A STRUCTURAL ANALYSIS OF THE WATER ALLOCATION MECHANISM OF THE WATER ACT 54 OF 1956 IN THE LIGHT OF THE REQUIREMENTS OF COMPETING WATER USER SECTORS

with special reference to

THE ALLOCATION OF WATER RIGHTS FOR ECOBIOTIC REQUIREMENTS

and

THE HISTORICAL DEVELOPMENT OF THE SOUTH AFRICAN WATER LAW

by

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ABSTRACT

Current water legislation does not provide protection for ecobiotic water requirements, and neither does it contain sufficient measures for the sustainable conservation of water as a scarce resource. This lack of statutory protection can no longer be afforded, because it is assumed that environmental elements are interdependent, and that neglected conservation measures with respect to one of these elements, may harm the entire environmental cycle. During a case study of the Letaba river system in the Eastern Transvaal, it was realised that very little protection exists for ecobiotic water needs, and that little more than moral condolence will ensure prolonged water supply for natural ecosystems during drought conditions. This conclusion necessitated a critical analysis of the legal system in terms of which water rights are allocated in the South African law. In order to do this analysis, the historical development process of the South African water law was investigated, and the main tendencies followed in the Roman and Roman-Dutch law systems, as well as the principles of water allocation which had been adopted into the South African system by the courts and the legislature, were critically analysed. This investigation was followed by an analysis of the current water allocation mechanism of the Water Act 54 of 1956, to indicate the lack of basic principles which could form the basis of an allocation system aimed at the protection of the environmental network of interdependency, as described. This study was followed by proposals for fundamental principles to form the basis for revision of the South African water law, in order to create a system of water allocation which accommodates the water requirements of all user sectors in a balanced and equitable way.

OPSOMMING

Bestaande waterwetgewing voorsien nie genoegsame beskerming vir die waterbehoeftes van ekobiota nie, en nog minder bevat dit voldoende maatreëls vir volgehoue bewaring van water as 'n skaarser wordende hulpbron. Hierdie gebrek aan bevredigende statutêre beskerming kan nie langer bekostig word nie, omdat daar veronderstel word dat die omgewingselemente interafhanklik is, en dat verwaarloosde bewaringsmaatreëls met betrekking tot een van hierdie elemente die omgewingsiklus in sy geheel mag beskadig. Gedurende 'n gevallestudie van die Letaba rivierstelsel in die Oos Transvaal het dit geblyk dat daar baie min regsbeskerming vir ekobiotiese waterbehoeftes bestaan, en dat weinig meer as morele besorgdheid sal sorg vir volgehoue watervoorsiening aan sulke natuurlike stelsels gedurende ernstige droogtetoestande. Dit kan nie bekostig word nie, en hierdie gevolgtrekking het 'n kritiese ontleding van die regstelsel in terme waarvan waterregte in Suid Afrika toegedeel word, genoodsaak. Om hierdie analise te kon doen, was dit nodig om die geskiedkundige ontwikkeling van die Suid Afrikaanse waterregstelsel te ondersoek, en om die hoofstrome en neigings waarvolgens die Romeinse en Romeins-Hollandse waterregstelsels ontwikkel het, asook die beginsels wat in die Suid Afrikaanse waterreg oorgeneem is, te analiseer. Hierdie ondersoek was gevolg deur 'n ontleding van die toedelingstelsels wat in die Waterwet 54 van 1956 vervat is, om die gebrek aan basiese beginsels wat die basis kan vorm van 'n toedelingsmeganisme gemik op die beskerming van die interafhanklike omgewingsnetwerk, aan te dui. Hierdie studie was op sy beurt gevolg deur voorstelle vir onderliggende beginsels vir die hersiening van die Suid Afrikaanse waterreg, om sodoende 'n stelsel van watertoedeling te skep wat die waterbehoeftes van alle gebruiksektore in 'n gebalanseerde en regverdige wyse akkommodeer.

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ABBREVIATIONS AND EXTRAORDINARY TERMINOLOGY

acre	0,4047 hectares
cumec	cubic metres per second
cusec	cubic feet per second (while 35,31 cusec = 1 cumec)
C	*Codex Justiniani*
D	*Digesta Justiniani*
Fanie Botha dam	Now Tzaneen dam
gallon	4,564 litres
GEP	General Environmental Policy
GG	Government Gazette
GN	Government Notice
GNP	Gross National Product
IUCN	International Union for the Conservation of Nature
lcd	Litres per capita per day
MAR	Mean Annual Runoff
morgen	0,8565 hectares
morgen foot	2 611 square metres
Park	Kruger National Park
WP	White Paper

CHAPTER I

INTRODUCTION : FUNDAMENTAL CONCEPTS AND PROBLEM FORMULATION

"Man appeared like a worm in a fruit,
like a moth in a ball of yarn,
and he has chewed his habitat
while secreting theories
to justify his acts"

Dorst 1970

CHAPTER I

INTRODUCTION : FUNDAMENTAL CONCEPTS AND PROBLEM FORMULATION

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DEFINITIONS AND PROBLEM FORMULATION

1.1. SCOPE

South Africa is described as an arid country,[1] where water is regarded as an increasingly scarce strategic resource.[2] Living organisms are in constant competition for this life-giving resource, and people are the administrators. But because humans are also co-users of water and thus involved in the competition for it, the fair allocation and control of water cannot be entrusted to them. This would be to set the fox to keep the geese.[3] To ensure that non-human organisms receive a fair share of the water resources, an objective allocation and preservation system, removed from human conscience, is required. The rules of this system should be binding and enforceable on both the users and the administrators.[4]

Law may be described as a body of binding rules aimed at establishing harmonious interrelationships in the environment.[5] Law is therefore the very means to accomplish a balanced distribution of natural resources such as water amongst all living organisms. The South African water law system had, however, originally been formulated to fulfil

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1 Fuggle & Rabie *Environmental Management* 277-278; *Management of Water Resources* 1.3.

2 *Management of Water Resources* 2.8, 10.3; Rabie "Conservation of rivers I" 1; *President's Council Report* PC 1/1991 32.

3 Rabie "Environmental law" 213 : "...man seeks to protect natural resources against his own exploitation thereof, to the extent that a satisfactory compromise should be reached between such exploitation (development) and the protection of the natural environmental media involved".

4 Vide Hahlo & Kahn 6 et seq for a discussion on law, ethics and positive morality.

5 Hahlo & Kahn 3. Wessels 283 : "Those things, therefore, which it is necessary for him [man] to do in order to preserve this tranquil, social life are virtually the sources of Natural Law or Law *par excellence*." In this sense, the environment includes the social, cultural, and natural environment, because legal rules do not only regulate human interrelations, but also human relations with their natural surroundings, their cultural heritage etc.

human water needs only, and therefore the mechanisms to apportion water fairly amongst all user sectors, had not been established.[6] This means that water law does not comply with the definition of law, viz the rules to accomplish harmonious environmental interrelationships. It is therefore necessary to ascertain to what extent the prevailing legal system protects the water requirements of non-human organisms, and how it should be adapted to create the ideal balance in the relationship between humans and their environment. Such an investigation will require the identification of non-human water user sectors with their water requirements, in order to indicate their need for water rights and to finally propose modified principles for a statutory water allocation mechanism.[7]

1.2. FUNDAMENTAL CONCEPTS

The investigation proposed above is interdisciplinary, involving not only law, but also ecology (ie the study of the complex relationships between elements and their environment), and hydrology (such as rainfall and flow conditions of rivers). Water law is part of environmental law, and a meaningful study of water law is hardly possible without reference to some environmental concepts which are well-known in ecology and hydrology. It is therefore necessary to define and briefly discuss the main concepts and issues which will be involved in such an interdisciplinary investigation.

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6 Chapter III *infra*.

7 This need had been confirmed by the President's Council in 1991 : "The Water Act will have to be amended to recognise nature conservation as lawful water users" (*President's Council Report* PC 1/1991 37). Cf Fuggle & Rabie *Environmental Management* 4.

1.2.1. The Environment[8]

In terms of the Environment Conservation Act 73 of 1989, the environment is "the aggregate of surrounding objects, conditions and influences that influence the life and habits of man or any other organism or collection of organisms".[9] This broad definition excludes very few, if any, living or non-living, natural or man-made, physical or immaterial elements observable or unknown to man.[10] Fuggle & Rabie[11] restrict the term to such elements influencing human life. They are, however, of the opinion that the term is not yet finally defined, because it is part of a fast-developing discipline.[12] Holmes,[13] on the other hand, broadens the concept by adding that it also includes external influences acting on *organisms or parts of organisms*. Rabie,[14] however, warns that too broad a definition could undermine the entire conservation effort, as well as the attempt to develop environmental law as a separate discipline.[15] Confirming the view of Fuggle & Rabie, he concludes that the term should not be restricted to a hard and fast definition, because it concerns a policy issue upon which opinions may differ. He is of the opinion that "the parameters of the concept 'environment' are obviously still evolving and it would be unwise to attempt to formulate a fixed definition of the concept".[16] In a President's Council Report,[17] very little consideration was given to the

8 Vide in general Fuggle & Rabie *Environmental Management* 4.

9 Section 1(x).

10 Rabie "Environment Conservation Act" 3.

11 *Environmental Concerns* 2.

12 32.

13 132.

14 "Environment Conservation Act" 3. He comments on the definition of the Act as being "about as all-embracing as may be imagined".

15 "Environment Conservation Act" 3; Cf Rabie "Environmental law" 206.

16 Rabie "Environmental law" 214.

definition of the concept or to the arguments raised by Rabie, viz the question of whether definition thereof was at all practicable - the Council had accepted an *ad hoc* definition of the term, which supports the definition contained in the Act.[18]

Although the term "environment" necessarily carries the definition attached to it in the Act, nothing prevents the use of the term in combination with some restrictive adjective, to render it more apposite to a specific situation. Such usage would be in accordance with the view that the term is indeed too broadly defined for practical application, and that the true definition depends on the particular circumstances.[19] Examples of restrictive adjectives which could be used to qualify "environment" would be "cultural", "political", "sociological" or "labour".[20] As such, the *natural* environment will then be that part of the environment consisting of elements belonging to nature. This would exclude man-made structures such as buildings, impoundments and human or technological noise, but include, for instance, plants, animals, the air, water, sunlight and soil.

1.2.1.1. Ecological environment

Another example of the restrictive use of the concept "environment" which is often encountered, is the *ecological* environment. Ecology is the study of the interrelationships of living organisms in their natural habitat.[21] A habitat is a life-supporting area.[22] The

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17 PC 1/1991.

18 The environment is defined as those physical, biological and cultural conditions which influence the lives of individuals or the community. Therefore the condition of the environment is an important determining factor of the quality of life within society, and a healthy environment promotes healthy socio-economic development (2).

19 Rabie "Environmental law" 214. One practical problem mentioned by the author, is that such a broad definition would mean that all law would then be environmental law, since the law is the set of rules regulating relationships within the environment (202).

20 Rabie "Environmental law" 204; Fuggle & Rabie *Environmental Management* 4.

21 Holmes 121; Ryke 1.

use of the adjective "ecological" therefore bears reference to the interrelationships between living organisms functioning within their natural life-supporting systems, so that an ecological process is the interaction between organisms within their habitat.[23] Ecological harm then means harm to the functional interrelationships between such organisms in their habitat, and ecological water requirements are the water requirements of interacting organisms needed to continue functioning normally in their natural habitat. The ecological environment is that part of the environment which consists of living organisms interacting in their natural habitat.

The use of the adjective "ecological" in this context is, however, linguistically unsound.[24] It was stated in the previous paragraph that the term means the *study* of organisms interacting in their habitat. The term had been derived from the Greek words *oikos* (home) and *logos* (a study). Literally, ecology is thus the *study* of *habitat*, and not of organisms within their habitat or the interaction between organisms and their physical habitat, or between habitats. This problem had been pointed out by Fuggle & Rabie in 1983,[25] yet the adjectival use thereof remained, and in fact became established in ecological language and even in legislation.[26] Moreover, the noun "ecology" has become the general term to describe the interaction of organisms within their natural habitat, without any reference being made to the *study* thereof. It is often stated that "the ecology" was harmed by some incident, or that a study is being made of "the ecology" of

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22 Holmes 177; Ryke 1.

23 The Environment Conservation Act defines an ecological process as the interaction between plants, animals and humans and the elements in their environment (s 1(viii)).

24 Fuggle & Rabie *Environmental Management* 4.

25 *Environmental Concerns* 2.

26 GN 51 of 21 January 1994 : "The maintenance of natural systems and *ecological processes*...is essential for the survival of all life on earth" (italics supplied).

a certain area.[27] It is submitted that this use of the term is incorrect, and that an attempt should be made to find a proper descriptive term for organisms in their natural habitat.

One possibility is the use of the term "biota", derived from the Greek word *bios*, meaning life. There is, however, a difference between living organisms on the one hand, and living organisms *living within a natural habitat*, on the other. Animals kept in custody, pets, poultry and fish within dams or impoundments, are all included under the concept "biota", yet these living organisms are not functioning within a natural habitat. Another possibility is the use of the term "ecosystem", which is defined by Ryke[28] as a system consisting of those biotic elements of the environment which interact with other biotic and abiotic elements therein. The trouble with this term is that it refers to an area isolated to facilitate the study of processes within it, which implies the artificial abstraction of a part of the larger system without recognition of interactions across the boundaries of such systems. What is required, is a descriptive term for the aggregate of these systems, representing the aggregate of organisms living in a natural habitat.

1.2.1.2. Ecobiotic environment

If "eco-" means habitat (derived from the Greek *oikos* (home)), and "-biota" refers to living organisms (derived from the Greek *bios* (life)), then "ecobiota" is the term for living organisms living within their natural habitat. Then the "ecobiotic environment" is that part of the environment which consists of living organisms functioning within their natural life-supporting areas.

In view of the opinion that it is unwise to adapt a hard and fast definition of terms in the still developing field of environmental conservation, and because of the lack of a proper

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[27] Which linguistically would mean that *the study* of organisms has been harmed, or that the *study* of organisms is being *studied*.

[28] 3.

descriptive term to refer to organisms in a natural habitat, it is proposed that the noun "ecobiota" and the adjective "ecobiotic" are apposite terms for the purposes of this study. Therefore, when reference is made to "ecobiotic water requirements", this means the water requirements of organisms living in their natural habitat, be this in a small ecosystem or in the aggregate of such systems in the biosphere as a whole. When reference is made to "water rights for ecobiota", this means such rights for organisms in their natural habitat. Similarly, "ecobiotic law" is taken to mean that part of law which deals with the protection of organisms in their natural environment. The "natural environment" is almost a contradiction in terms for modern-day humans, who so drastically adapt their habitat to fit their needs. For this reason, no definition thereof will be attempted here, and humans are intended to be specifically excluded when the term "ecobiota" is used in this study.

1.2.2. Conservation

1.2.2.1. Definition

The Environment Conservation Act does not define the term "conservation". Provision is however made for the Minister to determine a general environmental policy to be applied with a view to :

> "(a) the protection of ecological processes, natural systems and the natural beauty as well as the preservation of biotic diversity in the natural environment;
>
> (b) the promotion of sustained utilization of species and ecosystems and the effective application and re-use of natural resources;
>
> (c) the protection of the environment against disturbance, deterioration, defacement, poisoning or destruction as a result of man-made structures, installations, processes or products or human activities; and
>
> (d) the establishment, maintenance and improvement of environments which contribute to a generally acceptable quality of life for the inhabitants of the Republic of South Africa."[29]

[29] Section 2(1).

Each statutory authority to which powers have been assigned regarding the environment, is bound to exercise such powers in accordance with this policy.[30] This policy has been determined piecemeal since the beginning of 1994.[31] The General Environmental Policy (hereafter GEP) which has been the first part to be declared, is based on eight premises and principles, and includes the following principles :

* The maintenance of natural systems and ecological processes, and the protection of all species, diverse habitats and land forms is essential for the survival of all life on earth;

* Renewable resources are part of complex and interlinked ecosystems, and must through proper planning and judicious management be maintained for sustainability. Non-renewable natural resources are limited, and their utilisation must be prolonged through judicious use and maximum re-use of materials with the object of combating further over-exploitation of these resources;

* The concept of sustainable development is accepted as the guiding principle for environmental management.[32]

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[30] Section 3. According to the fourth principle of the policy (which has recently been declared (n 31 *infra*)), "[t]he state, every person and every legal entity has a responsibility to consider all activities that may have an influence on the environment duly and to take all reasonable steps to promote the protection, maintenance and improvement of both the natural environment and the human living environment".

[31] GN 51 of 1994 (GG 1542 of 21 January 1994)(General Environmental Policy); GN 858 of 1994 (GG 15655 of 29 April 1994)(Control of Vehicles in the Coastal Zone); GN 449 of 1994 (GG 15726 of 9 May 1994)(Classification of Terrestrial and Marine Protected Areas).

[32] Fifth, sixth and seventh principles of the GEP.

In terms of the GEP, a national nature conservation plan will be developed,[33] aimed *inter alia* at "effective management and control... to make possible the sustainable use of economically viable natural resources". The "maintenance of the ecological integrity and natural attractiveness of protected areas" will be pursued as a primary objective.[34] The GEP moreover makes provision for "resources protection" and "the judicious utilisation of all renewable and non-renewable natural resources as critical environmental issues".[35]

In terms of the GEP, conservation may be summarized as the maintenance of the ecological integrity[36] of natural systems and ecological processes, as well as the protection and judicious utilisation of natural resources aimed at the survival of all life on earth. The President's Council, which laid the foundation for the GEP, defined conservation as the management of the utilization of the biosphere in such a way that it provides the maximum sustained benefit for this generation, while retaining its potential to meet the requirements and aspirations of future generations, as well as the minimum loss of fauna and flora species and natural habitats.[37] This is in accordance with the definition of the IUCN, which defines conservation as "the ecologically sound management of productive systems and the maintenance of their viability, to ensure the earth's capacity to sustain development and to support all life".[38]

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[33] GN 449 of 1994 is a part of this plan.

[34] This is contained under the heading "Nature Conservation".

[35] This is contained under the heading "Conservation of Natural Resources".

[36] In view of the above discussion of this term, it is submitted that "ecobiotic integrity" would have been more apposite in this context.

[37] PC 1/1991 3.

[38] World Conservation Strategy 1980.

1.2.2.2. The objectives of conservation

Much has been written on the objectives of conservation. According to Green,[39] conservation is a human-induced action with various objectives, of which only one is of a non-utilitarian nature,[40] this one being the ethical purpose. In terms of this purpose, humans conserve because they have a duty to do so :

> "[M]any people feel that conservation is somehow a matter of conscience; that man, the thinking and all-powerful species, is not morally justified in bringing about massive extinction among the other species that share the planet with us, and so has a duty to foster their survival".

The ethical duty to conserve could be religiously inspired,[41] but it could also be a matter of mere instinctive concern, love, conscience or a sense of duty.[42]

Utilitarian motives for conservation, on the other hand, could be one or more of the following :[43]

(i) The aesthetical motive, in terms of which people have an instinctive feeling for the pleasant and the beautiful or the undisturbed creation;

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39 8 et seq.

40 Cf Fuggle & Rabie *Environmental Conserns* 5-7 who draw a single distinction, viz between the utilitarian and Judeo-Christian purposes. In *Environmental Management*, they add "other religions" (7-10).

41 Fuggle & Rabie *Environmental Management* 9 suggest that Judeo-Christianity prescribes conservation (with reference to Gen 1:26, 28 and 9:2-3; Psalm 8:1-8), but Green is of the opinion that various other religions hold the same principle.

42 Burgert 4-6, 9-15.

43 Vide in general Burgert 7-9.

(ii) Cultural values, which urge people to preserve their surroundings, as being the inspiration for poetry, music or art;

(iii) Scientific values, arising from the inborn curiosity of humans to analyse and understand their surroundings and their desire to transfer knowledge to future generations;

(iv) Material benefit;

(v) Ecological benefit, which means that humans instinctively realize that their survival is dependent on the interrelationships between species and the elements of the environment : they realize that the environment is their own habitat;

(vi) Juridical instrumentalism;

(vii) The sanity of humans, which implies that if an artificial habitat is created using technological means, humans will not survive (or at least maintain their quality of life), because their sanity will not be able to bear it.

The Environment Conservation Act recognizes three of these purposes, viz the ecological, ethical and aesthetical objectives : it provides for the formulation of a conservation policy "with a view to the protection of ecological processes, natural systems and natural beauty, the preservation of biotic diversity, the sustained utilization of species, ecosystems and resources, the protection of the environment against human destruction, and the maintenance of human quality of life".[44]

The policy of the National Parks Board is based on the philosophy that conservation is a human activity performed for the benefit of humanity. It is submitted that human understanding that people are dependent on the environment underlies all objectives of conservation, as does the fact that the elements of the environment are interdependent. Therefore, whether the inspiration for conservation is anthropocentric or ethical, ie whether human survival or the survival of other biota is envisaged, conservation of all environmental elements is necessary. To envisage the survival of humans alone is of

[44] Section 2(1).

little value, because "man is part of nature's network - that complex web of life in this speck of matter whirling through the infinities of space".[45] It is submitted that the maintenance of interrelationships between all elements of the environment is a purpose in itself,[46] and that conservation should aim at maintaining these interrelationships.[47]

The creation of a system of rules aimed at the protection of interrelationships in the natural environment is a commendable idea, yet ironic in the sense that it is people's counterbalance against their own destructive actions. Humans therefore destroy to live, and then restrict these destructive actions, yet still with survival as the goal.[48] They therefore sacrifice the improvement of their quality of life for the very sake of maintaining their quality of life. The balance between utilization and conservation is a very fine one which has not yet been mastered.[49] The greater the extent to which humans are able to master the balance, the fewer rules will eventually be necessary to regulate the balance and restrict utilization.

1.2.3. Environmental law

If the environment is the aggregate of the elements surrounding humans and other organisms, then environmental law encompasses all the rules aimed at regulating the relationships between humans, other organisms and their surroundings. But this

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45 Rabie *Environmental Legislation* 199 et seq.

46 GEP (sixth principle) : "Renewable resources are part of complex and interlinked ecosystems and must through proper planning and judicious management be maintained for sustainability".

47 Cf Rabie "Environmental law" 215 who submits that the term "conservation" ought to be replaced by the broader term "management", because in a modern sense (and especially from a legal perspective), conservation is often subject to development.

48 O'Keeffe *Conservation of Rivers* 20, 25; Burgert 3.

49 Davies, O'Keeffe and Snaddon 5-6 : "[T]here is a major conflict between the *conservation* and *utilisation* of the resource".

encompasses *all* law, because if law is the body of rules regulating interrelationships,[50] and the environment is the aggregate of human surroundings, then there is hardly a legal rule which can be excluded from the field of environmental law.[51]

Rabie[52] is of the opinion that although agreement exists as to the hard core of environmental law, its general scope is uncertain. He blames the unclear definition of the term "environment" for this lack of clarity. He submits that the term should apply to the relationship between man and his natural environment only.[53] Elsewhere,[54] he argues that environmental law is aimed specifically at the conservation or management of natural resources. MacWilliam[55] states that environmental law consists of the rules governing conditions or influences which affect the lives or development of any person or thing. This is unsatisfactory, because it is not the *conditions* or *influences* that need to be governed, it is *human conduct* that needs to be controlled to conserve the interrelationships between people and these conditions and influences. Glavovic[56] defines environmental law as the rules which regulate human conduct so as to protect

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50 Hahlo & Kahn 3.

51 Rabie "Environment Conservation Act" 3; Rabie "Environmental law" 211.

52 "Environmental law" 223.

53 Rabie "Environment Conservation Act" 3. This view must however be subject to the recent statutory contents which "environmental management" has acquired (GN 51 of 1994 dated 21 January 1994). In "Environmental law" (211-215), Rabie argues that the natural environment refers not only to those elements of human surroundings which exist in a natural condition, but those created by God as against human-made elements.

54 "Environmental law" 215.

55 26.

56 107.

wildlife from human-induced extinctions, and to protect the natural areas which constitute its habitat from accelerating destruction as a result of human impact.[57]

It is submitted in view of the above,[58] that the term "ecobiotic law" will be an apposite term, because it refers to rules aimed at preserving organisms in their natural habitat.[59] Ecobiotic law then encompasses the rules which regulate human utilization of and the relationship with ecobiota, in order to ensure the survival of species (ie for the purposes of conservation and in accordance with the statutory environmental policy.[60]

1.2.4. Water law

Acknowledgement of the interdependence of elements of the natural environment implies recognition of the water needs of ecobiota, since both water and ecobiota interact in this network. This awareness necessitates the establishment of mechanisms

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[57] Glavovic describes wildlife law as follows : "Wildlife law as an accepted discipline ... is still in an embryonic stage in South Africa. In the USA it has been born, has passed through the stage of infant emergence, and has been described as already having proclaimed its robust adolescence. In South Africa, legislative reform is required to remedy the deficiencies which exist in our legal system, which has not kept pace with developments in international understanding of ecological processes." ("Wildlife law" 519). In South Africa, wildlife law is a recent field of study. However, rules regarding environmental conservation have been part of the legal system since the earliest years of European settlement in South Africa : in 1655, Jan van Riebeeck issued a *Placcaat* prohibiting the pollution of the streams of Table Valley, to ensure peaceful common use by inhabitants and crew members. Various regulations protecting fauna and flora were also placed on the statute book in these early years. A variety of rules aimed at environmental conservation currently exist, scattered through various acts. A need to consolidate environmental law developed in due course, encouraged by a world-wide awakening of an awareness of the necessity for conservation, as well as a rapid development of similar legal fields in other countries, like the USA and England. This led to the promulgation of The Environment Conservation Act in 1982, replaced by the Environment Conservation Act of 1989, a potentially strong instrument in the hands of conservation (Rabie "Environment Conservation Act" 2 et seq; Hoogervorst 1989).

[58] Par 1.2.1.2.

[59] The term "wildlife law" is also often used (vide Glavovic "Wildlife law" 519 et seq), although it does not specifically refer to wildlife functioning within its natural habitat. Rabie & Van der Merwe "Wildboerdery" 114 et seq.

[60] As set out in the GEP (vide par 1.2.2. *supra*).

to ensure that ecobiota are supplied with water in accordance with their needs, but with due consideration of human needs. Such mechanisms should be contained in the legal system, embodied in statutory provisions and enforced by courts of law. Water law provides a framework for the management of water resources, and may be regarded as part of environmental law. It should aim at apportioning water amongst all sectors (human or otherwise) in need of it, in such a way that the sensitive environmental balance is maintained. The rules of water law should therefore be based on a proper water management strategy, aimed firstly at establishing a fair allocation system and, secondly, at preserving the existing resources. These allocation mechanisms ought to be contained in legislation and should be legally enforceable.

Water law should therefore convey the recognition of the interdependency of environmental elements. If water law should fail to reflect this recognition, it would not be in accordance with practical needs, and ought to be revised.

1.3. THE PROBLEM

1.3.1. Water

Water is defined as a colourless, odourless, tasteless and transparent liquid, consisting of oxygen and hydrogen, found in seas, lakes, rivers and rain.[61] The term is not defined in the Water Act 54 of 1956,[62] but from the use of the concept in the Act, it seems to be confined to fresh water which naturally falls, drains or rises, or which flows in streams; and irrespective of its categorization as surface or ground water, or of its quality.[63] The main sources of fresh water are rivers, vleis and floodplains such as marshes, sponges and

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[61] *Oxford Dictionary* 1386.

[62] This Act contains the codified South African water law. Vide Chapter III infra.

[63] Cf the definitions of "private water"; "public water"; "normal flow"; "surplus water" : s 1.

swamps, endorhic pans and lakes, impoundments, coastal and estuarine lakes and lagoons, and open and closed sinkholes.[64] In terms of the Act, water can either be public or private, depending on its capability of common use.[65]

Water is a natural and life-essential resource which is required by all living organisms for survival.[66] It is therefore a commodity which needs to be shared by each and all in need thereof.[67] It is however an increasingly scarce resource in South Africa, which is described as an arid country, served poorly with natural water resources.[68] It is estimated that the demand for water will exceed the availability by the year 2020.[69]

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64 Noble & Hemens 8-47; Fuggle & Rabie *Environmental Concerns* 238.

65 Vide Chapter IV infra.

66 *Retief v Louw* (with reference to Groenewegen *CF* 2 1 6) : "Common things ... which on account of the common use that all have a right to by nature, cannot, by the laws of nations, be divided : thus flowing water, which, collected either from the rain or from the veins in the earth, makes a perpetual current. These things, by nature itself as it were, are attributed to, and may be occupied by, any one, provided that the common and promiscuous use is not injured, for without the use of air or water no-one could live or breathe". Uys "Natural ecosystems" 104.

67 Note 66 *supra*; *Management of Water Resources* xvii.

68 Fuggle & Rabie *Environmental Concerns* 238; *Management of Water Resources* xvii, 1.3, 2.8; *President's Council Report* PC 1/1991 32. Cf Grotius *Inl* 2 1 who stated that the classification of water as *res communes* was due to it being *sufficient for all*. Cf Davies, O'Keeffe & Snaddon 1.

69 Precipitation in South Africa varies from 100 to 2000 mm per annum, with a mean annual rainfall of 502 mm (which is far below the world mean of 860 mm (*President's Council Report* PC 1/1991 32; *Management of Water Resources* 1.3; Rabie "Conservation of rivers I" 1). The per capita water requirements will increase from 20 litres per per capita per day (lcd) to 300 lcd by 2020 (*President's Council Report* PC 1/1991 34). Cf *The Reconstruction and Development Program*, where a medium-term supply of 50-60 lcd is envisaged. Cf Fuggle & Rabie *Environmental Concerns* 239; Fuggle & Rabie *Environmental Management* 278-283.

1.3.2. Human water utilization

Humans are the managers of the natural environment. They are, however, also competitors for certain life-sustaining elements such as water. Due to their constant development and progress, humans constitute the sector that has the most negative impact on water resources. They should therefore find a means to protect water resources from their own destructive utilization.[70] As far as human utilization is concerned, the following categories may be distinguished :

1.3.2.1. Agriculture

Agriculture is the largest water consumer : some 75% of the available water is used to irrigate 0,7% of the country's total surface area.[71] This user sector is, however, not expected to grow much,[72] because agricultural development is subject to consideration of socio-economic necessity and the availability of water.[73] The President's Council has submitted that irrigation consumes more water than its proportional contribution to the gross national product (GNP), and that more effective utilization of existing schemes ought rather to be reconsidered.[74]

Agricultural practices have a quantitative and qualitative influence on water resources. As far as quality is concerned, irrigation methods are to a large extent co-responsible for

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[70] Davies, O'Keeffe & Snaddon 5-6 : "[T]here is a major conflict between the **conservation** and **utilisation** of the resource. It is an exceptionally difficult task to convince poor urban and rural people that conservation is for them, when they have a gruelling daily struggle to survive."

[71] *President's Council Report* PC 1/1991 35. According to Davies, O'Keeffe & Snaddon (1), this consumption is currently 52,4% which will drop to 47,3% in 2010.

[72] This is in terms of the recommendations of a Commission of Enquiry into Water Matters in 1970.

[73] Davies, O'Keeffe & Snaddon 1-3.

[74] *President's Council Report* PC 1/1991 35. Cf the White Paper of the Department of Environment Affairs on a National Environmental Management Policy W.P B 3/1993.

polluting effects such as salinization, eutrophication and mineralization.[75] Salinization is the increase in salt levels of water due to evaporation during irrigation. Eutrophication is abnormal nutrient (such as phosphates, nitrates, ammonia and potassium) enrichment of water leading to excessive growth of various plant species. These plants, usually algae and exotic or intruder weeds, change the trophic structure of riverine ecosystems.[76] An example is the sinking of dead algal material to the bottom of a water source. This attracts large numbers of bottom-feeders, thereby reducing oxygen-levels, generating noxious substances such as hydrogen sulphide and methane, and eventually wiping out other sensitive yet essential organisms, including those which have a cleansing function. Mineralization is the mineral enrichment of water, caused by returned irrigation water, but also by evaporation from the river course.[77]

As far as water quantity is concerned, poor land-use practices can seriously harm riparian vegetation, causing erosion and increased silt loads. River regulation (impoundment, diversion, inter-basin transfers) can influence water temperature and even change flow conditions so as to impede perenniality, which could in turn harm sensitive ecosystems, especially in estuaries.

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[75] O'Keeffe *Conservation of Rivers* 24-27; *President's Council Report* PC 1/1991 42.

[76] O'Keeffe *Conservation of Rivers* 12.

[77] Fuggle & Rabie *Environmental Concerns* 246; *Environmental Management* 285-288.

1.3.2.2. Domestic use

Domestic water demand in South Africa doubles every twenty years.[78] Both the qualitative and quantitative impact which this user sector has on rivers could in future become hazardous for other user sectors, as well as for the conservation of the resource. Storm water drainage contains oil, traffic deposits, chemical spillage and diffuse wastes, which are discharged into rivers. Sewage effluent is high in nutrients, causing eutrophication and the spread of diseases. In urban areas, the purification of sewage is controlled by municipalities, but in rural areas and squatter camps, this effluent flows directly into rivers. Seepage from disposal sites of urban refuse contains pathogens and toxins which are harmful for biota.

Interbasin transfers attempt to provide water in areas of low rainfall and high demand.[79] These schemes are responsible for the breakdown of natural inter-catchment barriers, in this way possibly encouraging the translocation of species, as well as the spread of disease-carrying and exotic invasive species. Other potentially detrimental affects are the loss of biogeographical isolation and of endemic biota, the alteration of hydrological regimes, changes in water quality and temperature, and the spread of diseases.[80]

Impoundment, being the most reliable solution to the growing domestic water demand, may have detrimental influences on biota by altering the channel and changing run-off,

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[78] *President's Council Report* PC 1/1991 34. In terms of the Reconstruction and Development Programme of the Transitional Government, the immediate target as far as domestic water supply is concerned, is to supply twenty litres of potable water per capita per day (lcd) at a cartage distance of 200 metres, as well as one ventilation improved pit (VIP) toilet per household, which will place a heavy burden on the existing water resources (*Water Supply and Sanitation Policy* 1994 15-16) Cf Davies, O'Keeffe & Snaddon 1-3, who predict that the demand will be 4 477 million cubic metres per annum (17,3%) in 2010.

[79] Vide in general Petitjean & Davies 1988; Fuggle & Rabie *Environmental Management* 283.

[80] Petitjean & Davies 819.

water temperature and silt-load. Furthermore, dams act as barriers to the migration of certain fish species which move up or down rivers for purposes of propagation.

1.3.2.3. Forestry

Approximately 1,1 million hectares of South African land is utilized for afforestation - of this area 71% is privately owned.[81] According to the President's Council,[82] forestry contributes a quarter of the agricultural sector's share of the GNP, which justifies its water demand. The usage of land for forestry can reduce run-off by up to 60%. It is envisaged that this sector will be developed to cover up to 1,8 million hectares by the end of the century, due to an increasing wood and paper demand. It seems reasonable that such development should depend on water availability. Afforestation also results in increased evapotranspiration, the interception of rainfall and the abstraction of soil water from deep soil layers, all of which have a negative effect on run-off.[83]

1.3.2.4. Mining, industry and power generation

The importance of mining for the South African economy is recognised in the water allocation policy of the Department of Water Affairs.[84] Strict control measures aimed at the purification and recycling of water which is used by the mining industry, are contained in the Water Act.[85] However, effluent from mines and industries contains

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81 *Management of Water Resources* 2.21.

82 *President's Council Report* PC 1/1991 36.

83 Fuggle & Rabie *Environmental Management* 283-284.

84 *Management of Water Resources* 2.14.

85 Sections 12B, 21-24.

toxic waste material, including chemical rinsing fluids, solids, organic wastes and heavy metals.[86]

Power generation raises water temperatures to a level which may harm certain sensitive biota, and which may favour diseases such as bilharzia and malaria. Toxic seepage from mines influences the acidity levels of river water again to a level which threaten certain forms of life.

1.3.2.5. Recreation

Angling may cause the destruction of riparian growth, leading to bank destabilization. It also tends to engender littering and pollution, and has a substantial effect on fish life. Exotic fish species which may harm indigenous biota and the ecobiotic balance, are often introduced into fresh water systems.

1.3.2.6. Protected areas

South Africa is one of the leaders in the field of maintenance of protected areas. These areas are classified, on the basis of management requirements, into six main categories :[87]

(i) Category I : Scientific Reserves and Wilderness Areas

The objective of scientific reserves is to maintain ecological processes, to preserve diversity and to protect special cultural resources in an undisturbed state in order to have representative examples of the natural environment and special cultural resources available for scientific study, environmental monitoring, education, and for the

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[86] O'Keeffe *Conservation of Rivers* 30.

[87] GN 449 of 1994 (GG 15726 of 9 May 1994).

maintenance of genetic resources in a dynamic and evolutionary state. The objective of wilderness areas is to protect a largely undisturbed natural area which serves human physical and spiritual well-being. Special nature reserves and wilderness areas[88] are examples of existing areas which will fall in this category.

(ii) Category II : National Parks and Equivalent Reserves

These are defined as relatively large, outstanding natural areas of land and/or sea designated to protect the ecological integrity of one or more ecosystems for this and future generations, to exclude exploitation or intensive occupation of the area and to provide a foundation for spiritual, scientific, educational, recreational and cultural opportunities for visitors. The objective of these areas is to protect natural and scenic areas of national or international significance for spiritual, scientific, educational, recreational and tourism purposes.[89]

(iii) Category III : Natural Monuments and Areas of Cultural Significance

These are natural features or features of cultural significance or both, but can also be areas of outstanding or unique scenic, scientific, educational of inspirational value, and

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[88] As defined in the Environment Conservation Act of 1989.

[89] Cf the definition of a National Park in terms of the National Parks Act of 1976, where it is defined as an area where : "a) one or several ecosystems are not materially altered by human exploitation and occupation, where plant and animal species, geomorphological sites and habitats are of special scientific, educational, and recreational interest or which contains a natural landscape of great beauty; b) where the highest competent authority of the country has taken steps to prevent or to eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; c) where visitors are allowed to enter, under special conditions, for inspirational, educative, cultural and recreative purposes" (s 1). The objective of National Parks is described as follows : "The object of a park is the establishment, preservation and study therein of wild animals, marine and plant life and objects of geological, archaeological, historical, ethnological, oceanographic, educational and other scientific interest and objects relating to the said life of the first-mentioned objects or to events in or the history of the park in such a manner that the area which constitutes the park shall, as far as may be and for the benefit and enjoyment of visitors, be retained in its natural state" (s 4).

the objective is the protection of outstanding natural and cultural features and places. Such places include national monuments, botanic gardens, zoological gardens, natural heritage sites and sites of conservation significance.

(iv) Category IV : Habitat and Wildlife Management Areas

These are areas subject to human intervention, but where research has shown that certain species require them for nesting and feeding, and to ensure their survival. The purpose of protecting these areas is to assure the natural conditions which are required to protect these significant species. Provincial, local and private nature reserves, as well as conservancies, fall in this category.

(v) Category V : Protected Land/Seascapes

These are areas which are a product of the harmonious interaction of people and nature, and the objective of their protection is the provision of opportunities for public enjoyment through recreation and tourism, nevertheless supporting the accepted life-style and economic activity therein. These areas also serve scientific and educational purposes and maintain biological and cultural diversity. Examples of areas which fall in this category are protected natural environments, natural resource areas, scenic landscapes and urban landscapes.

(vi) Category VI : Sustainable use areas

These are predominantly natural areas of land or sea, designated and managed to ensure the long-term protection and maintenance of its biological diversity, while providing a sustainable flow of natural products. Mountain catchment areas will fall in this category.

It is difficult to determine the water requirements of aquatic systems and species, because they often do not exist in natural conditions.[90] It would nevertheless be ideal to study these systems in areas where they function within their natural state. Protected areas, where it is endeavoured to maintain natural conditions,[91] serve as good locations to investigate river functions. Where such areas are situated in and around the lower reaches of rivers, the impact of over-exploitation of the rivers in the upper reaches may impede this ideal state, yet rivers have a self-purifying function which helps produce at least semi-natural conditions within these reaches.

The Kruger Park Rivers Research Programme is an example of a serious attempt to understand the complex functions of river systems. The objective of this research programme is to provide increased decision support for improved water management, including the making of recommendations regarding the legal system in terms of which water is managed. This comprehensive programme is supported by a variety of government, semi-government and private institutions. It is hoped that a better knowledge of the interrelationships between, and the water requirements of, aquatic species will ultimately assist the development of a balanced water management system for the benefit of humans and ecobiota.

Lack of knowledge regarding the value of aquatic systems and of species in the environment, are two probable reasons why ecobiotic water needs have never been recognised in water law. Short-term financial considerations have impeded proper consideration of this water need. This, ironically, has been to the long term expense of both humans and ecobiota.

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[90] Davies, O'Keeffe and Snaddon 6 : "Southern African lotic ecosystems appear to be 'predictably unpredictable', because we see variation and uncertainty as two of the main characteristics of Southern African rivers, both from the point of view of understanding their ecological functioning and of their management as sustainable water resources".

[91] Especially Category I, II and IV areas.

> "Man appeared like a worm in a fruit, like a moth in a ball of yarn, and he has chewed his habitat while secreting theories to justify his acts"[92]

This attitude can no longer be afforded, and it is necessary to reconsider the legal system in terms of which water is apportioned, in order to accommodate ecobiotic water needs as well as to conserve the resource in a sustainable way.

1.3.3. Ecobiotic water use

Acceptance of the philosophy of conservation necessarily implies acceptance of the water requirements of ecobiota, because living organisms are interdependent, and they are dependent on abiotic environmental elements such as soil, air, sunlight and water.[93] Humans are part of the network of environmental interdependence, which means that their own survival depends on the acknowledgement of the water requirements of all species. It is in their own interest to manage the water resources of the country in such a way that these organisms can survive in their natural habitat and thus continue to play their respective parts in the functioning of the network.

1.3.3.1. Fresh water resources

South Africa is an arid country served relatively poorly with well-distributed natural water sources.[94] The main freshwater resources are rivers, although permanent fresh water is also found in vleis and floodplains, endorhic pans, lakes, impoundments, coastal and estuarine lakes, estuaries and lagoons, and open and closed sinkholes.[95] For the purposes of this discussion, a threefold distinction is drawn between rivers, wetlands and

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92 Dorst "Before nature dies" 1970 328.

93 GN 51 of 1994 (fifth and sixth principles).

94 Fuggle & Rabie *Environmental Management* 277-278; *President's Council Report* PC 1/1991 32.

95 Noble & Hemens 8 et seq.

estuaries.[96] Each of these has characteristic ecobiota. The main origins of exploitable water for human use are rivers, dams and ground water, with the result that organisms living in and around these sources are more vulnerable. However, human activities such as mining, industry, forestry and urbanization often also endanger ecobiota in and around vleis, lakes, estuaries and lagoons.

(i) Rivers

Rivers are regarded as dynamic longitudinal ecosystems, reflecting the events and conditions in their catchments, and have been described as "natural drainage networks sculpting the landscape".[97] They consist firstly of fast-flowing, clear headwaters, secondly of broader and slower-flowing middle reaches with poorer water quality due to leaching, the presence of debris and less oxygen, thirdly of mature lower reaches where nutrient-rich water slowly flows onto the coastal plain, and finally of estuaries.[98] In general, only 9% of rainfall gathers in rivers, while about 82% infiltrates the soil, and the remaining 9% is intercepted by plants.[99] The run-off which reaches rivers is influenced by the type of land-use, for example forestry increases evapotranspiration, while impoundment increases evaporation. These influences can determine the perenniality of rivers[100] : of the 3193 rivers in South Africa, some 40% are seasonal. Some 33 000 million cubic

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[96] But in general, due to the interlinked nature of water bodies, a holistic view is taken of freshwater systems (Davies & Day 31-32).

[97] O'Keeffe *Conservation of Rivers* 1. See also Fuggle & Rabie *Environmental Management* 647 et seq.

[98] Cf Davies, O'Keeffe & Snaddon 7-14, 69-134 on the principles of lotic ecosystem functioning.

[99] Fuggle & Rabie *Environmental Concerns* 239.

[100] Davies, O'Keeffe & Snaddon 1 : "There are few rivers in Southern Africa that have not been over-exploited, degraded, polluted or regulated by impoundment/s, and we know of many that were once perennial, but which now flow only seasonally or intermittently."

metres of river water can be exploited annually, an amount which will probably be exceeded by demand by the year 2020.[101]

(ii) Wetlands

Wetlands have been described as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water being either static or flowing, fresh, brackish or salt. This definition includes areas of marine water, the depth of which does not exceed six metres at low tide.[102] As this definition hardly excludes any water source, the more restrictive definitions of Begg and Walmsley should also be mentioned :

> "A wetland is land where an excess of water is the dominant factor determining the nature of soil development and the types of plant and animal communities living at the soil interface"[103]

and

> "Wetlands are water dominated areas with impeded drainage where soils are saturated with water and where there is a characteristic fauna and flora".[104]

For present purposes, the term wetland is used to refer to freshwater lakes, man-made dams, vleis and pans only.[105] There are some 520 major state dams in South Africa, capturing 50% of the mean annual runoff (MAR) and supplying some 37 000 m^3 of water

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[101] *President's Council Report* PC 1/1991 32. According to Davies, O'Keeffe & Snaddon, full utilization of available resources will occur within the next ten years.

[102] The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) was held in Iran 1971. It is an intergovernmental treaty which provides the framework for international cooperation regarding the conservation of wetland habitats.

[103] Begg 73.

[104] Walmsley 3.

[105] Chapter IV *infra*.

per year.[106] These major dams represent about 10% of all water storage structures in South Africa.[107]

(iii) Estuaries

An estuary is a partially enclosed coastal body of water receiving freshwater inflow and which is connected to the sea. Fresh and sea water mix in estuaries, and they may be under tidal influence.[108] Estuaries are important to humans for navigation, recreation and as repositories for industrial effluent and domestic waste.[109] They also constitute a habitat for unique organisms, adapted to live on the partially fresh and partially salt water. South Africa has 296 estuaries, covering some 600 square kilometres.[110] These ecological systems are of great concern due to rapid deterioration, caused by over-utilization and by mismanagement in the upper reaches and catchments of rivers.

Each organism living in or around these freshwater resources has particular water requirements as far as quality, quantity and temperature are concerned. This makes water allocation rather complex, in that a predetermined volume of water[111] can hardly be allocated to ecobiotic water needs.

To maintain and preserve the diversity of those species which are directly dependent on water, involves the proper control of human utilization of the resource. Only in this way

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[106] Chapter IV *infra*.

[107] Davies, O'Keeffe & Snaddon 137.

[108] Noble & Hemens 37, 47. Cf *The SANCOR Estuaries Programme 1982-1986* 3; Davies & Day 10.

[109] *The SANCOR Estuaries Programme 1982-1986* 1.

[110] *The SANCOR Estuaries Programme 1982-1986* 1; Fuggle & Rabie *Environmental Concerns* 267.

[111] Roberts suggested it to be 11% of the mean annual runoff (MAR), while O'Keeffe is of the opinion that the figure is negotiable (*Conservation of Rivers* 16).

can water of the highest possible quality and quantity be provided, in accordance with the survival requirements of ecobiota dependent on that particular source. This attempt should however take into consideration the requirements of human user sectors, such as urban, agricultural, forestrial and industrial needs, as well as recreational use.

> "The management of rivers is made difficult by their heterogeneous longitudinal attributes. A large river typically flows through a number of different environmental zones, passes through the jurisdiction of numerous landowners and other authorities, and is affected by natural and artificial variables from many sources. Perhaps it is not surprising, therefore, that management policies ... have lagged behind those in other fields"[112]

In cases of artificial wetlands such as impoundments, harmful ecobiotic consequences often occur, for example increased plankton production, downstream fauna and flora changes, precipitation of sediments, interference with fish migrations, changes in water temperature and chemistry and channel erosion below the dam wall with subsequent river bed armouring.[113] Impoundment is, however, regarded as one of the most effective management options for providing water in accordance with growing water demands. Therefore a balance between utilization by impoundment and ecobiotic conservation ought to be sought.[114]

1.3.3.2. The functions of water

> "[Water] must be regarded as its [South Africa's] primary national asset, the one which makes life possible. As such, it cannot be regarded as the property of any one sector or individual, nor can the actions of any user agency be allowed to impinge on others in a

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[112] O'Keeffe *Ecological Research on Rivers* 4.

[113] O'Keeffe *Ecological Research on Rivers* 21.

[114] The Department of Water Affairs undertakes Environmental Impact Assessments before constituting any major water works (*Management of Water Resources* 6.45).

> detrimental manner. In our use of rivers, it is not even a case of "greatest good for the greatest number" but rather "survival for all"".[115]

Water is required for drinking, washing, inhabiting (eg hippo's), breathing (eg fish), breeding (eg frogs), feeding (eg plankton feeders) and transport. Human uses vary from agriculture, forestry and mining to usage for urban, domestic and industrial purposes.[116] Although the quantity, quality, regularity of need, temperature, oxygen content and purposes for utilization of water differ from organism to organism, it is a vital requirement for every form of life. Because of this, and because species are interdependent, a proper water management system should respect every demand. Adverse impacts on the resource should be minimized - "if this simple rule is not observed, everyone loses."[117]

The main function of water resources is the supply of water to satisfy these survival demands. But because water is in constant circulation, and constantly exploited and utilized, it needs to be constantly renewed. This function is to a large extent exercised by the network of interacting environmental elements in and around water sources. Proper water management is therefore necessary not only to supply these demands, but also to maintain healthy fresh water systems for the sake of conservation.

(i) Rivers

The functions which a properly conserved river will perform are relevant to both the natural water renewal process and to human requirements. River functions include water supply, renewal and cleansing, sediment transport, nutrient transport and recycling,

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[115] O'Keeffe *Conservation of Rivers* 33.

[116] Para 1.3.2. *supra*.

[117] O'Keeffe *Conservation of Rivers* 32-33.

biotic dispersal, vegetation maintenance, water storage, effluent transport, and the buffering of floods. Rivers are also of scientific, educational and aesthetic value.[118]

(ii) Wetlands

Wetlands function as flood-barriers, because the vegetation therein inhibits the force of flood water. They also serve as natural filters and treatment zones, in that they trap sediments, nutrients and pathogenic bacteria, thereby protecting downstream lakes and estuarine water quality.[119] Artificial wetlands (impounded water) serve as water-storage systems, which provide water for agricultural, industrial, urban and power generation purposes.[120] Wetlands also assist in the maintenance of hydrological processes.

(iii) Estuaries

Estuaries serve as feeding-grounds and habitat for unique animal and bird species. Humans also benefit from these systems : harbours and towns are developed around them and they are used for fishing, recreation and research purposes. They form the link to the ocean and the outlet for river freightage. Therefore they have an important cleansing and purifying function. Over-utilization in the upper reaches can cause a obstruction in this outlet, causing a health-risk, reed encroachment, infilling by sand and accumulation of pollutants.

1.3.3.3. Functions of ecobiota

It is argued above that water can be continually utilized only if it is allowed to interact with surrounding environmental elements, which fulfil important functions in these

[118] O'Keeffe *Conservation of Rivers* 20.

[119] Davies & Day 1986 14.

[120] Davies & Day 14.

aquatic systems. Besides abiotic elements such as sunlight, air and soil, the biota in and around these systems are of vital importance.

(i) Flora

O'Keeffe[121] distinguishes between three main kinds of plant communities having an influence on river functions :

The first is catchment vegetation, which plays a role in evaporative loss and therefore in run-off, as well as in the duration, extent and regularity of floods. It also has a buffering capacity regarding silt load.[122] Other functions include the effect which it has on the chemical constituents of run-off and the type and amount of allochthonous input to the river, as well as the stabilization of river banks.

> "The catchment vegetation therefore affects the hydrology, water chemistry, turbidity and suspended sediment load of a river, as well as dictating to a large extent the energy and nutrient input into the system."[123]

The second is the emergent semi-aquatic vegetation. This acts as a natural buffer, it contributes to nutrient and energy cycling, and provides habitat for river fauna. It traps silt and may lead to marsh formation.

The third is the aquatic macrophytic vegetation, which also plays a role in nutrient flow and in providing habitat. These plants form an important primary food source. Their sensitivity to levels of nutrient input makes them a helpful gauge of water quality.

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[121] *Ecological Research on Rivers* 58 et seq.

[122] Chutter 22-34.

[123] O'Keeffe *Ecological Research on Rivers* 58.

(ii) Fauna

Fish are not only an important food source, but also play an important balancing and cleansing role in the food chain.[124] Many fish species live on bottom sludge and therefore consume impurities and rotting material. Others live on disease-spreading insects.

Limited research has been carried out in South Africa to elucidate the role of fauna such as fish, aquatic invertebrates,[125] mammals, amphibians, birds and reptiles in the functioning of river ecosystems.[126] Each species is obviously assumed to have some place in the nutrient flow. The importance of each of these species and their interaction ought to be determined to make proper conservation and management possible.[127] Stream modification can lead to imbalances such as the development of vast populations of certain species to the detriment of others, and with consequences such as an increase in the incidence of certain diseases.

1.4. CONCLUSION

There is a sensitive balance between ecobiota and water conditions, the maintenance of which is essential for the survival of species. Since every organism in and around any

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[124] O'Keeffe *Ecological Research on Rivers* 52.

[125] Some invertebrate organisms in rivers fulfil a water purifying function, in that they distract dissolved and particulate material from the water column and sediments for use in their life-processes. Davies, O'Keeffe & Snaddon 98-132.

[126] O'Keeffe *Ecological Research on Rivers* 52. Cf Davies, O'Keeffe & Snaddon 132 : "Most studies have been devoted to fish distribution. Much of the research, however, tends to be self-contained and separate from other facets of river ecology... and there has been very little research to establish the importance of fish populations in the functioning of river ecosystems, or to quantify the effects of catchment and river changes on fish populations".

[127] Davies & Day 34 et seq; Ferrar 94 et seq.

water source can be assumed to have a particular role in the balanced interacting system, the existence of species diversity is in some small or large way important for human survival. Humans are dependent on the interrelationships between environmental elements and therefore also on aquatic biota.

Water is an increasingly scarce strategic resource in South Africa, subject to over-exploitation as well as to pollution, large-scale impounding, inter-basin transfers and to the surrounding poor land use practices. The demand for water is expected to exceed its availability soon.[128] It has only recently been realized that water should be managed in a way intrinsically directed towards environmental well-being. Although law is the proper measure to inhibit deterioration of water sources, prevailing water law provisions are often not in accordance with sound conservation principles.

Acknowledgement of the interdependence of environmental elements implies recognition of the water needs of all organisms and of their supporting physical environment. Acknowledgement of ecobiotic water needs calls for the establishment of mechanisms to ensure that all organisms are supplied with water. Such mechanisms, in order to be effective and enforceable, should be contained not merely in government policy, but in the legal system, embodied in statutory provisions and enforced by courts of law.

Water law should aim at establishing a fair allocation system for water utilization by all organisms, and secondly at preserving the resource. Preservation is, however, not possible without the allocation of water to those natural systems which play a role in the renewal of the resource.

The legal system should provide measures to reduce pollution, eutrophication, salinization, mineralization, silting and other harmful qualitative influences caused by human utilization. It should moreover regulate actions which influence flow conditions,

[128] Davies, O'Keeffe & Snaddon 1; *Options for Land Reform and Rural Restructuring* 9.

including riparian and other land-use practices such as forestry, agriculture and impoundment, as well as address the prevention of wastage. Water law should furthermore control the exploitation of water sources, such as rain modification and ground water exploitation. It should, finally, protect those aquatic biotic and abiotic elements which are vital for the functioning of aquatic systems.

In South African water law, some such measures do exist, but these vary in their degree of efficiency. To ascertain to what extent South African water law complies with the abovementioned goals, it is necessary to evaluate the water management system which is implied by legislation. If it is concluded that this system does not comply with these objectives, then consideration should be given to revising the statutory system.

CHAPTER II

A CASE STUDY OF THE LETABA RIVER

Duivelskloof
de 4.Jan 1936

£. 'nister
Kol. Reitz

Waarde Kol
Die publik wel ieder dag van my weet wat gaanword
of u ver ons die dame gaan laat bouw en die koedesri
vier en Brandbontjes rivier.
Koedesrivier moet ons die menste vier kry en die
Brandbontjes drie.
Kol als u ons nie help dat ons die Dame kry dangaan
al die boere oor muir als ons die Dame kry is ons
geholpe boere weer . so laat my weet wat gaanen
is A.u.b

de uwe
Met agten
Hackerman

CHAPTER II
CASE STUDY OF THE LETABA RIVER

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LETABA RIVER CASE STUDY

2.1. INTRODUCTION

In spite of modern environmental awareness, the need to protect ecobiotic water requirements is often underestimated by users who are financially dependent on water. In a country where water is an increasingly scarce resource, and where there is serious concern as to how long available water resources can still meet demands, this lack of concern can no longer be afforded. However, the recognition of ecobiota as additional lawful water users may cause conflicting interests. It was thus to investigate a typical over-exploited South African river, in order to evaluate the nature of conflicting interests and the necessity for statutory protection. The Letaba river in the Eastern Transvaal was chosen, mainly because it serves a variety of water user sectors[1] and has been heavily exploited since the beginning of the century. It therefore provides a good example of conflicting interests between conservation (the main focus of this study) and irrigation (the major water consumer in South Africa[2]). Another reason for choosing this river as a case study, is that it has been impounded at various places within the main stream and the tributaries, and thus involves a variety of aspects regarding water right. The Letaba river is, moreover, one of the rivers serving the Kruger National Park (herein referred to as "the Park") the water requirements of which have, since 1987, been placed under the scientific spotlight in an extensive research programme.[3] This programme is aimed at the acquisition of a proper knowledge of ecobiotic water needs, and will thus hopefully

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1 This includes irrigation within and outside a government water control area, urban use, extra-basin urban use, forestry, erstwhile trust areas, a protected area and a neighbouring country.

2 Irrigation is said to use more than 50% of the available fresh water resources in South Africa (Chapter I).

3 It is known as the Kruger National Park Rivers Research Programme, established in 1987. Chapter I *supra*.

facilitate water administration. An attempt to improve water administration also necessitates a legal investigation, because water is administered in terms of the provisions of the water law.

2.2. HISTORICAL FLOW CONDITIONS OF THE LETABA RIVER

The Letaba river is one of five perennial rivers[4] flowing through the Park. The area of its catchment is 13 850 square kilometres, of which 3 300 square kilometres are situated within the boundaries of the Park.[5] It joins the Olifants river approximately seven kilometres west of the Mozambique border. The joint channel is known as the Olifants river. The Letaba river is about 500 kilometres long, and its catchment stretches over parts of the Northern Transvaal, Venda, and Mozambique.[6] It enters the Park where it adjoins the farm Letaba Ranch (virtually at the Mahlangeni ranger post) and is met here by the Klein Letaba river. Within the Park, it flows through mopane and combretum veld. Riparian growth is scant, but serves as good forage for many local animal species, of which elephant and buffalo are common. Six major weirs had been constructed between the Fanie Botha dam (now Tzaneen dam[7]) and the western boundary of the

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4 The others are the Levhuvhu, Olifants, Sabie and Crocodile rivers. They should rather be referred to as major rivers, because the Sabie river is the only one which had never come to a standstill during dry periods. The Letaba and Levhuvhu rivers can hardly be described as perennial, because they seldom keep flowing in the Park during the dry season. See the Roman law definition of perennial rivers in Chapter III *infra*.

5 Engelbrecht 2.

6 Although this is no longer relevant, these boundaries had been important during the years which will be discussed in this chapter.

7 The name was changed during the new political dispensation which commenced in 1994. For purposes of this historical study, the dam will be referred to as the Fanie Botha dam.

Park, and four within the Park.[8] Irrigation is the major water consumer, abstracting between 61 and 95% of the water in the river.[9]

The Park authorities had for many years been concerned about the flow conditions of the river. As early as 1932, it had been necessary to sink a well in order to supply the Letaba rest camp with domestic water. According to Park records, the river came to a standstill first in 1949, and it has done so regularly ever since. Concerned ecologists maintain that this condition in a normally perennial river may impair the survival of ecobiota.

For the last few years, a weak but relatively constant flow has been maintained in the river within the Park. This is the result of an understanding between the Park and the Groot Letaba Main Irrigation Board (hereafter "the Irrigation Board") in terms of which regular water releases from the Fanie Botha dam are sanctioned. The agreement to do so is however not based on statutory water rights, but on a ministerial directive of contentious legal status.[10] This is obviously an unsatisfactory situation. Current research on ecobiotic water requirements for this and other Park rivers, is aimed at the establishment of a water allocation system which will be legally acceptable.

2.2.1. The years before 1920

According to archaeologists, the lowveld had been inhabited for approximately 500 000 years.[11] Over-exploitation of the Letaba river can however only be traced back to the period after white influence began. The first record of the presence of whites in the

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[8] These are the Black Heron dam, the Shimuwini dam, the Mingerhout dam and the Charles Engelhardt dam, which is the largest of the four. The first three store less than 1 million cubic metres of water each, while the Engelhardt dam stores 3,75 million cubic metres of water.

[9] Engelbrecht 54.

[10] Vide par 2.3.3. *infra*.

[11] Kruger 27.

area, was that of representatives of the VOC who had visited the lowveld in 1725 to investigate trade possibilities with nomadic natives.[12] Permanent settlement only occurred when gold was discovered at Lydenburg in 1869. Good winter grazing and hunting areas had become increasingly attractive,[13] initiating large-scale development in the lowveld. In 1905, the then Department of Agriculture investigated the possibility of irrigation from the Politsi river, a tributary to the Letaba river.[14] In 1911, a canal was built, which made this possible. This project has been controlled by the Tzaneen Irrigation Board since 1918.

In 1911, irrigation possibilities on the right bank of the Groot Letaba river[15] were investigated. A structured irrigation project was established, and has been controlled by the Pusela Irrigation Board since 1929. According to available records, the Groot Letaba river had been a strong perennial river flowing through an exceptionally fertile valley, and therefore it had promising agricultural possibilities.

The picture of this era is different from the point of view of the Park. The Shingwedzi Nature Reserve had been proclaimed in 1903. This was the second step in implementing Paul Kruger's idea to declare game reserves in the lowveld.[16] The Letaba river (from the confluence of the Groot and Klein Letaba rivers) to its confluence with the Olifants river had formed the southern boundary of this reserve. The reserve[17] had been placed under the control of the well-known Colonel Stevenson-Hamilton. By 1905, he had a staff consisting of five rangers and a few policemen, who were however reluctant to

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12 Fourie 11; Pienaar 67.

13 Fourie 11; Pienaar 172 et seq.

14 Department of Irrigation *Regional Report* 1952.

15 This was called the Pusela Block.

16 The first step had been the proclamation of the Sabie game reserve (called the *Sabie Gouvernement Wildtuin*) in 1898 (Pienaar 320 et seq).

17 Together with the Sabie game reserve.

garrison the Shingwedzi reserve due to health risks and the area's seclusion. They had described it as "no place fit for human beings". The first ranger who was stationed in this tsetse fly-, rinderpest- and malaria-afflicted wilderness, was a rugged major Fraser, known for "superb marksmanship with rifle or shotgun".[18] Using 25 dogs, he worked in the reserve for sixteen years. Unfortunately, he left few written records, mainly due to the large area[19] which he had to patrol, but also due to his alleged administrative sluggishness.[20] Stevenson-Hamilton described him as being very observant of facts relating to wildlife, and as having an extraordinary memory. His failure to keep records, however, left this current generation with little historical data on the flow conditions of the Letaba river during that period.

In an undated report in the archives of the Park, Stevenson-Hamilton had referred to "a few perennial rivers" as the only water sources of the reserve. He had not indicated whether the Letaba river had been one of these. The fact that this river had been chosen to form the boundary of the reserve might, however, be an indication that it had indeed been one of these perennial rivers.

According to Park records, the Shingwedzi reserve experienced a severe drought from 1910 to 1916. During this period, various water sources had dried up. Thereafter good rainfall was experienced, and no complaints regarding river flow were recorded. There has been speculation that the Park used to be a rather wet area in early years :

> *"Ons hoor dikwels mense sê dat die land aan opdroog is, en dit wil voorkom of so 'n proses aan die gang is, maar ons het nie genoeg gegewens uit die verlede om ons in staat te stel om selfs te gis of ons die laagtepunt bereik het nie, en of ons slegs halfpad is na die laagtepunt*

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[18] Kruger 50.

[19] Approximately 20 000 square kilometres.

[20] "Fraser cared nothing for desk work or, it appears, for paper in any form..." and "Such contempt did he have for red tape and official documents that he simply ignored them. Having judicial powers as acting warden, he held court and issued sentences but never bothered to keep records ... the result was chaos, which took months to sort out" (Kruger 51).

toe. Daar is geen gegewens binne die wildtuin wat ouer is as 40 jaar nie, maar aan die hand van ou inwoners en langer gevestigde weerkundige stasies buite die wildtuin weet ons dat daar tussen 1890 en 1895 'n tydperk van besonder hoë algemene reënval was. In 'n gebied met die wildtuin se topografie moes hierdie nat jare aansienlike panne, moerasse en vleie veroorsaak het. Al die spruite moes baie sterk gewees het, en tydelike riviere moes lank geneem het om af te loop. Standhoudende riviere het ongetwyfeld geweldige vloedhoogtes bereik, en al hul seekoeigate is baie diep uitgekalwe. Dit het die land vir baie jare in 'n toestand gehou wat moontlik kunsmatig kon gewees het. Eerste indrukke is blywend; en die eertydse wildparadys - wat moontlik regstreeks aan hierdie nat tydperk toe te skryf is - leef nog altyd voort in die herinnering van diegene wat die wildtuin vroeër jare geken het....Na hierdie paradystydperk het die gebied geleidelik droër en droër geword... en as die ou inwoners aan die paradysjare dink, is hul van mening dat die land aan die opdroog is. Maar miskien is die paradysjare weer naby - of was daardie jare 'n speling van die natuur wat nooit weer terugkom nie? Wat is die normale toestand? ONS WEET NIE."[21]

In spite of various attempts to predict wet and dry cycles, no accurate formula has ever been developed to do so.[22] Any theory regarding the flow conditions of the Letaba river during these unrecorded years, has thus been mere speculation. If the river had once been strong and perennial, this could equally well be attributed to the absence of large-scale irrigation and urban development in the upper reaches. It is nevertheless important to attempt to determine how the river has deteriorated since human settlement began taking place on its banks. This knowledge may assist in establishing minimum flow requirements for the Letaba river within the Park.

2.2.2. The twenties

During this decade, the first indications of user competition in respect of the water of the Groot Letaba river can be traced. Union Fruit and Citrus Farms Ltd applied to the water court in 1926 for the apportionment of the water of the river in terms of the

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[21] A presentation by colonel Sandenberg on the annual meeting of the Wildlife Society in 1949.

[22] *Management of Water Resources* 6.12. Cf Pienaar 475.

Irrigation Act.[23] The court then allocated water rights for secondary use to 35 of the 49 existing riparian farms.[24] This order affected 26 096 acres (10 561 hectares) of irrigation land, stretching from the Pusela Block to Belle Ombre, east of Tzaneen.

In the same year, the National Parks Act[25] was promulgated, in terms of which the Kruger National Park was established. The Sabie and Shingwedzi reserves were consolidated to form a single reserve of 19 000 square kilometres in extent.[26] Both banks of the Letaba river had been included in the Park.

Precipitation figures during the first half of this decade had been relatively good, but since 1925 the northern parts of the park became affected by drought. The Letaba river was later described as having degenerated into a series of pools.[27] Stevenson-Hamilton expressed his concern, remarking that "water is only found along the road between the western border and Letaba camp, at the various pumps which have been put up at intervals."[28]

In an internal report written in 1968 it was, however, stated that water provision had played a negligible role in 1929, and that a strong flow should be regarded as "the more luxurious" for that period.

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[23] The Irrigation and Conservation of Waters Act 8 of 1912, s 11(3). In terms of s 11(1), water of a public stream was subject to a preferential order of use, of which secondary use is the use of water for irrigation. This right was subject to primary use, which was use for primary purposes.

[24] The case was not reported.

[25] Act 56 of 1926. This act had been approved on 26 July 1926, and signed in English. It came into force on 15 September 1926.

[26] This is 1 900 000 hectares. Vide Fourie 11; Pienaar 470-516.

[27] Kruger National Park master plan 1926-1945.

[28] This was in one of his regular internal reports. Cf Pienaar 473, 476-7.

2.2.3. The thirties

The drought of the twenties continued until 1935. In this year, the flow of the Groot Letaba river was the lowest ever measured till then.[29] In September 1935, the Lowveld Farmers Union requested the construction of a series of dams. This would not be for irrigation only, but to strengthen the flow of the river. This had however not been approved :

> "...it is not known that there are any suitable storage sites on the above named rivers for even one storage dam...and that a series of such is entirely out of the question. And as regards the Letaba river there has never been any shortage of flow that would need to be augmented for primary purposes."[30]

This reply was not resignedly accepted by the Farmers Union, the chairman of which responded as follows :

> " *Waarde Kol [Reitz]*
> *Die publik wel ieder dag van my weet wat gaanword of u ver ons die dame gaan laat bouw en die Koedesrivier en Brandbontjes rivier.*
> *Koedesrivier moet ons die menste vier kry en die Brandbontjes drie*
> *Kol als u ons nie help dat ons die Dame kry dangaan al die boere oor muir als ons die Dame kry is ons geholpe boere weer . so laat my weet wat gaanen is A.u.b" [sic]*[31]

Government representatives had since then visited the area regularly "to disabuse the minds of those who think that Government has in view a scheme of this kind".[32] This

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[29] According to records of the Department of Water Affairs, this had been 26 cubic feet per second (cusec). This is 0,74 cumec in modern terms.

[30] From a letter by the Director of Irrigation in 1935 to the Lowveld Farmers Union.

[31] Dated 4 January 1936, signed by H C Ackerman.

[32] Extract from a letter by one Rooth to Lewis Esq, Dept of Irrigation, dated 11 August 1936.

had not discouraged the farmers either, and the government finally decided to investigate storage possibilities. It was however decided that there was no genuine storage potential, and the construction of a storage dam was refused. The Koedoes river Soil Conservation Area was established soon afterwards.[33]

Within the Park, the drought had severely affected the area north of the Letaba river. A well with a windmill had been constructed in 1932, to supply the Letaba rest camp with domestic water. Although the water was rather brackish, it met immediate quantitative needs. This source of water soon proved insufficient to meet the demand, and it was replaced by a manual pump in 1938. In 1939, the well was deepened and fitted with a diesel engine. Financial factors constrained any plans to pump water of a better quality directly from the river bed. Fortunately, good rains in the last years of this decade brought relief.

The deterioration of the Letaba river was now causing ecological concern. To save sensitive ecobiota, a series of dams and bore-holes were planned. However, the very idea of artificial water provision for ecobiotic needs was rejected by others as being ecologically unsound. The financial implications of artificial water provision were moreover rather onerous, especially considering that tourism had not been contributing to the Park's income before 1927. For these reasons, the initiative to provide artificial water was delayed.

In spite of irrigation and urban development on the banks of the Groot Letaba river, Park authorities had never blamed the poor flow of the Letaba on over-utilization by these user sectors. It was simply ascribed to natural drought conditions. The search for solutions was also confined to the Park boundaries, and no record of correspondence with outside agencies could be found regarding these water problems within the Park.

[33] This was in 1938, in terms of the provisions of the Soil Conservation Act.

Regional maps of the time either indicated the Park as a blank area or ignored it completely. Flow records contained no data of river flow within the Park.

2.2.4. The forties

By 1942, irrigation practices had grown to such an extent that a departmental investigation was conducted to determine the maximum capacity of the river. In a subsequent report, it was stated that the river was not capable of supplying all the demands existing at that time. This condition was ascribed to over-exploitation upstream, as well as to drought conditions and afforestation in the catchment. It was recommended that the irrigated area of 11 000 acres (4 451,7 hectares) could not be expanded :

> "The conclusion is therefore reached that the present developed area along the Letaba River is just about all that the river can supply with any degree of responsibility. It follows that any appreciable extension of the developed area can only be considered if storage is provided."

It was however suggested in the report that impoundment could increase the capacity of the river such that irrigated areas could be expanded to 50 000 acres (20 235 hectares). For purposes of the calculation of the amount of irrigable land, the river was divided into an upper, middle and lower zone, the lower zone extending to Letaba Ranch, and thus again disregarding the Park as a water user sector.

In the report, the construction of a storage dam at a site which still had to be determined, was recommended as a matter of urgency. In 1947, farmers had formally applied for the construction of a storage dam. A suitable storage site had been selected at the confluence of the Broederstroom and the Helpmekaarspruit. A storage dam situated there, would allow the expansion of the developed area to three times its size.

Within the Park, the drought of the thirties had stimulated renewed consideration of artificial water supply. This led to the implementation of the so-called "water-for-game" programme. It was realized that the creation of artificial sources of water supply could violate natural processes, but it was argued that even this would be a better solution than no water at all.[34] It is significant that solutions were still being searched for internally, although allegations were by then being made that water problems had probably been due to external land use practices. In 1947, in an annual report, the Letaba river was described as a weak stream which carried large volumes of silt. This condition was ascribed to poor agricultural practices in the upper reaches of the river.

In 1949, it was reported that the Letaba river had come to a standstill "once again". It seems clear from the terminology that this was not the first time that this apparently once strong and perennial river had ceased to flow during the dry season. It can be argued that the "series of pools" to which the river had "degenerated" during the twenties,[35] constituted a previous standstill. Be that as it may, this occurrence caused serious concern, and Colonel Sandenberg declared that

> *"...unless strong conservation measures are adopted in the upper reaches of the Letaba, it is evident that the day will come when this once strong perennial river will become a seasonal one."*

It seems that the Park authorities had not considered demanding a sustained flow from the State. Unlike the irrigation farmers who had been in constant contact with the Department of Irrigation regarding their water demands, and who were by then seriously negotiating the construction of a storage dam, the Park was committed to internal solutions. In terms of the water-for-game-programme, dams, windmills, wells, boreholes and drinking troughs were constructed over the length and breadth of the Park. Colonel

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[34] According to U de V Pienaar in the 1947 annual report of the Park.

[35] Vide par 2.2.2. *supra*.

Sandenberg,[36] had at first opposed the idea, but finally conceded under the pressure of the drought :

> *"Dit wil voorkom asof die hele wildtuingebied vir baie jare onderhewig was aan 'n proses van geleidelike uitdroging met nadelige gevolge vir wild en weiding."*[37]

He referred to the rainfall which had for at least eighteen years been precarious and ineffective, causing the desiccation of rivers, springs, water holes and pans. As a result thereof, game had gathered around the remaining water sources, causing overgrazing and trampling of the soil. Overpopulation forced animals to move westwards and out of the Park boundaries where they fell prey to hunting. Sandenberg described this situation as "a disastrous cycle".

In the same year, Orpen emphasised the importance of water provision by recommending that tourism-orientated expenses ought to be cut down to the bare minimum, and that "all our energy resources be devoted to providing more water in the form of boreholes and dams for the animals". He even suggested that the game reserve be closed to the public for a few years, "to give us a chance to catch up and carry out works which should have been carried out years ago".[38]

2.2.5. The fifties

This important decade in the history of the Letaba river was characterized by the construction of the Ebenezer dam, the promulgation of the Water Act of 1956,[39] the

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[36] The Park warden.

[37] Extract from the address of Sandenberg on the annual meeting of the Wildlife Society in 1949.

[38] Extract from a letter of Orpen to Van Graan dated 30 March 1949.

[39] Act 54 of 1956.

proclamation of the Groot Letaba government water control area and the contentious water quota system.

During this decade, little urban development occurred in the area. Tzaneen was the largest town, with 762 inhabitants. The rural population, however, increased sharply. The main water consuming activities were agriculture[40] and forestry.[41] Three main irrigation areas had existed, being Tzaneen, Pusela and Masalal.[42]

During this decade, the borehole which had supplied Pietersburg, situated outside the catchment, with domestic water, dried up, and application was made to the water court for permission to abstract three million gallons[43] of water from the Broederstroom (a tributary of the Letaba river) for domestic purposes. This step followed an unsuccessful application by the town council to purchase land on which to build a dam to supply urban water needs.

At the same time, landowners in the Pusela district lodged an application for permission to build a canal in terms of the 1926 court order. This application was rejected, because *"die gevestigde besproeiingsdistrik het die afgelope 21 jaar geweldig uitgebrei, en dit wil nou voorkom dat die beskikbare waterhulpbronne van die Groot Letaba ontoereikend sal wees om in die waterbehoeftes van al die gronde in die vallei te voorsien".*[44]

In 1952, the Letaba District Development Committee requested the construction of a dam at the confluence of the Broederstroom and the Groot Letaba river, to meet the variety of water demands from all over the Letaba valley. This led to a departmental

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[40] 7 000 morgen (this is 5 995,5 ha) of apples, plums, citrus, vegetables and subtropical fruit.

[41] 97 000 morgen (this is 83 080,5 ha) under indigenous and exotic trees.

[42] These districts had been proclaimed in 1918, 1929 and 1944 respectively.

[43] This is 14 million litres of water, at a flow rate of 159 liters per second.

[44] The private secretary of the minister of Irrigation.

investigation, which eventually resulted in the construction of the Ebenezer dam in 1954. On 13 August 1954, it was reported in the press that a *"reuse dam vir 'winterskuur' van Suid Afrika is in aanbou".*[45]

The Water Act[46] came into force in 1956,[47] replacing the Irrigation Act of 1912. Soon afterwards, the Groot Letaba government water control area was proclaimed.[48] This step had been motivated as follows :

> "To ensure that the stabilisation of the water supplies thus brought about is not largely vitiated by excessive expansion of the irrigated area along the river, it will be necessary to declare the Groot Letaba River valley a government water control area in terms of Clause 59(1) of the Water Act 1956. Therefore the provisions of Clause 62 of the said Act will become applicable, which will mean in effect that the rights to the use of water from the river will be subject to the issue of a permit by the minister of Water Affairs, of such conditions as he may deem fit to impose."

During this decade, the water court order of 1926[49] came under discussion again. It was suggested that the 18 340 acres (7 422,2 hectares) of irrigated land which had been considered by the court for purposes of apportioning the water, had since been expanded substantially, and that the court order could therefore no longer be applied :

> "...the extension of irrigation now to 57 riparian farms shows that the Water Court order no longer represents the irrigation position of this river."[50]

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45 *Die Transvaler* 13 August 1954.

46 Act 54 of 1956.

47 On 13 July 1956.

48 This area was, in fact, already proclaimed to be a government irrigation area in terms of s 98 of the Irrigation Act, but by proclamation 272 of 1956, it was transformed into a government control area in terms of s 59 of the new act.

49 *In re Union Citrus Farms Ltd* (unreported) dated 1926.

50 Report of the regional engineer of the Department of Irrigation (1952).

This view was confirmed in 1954 :

> "In general it can be said that the judgment is not of date, and no longer fulfils any useful purpose."[51]

When the allocation of water quotas in terms of section 62 of the act was made a few years later, the water court apportionment had nevertheless been taken into account, inhibiting irrigation development, to the discontent of farmers :

> "The application of the permit system has brought to a sudden halt the phenomenal expansion of the Letaba Valley."[52]

The allocation of water rights was based on the extent of the area which could be served by the dam, which had in turn been determined by the amount of irrigable land as well as the capacity of the dam.[53]

According to the Department, this reduction in irrigation was justified, because farmers had in the past exceeded their rights. To explain the new policy and the basis on which quotas had been allocated, representatives of the Department visited several farmers' communities. During one event in 1959 the situation was explained to the Letsitele Farmers' Association as follows :

> *"Daar moes toe oor 'n beleid besluit word wat betref die beskikking oor of die gebruik van die water wat in die dam opgegaar sal word, asook die normale vloei in die openbare strome en dit is besluit om al die water aan die boere vir besproeiingsdoeleindes beskikbaar te stel met*

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51 Internal report by the assistant chief engineer Murray.

52 *Cape Argus* 14 May 1959. The same article referred to the Letaba valley as "the multi-million-pound irrigation area in the Eastern Transvaal".

53 For this calculation, interested parties had been requested to lodge their water claims (GN 216/1959 of 10 April 1959). The Park had not reacted to this notice.

uitsondering van 'n klein hoeveelheid wat vir moontlike stedelike en nywerheidsgebruik benodig mag word."

An internal report put the matter as follows :

"Dit sal normaalweg raadsaam wees om 'n redelike hoeveelheid van die beskikbare watervoorrade in reserwe te hou, wat na die goeddunke van die Minister gebruik kan word, en dan tot 'n mate as reserwe vir onvoorsiene en onverwagte toekomstige ontwikkeling op aanvraag sal dien."

During the calculation of these water quotas, neither domestic nor ecobiotic water requirements within the Park were taken into account. This major development phase in the upper reaches seemed to have passed the Park authorities unnoticed. This had been partly the result of tolerable rainfall figures and thus reduced concern during this decade.

The Letaba river once more came to a standstill in 1950, but, although the next year was described as one of the driest years in living memory, it did not happen again in 1951.[54] Complaints were however lodged against poor agricultural methods applied in the upper reaches, which were causing silt discharge. During the following winter, the river ceased flowing for more than a month. It was described as consisting of nothing more than a series of pools. From 1953 till the end of the fifties there was, however, no further cessation of flow, as a result of good rainfall. During the implementation of the water-for-game programme, 23 further dams were planned for 1956, two of which would later be constructed in the Letaba river.

[54] The total precipitation figure had been 6.4" (156 mm).

2.2.6. The sixties

The sixties turned out to be the most important decade in the history of the development of the Letaba basin, and was characterised by continued discontent regarding the permit system, resumed irrigation expansion (including the establishment of sugar and tea plantations), a severe drought, large-scale impoundment, the commencement of the construction of the Fanie Botha dam and the acknowledgement of nature as an additional water user sector.

This decade started with ongoing complaints concerning the unfairness of the system in terms of which irrigation permits had been issued. The basis of the complaints had however changed, in that the *necessity* for the permit system and no longer the *calculation* thereof, was questioned. In a memorandum by the Groot Letaba Action Committee, it was alleged that

> *"[d]ie Departement van Waterwese beweer dat die Ebenezerdam gebou is 'omdat die ontwikkeling langs die rivier die peil bereik het waar die normale vloei van die rivier nie meer kan voldoen aan die vereistes van die bestaande ontwikkeling nie'. Hierdie komitee beweer dat dit nie so is nie"*

The farmers were of the opinion that they had been unnecessarily restricted, because there had been enough water to allow a considerable flow into and onwards through the Park "fruitlessly" :

> *"Die Komitee wil weer eens beklemtoon dat hulle hul vereenselwig met waterbeheer aangesien dit 'n lewensbelangrike saak geword het vir geheel Suid Afrika; maar die Komitee wil ook langs hierdie weg dit duidelik stel dat aangesien die Laeveld nou eers aan die begin van 'n ontwikkelingsperiode staan, en nou nog maar 'n geringe deel van die bevolking dra waartoe dit in staat is, dat daar moet getrag word om nie ontvolking van die platteland ook hier verder in die hand te werk deur onbillike beperkings op die gebruik van oorvloedige water te plaas nie.. As 'n semi-woestynland soos Israel wondere kan verrig met die ontwikkeling van sy ondergrondse waterbronne, waarom kan Suid Afrika nie ook wondere verrig met die*

ontwikkeling van sy bogrondse strome nie, en temeer die Laeveld waar nog massas water nutteloos verbyvloei na die oseaan, terwyl oewereienaars nou alreeds onnodiglik aan bande gelê word."

This argument concerning the alleged unavailing flow of excessive water to the Park and the ocean, was shortly afterwards countered by the effect of the oppressive drought of the sixties, and by a rising awareness of ecobiotic water requirements. By 1965, the influence of the drought was so severe that the Irrigation Board requested the Minister of Water Affairs to consider the construction of a second and even larger dam :

"Sonder die skepping van verdere opgaar fasiliteite, is in u gebied niks meer water beskikbaar met redelike bestendige vloei vir verdeling nie"

The Board motivated its appeal using the following reasons :

(i) The Pietersburg Municipality had, in terms of an order of the water court on 27 April 1954,[55] obtained the right to abstract water directly from the Broederstroom, to store 370 million gallons (1 688,6 litres) and to sell water to the then Bantu Administration at Turfloop. Furthermore, a pipeline was under construction from the Ebenezerdam to Pietersburg.

(ii) The Tzaneen, Politsi and Letsitele irrigation districts were in the process of expansion, and their water requirements had increased accordingly.

(iii) The water requirements of Gravelotte and the surrounding mines would increase to 2 000 morgen-foot (5 222 km^2) within thirty years.

(iv) A certain quantity of water had to be allowed through to the Park.

[55] *In re Pietersburg Municipality* 1954 Vos Rep 182.

By including this last item on the list of additional water users, the Irrigation Board became the first to mention the water requirements of the Park. Although this was probably a tactical step to convince the Department of the need for further storage, it nevertheless advanced acknowledgement of the water requirements of the Park.

In 1967, the Tzaneen Municipality joined in and strengthened the request :

> *"Die dorpsraad van Tzaneen wil u dus beleefd versoek dat die voorgestelde dam by Tzaneen gebou sal word, en wel om die volgende redes :*
>
> *"...my Raad is bereid, en ook uiters begerig, om so 'n dam in een van die puik vakansie-oorde van ons land te omskep..."*
>
> *"...Die onttrekking van 12 000 000 gelling per dag...vir watervoorsiening aan Pietersburg uit die Ebenezer...gaan die voorsieningsbron van hierdie gebied, wat homself reeds geheel ontoereikend bewys het, verder benadeel en dit is dus absoluut noodsaaklik dat dit so spoedig moontlik aangevul word.*[56]
>
> *"...Die Dorpsraad van Duiwelskloof ondervind ook geweldig baie probleme met watervoorsiening aan sy inwoners..."*

The request was also supported by the Afrikaans Business Chamber and the Chamber of Commerce. In 1968, a White Paper was finally submitted,[57] following which a budget was approved for the construction of the Doornhoekdam, steps which were welcomed.[58] No reaction had however been received from the Park regarding the potential effect of the dam on ecobiota.

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[56] Twelve million gallons is 54 768 000 cubic metres.

[57] WP.Y 68.

[58] *"Dié beoogde ontwikkeling is gister as 'baie goeie nuus' en 'van geweldige betekenis' deur woordvoerders van die landbou bestempel"* (*Die Beeld* 29 March 1968).

The Ebenezerdam had never been full since its completion, its contents having in fact dropped to 4% of its capacity during the drought of the sixties. Due to this low water level, and because the new dam would take several years to complete, a second white paper was submitted,[59] proposing four balancing dams.[60] The construction thereof, together with the construction of the Magoebaskloofdam and eleven other weirs which had been planned since 1968, as well as a pipeline to Pietersburg which transfer four million gallons (18 256 000 litres) of water per day, made it clear that the farmers' original argument that water had been available abundantly, was ill-considered.

The construction of the Tzaneendam[61] commenced in 1969, a five million rand project introducing a new era for the Letaba river valley.

Within the Park, four of the five perennial rivers came to a standstill during certain dry seasons of this decade.[62] Pienaar[63] blamed this fact on increased irrigation as well as industrial and urban development on the banks of the rivers. He was of the opinion that the construction of dams and weirs was the only solution for the water shortages in the Park. Four measuring weirs, which also served as storage sites, were constructed in the Park during 1961.

In 1962, the Letaba river came to a standstill once again, as it did almost annually thereafter. During the winter of 1968, it ceased flowing for four months during the dry

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59 WP.II 68.

60 These were Yamorna, Junction, Jasi and Prieska.

61 During the planning phase the dam was renamed from Doornhoek dam to Tzaneen dam. Later it was renamed again under initiative of the farmers' community, to be called the Fanie Botha dam. In 1995, the Minister of Water Affairs and Forestry renamed it the Tzaneen dam. For purposes of this, the old name is used.

62 Kruger National Park Master plan 1960-70.

63 Dr U de V Pienaar is a former chief warden of the Park. He had been the first to blame the river flow on over-utilization upstream. He had taken the water crisis in the Park to heart and played a significant role in the awakening of an awareness of ecobiotic water requirments.

season, so that even the pools dried up. The condition of the river was described in internal reports as "an agonizing sight" and "no more than a seasonal river". Good rain in December 1968 had however raised expectations that conditions would return to normal. On 17 March 1968 the river experienced its highest flow in 23 years : a pump station was flooded, and the river flowed 400 metres wide at some places. This was, however, the end of the good rains for this decade. In 1969, even the larger pools dried up, and in 1970 there was no water left in any natural source in the northern part of the Park.

In a 1968 departmental memorandum, it was stated that the minimum flow conditions in the Letaba had dropped significantly during the previous two decades and that urgent steps were necessary to save fauna and flora. It was regarded necessary to shoot 680 hippos in 1968 in order to prevent unnatural fighting, starvation and exposure. Soon after, funds were donated to the Park[64] for the construction of a 700 million gallon (3, 195 million cubic metres) dam, which was to be erected 3,5 miles downstream from the Letaba rest camp. The Star reported as follows :

> "It is hoped that the new dam will provide a permanent home for the hippopotami in the reserve, of which there are 2 187...The new dam will prevent the elephants from crowding out smaller game...The dam will also attract many crocodile as well as serving as a valuable hatchery of freshwater fish in the Kruger Park."[65]

At a subsequent conference, the chief warden[66] stated that the dam would be of tremendous importance to animal and bird welfare. He said that intensive use of the water upstream of the Park, was the direct cause of the standstills which had started to occur regularly in the dry seasons. This was the first public declaration concerning the

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[64] The donor had been an American conservationist, one Charles Engelhardt.

[65] The Star 19 March 1968.

[66] Mr Rocco Knobel.

state of the Kruger Park rivers. In 1968, Pienaar drew up a memorandum concerning the water problems of the Park :

> *"Daar kan geredelik aanvaar word dat die grootskaalse vraag na water in die Laeveld steeds sal toeneem, veral met die ontwikkeling van die Bantoe-tuislande. Die 'nasionalisering' van die groter riviere in die Laeveld en die behoorlike beplanning en toewysing van waterkwotas aan al die belanghebbende instansies, deur die Departement van Waterwese, sal seker ook nog 'n geruime tyd duur, dog sal selfs dan nog geen waarborg verskaf dat daar wel water beskikbaar sal wees vir die wildtuin (wat aan die end van die tou staan) in gevalle van werklike langdurige droogtes of ander krisistye nie*
>
> *"(D)ie probleem van ernstige watergebrek langs hierdie eens standhoudende strome ... hou groot gevare in - nie alleen vir die aansienlike seekoei-populasie nie, dog oefen dit reeds ook 'n nadelige invloed uit op die oewerflora, die vislewe en die hele riviersisteem.*
>
> *"Gedurende die vorige winter het die waters van die Letaba 'n absolute laagtepunt bereik, en was daar plek-plek myle droë sand tussen kuile versprei. Die toestande van oorbevolking deur seekoeie van die enkele oorblywende waterkuile was skokkend om te aanskou ... Diere kan nie meer hulle rûe onder die water dompel nie en was ongenadiglik deur die son verbrand...Die weiding om hierdie kuile was snuif getrap en die oorbevolkte toestande het aanleiding gegee tot intraspesifiese kompetisie en aanhoudende gevegte onder hulle...*
>
> *"Van 'n normale waterlewe in die Letabarivier is daar lank reeds geen sprake meer nie, en die visbevolking het onherkenbaar agteruitgegaan.*
>
> *"Die huidige toestand in die Letaba moet dien as 'n vingerwysing van wat ook in die ander riviere binnekort te wagte kan wees, en werp 'n ernstige refleksie op ons gereedheid om derglike toestande hier en elders die hoof te bied."*

Pienaar warned that if these conditions were allowed to continue, a destructive disturbance of the natural balance could be expectected in the very near future.

It seems clear that the flow conditions of the Letaba river had, since the establishment of the Park, gradually deteriorated to such an extent that the river could, by the end of

the sixties, no longer be classified as one of the strong and perennial rivers in the Park. There was no lack of concern, but this attention was confined to inside the Park. Although over-utilization upstream was blamed, no remedies to address this cause were ever sought. Internal measures such as the construction of dams and boreholes, were regarded as the only solution to the water shortages. If desiccation of the Letaba river could be attributed to natural conditions, then these steps could be considered more appropriate. But since the water problems were apparantly the result of external practices, the Park can be said to have erred by failing to attempt to obtain legal remedies. The Park evidently considered their national bargaining position for water as very weak at that time.

2.2.7. The seventies

The most important occurrence in the Letaba catchment during the seventies, was the construction of the Fanie Botha dam in October 1977.[67] The dam, which had been planned since 1968 when a White Paper had been submitted, took four years longer to complete than had originally been planned, mainly due to high rainfall during the early seventies. Moreover, the dam was eventually approximately three times its originally intended size.[68] The dam had several purposes, viz to supply an irrigation demand of 12 185 hectares, to provide water for urban use in the fast-growing Tzaneen, to serve as a fishing resort and in general to stabilize the flow of the over-exploited Letaba river.

The seventies were also known for high rainfall figures. The Irrigation Board had claimed storage rights of surplus water in 1974. In April 1978, within six months after completion, the Fanie Botha dam overflowed. In spite of this apparent success of the dam, and besides the relief which it had brought to a situation of continuous water

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[67] The dam had officially been taken into use in March 1978. The details concerning the dam are contained in white papers WP.Y 68, WP.N 69 and WP.N 70.

[68] Viz 158,85 million m^3. In 1977, the assured yield was estimated at 50×10^6 m^3, which had to satisfy a demand of $92{,}14 \times 10^6$ m^3. During construction, two white papers (WP.N 69 and WP.N 70) were submitted to make provision for the enlargement of the dam.

shortage since the thirties, the farmers had been busy preparing petitions for the construction of a third dam.[69] One of the reasons for this, was the fast population growth within rural homeland areas, which had been exempted from the provisions of Chapter 6 of the Water Act.[70]

Another aspect to which farmers had given much attention, was the necessity to revise irrigation permits, the ones existing then having been issued just after the completion of the Ebenezer dam, and therefore not taking into consideration the changed position after completion of the new dams.

During this decade four weirs, viz Yamorna, Junction, Jasi and Prieska had also been completed.[71]

Within the Park, the seventies started off with good precipitation, terminating the drought of the sixties. The intensity of the water-for-game project had however not been reduced, because "the excessive extraction of water from rivers outside the boundaries of a protected area must be countered by buffer actions, aquatic habitats must be maintained, and induced desiccation must be combatted".[72] It was now clearly acknowledged that river conditions were in fact influenced by more than natural factors.

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[69] Correspondence in this regard by the Leydsdorp Boerevereniging, the Groot Letaba Main Irrigation Board and the Letsitele River Irrigation Board is on record in the files of the Department.

[70] The exemption had been proclaimed by Proclamation 273 of 1973. This implied that government control in the form of control areas was not applicable in trust areas. Therefore they were not subject to permits in terms of the act, but water was sold to them at a tariff.

[71] The details thereof is contained in WP.II 68.

[72] Kruger National Park Master plan 1970-80.

Remedies were, however, still sought internally,[73] and no evidence of external communication in this regard could be found.

The Engelhardt dam was completed in 1970. The Shimuwini, Mingerhout and Black Heron dams were completed soon after.[74] These dams stabilized the flow of the Letaba for a few years. Hippo pools could now be replenished regularly. Unfortunately silt, deposited by flood water, soon caused problems.[75] This had however been counteracted to an extent by the opening of the sluices of the Fanie Botha dam in 1978. In the Park's annual report of 1979, hope was expressed that this dam would finally stabilize the river.

Precipitation had however again started dropping in 1978, and once again the flow of the river caused concern. In the 1981-82 annual report, it was reported that it was time again "to dust the water-for-game-engines for use in the very near future".

2.2.8. The eighties

From a conservation viewpoint, there was a breakthrough during this decade, in that ecobiotic water requirements received sudden general recognition. For the first time since the establishment of the Park, active communication between the Park and the Department of Water Affairs, as well as between the Park and other user sectors, was inaugurated. This led to the establishment of various programmes aimed at water supply for ecobiotic purposes. This decade was also known for a countrywide drought.

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[73] The value of this program, should however not be under-estimated. In the annual report of 1970-71, it was reported that prior to the rain, almost all the pools had been dry, which caused over-population of hippos around these pools, and in its turn caused the pollution of the water to such and extent that it became undrinkable for other animals. The boreholes and windmills brought relief, but the areas around these water holes were trampled to a soggy mass.

[74] This had happened in 1972, 1973 and 1974 respectively.

[75] Kruger National Park annual report 1977-78.

Integrated river management (now also aimed at the inclusion of protection for rural and ecobiotic water needs) and further impoundment were aspects which received departmental priority in this decade. Because certain provisions of the Water Act had not previously been applicable to the trust areas, water utilization in these areas was rather uncontrolled. The farmers were concerned about this situation and requested further storage on the Letaba to accommodate this growing demand. In terms of the first investigation into further storage, the water requirements of the Park was estimated at 0,6 cubic metres per second.[76] It was suggested that, in considering further storage, this requirement had to be complied with. This was the first initiative by the Department to accommodate ecobiotic water requirements.

The wet cycle of the seventies was rounded off by good rainfall in the Park during 1980.[77] The decision to launch the water-for-game programme once more, was taken unenthusiastically. Although the value of this programme had not been not denied,[78] a study undertaken by Joubert and Gertenbach in 1981, concluded as follows :

> "A programme of general water provision was also considered a violation of the principles of the preservation of pristinity".

Although these scientists had been of the opinion that the decision to fence the Park necessitated human interference with the course of nature, they suggested that the influence of artificial water provision on ecobiota was not yet properly understood. These scientists rejected the idea of the construction of dams in streams within the Park :

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[76] This figure was determined in 1980, with the help of flow records and in consultation with the Park engineers.

[77] Park annual report 1980-81.

[78] Kruger National Park Master plan 1980-85 : "Our water provision program, which has continued unabated since the droughts of the 1960's and with which we are still busy, is of incalculable value" and "*Indien hierdie droogtetydperke moes ingegaan word sonder die windpompe en damme wat destyds opgerig is, sou die een katastrofe op die ander die NKW getref het*" (Annual report 1982-83).

> "... what right do we then have to disturb (perturb) such a natural drainage system with a dam of which we cannot grasp the consequences?"

This opinion had however not necessarily represented Parks Board policy :

> "In the water stabilization program of the Park, the well distributed network of natural waterholes and springs which prevails during times of average or above-average rainfall is considered the more desirable "normal" situation than the scarcity or complete absence of water over large areas during periods of prolonged drought."[79]

The effect of artificial water provision on ecobiota received further attention in the following years. This loss of trust in an established project, together with the intensifying drought, had possibly contributed to the decision to finally approach the Department with the water dilemma, preceeded by some incidents :

In March 1982, the Park warden had requested the Irrigation Board to release water from the Fanie Botha dam to relieve the critical water shortage in the Letaba river. Soon afterwards, members of the Irrigation Board, the circle engineer of the Department and members of the Parks Board held a meeting to address the water problem. It was decided that the Irrigation Board would release small quantities of water from time to time, and that the results would be monitored. Members of the Irrigation Board raised the opinion that the minister had previously exempted the Board from the obligation to release water for the Park. This was seen as a potential area of dispute, and motivated the Park warden to request the Chief Director of National Parks[80] to approach the Minister of Environment Affairs with the matter :

> *"Daar is wel, sedert die kritieke droogte van 1970, 'n aantal stuwalle in die Letabarivier gebou dog die opgegaarde waterkapasiteit van hierdie damme is nie sodanig dat hulle 'n*

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[79] Pienaar 1982.

[80] Dr A M Brynard.

gewaarborgde vloei van water deur die hele droë seisoen kan waarborg nie om sodoende die waterlewe van hierdie rivier te vrywaar teen die rampspoedige gevolge van totale desikkasie(sic). Daar is egter aanvaar dat die Fanie Botha opgaardam wel in hierdie behoefte sal kan voorsien.

"Na lang bespreking met die dagbestuur van die Groot Letaba Hoofbesproeiingsraad is daar uiteindelik op 'n interim maatreël ooreengekom waarvolgens daar wel 'n klein hoeveelheid water deurgelaat sal word en dat die trefafstand van die verhoogde vloei in die wildtuin deur ons amptenare gemonitor sal word met terugvoering aan die sekretaris van die besproeiingsraad. Dit is egter duidelik gestel dat indien daar beperkings ingestel moet word, die wildtuin waarskynlik eerste aan die kortste end sal trek.

"Indien ons ons bewarings- en toerisme-ontwikkelingstaak in die Krugerwildtuin na behore wil uitvoer is hierdie reëling nie op die medium of langtermyn aanvaarbaar nie en sal daar 'n meer duidelike en werkbare prosedure ingestel moet word om aan ons waterbehoeftes te voldoen. Die Parkeraad is nie by magte om, met die fondse wat tans deur die Staat aan ons toegeken word vir ons water-vir-wildprogram, die tipe stuwalle in die groter riviere te bou wat genoegsame kapasiteit sal verskaf om die riviere aan die loop te hou gedurende die droë seisoen nie"

The Chief Director also held a meeting with the Deputy Director-General of the Department[81] on 20 April 1982. It was proposed that water in the Fanie Botha dam which was reserved for Tzaneen, should be made available on a temporary basis for use in the Park. This proposal was accepted,[82] the minister confirming the arrangement in writing, to obviate negative reaction from the farmers. The Circle engineer was tasked with investigating an alternative solution, such as the application of emergency measures,[83] to solve the problem. For the longer term, the modification of the system in terms of which water rights were allocated, would also have to be investigated. The Irrigation Board was notified of these decisions. In November 1982, the Park requested

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81 J G du Plessis.

82 Two or three short releases of 6 cumec each were decided upon.

83 In terms of s 9A of the Water Act.

the first release. The Irrigation Board replied that a constant flow rate of 0,5 cumec had been maintained at Letaba Ranch, and that they required timeous and continued communication was necessary to ensure that the *ad hoc* releases functioned effectively. To comply with this request, the ranger at Mahlangeni was instructed to monitor the flow regularly, so that the Irrigation Board could be advised of a reduced flow in time. In spite of these measures, Pienaar reported as follows in 1983 :[84]

> *"Die Letabarivier hou reeds weer vroeg in die wintermaande op met vloei, en sporadiese waterkwotas word op aanvraag van die streeksingeneur van die Direktoraat van Waterwese deur die Letaba Waterraad uit die Fanie Botha dam losgelaat, indien probleme met water by die Letaba ruskamp ontstaan. Die reëling is egter onbevredigend, onprakties en ook verkwistend. Die afstand wat water in die droë Letababedding moet afbeweeg om die wildtuin te bereik is so groot dat groot hoeveelhede water in die proses doelloos verlore gaan. Onlangs is daar groot probleme by die suigpunt van die Letaba ruskamp ondervind as gevolg van die dalende vlak van water uit die Fanie Botha dam. In opdrag van die streeksingenieur is daar dan ook 720 000 kubieke meter water uit die Fanie Botha dam losgelaat vir die wildtuin, dog van hierdie water het nie 'n druppel die wildtuingrens bereik nie"*

The Irrigation Board had in the meantime suggested that the Park should pay for water, which proved that the dispute regarding water rights for the Park had not yet been fully solved. The chief engineer of the Department then proposed that the existing water quotas[85] be revised, in order to accommodate the water requirements of the Park.[86] Although 25,26 million cubic metres of the contents of the dam[87] was allocated to Tzaneen for urban use, it was estimated that the water consumption of this town would not exceed 3,5 million cubic metres before the year 2000. It was thus suggested that quotas could be reallocated to allow 15 million cubic metres to the Park and 12,39

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[84] In a memorandum entitled "Die huidige en toekomstige waterbehoeftes van die Krugerwildtuin uit die Letabariviersisteem" dated 11 November 1983.

[85] As set out in white paper WP.J 71.

[86] Which had been estimated at 0,6 cumec.

[87] Which contained 79,88 million cumec.

million cubic metres to Gazankulu. The Circle engineer supported this proposal, but the Chief Engineer had another suggestion :

> *"Indien verdeling van water op die gebruiklike grondslag, gebaseer op potensiaal sou plaasvind, sou die wildtuin geregtig wees op 'n derde van die normale stroming. Aangesien al die normale stroming aan die besproeïers stroom-op van die wildtuin uitgedeel is, is daar 'n saak uit te maak ten gunste van die loslating van kompensasiewater uit die Fanie Botha dam vir die wildtuin. Die NKW is van onskatbare waarde vir die SA toeristebedryf en dit is in die staat se belang dat die ekologie beskerm word...*

and

> *"In die lig van die feit dat die volle normale stroming sonder inagneming van die wildtuin se behoeftes toegedeel is, word daar aanbeveel dat die water gratis aan die wildtuin voorsien word uit die Fanie Botha wanneer nodig".*

This proposal of the Chief Engineer was approved by the minister on 21 November 1983. The Circle engineer's proposal was thus rejected, and the Park had to accept *ad hoc* releases instead of a legally protected quota. However, the Irrigation Board was still not satisfied, and requested :

> *"(a) 'n meesterplan vir die Groot Letabarivierkompleks opgestel word waarin die behoeftes van die RSA, Gazankulu, Lebowa en die NKW in ag geneem word;*
>
> *(b) die oprigting van 'n derde opgaareenheid in die Groot Letabarivier onmiddellik op die prioriteitslys geplaas word;*
>
> *(c) die uitneem van water na buite die natuurlike afloopgebied bevries word;*
>
> *(d) die huidige beleid tot reservering van relatief groot hoeveelhede binne die kompleks hersien word en dat sulke toekomstige gebruik uit toekomstige ontginning voorsien word;*
>
> *(e) waar die groei in landbou se aandeel landswyd laer sal wees as vir ander sektore, die beginsel nie hier sal geld nie en dat die huidige beleid van die Direktoraat Waterwese in hierdie verband hersien word en toedelings aan landbou verhoog sal word."*

The Irrigation Board insisted that if water were to be allocated to the Park, it should share in the costs. The Park requested a well-considered and economically justifiable

water plan for the Letaba river which would stabilize the river flow within its boundaries. Additionally, Pienaar set out his long term ideas in an internal memorandum :[88]

"Al vyf die riviere wat as die hoofslagare van die gebied vanuit 'n waterverskaffingsoogpunt beskou kan word, was twintig jaar gelede nog sterk, standhoudende strome, selfs gedurende droogtetydperke. Toenemende druk van buite ons grense deur die landbou, stedelike ontwikkeling, mynbou en industrialisasie en onoordeelkundige boomaanplantings in die opvanggebied van hierdie riviere het egter so 'n eskallasie in waterverbruik vanuit hierdie riviere tot gevolg gehad dat die Letabarivier steeds ten tye van die vorige droogte era (in die sestigerjare) ophou vloei het in die wildtuin, gedurende die wintermaande. Die Parkeraad moes noodgedwonge, teen groot koste, 'n reeks stuwalle ... aanbou om die toestand enigsens te beredder. Hierdie noodmaatreëls was egter nie voldoende om 'n gewaarborgde lewering van goeie kwaliteit water aan die Letaba ruskamp ... te lewer gedurende kritieke droogtetye soos die huidige nie en kon ook nie die probleem oplos van die Raad se primêre bewaringsplig jeens die unieke spesies waterlewe in dié rivier wat slegs in goedbelugte, lopende water kan oorleef nie.

"Die aanbreek van die huidige droësiklus gedurende 1980/81 het egter spoedig die gevaartekens uitgewys van die omvang van waterverbruik buite die grense van die wildtuin, die probleme wat dit inhou vir die Raad se langtermyn bewaringstrategie en hoe weerloos die wildtuin wat aan die eindpunt van dié riviersisteme wat die Laeveld van wes na oos dreineer geleë is, is jeens oormatige waterverbruik buite ons grense (waar daar nog nie vaste waterkwotas in terme van Staatswaterbeheerde skemas aan ons toegewys is nie)...

"'n Verhoging van die Engelharddam met ongeveer 1-1,5 meter sal waarskynlik 'n korttermynoplossing bied vir die waterprobleme van Letabaruskamp wat ook nie besonder koste-intensief sal wees nie 'n Paar addisionele lae stuwalle tussen Letaba-kamp en die Shimuwini-stuwal, om die seekoeigetalle meer eweredig te versprei, kan ook van waarde wees.

"Ten einde die hoof-bewaringsprobleem van die Letabarivier op die lang termyn te beveilig is daar egter bereken dat 'n minimum gewaarborgde vloei van ongeveer 0,7 kumek noodsaaklik is om 'n geringe stroompie water in die rivierbedding in stand te hou...

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[88] "Die huidige en toekomstige waterbehoeftes van die Krugerwildtuin uit die Letabariviersisteem" dated 11 November 1983.

"Dit is egter uit onlangse ondervinding duidelik dat sodanige lewering, ten spyte van streng beperkings onder artikel 9A van die Waterwet, nie voorsien kan word vanaf die Fanie Botha dam by Tzaneen nie, en dat daar nader aan die wildtuingrense genoegsame opgaarkapasiteit vir dié doel geskep sal moet word...

"Wat wel vir die Parkeraad en die wildtuin by name ter saaklik is, is 'n weldeurdagte en ekonomies regverdigbare waterplan vir die Letabarivier wat ook die nodige stabilisasie van watervloei in die wildtuingedeelte van die rivier sal bewerkstellig.

"Daar moet egter nie slegs klem gelê word op die moontlikhede van wateropgaring d.m.v. damme nie, dog moet ook indringende aandag gegee word aan ander vorms van water- en omgewingsbewaring soos goeie bestuur van opvanggebiede, bosaanplantings slegs in dié gebiede wat minimum invloed op waterafloop sal hê, erosiebestryding, behoorlike weidingsbestuur, rasionele benutting van ondergrondse waterbronne, weermodifikasiemoontlikhede, waterbesparings- en hersikleringsprogramme, verbeterde besproeiingstelsels (soos die drup-, mikro- of sweetpypstelsels i.p.v. vloedbesproeiing) vir sekere landbougewasse en doelgerigte bevolkingsbeheer deur gesinsbeplanningsprogramme."

On 14 February 1983, negotiations aimed at long-term solutions were resumed. Pienaar expressed concern regarding *ad hoc* releases : he was of the opinion that much water was lost between the dam and the Park, lessening the guaranteed flow of 0,6 cumec. He referred to this plan as "unsatisfactory, unpractical and wasteful", and proposed further storage, closer to the western boundary of the Park. The Parks Board was subsequently been notified that :

"Die lae vloeie van die Letabarivier gedurende die afgelope paar jaar is ontleed en daar is besluit om 'n toekenning aan die wildtuin uit die Fanie Botha dam te maak. Indien die vloei in droogtetydperke tot minder as 0,6 m^3/s daal, sal aanvullings uit die Fanie Botha dam gemaak word. Die Minister van Omgewingsake het reeds goedkeuring tot gratis aanvullings verleen."[89]

[89] Letter by the director-general dated 28 March 1984.

The latter meeting therefore seemed not to have contributed towards a solution. In the meantime, the Leydsdorp Boerevereniging had lodged a claim for improved institutional control, viz :

> *"(i) Die daarstelling van 'n funksionele staatkundige liggaam wat belas is met die ondersoek en oorhoofse beplanning van waterbronne tussen die RSA en die nasionale state.*
>
> *(ii) Die daarstelling van 'n meganisme vir die beheer en ontwikkeling van waterbronne tussen die RSA en nasionale state.*
>
> *(iii) Die daarstelling van 'n plaaslike liggaam deur kundige mense, wat plaaslike toestande ken, en met skakeling en kontrole hierdie besluite kan implementeer.*
>
> *(iv) Dat die beplande dam in Lebowa by Tours Koffieprojek gebou word vir gebruik van Lebowa en Gazankulu met die gebruiklike deurlating van water vir primêre gebruik.*
>
> *(v) As teenprestasie vir hierdie vergunning verwag die blanke boere voorsiening van water laer af in die rivier."*

Continued pressure for the institution of an overall strategy eventually resulted in a meeting between the minister and representatives of the Board, Gazankulu, the Park, the Letaba District Agricultural Union and the Leydsdorp and Letsitele Farmers' Associations, to discuss additional storage.[90]

In June 1984, the Department issued a preliminary report which summarized the water situation in the Letaba basin, in which the water requirements of the Park were fixed at 18,84 cubic metres per second. This report led to the appointment of consulting engineers Steffen, Robertson & Kirsten, to do an extensive study to propose a long-term management system for the valley, which report was completed in 1991.

In spite of these attempts, a spirit of despondency could be detected in the annual reports of the Park during these first years of the drought :

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[90] The meeting was held on 6 December 1983.

"Die meeste van ons 'lopende riviere'[91] is deur die droogte en toenemende onttrekking van water buite die wildtuingrense aangehelp op hulle pad na uiteindelike permanente status van kuil- of tydelike riviere."

It was furthermore reported that the Letaba river, in spite of what was called "sporadic replenishment from the Fanie Botha dam", came to a standstill and remained so through the 1983 winter. During this period, the Klein Letaba river came to be regarded as the main water source of the Letaba river.[92] At this stage, the Fanie Botha dam was only 10% full, proving it ineffective in supplying water to the Park. In the meantime, the Department was investigating further storage downstream. On 12 August 1985, the Irrigation Board submitted a consultant's report regarding further storage on the farm Nondweni. Without investigating the ecological consequences of the construction of a dam so close to its boundaries, the Park supported the plan :

"Aangesien ons ook uit dure ondervinding geleer het dat, by gebrek aan 'n doeltreffende inspektoraat, dit gewoonlik die verbruikers laer af langs 'n rivier is wat aan die kortste end trek na die toekenning van waterkwotas, sal dit uiteraard in ons belang wees indien die addisionele opgaarkapasiteit in die Letabarivier so na as moontlik aan ons wesgrens daargestel kan word."[93]

Two months later, the Irrigation Board requested the Park to make a contribution to the construction expenses of the dam, to which the Park agreed conditionally. The Department, however, had some objections : first, there were no funds available. Secondly, it was argued that a hydrological investigation had not been completed yet. Thirdly, according to the Department, it had not yet been proved beyond doubt that the construction of such a dam would not be harmful to ecobiota. For these reasons, the

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91 The previous classification of natural water as either "perennial" or "intermittent" rivers, had by now made way for a distinction between "running rivers" and "streams".

92 This tributary of the Letaba had, however, flown through agricultural areas where agricultural methods were underdeveloped, which caused large amounts of silt to be carried down, increasing the silt problem of dams within the Park.

93 Letter dated 1985-09-23.

Department refused permission for the construction of the Nondweni weir. While further investigations were being undertaken, riparian farmers (including those from Gazankulu) placed increased pressure on the Department to reconsider their decision.[94] In August 1986, the planning engineer of the Department reported that the construction of the weir could actually reduce flow to the Park. He proposed that the dam could be built, but on the condition that a certain specified yet revisable minimum flow would be allowed through to the Park at all times. This minimum flow was later fixed at 0,3 cumec in the winter and 0,6 cumec in the summer. It was moreover specified that the so-called "release document"[95] had to be honoured, meaning that additional releases would be made when the flow had dropped below 0,6 cumec. It was further stipulated that a Parks Board representative had to be co-opted on the Irrigation Board. The Department had made it clear that it would make no financial contribution towards the construction of the weir, because the purpose thereof was mainly to assist the Gazankulu farmers.

The Nondweni weir was never built, evidently due mainly to financial problems. A representative of the Park, however, took up a seat on the Irrigation Board in May 1988.

During the summer of 1986-87, the drought led to the worst water need in the Letaba rest camp since the thirties. The rainy season was characterised by heavy hail storms, and although the level of the Fanie Botha dam reached the 50% mark, the cold water caused mortalities of aquatic biota downstream. This die-off was followed by a flood, described as the severest since a flood during the cyclone Emily. Despite this event, the river came to a standstill soon afterwards, and at the subsequent Irrigation Board meeting, the Parks Board representative[96] requested a water release of 0,5 cumec. On

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[94] Letters had been received from the Board (1986-07-28), the District Agricultural Union (1986-08-04) and Gazankulu (1986-07-09).

[95] This is the letter of confirmation that the minister had signed on 21 November 1983 that the Park had been entitled to *ad hoc* water releases from the Fanie Botha dam.

[96] Dr Freek Venter.

20 January 1989, a further release of 0,6 cumec was requested, because it was stated that even the hippo pools were drying up. Although the Irrigation Board agreed in principle to this release, there were doubts as to whether there was sufficient reserve water in the dam, and so it was proposed that water from the Ebenezer should be used. During this discussion, the Park representative produced the release document, but this was rejected by the Irrigation Board as "*'n ongespesifiseerde toekenning ... by 'n ongespesifiseerde punt*".

In the following months, good rains fell in the Letaba catchment, causing a strong flow until April 1990. When the Park had next complained about insufficient flow, the Irrigation Board once again suggested that the Park should pay for the water. The Department was subsequently requested to investigate the question, and determined that the cost of the released water would be debited against the account of the Park's quota from the Fanie Botha dam. The warden of the Park,[97] however, replied that the released water had not even reached the Mingerhout dam, and that only water which had reached the Letaba rest camp should be so debited.[98] The Department eventually terminated the negotiations after good rains had caused the level of the dam to rise to 98%.

At the meeting in November 1989, the Irrigation Board enquired whether the Park was making proper use of their internal weirs to alleviate the effects of drought situations. During a subsequent meeting, the Park member furnished four reasons why the weirs had been of little value in stabilising the flow. Owing to sporadic releases during the next winter, the Letaba kept flowing through the winter, and this issue was not discussed again for some time.

Outside the Park, the full dam and the good rains unfortunately brought little peace of mind. On 7 February 1989, the Commissioner-General of Gazankulu requested the construction of a dam. The minister reacted with several objections, including (a) that

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[97] Dr S C J Joubert.

[98] This reaction raises doubt as to whether the Park had ever accepted the provisions of the release document, in terms of which it had no quota, but was entitled to *ad hoc* compensation water only.

over-utilization of the river was a major cause of the instability of the river; (b) that there was a lack of proper storage sites; (c) that there was a substantial probability of silting; and (d) that a dam so close to the Park boundary could be ecologically detrimental, because it was likely to affect natural floods and water temperature. He was of the opinion that it was necessary to wait for the results of the consultants' basin study.[99] At the same time, the Lower Letaba Citrus Co-op objected to releases for the benefit of the Park while no reserves for such releases had been stored in the dam. They requested additional storage to meet both ecobiotic and agricultural needs. The Department however refused, claiming that the area was hydrologically inappropriate due to high evaporation and low precipitation, and because large farming areas would have to be sacrificed. A preliminary report by the consulting engineers recommended that either existing dams should be raised, or that water resources in the upper reaches should be developed. The Citrus Co-op then demanded high-level negotiations with all interested parties. These negotiations were soon initiated, and the Commissioners-General of Gazankulu and Lebowa, representatives of the Park, the Department and the District Agricultural Union proposed the establishment of a basin authority. An advisory committee in terms of section 68 of the Water Act had eventually been established.

This step towards the solution of the problems of the Letaba basin, had been partly influenced by a series of workshops and symposia held since 1985, signalling a growing awareness of ecobiotic water requirements :

(i) On 15 August 1985, the Letaba Basin Steering Committee held their first meeting attended by representatives of Gazankulu, Lebowa and Venda.

(ii) On 17 July 1986, the RSA and Gazankulu Permanent Water Committee was established to develop plans which would finalise water distribution agreements between their respective areas.

[99] This is the basin study by Steffen, Robertson & Kirsten referred to earlier.

(iii) On 29 October 1986, a workshop on river classification was presented by the Department, to develop a classification system which could be used in the basin studies relevant to the Park.

(iv) On 16 March 1987, a workshop was held in Skukuza on the water requirements of ecosystems, resulting in the establishment of an extensive research programme. The workshop was followed by a field study during the week of 5-9 May, attended by representatives of the Department and the Transvaal Provincial Administration. During this excursion, localities were determined at which the Department would erect a total of 24 measuring weirs, 30 measuring plates and two lectratec units to monitor the flow in the Park. A further result of the workshop was that certain shortcomings in the knowledge of the functioning of ecosystems had been identified.[100] It was realized that the Park could not demand legal protection of water rights unless ecobiotic water requirements could be motivated, quantified and qualified.[101] Gertenbach proposed a field project in terms of which the influence of hippos on the morphology of the river channels could be monitored, a project which led to the broader idea of monitoring ecobiotic water requirements, and eventually the commencement of several such research projects in the years to come. The Kruger Park Rivers Research Programme was formally established on 11 October 1988. Representatives of the Foundation of Research Development (FRD), the Departments of Water and Environment Affairs, the Water Research Commission and the National Parks Board had initiated the programme, with the objective "... that a cooperative multidisciplinary research programme should be urgently initiated in order to provide the appropriate information needs for assessing the water requirements of rivers of the Park and adjoining nature reserves".

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[100] According to Dr W P D Gertenbach, then a senior researcher in the Park.

[101] This appears from a letter from the chief engineer of the Department to the managing engineer of water planning, dated 1987-07-27.

2.3. WATER RIGHTS IN RESPECT OF WATER FROM THE LETABA RIVER

From the above, it seems that water allocation from the Letaba river took place firstly by way of a water court order,[102] and secondly by water allocations in terms of the Water Act of 1956.[103] Allocations were done for the section of the river upstream of its confluence with the Klein Letaba river (this is the point where it enters the Park).[104] This was because attention was being paid to water allocation for irrigation purposes only. Water requirements within the Park were not considered until the Park authorities complained about it during the eighties. In an attempt to then address this problem, a document was signed by the minister, in terms of which compensation water had to be released from the Fanie Botha dam at the request of the Park.

In this paragraph, the legality of existing water rights will be evaluated. This will determine the necessity to reallocate the water of the Letaba river amongst all water user sectors, or to amend the statutory water allocation system.

2.3.1. *In re Union Fruit & Citrus Farms Ltd*[105]

The most important court order in respect of the water rights of riparian owners on the Letaba river was granted in 1926. An application in terms of section 32(b) of the Irrigation Act of 1912,[106] was brought to the water court for the definition and recording

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[102] *In re Union Fruit and Citrus Farms Ltd* (unreported) dated 1926.

[103] Sections 62 and 63.

[104] This is in respect of the Groot Letaba government water control area only.

[105] (Unreported) Transvaal Water Court 1926.

[106] Act 8 of 1912.

of rights to the use of the water in the Groot Letaba river, and for the apportionment and distribution thereof for irrigation purposes.[107]

The applicants were the owners of the riparian farms Bellevue, Leeuwfontein and Vrede. The application involved 35 riparian farms situated from the confluence with the Broederstroom[108] to the confluence with the Janetsi river.

Before the commencement of the proceedings, the parties had instructed an engineer[109] to determine the total irrigable areas,[110] as well as the maximum flow which each channel could divert from the main stream.[111] The parties had also agreed that the water requirements per 100 acres (40,47 hectares) was one cumec of water. The only task left to the court was therefore to distribute the water amongst the irrigators.

In spite of the parties claiming that the annual runoff of the river was sufficient to irrigate 26 096 acres (10 561 hectares), the court held that this was not proved to its satisfaction, because the measuring walls were deficient. The court was moreover not convinced that it was fair to exclude downstream riparian owners from the allocation of water rights. For these reasons, the court proposed distribution as follows : the readings at all measuring stations had to be taken *de die in diem* at the point of diversion and added to the reading of a measuring weir below the last point of diversion (which weir would measure what was left of the stream). The total then had to be divided in relation

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[107] Jeppe J, in his judgement, did not specifically refer to this section of the act : "In this application the applicants ... ask for apportionment and distribution (definition and recording of rights) of the use of water of the Groot Letaba River and its tributaries..."

[108] Where the Ebenezer dam had later been constructed.

[109] H Howitz. Hereafter reference will be made to the calculations of Howitz, which will imply the irrigable areas and water duty which he had determined for purposes of this water court case.

[110] Which area was determined to be 26 096 acres (10 561 hectares).

[111] This figure had been amended by the water court in 1934.

to a fixed formula, and each channel had to divide its portion in relation to the irrigable area of each riparian farm.

In order to do this, it was necessary to construct and maintain accurate measuring weirs, to measure the flow on a daily basis, for which the parties agreed to carry the costs. The court ordered that, unless such weirs had been constructed within twelve months after the decision, no further water abstraction would be allowed. Furthermore, readings had to be taken at 08h00 each morning by the owners and sent to the Circle engineer. In the case of the failure of such record-keeping, the court could suspend diversion temporarily. The last measuring weir, ie the one measuring the remainder of the stream below the lowest point of diversion, had to be constructed by the state. The parties could apply for the proclamation of a river board in terms of section 5 of the Act, if they regarded it necessary to obtain the power to control or adjust the weirs. Otherwise, any party could approach the court for further instructions.

The court had therefore not finally distributed the water, but merely set a formula for fair distribution, the application of which was totally dependent on the construction and maintenance of measuring weirs at each point of diversion. Each tributary had to be dealt with separately, because no riparian owner was obliged to allow water through to the main stream if he could apply it beneficially for irrigation. The court stated that the order was only binding on the parties involved in the court proceedings.

Measuring weirs were not constructed within twelve months. In terms of the court order, the failure to do this would automatically place a prohibition on any further water abstraction. In spite of this, irrigators continued to irrigate. Moreover, they pressured the Department to consider further storage, because the flow seemed to have become insufficient for increased irrigation requirements. In terms of section 38 of the act, non-compliance with an order of a water court constituted the offence of contempt of court, and was punishable at the instance of a water court by a superior court as if it were contempt of the superior court. This did not happen. Neither was an application

brought for the proclamation of a river board in terms of Chapter V of the act. In 1954, an engineer of the Department suggested that application should be made for the establishment of such board but, because of the proclamation of the Groot Letaba government water control area in terms of the 1956 act, nothing came of it. The court had decided that if a river board was not declared, the control over and adjustments to measuring weirs would be administered by the court on application. No such application was made.

During 1931 to 1933, a serious water shortage caused crop losses. There was much uncertainty regarding the validity and applicability of the court order. It was alleged that *"die moeilikhede wat 'n vroeë en oneffektiewe waterhofbevel geskep het, deur wetgewing en opgaring uit die weg geruim kan word"*. In spite of this, in an investigation of the irrigation possibilities in the catchment undertaken by the Department some years later,[112] use was made of the calculations of Howitz on which the court had based its decision.

By 1952, the irrigated riparian farms had increased to 57. The water court order was no longer regarded as a reflection of the irrigation situation in the area. This was fair in view of the court's opinion that the order could not bind parties other than those who had been involved in the court proceedings, and in view of section 37(2), stating that a court order was valid only in respect of those interested and affected parties on whom copies of the order was served. On the other hand, the flexible formula according to which the court had distributed the water, as well as the decision that owners who had not been parties to the court proceedings could submit claims, induced some to still consider the order valid. According to an internal Departmental report, only two aspects of the order still applied : first, that owners on tributaries were not obliged to allow water through to the main stream if they could apply the water for beneficial irrigation, and secondly, that the water duty was 1 cumec for every 100 acres (40,47 hectares).

[112] This investigation had been undertaken by one Bishop in 1942.

In 1953, the Circle engineer[113] rejected the water court order as being no longer valid. In 1954, engineer Murray alleged that no attempt had ever made to give effect to the water court order, in that riparian owners who had not been parties to the proceedings used water as if they had been parties. He moreover alleged that the impoundment of the river created some unique problems. He suggested that the court order should be abolished by legislation or by agreement.

When a Government Water Control Area was declared in 1956,[114] the question of the validity of the court order caused uncertainty. The Assistant Chief Engineer (planning and research) of the Department raised the questioned whether land which was regarded as irrigable for purposes of the court order but had never been irrigated, had preference over land which had not been included in the court order, but which had since then been put under irrigation. In 1958, the Department instructed that although the court order was invalid due to non-compliance with its conditions, it had to be applied nevertheless, because irrigators have, since the order, been irrigating strictly according to its terms.

When water quotas were eventually issued in terms of section 62 of the act, the water court order was applied as follows : where the quota exceeded both the water court allowance and the irrigable area, then the permit was determined according to the quota. Where the quota did not exceeded these, then the water court allowance was decisive. Where the water court allowance exceeded both the quota and the irrigated area, then the permit was issued in accordance with the irrigated area.

Many irrigation farmers were unsatisfied with this measure. It was argued that there was excessive water left after allocation, which would pass to the Park unutilized. They were of the opinion that farms which had been omitted from the court order were prejudiced, because excessive quotas had been allocated to the parties involved in the proceedings.

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[113] For the Eastern Transvaal.

[114] In terms of the Water Act of 1956.

The farmers demanded the abolishment of the court order, as well as of its effect on the water quotas. No official reaction was however received from the Department after these demands had been submitted. Nevertheless, a provision[115] was soon after inserted into the Water Act[116] :

> "When the water court has made a determination in respect of any piece of land which does not correspond with the determination made by the Minister in respect thereof, any apportionment of water previously made to the owner of such piece of land shall lapse and a fresh apportionment based on the water court's determination shall be made".[117]

In a departmental memorandum of 1970, it was proposed that existing court orders had to be considered whenever quotas were allocated in terms of the act, even when such orders had become invalid due to their non-application. In 1983, this principle was confirmed during a meeting with Park officials. In spite of this revival of the contentious court order, it was alleged some years later, in a report regarding the water situation in the Letaba basin in 1984, that it was doubtful whether the provisions of the order were still valid, due to the failure to erect the measuring weirs.

In 1984, the Water Act was once again amended, this time to abolish section 62(2)*bis*(e).[118] In 1986, the provisions of section 63 were applied to the Groot Letaba river. For purposes of scheduling, the irrigable areas of the old system were adopted,[119] which meant that the provisions of the water court were applied again. This is still the position today.

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[115] Section 62(2)*bis*(e).

[116] By s 11(d) of the Amendment Act 56 of 1961.

[117] Section 11(d) of the Water Amendment Act 56 of 1961.

[118] Section 20(1)(c) of the Amendment Act 96 of 1984.

[119] In terms of section 2(a) of proclamation 1813 of 1986 (GG 10414 dated 5 September 1986).

2.3.1.1. Jurisdiction

In 1963, in the case of *Human v Lourens*,[120] it was decided that[121] :

> *"Die waterhof het geen inherente jurisdiksie nie, maar is 'n skepsel van die wetgewer en kan dus slegs optree in sodanige gevalle en tot sodanige mate as wat òf deur uitdruklike voorskrif òf deur duidelike implikasie deur die wetgewer neergelê is".*

This decision however referred to section 40 of the Water Act of 1956, while the decision in question, decided in 1926, had been made in terms of the Irrigation and Conservation of Waters Act of 1912. The 1912 act however had a similar provision than that of the Water Act,[122] and an interpretation of the jurisdiction of the water court under this old act would probably have been similar.

Jeppe J, in his judgement in the *Union Citrus Farms* case, did not refer to any of the provisions of the Irrigation Act to assume jurisdiction, but indicated that the court was dealing with an application for the "apportionment and distribution (definition and recording of rights)", which terminology was used in section 32(b) of the Act.

It was not explained what was meant by "apportionment". The court set a flexible distribution formula which depended on the river flow. The formula could be applied only if certain conditions had been fulfilled, viz the construction of measuring weirs and the control and adjustment thereof by a river board which had to be established. The court held that in the case of the weirs not being constructed within twelve months, a

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120 Vos Rep 356.

121 With reference to s 40 of the Water Act.

122 Section 27(2) provided that the water court had the jurisdiction to hear and determine disputes in connection with the use and appropriation of water, as well as such other jurisdiction, powers and authorities as were assigned to it by the act. Section 32(a) granted a general jurisdiction, viz to investigate and make orders and awards regarding disputes on the use, diversion or appropriation of water.

restriction would be placed on the abstraction of water in the area. In terms of section 38 of the act, the failure to comply with a court order was punishable. Except for the criminal sanction, and the possibility to apply for the proclamation of a river board, the court did not state what the position would be if the conditions had not been complied with. The logical result would be that the order would lapse, because the formula could not be applied without fulfilment of the conditions. The act was clear that the court could investigate disputes and make distribution orders. If the court intended to set conditions which would, at the time of fulfilment, accomplish distribution, it should at least have laid down a period within which the conditions had to be fulfilled together with a provisional court date when the fulfilment could be controlled and where, if necessary, an alternative distribution scheme could be ordered. It is submitted that an uncontrolled and conditional distribution was no proper distribution in accordance with the jurisdiction granted by section 32 of the act.

The court had however ordered that no diversion was allowed in the area unless the weirs had been constructed within twelve months from the decision. It is however submitted that the court was not empowered to suspend basic water rights in terms of the act. By prohibiting diversion, the court suspended water rights in terms of section 11(5), which was invalid for being *ultra vires* :[123]

Even if the above submission is incorrect, the question remains what the results of non-fulfilment of the court's conditions would be. In terms of section 11(5) of the act, upper owners were entitled to apply the normal flow of public streams for secondary purposes, provided that they did not thereby impair lower owners in their primary use of the water. Prior to the court order, water rights in the area was exercised in terms of this provision. The court ordered that measuring weirs had to be erected within twelve months. This had never been done, and the distribution order could therefore not be implemented. For this reason, the order was of no practical value, and it is submitted that owners

[123] Vide in general Wiechers 216.

regained their *ex lege* rights in terms of section 11(5). The fact that they retained the tables of irrigable areas which were drawn up by Howitz for purposes of the court case, did not necessarily mean that they irrigated "strictly according to the court order", as was alleged by Myburg in 1958. The quotas in terms of the water court order could not be implemented without the construction of the weirs. The retention of a fixed calculation of irrigable areas and the fact that water was allowed through to meet the requirements of lower owners, was merely an agreement between the respective farmers. But if an owner could use all the water of the stream on his land for irrigation, nothing (except downstream primary use) could keep him from appropriating all. For this reason, it was not necessary to invalidate the court order by way of legislation or agreements. The court order had never come into effect, due to non-compliance with its conditions. The Department had nevertheless respected and followed the court order as if it had had practical effect. Moreover, because the number of irrigation farms had increased since the court order, the tables of irrigable areas no longer reflected the physical circumstances.

The insertion of section 62(2)*bis*(e) into the act cannot be criticized in principle. As far as this case is concerned, it has justified the alleged validity of the court order. In 1970, in a Departmental memorandum, it was stated that the statutory provision implied that all previous water court orders had to be respected, even though such orders "had become invalid due to the failure to apply the conditions thereof". In 1984, when section 62(2)*bis*(e) was deleted from the act, the legitimation of otherwise ineffective water court orders was abolished. The 1926 water court order had nevertheless still been honoured, in that the tables of irrigable areas had been retained during scheduling in terms of section 63.[124] Areas which were not at the time being irrigated but which was regarded irrigable in 1926, were deemed to be irrigable for purposes of scheduling.
It is submitted that irrigable areas in the Groot Letaba area should now be revised realistically, and that the tables of Howitz should be abolished.

[124] This had occurred in 1986.

2.3.1.2. *The relevance of the court order to the Kruger Park*

The distribution of water for irrigation which Jeppe J had directed in 1926, was aimed at the distribution of the total runoff of the river. To accomplish that, it was necessary to construct measuring weirs at each point of diversion. A further weir had to be constructed below the last diversion weir in the main stream, in order to measure the remainder of the stream. The readings of all the diversion weirs would give the total flow, which had to be divided amongst the riparian owners in relation to their irrigable areas. This would mean that if every owner utilized his full quota, no flow would pass the last weir, with the result that no water would be allowed to pass for primary purposes. Such a condition would be in conflict with the rights of lower owners in terms of section 11(5), for the following reasons :

(i) In terms of the act, the primary use of water was "the use necessary for the support of animal life, and, in the case of use by riparian owners, the use necessary for domestic purposes".[125] An upper owner was entitled to use water for secondary purposes, ie for irrigation, provided that he did not thereby deprive lower owners of water for primary use.[126] This means that even animal life had enjoyed preference over irrigation. The fact that the court had thus excluded the animals within the Park from a right to utilize even the remainder of the stream after distribution, was therefore contradictive to the statutory preferential order and therefore irregular.[127]

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[125] Section 11(2).

[126] Section 11(5).

[127] In Chapter III.I *infra*, it will be seen that in Roman law, the term *pecus* (animals) could mean both stock and game. In the South African water legislation, this term had not been defined. However, in the Water Act of 1956, the term "animal life" had been replaced by "stock watering", and the wide interpretation of including game, can no longer be attached to the concept.

(ii) An upper owner was not allowed to use water for irrigation if he thereby deprived a lower owner of water for domestic purposes.[128] Because the Letaba rest camp was situated on lower riparian land and therefore required water for domestic purposes, it was in conflict with section 11(5) to deprive the rest camp of its water. Deprivation had however occurred soon after the court order, in that the rest camp had, by 1932, suffered a water shortage to such an extent that a well had to be sunk to provide in the immediate needs of the camp.[129]

The intention of the court to intercept the river flow below the lowest diversion point, was modified as far as the farms between Belle Ombre and the western boundary of the Park was concerned. The clear intention to exclude the Park from water allocation, was however confirmed by the proclamation of the Groot Letaba Irrigation area.[130]

It is concluded that the 1926 water court order had dominated the allocation of water rights in the Letaba river since it was issued. This is in spite of the fact that its conditions had not been complied with, and that it had deprived downstream users of legal water rights unlawfully. The effect of this order will only be nullified when water rights are being reallocated. Reallocation should however accommodate the water requirements of downstream water user sectors as well, for which it will be necessary to consider and evaluate the allocation mechanism of the Water Act as far as non-human water user sectors are concerned.

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[128] Section 11(2), (5).

[129] It must be noted that, in terms of the 1956 act, the definition of household purposes was amended to exclude rest camps, which makes the above argument no longer applicable.

[130] This had been done in 1954, in terms of s 98 of the Irrigation Act of 1912. In terms of the Water Act of 1956, this had been transformed to the Groot Letaba government water control area.

2.3.2. Water quotas

Until the construction of the Ebenezer dam in the Groot Letaba river, water utilization from the river was controlled by sections 11 and 12 of the Irrigation Act of 1912. In terms of these provisions, the use of water was subject to a preferential order. The use of water for animal life and for domestic purposes was primary use.[131] Irrigation was secondary use, and the use of water for industrial purposes was tertiary use.[132] In terms of section 12, a riparian owner was entitled to the reasonable use of the normal flow of a public stream, provided that he did not deprive lower owners of their primary use.[133] The term "reasonable use" had however not been defined, and the water court therefore had to arbitrate disputes arising from competitive use by determining the water rights or distributing the water.[134]

When the Ebenezer dam was constructed in the upper reaches of the Letaba river in 1954, a government irrigation area was proclaimed[135] in terms of the Irrigation Act of 1912.[136] A government irrigation area consisted of every piece of land which will be affected by the construction of a government irrigation work.[137]

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131 Section 11(2).

132 Section 11(3), (4).

133 Section 11(5).

134 Sections 23, 27(2).

135 By proclamation 203 of 1954-09-24.

136 Section 98, as amended by s 9 of the Irrigation Amendment Act 46 of 1934.

137 Section 98(1). The governor-general was entitled to acquire land for purposes of such a district even without the permission of the owner, but by notice and the payment of an indemnity amount (s 98(2), (3)).

In 1956, the Water Act came into force.[138] In terms of this act,[139] all government irrigation areas are deemed to be government water control areas. Government water control areas may be proclaimed to control the abstraction, utilization, supply or distribution of water in a public stream in the public interest.[140] This additional purpose, which had not existed in terms of the 1912 act, affects water rights : while the government had, under the 1912 act, been entitled to acquire land for purposes of the construction of a government water work only, section 62(2) of the Water Act[141] provides as follows :

> "(a)...the rights to the use and the control of water in any public stream or natural channel in a government water control area shall vest in the minister, and no person shall, except as provided in subsection (1), or under the authority of a permit from the minister...
>
> (i) abstract, impound, store or use such water; or
>
> (ii) construct, alter or enlarge any water work for the abstraction, impounding or storage of such water..."

Sections 59 to 62 of the act thus implied that the minister may assume control of water rights in the public interest. It is not necessary that a government dam be constructed within the area, and the land does not necessarily have to be acquired.

The amount of land which had originally been included in the irrigation district,[142] has since then been extended to include all land in the area where, in the opinion of the minister, the use of water has to be controlled in the public interest, whether such land will be affected by dam-building or not. In spite of this change in the practical position, water utilization continued as it had been done previously. A call for water claims in the

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138 Act 54 of 1956.

139 Section 59(3)(a).

140 Section 59(1).

141 As amended by s 11(c) of the Water Amendment Act 56 of 1961.

142 In terms of Proclamation 272 of 1956.

control area was proclaimed in 1956, and in 1959 irrigation permits were issued.[143] The minister explained the method of calculation as follows :[144]

> *"Daar moes toe oor 'n beleid besluit word wat betref die beskikking oor of gebruik van die water wat in die dam opgegaar gaan word, asook die normale vloei in die openbare strome en dit is besluit om al die water aan die boere vir besproeiingsdoeleindes beskikbaar te stel met uitsondering van 'n klein hoeveelheid wat vir moontlike stedelike en nywerheidsgebruik benodig word."*

The farmers however complained that not all the available water was allocated, with the effect that a substantial volume would pass to the Park. They were moreover unhappy about the preference of parties to the 1926 court proceedings. The minister however replied as follows :

> *"Ingevolge die bepalings van artikel 56(3) van die Waterwet behoort die water in die dam aan die staat, en die minister het volkome beheer daaroor en kan daarmee maak wat hy wil. Indien dit prakties moontlik sou wees, kon die water byvoorbeeld aan Kaapstad beskikbaar gestel word".*

The nature of the minister's discretion should be evaluated, and it is necessary to determine whether and to what extent it was restricted :

(i) First, it is submitted that the provisions of s 56 had not been applicable to the case involved, because section 56 deals with water works where the area had not been declared a control area. Because the Groot Letaba control area had already existed when the 1956 act came into force, water utilization was regulated by the provisions of sections 59 to 62 of the act, but "notwithstanding anything to the contrary ... and notwithstanding any existing right".

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[143] Proclamation 216 of 1956.

[144] This had been on a meeting with farmers on 15 July 1959.

(ii) The discretion of the minister is not unlimited, and he is not entitled to allocate all the water in a water work at will :

* The minister may declare a control area in respect of an area which would be affected by the construction of a dam, or in respect of an area where, *in his opinion*, the use of the water in a river should be controlled in the public interest.[145] There is, however, no definition or criterion to determine what the public interest is, and it is submitted that the minister has a free discretion as to whether or not it will be in the public interest to declare a control area. In practice, the minister will probably exercise his discretion when the declaration of such an area is requested, or when increasing disputes regarding the competitive use of a river are experienced. The fact that one of the objectives of the declaration of a control area is the control of the river in the public interest, implies that not only should the declaration of the area be in the public interest, but that the subsequent allocation of rights in such an area should also be made in the public interest. This means that the minister is not free to allocate water rights in such an area arbitrarily, but he is bound to allocate water rights in what he considers to be the public interest. If the public interest is thus seen as a restriction on his otherwise free discretion to allocate water in a control area, it can hardly be argued that he had the authority to allocate all the water in the Ebenezer dam to Cape Town, as he had alleged.[146]

* A preferential order of use in terms of which water rights have to be allocated in control areas and to which the minister is bound, is set out in section 62. Owners who had been abstracting water for beneficial use

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[145] Section 59(1)(b).

[146] Et vide Wiechers 257, 286 et seq; ...

from an existing water work when the control area was declared, have preferential rights.[147] They are entitled to permits to continue abstraction, subject to conditions which the minister may impose, and subject to a prescribed quantity which the water court may determine. This use need not necessarily be use for irrigation, as long as it is beneficial and the abstraction is from a lawful water work.

The minister was thus bound to issue permits to these users, and was not allowed to allocate the whole normal flow for irrigation. Neither could he "make all the water available to Cape Town", as he had alleged.

The minister has the power of use and control in respect of all water in the control area,[148] which power is subject to the prior issuance of permits[149] and authorizations.[150] Section 62(2)*bis* was inserted into the act in 1967.[151] In terms of this section, the minister has to determine how much of the remaining flow can be made available for beneficial irrigation.[152] He also has to ascertain the area which can be beneficially irrigated, and determine a formula for irrigation.

Section 62(2)*bis*(a)(i) provides that the minister has to determine the total quantity of water which will be made available for all owners who can utilize it for beneficial irrigation. It seems as if he is entitled to allocate to irrigation

147 Section 62(1)(b).

148 Section 62(2).

149 In terms of section 62(1) and (2).

150 In terms of section 62(2)(a).

151 Prior to the insertion, the minister could issue the water which had remained after the allocation of permits in terms of s 62(1), by notice in terms of s 62(2).

152 This must be done as soon as it has been determined how much of the flow the permits in terms of section 62(1) will occupy.

farmers *less* than they could beneficially utilize, or even nothing at all. But he is not allowed to allocate to them *more* than they can beneficially utilize, since he must determine a quantity of water to allocate to farmers who *can* utilize it for beneficial use. The minister may cancel a permit if the water cannot be utilized for beneficial irrigation.[153]

In the case of the Letaba river, there was no such excessive water, so that the question of excessive quotas was irrelevant. It was thus the task of the minister to determine how much he could issue in terms of section 62(2)*bis*, and how much he would leave unallocated, to be apportioned afterwards in terms of section 62(2)(a). In terms of this, he may make water available to anybody for any purpose and at any place within the control area.

Water users have a right to appeal against the allocation.[154] This is however available only to those users who had obtained water rights in terms of section 62(2)*bis*(a)(i). This means that if the minister had allocated all the available water (after section 62(1) permits have been deducted) to irrigation farmers, and had left no water in reserve, then users who wished to utilize water for urban, industrial and agricultural purposes, had to apply to the water court.[155] In the case of the Letaba river the minister had, however, reserved a quantity of water for urban and agricultural use, for which permits had been issued.[156] This was however because Pietersburg and Tzaneen, as well as certain homelands, had been in the process of development, and provision had to be made for further expansion. The Park, on the other hand, who had not been abstracting water from the river by way of a legal water work and had therefore not been entitled to a section 62(1) permit, required a quota from the remaining water in terms of a section

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153 Section 62(3).

154 Section 62(2)*bis*(a), 62(8). Section 62(2)*bis*(a) had only been inserted in 1967.

155 In terms of s 11.

156 In terms of s 62(2)(a).

62(2)(a) notice. This *spes* was however based on the minister's discretion : if he had decided to allocate all the available water by way of permits in terms of section 62(2)*bis*, the Park would not have had a right of appeal, and it would have been necessary to rely on the public interest during an application to the water court. It is however dubious whether the water requirements of ecobiota would have been a factor when the water court, in those years, had to determine what the public interest was.

It is submitted that the minister had acted within his jurisdiction when he issued permits for the control area, even though he had failed to consider the interests of the Park. But the quotas had never been published in the Gazette in accordance with the provisions of the act,[157] and the conclusion is that they had never gained validity.[158]

In 1970, the minister applied the emergency measures of section 9A to the area.[159] This section provides that the minister, in cases of a water shortage or threatening water shortage, may apply emergency measures to the use of any public stream in the public interest, irrespective of whether the water occurs inside or outside a control area, and notwithstanding any existing rights. Control can however only be exercised for agricultural, urban or industrial purposes.[160] This means that the minister was not empowered to make water available for ecobiotic use. This was the case even if a quota could be allocated for ecobiotic purposes. The minister probably attached a similar interpretation to the provision, because the Park was expressly excluded from the notice, as well as from subsequent notices in terms of section 9A.

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[157] Section 62(2)(c).

[158] Wiechers 221.

[159] By proclamation 643 of 1970.

[160] Vide s 9A.

It is submitted that the allocation mechanism of the water act is unsatisfactory as far as ecobiotic requirements concerning water in control areas is concerned, in that the contentious meaning of the public interest, which functions as a directive for the minister to allocate water, grants little protection in an economically oriented society.

2.3.3. The release document

On 21 November 1983 the minister of Environment Affairs gave permission that water from the Fanie Botha dam could be released on an *ad hoc* basis for the Park. Water would be released on request and whenever the flow within the Park had dropped below 0,6 cusec. This ministerial permission was the result of months of negotiations following a request by the warden of the Park that water was urgently required in the Letaba river.[168] Although the chief engineer (planning) of the Department had recommended that water should rather be allocated to the Park in terms of the provisions of the act, ie by re-allocating the water in the area, this recommendation was never approved.

After the Park had obtained representation on the Irrigation Board, the document was quoted in an attempt to support a request for water releases from the dam for the Park. The Irrigation Board had however rejected the validity of this document as being vague and uncertain. The request for water releases had nevertheless been approved, and for the first time since the seventies had the river flown uninterruptedly through the dry season.[169] It was attempted to maintain a flow of 0,6 cumec at Letaba Ranch, where the river enters the Park.

The relevance and validity of the release document ought to be evaluated, because this document currently contains the only "rights" which the Park has in respect of the water of the Letaba river.

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[168] Vide 2.2.8. *supra*.

[169] This had been in 1990.

2.3.3.1. *Acceptance and application of the document*

It is uncertain whether the agreement between the Park and the Irrigation Board that water is released from the Fanie Botha dam on an *ad hoc* basis, is based on the ministerial release document or on mere commiseration with ecobiotic water needs. Be that as it may, the Irrigation Board has, on several occasions, expressed doubt as to the validity of the document, and whether it had constituted a lawful allocation of water rights to the Park. First, it was rejected in 1988 as "*'n ongespesifiseerde toekenning ... by 'n ongespesifiseerde punt*". Secondly, although the document had stated that the releases would be free of charge (to compensate the Park for having been left out when allocation of water rights had been done), the Irrigation Board had requested the Department in 1989 to ensure that the Park paid for the water which was released. In spite of emergency restrictions from time to time during 1983 to 1989, and the document stating that its provisions would be replaced by those issued in terms of section 9A notices, *ad hoc* releases had continued.

The acceptance or not of the document would however not determine its validity, and neither will its desuetude nullify it. The validity rather depends on whether the provisions thereof had been in accordance with the law, as well as on its administrative status and its contents.

2.3.3.2. *Statutory provisions*

Although the release document was not issued in terms of a the provisions of the Water Act, the powers and discretion of the minister to allocate water are restricted by the act, and therefore the document can be valid only if it is not in conflict with the provisions of the act.

(i) Section 9

Water rights of riparian owners in respect of public streams are regulated by the Water Act.[170] This section provides that each riparian owner is entitled to the reasonable use of his share of the normal flow of a public stream for urban and agricultural purposes. The terms "use for urban purposes" and "use for agricultural purposes" are defined in the act.[171] The domestic water requirements of the Letaba rest camp will qualify as urban use if the camp falls within the jurisdiction of a local authority. A local authority, in terms of the act, is an area intended in section 84(1)(f) of the Constitution Act of 1961.[172] This act had however been revoked, and in the current constitution,[173] the concept is not defined. But the Letaba rest camp (or any other rest camp in the Park) does not fall under the known jurisdiction of any local authority in terms of any act. This means that domestic water use in the Letaba rest camp does not qualify as urban water use, and therefore no right to the reasonable use of water exists in respect of the Letaba rest camp. Should the act however be amended to provide that rest camps do fall under local authorities and thus qualify for urban water rights, then section 9(1)(c) would be applicable, which provides that an upper owner is not entitled to use water for irrigation if he thereby deprives lower owners of domestic water. If the upper owner's land is however situated within a control area where he irrigates in terms of a quota and not in terms of a right of use in terms of section 9, then the section 9(1)(c) restriction does not apply. The reason for this is that section 62(2) provides that water rights in control areas are regulated "notwithstanding anything to the contrary contained in the act and notwithstanding any existing right". Therefore, unless the minister subjects quotas[174] to the condition of section 9(1)(c), irrigators are under no obligation to allow water through

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170 Section 9.

171 Section 1.

172 Act 32 of 1961.

173 The Constitution of the Republic of South Africa 200 of 1993.

174 Which are allocated in terms of s 62(2E)(c) and (d)(iii).

to the Park. Such a condition attached to a quota will, however, not be easy to enforce. Farmers who abstract water strictly in accordance with their quotas, will not know whether or when they deprive lower owners of their domestic water. This will happen only when a shortage of water is experienced in the rest camp. This shortage will then have to be remedied by the release of water from the dam, which has to be recovered from the farmers pro rata by restricting abstraction. This will have to be done by applying section 9A to the control area until the shortage is replenished. A large amount of administration is involved in such a process. Moreover, the violation of such a condition in a permit can hardly be punishable in view of the bona fide attitude of the farmers who are merely exercising their rights in terms of their permits. Such a condition will moreover satisfy domestic water requirements within the rest camp, but not ecobiotic water requirements. It is therefore submitted that subjecting the permits to section 9(1)(c) is not a satisfactory solution for the lack of ecobiotic water rights in the Park, and it is necessary to statutorily protect such requirements.

In spite of this lack of *ex lege* statutory protection, the minister had allocated water rights for the Park in terms of the release document, which had permitted compensation water. The minister had thus used his power to allocate water *within* a control area to allocate water to a user sector *outside* the area. One solution would be to include the Park into the control area, so that section 9 is not applicable, and the allocation of a quota is dependent on the discretion of the minister in terms of section 62(2I) and in the public interest. It is submitted that only if the Park was entitled to water rights but had by mistake been left out during the allocation process, would compensation be justifiable. The minister does not have the power to "compensate" an unlawful user sector who had not been entitled to water allocation under any of the statutory provisions of the water allocation mechanism.

(ii) Section 9A

Section 9A is an emergency measure for periods of water shortage. This provision was inserted into the act in 1967.[175] It empowers the minister to assume control in respect of water utilization in an area where a water shortage exists or threatens. In such an area the minister may, notwithstanding any existing water rights, control the use of water for agricultural, urban and industrial purposes, as he regards necessary in the public interest.

In the Groot Letaba control area, section 9A was applied for the first time in 1970,[176] in respect of the river and its tributaries from the Ebenezer dam to the western boundary of the Kruger Park, as well as in respect of all the streams feeding the Ebenezerdam. In 1983, section 9A emergency measures were applied in this area once again, in respect of the Letaba river, the Helpmekaar spruit and the Broederstroom.[177] This control was revoked on 17 February 1989.[178] The control measures consisted of a prohibition on further storage of water as well as the curtailment of quotas for agricultural, urban and industrial purposes. Section 62(2)(a) permits and notices had not been affected. This means that the function of the document, as far as it can be regarded as a legal permit, had not been affected either, although the document had made provision for the replacement thereof by a notice in terms of section 9A.

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[175] By the Water Amendment Act 79 of 1967, s 2.

[176] GN 643 of 1970.

[177] GN 2682 of 1983. The proclamation was published on 2 December, two weeks after the release document had been signed by the minister.

[178] GN 100 of 1989.

(iii) Section 62

The release document was signed on 21 November 1983. At the time of approval, section 62 was applicable in the area. The minister therefore had to issue permits (in terms of section 62(1)) and allocations (in terms of section 62(2)*bis*), before he could distribute the remaining water for purposes of section 62(2)(a)-permits and -notices). Permits in terms of sections 62(1) and 62(2)*bis* had been issued for purposes of irrigation, and therefore it is submitted that the release document had not been issued in terms of one of these two sections. In terms of section 62(2)(b), the minister could allocate the remainder of the water to anyone for any purpose, for use within the control area. Because the Park was excluded from the control area, this water could not be allocated to the Park in terms of section 62(2)(a). The release document was thus not a valid permit in terms of section 62(2), 62(2)(a) or 62(2)*bis*.

In 1984, section 62 was amended to its current form.[179] This had affected the status of the release document :

The minister was obliged to issue permits in terms of section 62(2E) for purposes of irrigation, for as much thereof as could be utilized beneficially. What was left he could distribute at will, subject only to the public interest.[180]

In terms of section 62(2I), the minister may allocate any water which becomes available in a control area, for urban and industrial purposes outside control areas. Because the Park had not required water for any of these two purposes, an allocation could not be made in terms of section 62(2I). And because the release document had not been a valid document in terms of section 62(2) of the act,[181] the transitory clause of the 1984

[179] By Act 96 of 1984.

[180] In terms of section 59(1)(b).

[181] Prior to amendment.

act[182] was not applicable thereto, and it is thus neither a valid document in terms of section 62(2B).[183]

If section 62(2E) can be interpreted to assign to the minister a wide discretion to allocate remaining water, then there is no reason why a document such as the release document cannot be viewed as a valid document. The release document was issued before section 62(2E) was inserted into the act : because no transitory clause had declared it valid in terms of the amended act, it cannot be viewed as a valid document. Only if the minister had issued a similar document under the amended act, can it be argued to be valid in terms of section 62(2E).

(iv) Section 63

On 5 September 1986, the minister applied section 63 to the Groot Letaba government water control area.[184] Section 63(2) provides that the minister, in respect of an area to which section 63(1) was made applicable, has to determine the extent of irrigated or irrigable land, as well as the quantity of water which has to be supplied annually. This section makes no provision for the supply of water for any other purpose than irrigation. Users who have been abstracting water in terms of existing rights[185] for purposes other than irrigation prior to scheduling are, to a certain extent, protected by section 63(2). This subsection provides that the minister has to consider existing rights which are being exercised beneficially. He is therefore not empowered to allocate water for purposes other than irrigation, but may protect existing rights by restricting irrigation rights. However, scheduling replaces any rights which have been allocated or could be allocated

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[182] Section 2(b).

[183] But even if it was a valid permit in terms of section 62(2)(a) of the old act, and even if it could be deemed to be a section 62(2B) permit in terms of section 2(b) of the Amendment Act, section 62(2B) referred to water for irrigation only, and moreover to land within control areas only.

[184] By proclamation 1813 of 1986.

[185] Section 9 rights or quotas in terms of section 62.

in terms of section 62.[186] If the release document was a valid document, then its effect would have been revoked by proclamation 1813 of 1986.[187]

2.4. CONCLUSION

From the above, it may be concluded that over-utilization of the water of the Letaba river over the years, had caused the incapability of the water in the river to supply the demand for water in the catchment. Management of water utilization had initially been aimed at providing as much water as possible for agricultural purposes, in order to develop the very fertile basin to its maximum capacity. The reason for the failure to accommodate the water requirements of the Park in the allocation mechanism, had not necessarily been due to ill-management by the state, but rather to a lack of knowledge regarding the importance of water provision for ecobiotic purposes, as well as to a failure by the Parks Board to, like the irrigators, submit their demands to the Department.

The question of the management of water resources to accommodate ecobiotic water needs had, however, enjoyed attention since the early eighties, and it is submitted that the continued failure to meet ecobiotic water rights is no longer due to a lack of conservation awareness, but rather due to a lack of sufficient water to allocate to all, without seriously harming established and beneficially exercised rights.

It is submitted that the only solution for the water requirements of the Park lies in the redistribution of water rights amongst a wider variety of user sectors, which distribution ought to be supported by the statutory allocation mechanism. This will require extensive basin and resource development.

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[186] Clause 3 of Proclamation 1813 of 1986.

[187] It is moreover submitted that when the minister applies section 63 to a control area, he is empowered to permit water use from the government water work for purposes other than irrigation, in terms of section 56.

In 1984, section 62 of the act was amended,[161] and the discretion of the minister was substantially restricted. The minister's power of use and control of the water of public streams within control areas had been restricted by a variety of prescribed preliminary rights, allowances, allocations and existing rights. Moreover, sections 62(2A) to 62(2I) had been inserted into the act, which had restricted his discretion as far as the procedure of allocation was concerned :

The minister now has to publish a list of all irrigable and irrigated areas[162] as soon as the director-general has determined it.[163] This had never been done in respect of the Letaba control area, and neither was it published in terms of section 62(2F). Thereafter, the minister has to estimate the quantity of public water which, on a basis of consistency determined by him, will annually be available in the area, and the portion thereof which may annually be utilized for irrigation purposes.[164] This lastmentioned portion has to be allocated for purposes of irrigation, with consideration to the formula set out in section 62(2E)(b). The minister is compelled to allocate a portion of water for irrigation in the amount which *can* be utilized for irrigation. Only in cases where the stream is insufficient for domestic use, can the minister decide that no water can be used for irrigation. It is therefore submitted that the use of the words "shall" and "can" is an indication that the minister is not entitled to refuse to allocate a portion of the available water to irrigation. A decision to allocate all the available water for other purposes, such as urban, industrial or conservation purposes, would be *ultra vires* in terms of section 62(2E). Irrigation is therefore a preferential user.

Section 62(2I) provides that the minister may grant permission for the use of water within a control area for any purpose, and outside the control area for purposes of urban

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[161] By s 20 of the Water Amendment Act 96 of 1984.

[162] Section 62(2D).

[163] Section 62(2E).

[164] Section 62(2E)(a).

and industrial use, provided that he is convinced that there is sufficient water available due to some extraordinary reason. That part of the estimated quantity of water which is available annually[165] which had been allocated to irrigation, is not necessarily the same water than that intended in section 62(2I). The reason is that the water allocated in terms of section 62(2E) is part of the consistent stream which had been determined by the minister, while the water available for distribution in terms of section 62(2I) is water available in excess of this consistent stream, which had become available due to some unforeseen reason.[166] The conclusion is that the minister may not issue permissions in terms of section 62(2I) in respect any part of the consistent flow which had not been allocated in terms of section 62(2E). Nowhere in the act is it however indicated what the minister is entitled to do with the unallocated part of the consistent flow, and it can be argued that he may distribute it arbitrarily, subsequent only to the public interest.

In the case of the Letaba river, the minister had allocated this reserve for urban use, while section 62(2I) water was distributed for other purposes. The minister had not been empowered to allocate water for ecobiotic purposes within the Park, because the Park had not been included in the control area, and the minister could only allocate such water for use outside these areas if it was for purposes of urban and industrial use. If the Park had therefore wished to receive water from the Letaba river, it had to rely on the discretion of the minister (in the public interest) to grant a right in respect of the excess of the consistent flow. To rely on the public interest to obtain water is however rather unsatisfactory, because the public interest is a vague and undefined concept which may vary according to time, place and political climate. No right of appeal exists against the discretion of the minister when he allocates water for purposes other than irrigation.[167]

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[165] In terms of section 62(2E).

[166] Such a reason is an abundance of rain during a specific season.

[167] Section 62(2D).

Currently, various community and government-initiated forums are being established to address the problem of, *inter alia*, insufficient and unsatisfactory water rights for ecobiotic and other purposes. It is realized that basin-orientated resource development is the only solution for the water problems in the catchment.

In view of the above, it is necessary to analyze the water allocation system in further depth. The historical development of the South African water law, which had caused the system to be of such a nature that an unsatisfactory position like that of the Letaba river is possible, ought to be evaluated, in an attempt to get the water law on track and in accordance with modern requirements.

CHAPTER III

HISTORICAL BACKGROUND OF THE SOUTH AFRICAN WATER LAW

"Common things ... which on account of the common use that all have a right to by nature, cannot, by the laws of nations, be divided : thus flowing water, which, collected either from the rain or from the veins in the earth, makes a perpetual current. These things, by nature itself as it were, are attributed to, and may be occupied by, any one, provided that the common and promiscuous use is not injured, for without the use of air or water no-one could live or breathe."

Retief v Louw
1856

HISTORICAL BACKGROUND

INTRODUCTION

It was submitted[1] that a satisfactory attempt to provide proper protection for ecobiotic water requirements, will necessarily require the revision of the statutory water allocation mechanism. This is because the current mechanism is the product of a long development process during which the courts and the legislature have attempted to adapt inherited Roman and Roman-Dutch water law principles, as well as various bits and pieces introduced from foreign legal systems, to South African conditions and requirements. In this way irrigation, having been a major water consumer responsible for the most serious disputes amongst water users, had a preferential position in water allocation, while ecobiotic requirements enjoyed no legal recognition or protection.

These sentiments have however changed, yet the statutory allocation mechanism has not adapted to this change. Unfortunately, due to the scarcity of water in South Africa, the problem cannot be solved by merely adopting ecobiota as an additional lawful water user into the statutory allocation system, because this will necessarily affect existing rights adversely. It will be necessary to revise the very basis and criteria of the system in terms of which water rights are allocated. An attempt to revise this system will however require a proper knowledge of the original water law principles which form the basis of the South African water law. Moreover, it will require a critical evaluation of the development process during which these rules had been adjusted to suit the South African conditions.

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[1] Chapter I.

A study of the allocation of water rights for ecobiotic purposes will therefore not be complete unless a proper investigation of the history of the South African water allocation mechanism had been done. For such a historical investigation, the water law systems of Roman and Roman-Dutch law will be analysed,[2] whereafter the South African water law principles will be evaluated.[3]

[2] Chapters III.I and III.II respectively.

[3] Chapter III.III.

CHAPTER III.I

ROMAN LAW

"[Roman law] is undoubtedly an international passport
to various modern legal systems without which any lawyer
will be doomed to isolation and deprivation"

B C Stoop
1991 *THRHR*

"Often the seeds of a new idea have been planted in Roman law
which can be encouraged to grow or even to flourish or any existing
Roman institution which has been neglected can be
revitalized"

B Beinart
1971 *Acta Juridica*

CHAPTER III.I
ROMAN LAW

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ROMAN LAW

1.1. ROMAN LAW

Three main political periods are distinguished in the Roman rule, viz the monarchy, the republic and the empire.[1] There were five main legal periods, viz. the archaic, formative, classical, post-classical and Justinian periods. During the archaic, the Twelve Tables was the main source of legislation.[2] Of the formative period - Cicero being one of the main jurists - relatively little is known as far as legal rules are concerned. The classical period was known for active legal development, with jurists such as Gaius, Ulpianus and Paulus.[3] Little legal development had occurred during the post-classical period, and it is said that a simplified vulgate legal system had developed.[4] In the Justinian period, codification took place in an extensive work[5] known as the *Corpus Iuris Civilis*, undertaken by the emperor Justinian.[6] In the Digest, which is the second of the four sections of the *Corpus Iuris Civilis*, "a great mass of excerpts from classical authors" were gathered and preserved, giving Roman law "what was, in a sense, its final form".[7]

The period of Justinian law was the most important in the history of Roman law, in that it provided the Romans with a codified legal system, which codification represented the

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1 Jolowicz 4-7. The empire was further divided into three periods, viz the Principate (27 BC-284 AD), the Dominate (284-527 AD) and the period of Justinian (527-565 AD) (Van Zyl *Roman Private Law* 4-9).

2 Van Zyl *Roman Private Law* 28-30; Buckland 1-2.

3 The other jurists included in what Van Zyl calls "the five great jurists", are Papianus and Modestinus (*Roman Private Law* 24, 42 *et seq*). *Cf* Kunkel 103-104; Buckland 2-4.

4 Van Zyl *Roman Private Law* 25, 56; Kunkel 146-162.

5 Described by Van Oven 35 as *een monumentaal werk*. *Cf* Buckland 39.

6 Van Zyl *Roman Private Law* 61-62; Kunkel 163-164.

7 Jolowicz 4-7; Nicholas 38 *et seq*; Van Zyl *Roman Private Law* 63-66.

rules in force during all the previous legal periods. Approximately 95% of the *Corpus Iuris Civilis* was derived from legal sources of the classical period, which makes this period the most important contributor to the Roman legal system in its final form.[8] The fact that the *Corpus Iuris Civilis* represents codified Roman law as the official source of further legal development,[9] Justinian law is the law which will, for the purposes hereof, be referred to as Roman law.[10]

Of the *Corpus Iuris Civilis*, the *Digesta* is the book in which the opinions of jurists were compiled.[11] The *Codex* consists of legislative provisions,[12] while the *Novellae* contains legislation issued after codification.[13] The *Institutiones* is a brief summary of the law,[14] compiled as a student handbook.[15] It received legislative status when it was promulgated as law on 30 December of the year 533 AD.[16] It is submitted that this legislative recognition is unfortunate, in that the *Institutiones* is merely a summary which often

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8 Nicholas 40.

9 Van Oven 35 : *"Dan zij het Corpus Iuris hebben de bewoners van ons werelddeel, van welke nationaliteit ook, elkander kunnen verstaan, hebben zij hun onderlinge privaatrechtelike betrekkingen kunnen regelen, is een universeele Europeesche rechtswetenschap ontstaan die de tallooze plaatselijke rechtstelsels overkoepelde." Cf* 40-45.

10 Stoop 181.

11 Kunkel 169-174; Buckland 39-46.

12 Van Oven 36; Buckland 46-47. This book was published in 534 AD, and was called *Codex Repetitiae Praelectionis*.

13 Kunkel 175-176; Buckland 47.

14 Based, to a large extent, on the Institutes of Gaius, as well as on the works of some of the great classical and post-classical authors. Van Oven 39; Jolowicz 492.

15 Van Oven 39 : *"Zoodat van drempel der rechtstudie af geen andere stof dan de officieel gesanctionneerde door den jurist zou worden genoten" and "[O]nder Instituten verstaat een boek waarin de rechtstof in kort bestek word uiteengezet, geschikt voor den beginneling om zich in te werken, zonder zich met bijzonderheden in te laten." Cf* Buckland 46.

16 This was the same date as the date on which the *Digesta* came into force. Jolowicz 482; Nicholas 40.

contains brief renderings of the texts of the *Digesta*. Nicolas summarizes the value of the *Institutiones* as follows :

> "It is a patchwork of passages of classical institutional works, filled out, where a change of law or some other reason makes it necessary, with pieces of the compilers' own composition... This patchwork character accounts for the rather disjointed and occasionally contradictory appearance of the text."[17]

It is submitted that the texts of the Digest provide more complete renderings of the original opinions and legal provisions. As far as is possible, references will therefore be made to the Digest rather than to the Institutes. Where contradictions occur, the two sources will be compared in the light of the purpose and patchwork-status of the Institutes.

1.2. ROMAN WATER LAW

There was no official Roman **water law** system. This is because all water, including both running fresh water and sea water, was classified as *res omnium communes* in the classification system of things. *Res omnium communes* belonged to the class *res extra commercium*, which consisted of things not susceptible to private ownership. It was available for use by each and everyone in need of it, as long as such use did not impinge on the equivalent right of use exercised by other users. Numerous rules, often contained in praetorian interdicts, were, however, scattered throughout the full spectrum of legislation.[18] This is an indication of the emperor's power to control the use of water for the benefit of all users. He usually exercised this power in cases of competitive use such as navigation and fishing. This power to control water utilization which was vested in the praetor, did however not derogate from the classification of all water as *communia*.

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[17] 41. *Cf* Van Zyl & Van der Vyver 173; Van Zyl *Roman Private Law* 62-63.

[18] Ware 1 *et seq.*

The South African water law was, to a large extent, derived from Roman law. It is therefore necessary to investigate the nature and extent of Roman water legislation, in order to properly evaluate the historical development and the nature and shortcomings of current South African water law.

1.3. ROMAN *IUS RERUM* WITH EMPHASIS ON THE CLASSIFICATION OF WATER

The Digest contains two non-concordant systems in terms of which things were classified in Roman law, yet under the single heading *de divisione rerum, et qualitate.*[19] The first is a reproduction of that of Gaius,[20] a classical author who probably wrote his *magnum opus* in the year 161 AD.[21] The second is the system of Aelius Marcianus, a late-classical jurist.[22]

1.3.1. The classification system of Gaius

According to Gaius, things *(res)* were divided into two main classes, viz those of divine law (*res divini iuris*) and those of human law (*res humani iuris*).[23] The criterion for the distinction was the susceptibility of a thing to be owned : whereas *res divini iuris* could not be owned by anyone,[24] *res humani iuris* could belong to somebody in ownership.[25]

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[19] *D* 1 8.

[20] As set out in his Institutes, *lib* 2.

[21] Jolowicz 386-390, 386 n 2.

[22] Thomas 129 describes Marcianus as a "minor" jurist, yet he was quoted extensively in the law of things in the Digest, and thus contributed substantially to the Roman codified system of the classification of things.

[23] *D* 1 8 1 *pr.*

[24] *D* 1 8 1 *pr* : *id nullius in bonis est.*

The class *res humani iuris* consisted of two sub-classes, viz *res publicae* and *res privatae.*[26] Public things belonged to no-one in ownership,[27] but were those of the whole world.[28] Where Gaius referred to rights of ownership, he consistently used the term *in bonis esse.* In *Digesta* 1 8 1 *pr*, where his classification of things is set out, this phrase is repeated five times.[29] In the discussion of things belonging to the whole world, no reference is, however, made to the concept of ownership, but to *ipsius enim universitatis esse creduntur* instead. This may be an indication that, although these goods were not the property of anyone, they were not the common property of everyone either. They were, at the most, available for common use by the *universitas.*[30] Private things were those of individuals.[31]

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[25] *D* 1 8 1 *pr* : *alicuius in bonis est, potest autem et nullius in bonis esse.*

[26] *D* 1 8 1 *pr.*

[27] *D* 1 8 1 *pr* : *nullius in bonis esse creduntur.*

[28] *D* 1 8 1 *pr* : *ipsius enim universitatis esse creduntur.* According to *Cassell's Latin Dictionary* by Marchant & Charles, the term *universitas* means "the whole world" or "the universe". According to the *Latijnsch Woordenboek* of Van Wageningen, it includes "*de wereld, het heelal, het geheel*". Lewis & Short, in their *Latin Dictionary*, describes it as "the whole number of things", but offers another translation, viz "a body corporate", having legal personality. It is submitted that the last interpretation could not have been what Gaius had in mind, since this would exclude too many things from any of his classes. Moreover, such an interpretation would be in contradiction to Gaius' view that public things belonged to *no-one* in ownership. Schulz 93 is of the opinion that what is meant is a qualification of the broad dictionary meaning, viz *universitas civium*. It is submitted that this interpretation is too narrow, since, as will be seen *infra* (n 34), Gaius was of the opinion that the principles of the *ius gentium* regulated the use of public things. If the class is however limited to the citizens of Rome, the *ius gentium* would not be applicable.

[29] *Quod autem divini iuris est, id nullius in bonis est; id vero, qoud humani iuris est, plerumque alicuius in bonis est; potest autem et nullius in bonis esse : nam hereditariae antequam aliquis heres existat, nullius in bonis sunt. Hae autem res, quae humani iuris sunt, aut publicae sunt aut privatae. Qua publica sunt, nullius in bonis esse creduntur : ipsius enim universitatis esse creduntur.*

[30] This linguistic interpretation is in accordance with Gaius' view as set out in *D* 1 8 5 *pr.*

[31] *D* 1 8 1 *pr* : *Privatae autem sunt, quae singulorum sunt.*

In another paragraph in the Digest,[32] also taken from one of Gaius' works,[33] it was said that the public use of both rivers and banks was allowed in terms of the *ius gentium*.[34] Yet as far as the ownership (*proprietas*) of banks was concerned, the owner of the adjoining land owned the banks as well.[35]

Whether Gaius intended to classify rivers under *res publicae*, is not totally clear from the classification. To say that the right of public use of rivers existed in terms of the *ius gentium*, did not necessarily imply that rivers were *res publicae,* because the concepts of *usus publicus* and *res publicae* did not mean the same.[36] The earlier submission that Gaius' class *res publicae* was excluded from any form of ownership, yet available for use by the whole world, however supports a further submission that rivers, having been things available for use by members of all nations, could be classified under *res publicae.* This does not mean that all things subject to the *usus publicus* were necessarily *res publicae* : the banks of rivers were, in the same sentence, said to be also available for public use, yet they were not *res publicae,* but *res privatae*, belonging to individuals.[37]

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[32] *D* 1 8 5.

[33] *Rerum cottidianarum sive aureorum, lib* 2. This name is translated as "Everyday things" or "Golden sayings", according to Jolowicz 388 n 3*. This author is of the opinion that this work of Gaius probably consisted of post-classical adaptations of his Institutes.

[34] *D* 1 8 5 *pr* : *riparum usus publicus est iure gentium, sicut ipsius fluminis.* The *ius gentium* was that part of the law which was applicable to both the citizens of Rome and to foreigners (Jolowicz 104). *Cf* Buckland 53.

[35] *D* 1 8 5 *pr* : *sed proprietas illorum est, quorum praediis haerent.*

[36] Para 1.10. *infra* for a discussion of the difference between these terms.

[37] *D* 1 8 5 *pr.*

1.3.2. The classification system of Marcianus

The second classification system accepted in the Digest was that taken from the opinions of Marcianus.[38] Approximately half of the *ius rerum* in the Digest had been adopted from Marcianus' work, which makes him an authoritative author on this subject.[39]

According to Marcianus,[40] things were subdivided into the classes *res omnium communes, res universitatis, res nullius* and *res singulorum*.[41] Running water (*aqua profluens*) sorted under *res omnium communes* in terms of the *ius naturale*.[42] In a subsequent text,[43] Marcianus is quoted to the effect that almost all rivers and harbours are public.[44] This phrase later contributed to the general confusion between *res publicae, usus publicus* and *flumina publica*,[45] since Marcianus did not specify exactly what he meant by saying that almost all rivers were public. First, Marcianus, unlike Gaius, did not recognise a class of things known as *res publicae*.[46] Marcianus' class of things which could be used by all people, was called *res omnium communes*. It is unlikely that he would, in the midst of a discussion of the classes of things which he had defined in a previous paragraph, define a new class in which rivers belonged, especially while there was already a class under which running water sorted. Moreover, in his classification system (in which he

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38 *D* 1 8 2, 4, 6, 8.

39 *Cf* Thomas 129; n 22 *supra*.

40 *Inst Lib* III.

41 *D* 1 8 2 *pr*.

42 *D* 1 8 2 1.

43 *D* 1 8 4.

44 *Sed flumina paene omnia et portus publica sunt.*

45 *Vide* the discussion of the interpretations which different authors on Roman law attach to the classification of things, 125 *infra*.

46 *Cf* Mommsen, Krueger & Watson who translated the phrase by saying that almost all rivers were public *property*.

distinguished between things belonging to each and everyone in terms of the *ius naturale*, and things belonging to cities), rivers and harbours would sort in seperate classes, harbours being things belonging to the city or state, and not to each and all. Secondly, Marcianus never mentioned *flumina publica*. If he intended to refer to *flumina publica* as described by Ulpian in *Digesta* 43.12 1 3, it would mean that almost all rivers and harbours were *perennial*, which does not make sense. Thirdly, he could have been referring to the *usus publicus*. The sentence occurs amongst others in which he clearly discussed the rights of use in respect of the things classified in the classes which he had defined. If this is the case, it means that almost all rivers and harbours were available for public use, irrespective of where they had been classified in the *ius rerum*. It is submitted that this interpretation is logical and in accordance with his classification system and with the subsequent systematic discussion thereof.

The class *res omnium communes* consisted of things belonging to everyone, in terms of the *ius naturale*.[47] Whether the origin of the *ius naturale* was human common sense and man's feeling for righteousness, divine inspiration or the laws of nature, is a debatable yet philosophic point.[48] For the purposes hereof, natural law is regarded as that body of rules which is based on the principles of justice and equity, and which binds each and everyone, irrespective of Roman citizenship.[49] Marcianus' opinion that certain things

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[47] The *ius naturale* was the underlying principle of many legal rules in Roman times (Thomas 64-65). It was the embodiment of justice and equity being a "valid and binding body of law which gave substance and reality to the community's feeling of, and desire for, justice, in the sense of *iustitia* or *aequitas*" (Van Zyl *Justice* 116). In the Justinian era, natural law was heavily influenced by Christian principles : *Sed naturalia quidem iura, quae apud omnes gentes peraeque observantur, divina quaedam providentia consituta, semper firma atque immutabilia permanent : ea vero, quae ipsa sibi quaeque civitas constituit, saepe mutari solent, vel tacito consensu populi, vel alia postea lege lata* (*I* 1 2 11; *D* 1 1 1 3); *Ius naturale est quod natura omnia animalia docuit* (*I* 1 2 *pr*). *Cf* Buckland 53-55; Chapter VI *infra*.

[48] Cicero *De Leg* 1 15 42-43 (*recta ratio*), I 6 7, 12 and II 4 ("the philosopher's conscience"); *De Inventione* 2 53 160; Kaser 3 III 3(d) 26; Van Oven 13 n 32; Jolowicz 105; Nicholas 54 *et seq*; Thomas 64 *et seq*; Sohm 70 *et seq*.

[49] The validity of the principles of natural law across the borders (*D* 1 1 1 3) was also the distinguishing feature of the *ius gentium*, which was the body of rules regulating relationships between *cives* and *peregrini*. The *ius gentium* was also based on principles of justice and equity, (*I* 1 2 2; *D* 1 1 1 4; 1 1 9) and it is not without reason that many authors on Roman law have identified

belonged to everyone in terms of natural law, may thus be interpreted that natural resources were intended for common use by all, and that no-one who was in need thereof, could be deterred from utilizing it, because that would be contrary to universal principles of justice.

1.3.3. The classification system of the Digest

To draw a uniform classification of things from the Digest, it is necessary to compare the two systems quoted in *Digesta* 1 8, ie those of Gaius and Marcianus, but with due care not to enforce an artificial similarity in order to obtain uniformity. It must therefore be taken into consideration that the two jurists had written in different periods of time, where practical situations and problems differed. Furthermore, the Digest is a compilation of authoritative texts, in which the occurrence of contradictory and incompatible opinions is quite probable.[50]

As far as things contained in the respective classes are concerned, Marcianus' *res nullius* is essentially similar to Gaius' *res divini iuris*.[51] Marcianus' *res singulorum* is in accordance with Gaius' *res privatae*.[52] Gaius' *res publicae* can be compared with two classes of Marcianus collectively, viz *res universitatis* and *res omnium communes*. Gaius' *res publicae*

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these two systems and dealt with them as one and the same (Van Zyl *Roman Private Law* 21 *et seq*; Van Oven 13 *Cf* n 32; Thomas 64-65, where the influence of the Greek philosophy on the merger of the two terms is discussed). For the purposes hereof, it should be noted that Gaius and Marcianus respectively mentioned the *ius gentium* and *ius naturale*, to justify the classification of certain things in a class where it was available for the common use of the whole world. This could be an indication of the similarity of these two systems as far as two characteristics are concerned, viz its universal application, and the principle of justice which forms the basis of both. For this reason, the distinctions between these two bodies of rules will be ignored for the purposes hereof.

[50] However, the compilators were instructed by the constitution *Deo Auctore* (dated 15 December of the year 530) to include nothing superfluous, obsolete, contradictory or repetitive (Jolowicz 481; Thomas 15; Sohm 123).

[51] Both contained *res sacrae, res sanctae* and *res religiosae* (*D* 1 8 1 *pr*; 1 8 6 2, 3, 4).

[52] Gaius stated that *res privatae* were those things belonging to individuals (*quae singulorum sunt* (*D* 1 8 1 *pr*)).

was regulated by the *ius gentium*, and rivers and harbours sorted thereunder, which were excluded from ownership but belonged to the whole world in rights of use.[53] The classification of certain things into Marcianus' class *res omnium communes,* was regulated by the *ius naturale*. This class contained, *inter alia*, running water which belonged to each and everyone in the world in need thereof, although not necessarily in ownership. His class *res universitatis* included all works constructed or controlled by a city or state or municipality, eg theatres and stadiums.[54] It should be noted that the *ius naturale* was not mentioned as the regulating system for this class, which supports an argument that these things, unlike *res omnium communes*, were available for use by citizens only. It is therefore submitted that both Gaius and Marcianus meant to include things available for public use in these respective classes. Marcianus' subdivision is however a more sophisticated classification, in that he distinguished between things available for citizens only and things available to all, while Gaius sorted them all in one class.

What Marcianus called *aqua profluens*, did not necessarily differ from what Gaius called *flumina*. It is submitted that both intended to refer to natural streams of water, with no consideration to the sophisticated distinctions between *rivi, flumina publica* and *flumina privata*, drawn by Ulpianus in *Digesta* 43 12 1.[55] The general acceptance of an intentional distinction between running water and rivers, encouraged by the classification system of the Institutes,[56] had led to confusion concerning the classification of water in the Roman *ius rerum*. This will be discussed in the following paragraphs.

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[53] 118 *supra*.

[54] *D* 1 8 6 1. After giving theatres and stadiums as examples of *res universitatis*, the author proceeded with the phrase *et si qua alia sunt communia civitatium*. It can therefore be argued that state waterworks, such as harbours, bridges, dams and lakes could also be included in this class, being constructed by the state or city for the beneficial use of citizens.

[55] *D* 43 12 1 1 and 3.

[56] Para 1.5. *infra*.

1.4. COMMON INTERPRETATIONS OF THE *IUS RERUM* AS FAR AS WATER IS CONCERNED

Kaser[57] pays little attention to the classification of water in Roman law. He refers to Marcianus as a *Schulschriftsteller*[58] who was of the opinion[59] that running water (*flußwasser*) was *res omnium communes*. He does not refer to *Digesta* 1 8 1 *pr*, but quotes Gaius[60] and allocates *res publicae* to the state in ownership.[61] He sorts rivers, lakes and aquaducts under *res publicae*, which is essentially in accordance with Gaius' classification in the Digest. Gaius had, however, never allocated *res publicae* to state ownership; he had, in fact, recognised ownership of *res publicae*.

Buckland[62] is of the opinion that a distinction ought to be drawn between the water of a river and the river itself, in that the river was public and the water common, while the bed was private. It is however submitted that his distinction is based on an incorrect interpretation of the terms *res publicae* and *res omnium communes* as contained in the texts of the Digest to which he refers.[63] The merger of the classification systems of Gaius and Marcianus in the Institutes had probably encouraged the artificial distinction which he draws. His distinction between the water and the bed of a river is not in accordance with the texts on this subject.[64]

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57 81.

58 Which was translated by Dannenbring as an "academic" author.

59 Kaser uses the term "*versteht*".

60 *I* 2, 10-11.

61 He admits however that the state cannot own privately : "*res publicae sind sachen in eigentum des staates, die, weil der staat am privatrecht (im allegemeinen) nicht teil hat, außerhalb des privateigentums steken.*"

62 180-185.

63 He refers to *Digesta* 1 8 4, 5; 43 12 1 3 and *Institutiones* 2 1 2 as authority for his viewpoint.

64 Para 1.8. *infra*.

Buckland recognises the opinions of some jurists that a river, including both the water and the bed, was available for *usus publicus*, irrespective of where ownership had vested.[65] It is submitted that this recognition has merit.[66]

Van der Merwe[67] refers to both the Digest[68] and the Institutes[69] to motivate his opinion that both the classes *res publicae* and *res omnium communes* included things available for public use, although *res omnium communes* were things not susceptible to human control, while *res publicae* were things belonging to the state in ownership. This viewpoint is fairly pure, yet *res publicae* was said by Gaius to belong to no-one in ownership. The author however distinguishes between public rivers and running water, a distinction which can be attributed to the influence of *Institutiones* 2 1 2, in which the classifications of the Digest had been merged, as well as to the incorrect interpretation of the application of the interdict in *Digesta* 43 12.[70]

Sohm[71] is of the opinion that *res publicae* were things belonging to the state, yet available for public use.[72] Although these things (such as public rivers) were destined for the benefit of all individuals, they could never be the object of private property. On the other hand, "the water of natural streams" was classified under *res omnium communes*, which were things not susceptible to ownership. It is difficult to perceive what the

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65 185.

66 Para 1.7.4. *infra*.

67 *Sakereg* 30-31, 34.

68 *D* 1 8 1; 1 8 4.

69 *I* 2 1 1.

70 *Vide* the discussion of the interdicts para 1.6.1. *infra*.

71 303.

72 *Publici usui destinatae*.

grounds for Sohm's distinction between public rivers and the water of natural streams are, since he does not refer to any authority.

Van Zyl,[73] being the only author who refers to the troublesome overlapping of the classes *res publicae* and *res omnium communes*, is of the opinion that although rivers were also *aqua profluens*, the classification thereof in a seperate class is justified, because *flumina* referred to perennial rivers only. This interpretation is in conflict with *Digesta* 43 12, where *flumina* were divided into *flumina perennia* and *flumina torrentia.* Not all rivers were *flumina perennia.* Furthermore, in terms of *Digesta* 1 8 2 *pr,* all running water was *communia*, and neither Gaius nor Marcianus distinguished between perennial and seasonal rivers.

Van Oven[74] admits that the Digest recognized no distinction between *res publicae* and *res omnium communes.* He also says that both *res publicae* and *res omnium communes* were destined for public use.

Thomas[75] is the only author who refers to authority[76] to support his viewpoint that *res publicae* belonged to the state. This text reads *bona civitatis abusive publica dicta sunt, quae populi Romani sunt.* It is submitted that Ulpian, in the text, meant nothing more than that things belonging to the state were destined for public use by the people of Rome. He probably referred to *loci publici*, as well as to *res universitatis.* Thomas is probably correct in his distinction between *res universitatis* and *res omnium communes* on this ground, but this is no authority for ascribing the ownership of *res publicae* to the state, which is contrary to the viewpoint of Gaius. Thomas alleges that flowing rivers

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[73] *Roman Private Law* 122 n 8.

[74] 50.

[75] 129.

[76] *D* 50 16 15.

were *res publicae*, which is true if the class *res publicae* is seen as Gaius' class of things which belongs to no-one in ownership.

Hall[77] sorts large perennial streams under *res communis* (sic). In a subsequent paragraph, rivers are described as *res publicae*. The criterion for his distinction is not clear.

It seems that most authors on Roman law distinguish between *res publicae*, being state property, and *res omnium communes*. Many also distinguish between rivers and running water.[78] It is submitted that these viewpoints represent an ill-considered comparison between the two classification systems in *Digesta* 1 8, as well as of the acceptance of the merger of the two in the Institutes, a general misunderstanding of the various possible meanings of the term *"publica"*, and the irrelevant introduction of the praetorian interdicts of *Digesta* 43 12 to 22 into the *ius rerum*, aspects which will be discussed in the following paragraphs.

1.5. THE *IUS RERUM* OF THE INSTITUTES

The Institutes had been compiled as a student handbook, being a brief summary of Roman law, based largely on the Institutes of Gaius, but also with reference to and quotations from other texts. *Institutiones* 2 1 deals with the classification of things.[79]

The majority of authors on Roman *ius rerum* derived their opinions from this book, without considering the texts of the Digest (which were however not necessarily harmonious with those of the Institutes on this matter). Because the Institutes had equal

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[77] *Origin* 5.

[78] *Vide* De Wet "Water" 28; *Opuscula* 7; *Festschrift* 757; Nunes 299-300.

[79] *De rerum divisione (et adquirendo ipsarum dominio).*

legislative force, it cannot be said that this way of interpreting the Roman *ius rerum* is incorrect, yet in the light of the Institutes being a brief summary, compiled for purposes of student reference, the failure to properly consider and compare the non-conforming texts of the Digest cannot result in more than a superficial portrayal of what the position in Roman law was.

Marcianus' classification is clearly represented in the Institutes' division of things :

> *Quaedam enim naturali iure communia sunt omnium, quaedam publica, quaedam universitatis, quaedam nullius, pleraque singulorum, quae ex variis causis cuique adquiruntur.*[80]

In fact, the Institutes was almost a verbatim repetition of Marcianus' text,[81] with a single major addition of another group of things, called *res publicae*, which had probably been derived from Gaius' division.[82]

It had beens argued[83] that Marcianus' *res omnium communes* was probably aimed at the same group of things as Gaius' *res publicae*, but that it was a more refined subdivision thereof. Both however referred to things which were intended for common use by all, although it had not been destined for ownership by anyone. While Marcianus sorted *aqua profluens* under *res omnium communes*, Gaius sorted rivers (*flumina*) under *res publicae*. However, there was little difference.[84] The inclusion of both these classes in the Institutes' classification, caused confusion about the difference between *res omnium*

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80 *I* 2 1 *pr.*

81 Marcianus' words as quoted in *D* 1 8 2 *pr* read as follows : *quaedam naturali iure communia sunt omnium, quaedam universitatis, quaedam nullius, pleraque singulorum, quae variis ex causis cuique adquiruntur.*

82 Gaius' division as quoted in *D* 1 8 1 reads as follows : *Quae publicae sunt, nullius in bonis esse creduntur, ipsius enim universitatis esse creduntur; privatae autem sunt, quae singulorum sunt.*

83 Para 1.3. *supra*.

84 Para 1.3. *supra*.

communia and *res publicae*. From there the general acceptance of what is in fact an artificial difference between rivers and running water, and also the trend to read unsound meanings into these classes, eg. *res publicae*, which is said to be "state property",[85] while such an interpretation is not supported by the texts regarding the *ius rerum* of either the Digest or the Institutes.[86]

In *Institutiones* 2 1 2, Marcianus was quoted again, asserting that all rivers and harbours were public.[87] This text is almost a verbatim repetition of Marcianus's opinion as quoted in *Digesta* 1 8 4 1.[88] As was said above, this text was part of Marcianus' discussion of his four classes of things. The assertion probably intended to explain that most rivers, being *res omnium communes*, were available for public use, and it was probably not intended to create a new class of things, called *res publicae*.[89] In the Institutes, this text was taken out of context, and it supported *Institutiones* 2 1 1 in adding the group *res publicae* to Marcianus' classification, probably thereby causing the subsequent confusion in Roman-Dutch and South African law, viz that *flumina publica* was classified as *res publicae* and *flumina privata* as *res privatae*.

However, even in *Institutiones* 2 1 2, no substantiation exists to draw a distinction between forms of watercourses as far as the classification of things is concerned. It is

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85 Thomas 129, with reference to *D* 50 16 15; Buckland 182-183; Kaser 81.

86 Hall *Origin* 5; Vos *Principles* 1; Van der Merwe *Sakereg* 30-31, 34; De Wet "Water" 28, *Festschrift* 757; Sohm 303; Van Zyl *Roman Private Law* 122 n 8; Van Oven 59; Buckland 182-183. Kaser 81 is of the opinion that *res publicae* comprises things belonging to the state in "non-private ownership", eg. things used by the public (*usus publicus*), but controlled by the state. He classifies rivers and flowing rain water under *res omnium communes*, and rivers and lakes under *res publicae*. He suggests no criterion for the distinction between the two classes.

87 *Flumina autem omnia, et portus, publica sunt.*

88 *Sed flumina paene omnia et portus publica sunt.* It is to be noted that the term *paene* ("almost") was left out in *I* 2 1 2, giving the phrase a different meaning than the Digest text.

89 *Vide* the argument in para 1.2. *supra*.

submitted that the distinction of *Digesta* 43 12-22 intended nothing more than administrative clarity.

1.6. PUBLIC AND PRIVATE RIVERS AND STREAMS

According to Gaius, rivers with their banks were public in terms of the *ius gentium.*[90] Although he probably referred to public use (*usus publicus*) rather than to a classification thereof as *res publicae*, rivers most probably sorted under *res publicae* anyway.[91] According to Marcianus, running water was *res omnium communes*, belonging to each and everyone in terms of the *ius naturale.*[92] It was submitted that both jurists intended to allocate the water of rivers to the public, including not only citizens of Rome, but the whole world, according to the principles of justice and equity of the *ius naturale* and *ius gentium*. It is also submitted that Justinian law, as far as the *ius rerum* as contained in the Digest is concerned, intended *communia*[93] to be all things destined to the common use of all (*publici usui destinatae)*,[94] and that water was such a thing.

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[90] *D* 1 8 5.

[91] Para 1.7.4. *infra*.

[92] *D* 1 8 4 1 read *omnium communia sunt illa*, which left the question of ownership turbid. It was however submitted *supra* that it at least implied rights of use.

[93] The Latin word *communia* was derived from *communis*, meaning "for the public good" or "for common use" (Marchant & Charles 112). Van Wageningen 565 translated it with "*gemeen goed, voor allen tot gemeenschappelijk gebruik, tot algemeen welzijn*". The word does not necessarily bear any reference to ownership. The closest English translation would be "commons", although this word actually refers to shared food provisions. For purposes hereof, the Latin term *communia* will be used when reference is made to things available for common use. This will then serve as a common term for Marcianus' *res omnium communes* and Gaius' *res publicae*.

[94] Sohm 303; 1.7.4. *infra*.

1.6.1. The praetorian interdicts

1.6.1.1. *Digesta 43 12*

One of a few successive chapters concerned with praetorian interdicts on river utilization,[95] gives an analysis of the types of rivers (as held by Ulpian[96]) under the heading : *De fluminibus : Ne quid in flumine publico ripave eius fiat, quo peius navigetur.*[97] The purpose of this analysis of rivers is to explain the interdict, which refers to public rivers. Nowhere in the *ius rerum* was a distinction ever drawn between different kinds of rivers : all running water or rivers were merely dealt with under *res publicae* (according to Gaius) or *res omnium communes* (according to Marcianus), without reference to certain flow conditions or forms. The praetor's reference to the concept of *flumine publico,* therefore requires investigation.

According to Ulpian, rivers (*flumina*) could be distinguished from brooks (*rivi*) by their size (*magnitudo*) or the common opinion (*existimatio circumcolentium*).[98] As far as *flumina* were concerned, they were either perennial (*flumina perennia*) or seasonal

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[95] *D* 43 12, 13, 14, 15.

[96] *D* 43 12 1 *pr* states that *ne quid in flumine publico ripave eius facias neve quid in flumine publico neve in ripa eius immittas, quo statio iterve navigio deterior sit fiat.*

[97] *D* 43 12.

[98] *D* 43 12 1 1.

(*flumina torrentia*).[99] A perennial river was a river which had a constant flow (*semper fluat*), while that of a seasonal river occurred during winter times only (*hyeme fluens*).[100]

A river which had ceased to flow during the odd summer, but had usually retained flow through the year, did not lose its status as a perennial river.[101] Some rivers were public, others were not.[102] Ulpian referred to Cassius when distinguishing between public and private rivers. According to him, public rivers were perennial ones.[103] The interdict of *Digesta* 43 12 referred to public rivers only, because a private river differed in no ways from certain private places.[104] The interdict also applied to navigable rivers only, because the object thereof was to prevent interference with navigation.[105]

Many authors on Roman law hold the opinion that the above texts constitute a further refinement of the *ius rerum*, viz that only public rivers (*flumina perennia*) are *res publicae*, and therefore that private rivers (*flumina torrentia*) are *res singulorum* or *res privatae*.[106]

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[99] *D* 43 12 1 2. According to Paulus (*D* 43 12 1 2 *pr*) *flumina publica, quae fluunt, ripaeque eorum publicae sunt*. Mommsen, Krueger & Watson translated this sentence as follows : "public rivers are those which are always flowing". Scott's translation reads as follows : "Public rivers which have a regular course, together with their banks, are public property". It is submitted that neither of the two translators gives an impeccable rendering of the intention of the text. A literal translation would be "flowing public rivers as well as their banks, are public". The first "public" (*flumina publica*) indicates that mention is only made of rivers defined as public, ie probably perennial rivers (that is if Paulus agreed with the classification of Ulpian). The second "public" (*publicae sunt*) refers not to public things or public rivers, but to public use (*publicus usus*). Para 1.7.4. *infra*. It therefore means that those rivers which have a flow suitable for common use, are available as such.

[100] This phrase (*hyeme fluens*) does not occur in all copies of the *Corpus Iuris Civilis*. The Greek term is however often used. (*D* 43 12 1 2).

[101] *D* 43 12 1 2.

[102] *D* 43 12 1 3.

[103] *D* 43 12 1 3.

[104] *D* 43 12 1 4.

[105] *D* 43 12 1 12 ; *sed si quid fiat quo deterior statio et navigatio fiat.*

[106] Buckland 183 n 4 refers to *D* 43 12 1 for his viewpoint that rivulets (*rivi*) were private, as against rivers, being "the property of the state" and therefore *res publicae*. It seems as if he places *res*

The distinction between the forms in which running water occurred, was probably drawn to demarcate the application of the particular interdict. The interdict was not meant to apply to small streamlets where navigation could not take place. Therefore seasonal rivers (*flumina torrentia*) and rivulets (*rivi*) were distinguished and expressly excluded. No intention to deviate from or add to the accepted *ius rerum* appears from the relevant texts. It is therefore submitted that all running water was still *communia*, although certain praetorian interdicts only applied to certain forms and strengths of streams. The exclusion of certain small streams did not have the result of moving such streams from *communia* to *res privatae*.

A similar limitation of the application of some praetorian interdicts, appears from *Digesta* 43 13-15 and 20 :

1.6.1.2. *Interference with the flow of public rivers*

In *Digesta* 43 13, the interdict by which the praetor had prohibited anything to be done in a public river which could cause the water to flow otherwise than it had in the previous summer, was discussed.[107] Because this interdict was not aimed at the utilization of the water for navigation (which is non-consumptive use) only, but particularly for diversion (which is consumptive use), the application thereof was more extensive, ie including both navigable and unnavigable rivers.[108] It therefore included all streams large enough to be capable of common use for diversion. It was however not

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privatae against *res publicae*. The only reference in *D* 43 12 1 to private and public waters, was in *D* 43 12 1, 4, where private rivers (*flumina privata*) were excluded from the application of the interdict. No mention was made of the classification of rivers or streams in the *ius rerum*. In terms of the *ius rerum*, all running water was *communia*, and private rivers or streams, merely because of their smaller size, were not excluded from this class. *Vide* 1.3.3. *supra*. Therefore even *flumina privata* were *res omnium communes*, and not *res privatae* or *res singulorum*. *Cf* Hall *Origin* 5; Van Zyl *Roman Private Law* 122 n 8; Lee 123; Nathan 338.

[107] *D* 43 13 1 *pr.*

[108] *D* 43 13 1 2.

applicable to seasonal rivers (*flumina privata*),[109] probably because such rivers hardly had enough water for common use. Neither were *rivi* included, because the interdict expressly referred to *flumina*, which were, in *Digesta* 43 12, distinguished from *rivi* on the grounds of *magnitudo* and *existimatio circumcolentium*.[110]

1.6.1.3. *Navigation of public streams*

The interdict of *Digesta* 43 14 forbade anyone to use force against another to prevent him from navigating a public stream.[111] Once again reference was only made to public streams, since only these, being perennial, were fit for navigation and therefore caused competition for sailing space. Although it was possible to sail on seasonal rivers and streams with smaller boats and in certain times of the year, the competition was probably less severe, which negated the necessity to regulate navigation on these watercourses.

1.6.1.4. *The fortification of banks*

In terms of *Digesta* 43 15, anyone was prohibited from forcefully preventing another from fortifying the banks of a river, unless such fortification hindered navigation or caused damage.[112] This interdict was generally applicable to the banks of various kinds of watercourses and -sources, such as lakes, canals and pools.[113] This is probably due to the beneficial value of such actions, and the fact that all these sources were *communia*.

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[109] *Cf* Mommsen, Krueger & Watson 580, where "in flumine publico" is translated as "in a private river".

[110] *D* 43 12 1 1.

[111] *D* 43 14 1 *pr* : *Praetor ait : quo minus illi in flumine publico navem ratem agere quove minus per ripam onerare exonerare liceat, vim fieri veto.*

[112] *D* 43 15 1 *pr.*

[113] *D* 43 15 1 6.

1.6.1.5. *Water abstraction from public rivers*

Digesta 43 20 contained an interdict forbidding anyone to draw more water from a public river than he had used to do.[114] The interdict was applicable to public rivers only, the reason being that only perennial waters could be diverted.[115] It did however not apply to all perennial rivers, but only to those of which the water could in fact be diverted.[116] The water of streams flowing underground[117] was water which could not be utilized (*ut usui esse non possint*) and such streams were not covered by this interdict. The interdict was aimed at regulating the public diversion of those large streams which offered divertable water for many people, and which were probably subject to severe competition by members of the public in need of daily water.[118] The purpose of the interdict was the peaceful common use of water, which appears clearly from the contents of the interdict.[119]

1.6.1.6. *Repairing and cleaning of rivi*

The interdict described in *Digesta* 43 21, forbade anyone to hinder another from repairing or cleaning any stream (*rivus*), covered watercourse (*specus*) or dam (*septa*) in order to draw water.[120] The interdict was also applicable to canals (*fossae*) and wells

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[114] *D* 43 20 1 *pr.*

[115] *D* 43 20 1 5 : *nulla enim alia aqua duci potest, nisi quae perenni est.*

[116] *D* 43 20 1 6.

[117] *D* 43 20 1 6 : *quae ita sunt summersae, ut defluere extra terram et usui esse non possint.*

[118] Daily water was water which was needed right through the year (*D* 43 20 1 2, 3). It included water for household purposes (*D* 43 20 1 3, 11), stock watering (*D* 43 20 1 3 *pr*, 18), irrigation (*D* 43 20 1 13) and recreation (*amoenitas)(D* 43 20 3 *pr*, 11).

[119] *D* 43 20 3 1.

[120] *D* 43 21 1 *pr*, 1, 2, 3, 4.

(*putei*),[121] and in fact to all watercourses, whether on public or private land.[122] This interdict was therefore applicable to all kinds of water, irrespective of its classification as public or private rivers, or as rivers or streams. This promotes an argument against the opinion that only *flumina publicae* were *res publicae*, and that *flumina privatae* and *rivi* were *res privatae*. All water was available for public use, and could be controlled by the state for the benefit of all (eg. by praetorian interdicts).

1.6.1.7. *Use of spring water*

Digesta 43 22 forbade anyone to withhold from another the use of the water of a spring (*fons*), lake (*lacu*), well (*puteus*) or fish pond (*piscina*) *nec vi nec clam nec precario*.[123] Moreover, the praetor forbade anyone to prevent another from cleaning or repairing such a spring, in order to facilitate the use of its water.[124] Reparations to any of these water sources which would allow use in a way other than it had been used previously, were forbidden.[125] The interdict was probably used to encourage the maintenance of watercourses and -sources by the users thereof, ie the members of the public, for the benefit of the public at large.

The above interdicts indicate that the use of all kinds of water, whether in rivers, streams, lakes, dams, ponds, wells, underground channels or impoundments, could have been and often were controlled by praetorian interdicts.[126] The applicability of certain measures of control to particular water sources only, did not influence the classification

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[121] *D* 43 20 1 5.

[122] *D* 43 20 3 5.

[123] *D* 43 22 1 *pr*. In terms of *D* 43 22 4, this interdict was specifically aimed at fresh water in perennial streams.

[124] *D* 43 22 6.

[125] *D* 43 22 1 8.

[126] Other forms of control, such as servitudes and actions also occurred (*D* 39 3).

of running water as *communia*. It is therefore submitted that the distinctions between forms of water, eg. public and private rivers, rivers and streams, and perennial and seasonal rivers, were drawn for the sake of the administrative control of water, and not to refine or amend the classification of things as it had been set out in *Digesta* 1 8.[127] The generally accepted view that only *flumina publica* were *communia*, appears not to be substantiated by the texts of the Digest, but seems to have been encouraged by the doubling of *communia*-classes in the Institutes.[128]

1.7. PUBLIC THINGS, RIVERS, PLACES AND USE

The general incompatibility of water-related texts in the *Corpus Iuris Civilis* calls for an investigation of the contextual meaning of the term *publica*, which is used in different forms in the texts. Ascertaining the different meanings of this term, could clear up the seemingly uncertain situation of Roman law as far as water is concerned.

1.7.1. Res publicae

The term *res publicae* is used in *Digesta* 1 8 1, and it had been derived from Gaius' writings. In terms of *Digesta* 1 8 1 *pr, res humani iuris* were either *res publicae* or *res privatae*. *Res publicae* belonged to nobody in ownership, but belonged to the whole world (*universitas*). In *Digesta* 1 8 5 *pr,* it was said that both rivers and their banks were available for *usus publicus*, in terms of the *ius gentium*.[129] *Res publicae* were therefore things which belonged to no-one in ownership, but to each and everyone in rights of use (*usus publicus*). Rivers were such things.

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[127] Para 1.7 *supra*.

[128] Para 1.5. *supra*.

[129] Banks, however, unlike rivers, were the private property of riparian owners (*D* 1 8 5 *pr*).

Marcianus never used the term *res publicae*. He however distinguished between two kinds of "common" things, viz *res universitatis*, belonging to the state or a city or municipality, and *communia omnium*, belonging to everybody in terms of natural law. It had been argued[130] that these two classes consisted of all the common things that Gaius had sorted into one class, viz *res publicae*. Since Marcianus never mentioned ownership, but discussed rights of use only, it it is not clear to whom he intended to allocate *res universitatis* and *res omnium communes* as far as ownership was concerned. Both were however available for use by citizens, while *res omnium communes* were available for use by each and everyone in terms of the *ius naturale*. *Res omnium communes* were natural resources,[131] while *res universitatis* were works constructed by the state for the use of citizens.

It is therefore submitted that Marcianus' classification did not deny the existence of *res publicae*, but merely devided it into two more sophisticated classes. Gaius' *res publicae* were therefore all non-owned things which could be used by members of the public, which members included foreigners (*peregrini)* in terms of the *ius gentium*.

1.7.2. Flumina publica

In *Digesta* 43 12-23, the term *flumina publica* is often used.[132] A public river was a river which was distinguished from a streamlet (*rivus*) by its size, and from a private river by its perenniality. Nowhere was the term *flumina publica* said to be synonymous with the term *res publicae*. Public rivers did however, like private rivers and streams, fall into the class *res publicae*.[133]

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130 Para 1.3.3. *supra*.

131 The air, sea and running water were things included in this class.

132 This term is defined in *D* 43 12 1 2-4, and discussed in para 1.6. *supra*.

133 This is in terms of Gaius' classification. In terms of Marcianus', all these forms of watercourses were *res omnium communes*, which was a similar class of things. It is submitted that man-made watercourses, such as canals, built by the state for the benefit of all citizens, were not *res omnium*

It was submitted that the purpose of a distinction between *flumina publica* and *flumina privata*, was not to withdraw non-perennial rivers from *res publicae* and re-classify them under *res privatae,* but to restrict the application of certain interdicts. Navigation, which was an important form of transport in Roman times, caused navigable and perennial rivers to be important waterways, subject to heavy competitive use. Because these rivers, like all running water, were *communia* and available for public use (*usus publicus*), it was, in the public interest, necessary for the state to issue control measures to regulate common use and prevent disputes between competing users. This was mainly done by issuing praetorian interdicts prohibiting or restricting certain activities. It was however not necessary for these control measures to apply to all rivers and streams, but only to those which had been subject to competitive use. That is probably why it was necessary to subdivide watercourses into rivers and streams, and into perennial and seasonal rivers. The purpose of the division of rivers was therefore to prevent over-legislation, and not to amend the recognised *ius rerum*.

Every interdict specified its application field : while *Digesta* 43 12 was applicable to *navigable* perennial rivers only, *Digesta* 43 13 and 14 applied to *all* perennial rivers, *Digesta* 43 15 to all rivers, as well as lakes, pools, and canals, *Digesta* 43 21 to all streams (both *flumina* and *rivi*), culverts, dams, canals and wells, whether on public or private land. The division of water sources into classes such as *flumina publica, flumina privata* and *rivi,* was merely for the sake of administrative control, and not for the sake of re-writing the *ius rerum*.

Therefore *flumina publica*, together with *flumina privata* and *rivi*, were *res publicae* or *communia*.

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communes, because they were not built for the benefit of *peregrini* as well. *Vide* 1.3.2. *supra*.

1.7.3. Publici loci

Publici loci (public places) were municipal works such as roads, walkways, detached buildings (constructed for the poor), highways, fields, court-yards and other municipal sites.[134] Although they were intended for use by members of the public,[135] they belonged to the state or the particular municipality which had constructed them.[136] It seems as if these were man-made works, excluding natural resources such as the air, rivers[137] and the sea, which were however also available for public use. It is submitted that the exclusion of natural resources from this term and therefore from the property of the state, was due to these resources being classified as *communia* and available for the use of each and everyone in need thereof in terms of the principles of the *ius naturale*, and not only for the use of citizens.

Publici loci can be classified in the *ius rerum* under *res universitatis*, together with theatres and stadiums and other things belonging to all citizens.[138]

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[134] *D* 43 8 2 3; 43 7 1.

[135] *D* 43 7 1 : *usus omnium*; *D* 43 8 2 2, 5 : *usibus deserviunt privatorum*.

[136] "Belonged" did however not mean private ownership, because the state could not own privately (*D* 43 8 2 2).

[137] Unless it formed part of a man-made structure, such as a dam, canal, well or pond, in which case it would probably classify as a public place.

[138] *D* 1 8 6 1 : *theatra et stadia et similia et si qua alia sunt communia civitatium*. In Gaius' classification, where no distinction was drawn between kinds of common things like in the classification system of Marcianus, these places would probably sort under the class *res publicae*, together with all other things belonging to no-one but available for common use.

1.7.4. Usus publicus

1.7.4.1. *Usus publicus in the Digest*

The term *usus publicus* occurred in a variety of forms in the water-related texts of the *Corpus Iuris Civilis*, but was nowhere discussed by Roman law authors. The term was usually employed to indicate that the public had the right to use a particular thing, without granting these users ownership or a *ius in re aliena.*

In *Digesta* 1 8 1 *pr,* things which were classified under *res publicae* were said to belong to nobody in ownership, yet were those of the whole world (*universitatis esse creduntur*). This probably implied that the whole world had rights of use, but not ownership.[139]

A second example of *usus publicus* is found in *Digesta* 1 8 5, where Gaius is quoted to have used the term *usus publicus* expressly, when saying that the banks of a river, like the river itself, was available for public use.[140] Although the banks sorted under *res singulorum*[141] and the river itself under *res publicae*,[142] they were both subject to *usus publicus.*

In *Digesta* 43 7, a similar term was used : with reference to public places, it was stated that *quod ad usum omnium pertineat.*[143] These places belonged to the state or municipality but were available for public use. This rule was confirmed in *D* 43 8, with

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[139] See the motivation for this argument para 1.3. *supra.*

[140] *Riparum usus publicus est iure gentium sicut ipsius fluminis.*

[141] In that they belonged to riparian owners in rights of ownership (*D* 1 8 5 *pr* : *sed proprietas illorum est, quorum praediis haerent*)

[142] Belonging to no-one in ownership (*D* 1 8 1 1).

[143] *D* 43 7 1.

the words *loca enim publica utique privatorum usibus deserviunt*,[144] which granted members of the public rights of use, while ownership vested in the state.[145]

Another reference to the public right of use occurs where Marcianus was quoted in his opinion that certain things were the *communia* of all, in terms of the *ius naturale*.[146] He did not directly refer to ownership, but discussed rights of use, implying, at the most, that these things were available for public use. In another text,[147] he was quoted to have said that almost all rivers and harbours were "public".[148] In view of the fact that Marcianus had not recognised a class of things named *res publicae*, it is submitted that, in this text, here merely referred to rights of use. Whereas harbours were probably *res universitatis*, and rivers *res omnium communes*, he could not have referred to a new class, but probably only to the common aspect of these two classes, viz *usus publicus*.

A fifth example is found in *Digesta* 41 1. Although the banks of rivers were private property and were classified as *res singulorum* or *res privatae*, the relevant text states that *usus autem eius publicus intellegitur*.[149] This is confirmed in *Digesta* 43 8 4, stating that the *ius gentium* allowed the public to build on the banks of rivers.

1.7.4.2. *The legal nature of usus publicus*

The next question is what the legal nature of the *usus publicus* was. In Roman law, a *numerus clausus* of real rights (*iura in re*) existed, viz *dominium, servitutes, pignus,*

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[144] *D* 43 8 2 2.

[145] *D* 43 8 2 2 : *Civitatis, non quasi propria cuiusque, et tantum iuris habemus ad obtinendum, quantum quilibet ex populo ad prohibendum habet.*

[146] *D* 1 8 2.

[147] *D* 1 8 4 1.

[148] *Sed flumina paene omnia et portus publica sunt.*

[149] *D* 41 1 30 1.

hypotheca, emphyteusis and *superficies*.[150] *Dominium* was the only real right belonging to the class *iura in re propria*, ie rights in respect of things belonging to oneself. The other rights sorted under *iura in re aliena*, ie rights in respect of things belonging to other people. The public right of use was not recognized as one of the *numerus clausus* of personal servitudes, which were those *iura in re aliena* concerned with rights of use of the property of others.[151] Furthermore, all servitudes were vested in terms of the *ius civile*.[152] The *usus publicus* however seems to have been a right or power which had vested in any member of the public, whether citizen or foreigner, and which had been conferred not by the *ius civile*, but by the *ius gentium* or *ius naturale*. The right could be exercised in respect of specified things, whether these belonged to individuals, the state or no-one : although the banks of rivers were the private property of riparian owners (*res singulorum*), the public had a right to use it for purposes related to fishing or navigation, which right had been assigned in terms of the *ius gentium*.[153] Although harbours were *res universitatis*, which belonged to the state, the public had a right to use them for purposes related to navigation.[154] Although rivers belonged to nobody in ownership (*res publicae*), the public had a right to use the water thereof for various purposes, which right of use was conferred by the *ius naturale*.[155]

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150 Van der Merwe *Sakereg* 65; Sohm 338.

151 Only *ususfructus, usus, habitatio* and *operae servorum et animalium* were recognized (Van der Merwe *Sakereg* 506; Thomas 202; Van Oven 162-163; Buckland 268; Nicholas 140, 144). *Usus* was a servitude granted to a person and the members of his household, and was aimed at allowing these specific people to use another's property, but without gathering more fruit than was necessary for daily household purposes (Van der Merwe *Sakereg* 521; Thomas 206; Van Oven 162; Buckland 278; Nicholas 144). It is therefore clear that the public rights of use described in the abovementioned texts, did not qualify as *usus*.

152 Thomas 199; Kaser 123; Van Oven 141-142.

153 *D* 1 8 5. The right to strengthen the banks also existed (*D* 43 15 1 1). *Cf D* 43 12 3 *pr*; 41 1 30 1; 43 8 4.

154 *D* 1 8 4 1. The same applied to roads, public buildings, municipal parks etc. (*D* 43 14 1 2-6; 43 12 1 8)

155 *D* 1 8 1 *pr*; 1 8 2; 43 14 1 1; 43 12 2; 43 20 3 1.

It is submitted that the *usus publicus* was an extraordinary *ius in re aliena*,[156] allowing members of the public the rights to use certain things, which rights were conferred not by civil law procedures but by the universal principles of justice and equity of the *ius gentium* or *ius naturale*. The right was terminated as soon as the thing was no longer suitable for common use, eg. when a river dried up.[157]

1.8. BANKS AND BEDS

The banks of rivers belonged to riparian owners.[158] River banks were those structures containing a river in its natural flow.[159] When a river swelled, the banks changed accordingly, but an irregular flood or low-flow would not affect it.[160] The bank was that part of the river channel where the land started sloping towards the water level.[161]

The bed was that part of the river channel which had normally been covered by water.[162] The river bed was public (*impossibile est, ut alveus fluminis publici non sit publicus*).[163] When a river changed its bed, the deserted bed became the private property of the riparian owner, while the submerged land became public.[164] Although the bed was probably also *res publicae* or *res omnium communes* together with the water in the

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156 *Vide D* 43 2 3, where reference is made to a *servitude* of using water.

157 *D* 43 1 30 1.

158 *D* 1 8 5 *pr*; 41 1 30 1. They were however available for public use (*riparum usus publicus est iure gentium sicut ipsius fluminis* (*D* 1 8 5)). *Cf D* 43 12 3 *pr*; 43 8 4 (*usus autem eius publicus*).

159 *D* 43 12 1 5.

160 *D* 43 12 1 5.

161 *D* 43 12 3 2. *Cf* Uys *Property Laws* 1042-1043.

162 *D* 43 12 1 9.

163 *D* 43 12 1 7.

164 *D* 7 4 24. It is submitted that the term "public" in this sense referred to public use.

channel, it could lose its status and become *res singulorum* when the river had left it. On the other hand, in the case of a flood, submerged land temporarily functioned as a bed for the water,[165] but did not become *res publicae*, although it became subject to *usus publicus* for the time being.

Islands rising in a river were not part of the bed, because they were not covered by water.[166] They were therefore not *res publicae* or subject to *usus publicus*. The authors of the Digest considered them to be new land with new banks which developed in mid-stream and were not yet allocated as far as the *ius rerum* was concerned. The rules of allocation of this land were as follows : in cases where the owners on both sides of the river were owners of *agri limitati,*[167] the island was available for occupation by the firstcomer.[168] In cases where the riparian owners owned *agri non limitati*, the island accrued to the closest land.[169] In cases where two neighbouring pieces of land were both in line with the island, it became the common property of the owners thereof, divided along the extensions of the boundaries.[170] When the island was in the middle of a river and not necessarily closer to one of the pieces of land on the two opposite banks, the island was hypothetically divided at the middle line of the river, and accrued in those shares to both owners.[171] The rules concerning the allocation of islands did however not deviate from the status of rivers as *communia* in terms of the *ius rerum*. Only the new land became private property. The banks of these islands were again subject to the *usus publicus*, for purposes related to river use.

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165 *D* 43 12 19.

166 *D* 43 12 1 9.

167 This was land with fixed boundaries, ie where a river did not form one of the boundaries.

168 *D* 43 12 1 6.

169 *D* 7 1 9 4.

170 *D* 41 1 29; 43 12 1 6.

171 *D* 41 1 65 3. *Cf D* 41 1 30 2; 41 1 56; 41 1 65 1-4.

1.9. STATE CONTROL

As was said above, water was *communia omnium* in terms of the *ius naturale*.[172] It was not susceptible for private ownership, but available for public use. However, certain streams were subject to heavy competitive use, due to the importance of navigation and fishing in the Roman economy.[173] To regulate peaceful common use of these, it was necessary for the government to interfere. This was mainly done by way of praetorian interdicts.[174] In *Digesta* 43 12-23, those interdicts issued to regulate water use, were compiled. Some were only applicable to navigable rivers, some to all rivers, some also to lakes, wells, ponds and even groundwater.[175] The classification of water sources in the *ius rerum* was no indication of the applicability of the interdicts. The application was determined by the objective of the relevant interdict. *Digesta* 43 12, for instance, was applicable to navigable perennial rivers only, because the objective of the interdict was to regulate the use of rivers specifically for navigation. On the other hand, *Digesta* 43 20, regulating domestic use of daily water, applied to all streams.

Water sources which had been subject to heavier pressure by users for particular purposes, leading to more severe disputes, obviously required stricter state control. Small streams and springs, containing hardly enough water for use by a single consumer, were seldom the subject of user disputes, and therefore required little or no state control. This however did not imply a lack of government jurisdiction to issue rules to control the

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[172] Para 1.3.2. *supra*.

[173] Dal Maso 95; Starr 135.

[174] *Quot principi placuit legis habet vigorem* (D 1 4 1 *pr*). *Vide* a discussion on the validity of praetorian legislation, Thomas 38 *et seq*. *Cf* Van Zyl *Roman Private Law* 30-31, 50-54.

[175] Para 1.6. *supra*. No criteria seem to have existed according to which interdicts were issued. The praetor probably interfered in common water use on an *ad hoc* basis when the merit of a dispute negated peaceful common use.

use of these smaller sources.[176] Many authors attributed the governmental power to control the use of water to the status of rivers in the *ius rerum*, namely that it was state property.[177] This conclusion is not necessarily a correct view of the position : Gaius clearly stated that *res publicae* were things excluded from the ownership of anyone. The state's power of control was merely a characteristic of its legislative jurisdiction, in that it was in a capacity to control relationships by issuing legislative provisions.[178] The issuing of control measures such as interdicts, did not assign to government the ownership of water sources. Water sources were *communia* and belonged to no-one, but were available for public use and were subject to state control.[179]

Authors are furthermore not unanimous on who "the state" was. While some regard it as the government and legislature,[180] others are of the opinion that the state was the *populus Romanus*.[181]

1.10. CONTENT OF THE *USUS PUBLICUS*

As was said above, the *usus publicus* was a right granted by the *ius gentium* and in terms of which specified acts could be performed.

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176 *D* 43 22 1.

177 Para 1.4. *supra*. The term *dominus fluminis* was created to illustrate this ownership (Hall *Origin* 6, 8, 11, 15, 29; *Cf* De Wet *Opuscula* 7, where it is alleged that the state was nothing more than the administrator of *res publicae*). Van der Merwe *Sakereg* 30 and Kaser 81 were however of the opinion that the state could not own privately and that rivers were therefore not the *private* property of the state. Unless a distinction between rights of use and rights of control is contemplated by these authors, in accordance with Grotius' *dominus eminens* theory (Chapter IV.II *infra*), it is difficult to see how someone can be owner without owning privately.

178 Hall *Origin* 6.

179 De Wet *Opuscula* 7.

180 Hall *Origin* 5.

181 Thomas 129; Van Zyl *Roman Private Law* 121; Sohm 303.

1.10.1. Fishing

According to *Digesta* 1 8, all running water was *communia* in terms of the *ius naturale*.[182] The right to fish in rivers was common to all.[183] Members of the public similarly had the right to use the banks of rivers for actions related to fishing,[184] viz going ashore (*navem ad eas appellare*), tying ropes to trees (*funes ex arboribus ibi natis religare*) and depositing cargo on the banks (*retia siccare et ex mare reducere*).[185] Nobody could be restrained from fishing in lakes and ponds.[186] The right to take the products of rivers was however even more encompassing, and included not only fish, but also pebbles, shells etc.[187]

1.10.2. Navigation

Everyone had the right to sail on rivers.[188] This common right of use was protected by two praetorian interdicts, viz the interdict prohibiting anyone to do anything in a river or on its banks which would inhibit navigation,[189] and the interdict forbidding the use of force to prevent anyone from travelling in a boat or raft on a public river.[190]

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[182] *D* 1 8 2 *pr.*

[183] *I* 2 1 2 : *ius piscandi omnibus commune est.*

[184] *D* 1 8 5 *pr* : *usus publicus.*

[185] *D* 1 8 5 *pr.*

[186] *D* 43 14 1 7.

[187] *D* 1 8 3; *I* 2 1 18.

[188] *I* 2 1 4.

[189] *D* 43 12.

[190] *D* 43 14.

1.10.3. Construction of works

A praetorian interdict existed which forbade anything to be done or placed in public rivers or on the banks thereof, if it would change the direction of flow, or if it would cause inconvenience to people living in the vicinity.[191] Waterworks such as dikes,[192] furrows[193] and ditches[194] can be argued to have been included, as well as any constructions which would make the river deeper, narrower or flowing faster, such as dams and impoundments and furrows and pumps.[195]

The erection of any construction in a public river, lake, canal or pool or on its bank[196] for the purpose of protecting the bank or adjacent land was allowed, provided that navigation was not hampered, and that a ten year guarantee was offered to cover potential harm.[197]

1.10.4. Abstraction of water

In *Digesta* 43 12, Pomponius was quoted to have said that no-one could be prevented from diverting water from a public river, unless prohibited by the praetor, and unless it was water in public use, and unless it was a navigable river from which another derived its navigability.[198]

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[191] *D* 43 13 1 *pr.*

[192] *D* 43 13 1 7.

[193] *D* 43 13 1 4.

[194] *D* 43 13 1 5.

[195] *D* 43 13 1 3.

[196] *D* 43 15 1 6.

[197] *D* 43 15 1; 43 13 1 6.

[198] *D* 43 12 2.

The praetorian interdict discussed in *Digesta* 43 20 allowed anyone to divert daily water *nec vi nec clam nec precario*, to the extent that he had done it previously.[199] The same applied to the water of springs.[200] He could lay pipes or divert the water in any way without harming the water rights of others.[201] He could repair any watercourse or furrow or dam or canal or well, in order to enable him to abstract the water thereof.[202] *Digesta* 39 3 10 2 provided that water should not be abstracted to such an extent that the river becomes less navigable.

Water could be used to water stock,[203] as long as the number of cattle in the herd had not been increased since the previous year.[204] Water could also be diverted for household purposes,[205] and for purposes of recreation and mere convenience.[206] In cases of the use of water for irrigation, diversion had to take place in proportion to the size of the irrigated land.[207]

Owners on whose land water had originated, had preferential rights to the use thereof, because it would have been unreasonable to allow others to use it at the expense of the upper owners' requirements.[208] An upper owner could however grant rights of use to

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199 *D* 43 20 1 *pr*, 1.

200 *D* 43 22 1 *pr.*

201 *D* 43 20 3 5.

202 *D* 43 21 1 *pr.* Springs, lakes, wells and fish ponds were also covered under the protection of this interdict (*D* 43 22 1 6, 10).

203 *D* 43 14 1 9; 43 20 3 *pr.*

204 *D* 43 20 1 18.

205 *D* 43 20 1 11, 13; 43 20 3.

206 *D* 43 20 1 11.

207 *D* 8 3 17.

208 *C* 3 34 6, 4.

other owners.[209] Lower owners could however prove vested rights of use, which restricted the upper owners' rights of use.[210]

1.10.5. Common use

Because water was *communia* and subject to *usus publicus*, it is clear why it was necessary to issue particular legislative measures, namely to control common use and prevent disputes. It is significant that most of the above rules had the objective of regulating use in order to prevent harm and inconvenience to other users with similar rights.

In *Digesta* 43 12 1, anything done in or around rivers which could harm other peoples' use of the river for purposes of navigation, was prohibited.

According to Ulpianus, the interdict preventing the interference with river flow[211] had been aimed at, *inter alia*, preventing injury to neighbours by changing a river bed.[212] The term "injury" (*vicinis iniuriam*) did not comprise economic damage only, but also inconvenience to others (*convenitur sentient; incommodo accolentium; incommodum circa colentibus*).[213] To determine when the interdict applied, the doer's own convenience and the financial harm which he tried to prevent had to be weighed against the injury and inconvenience which his actions caused others.[214]

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209 *C* 3 34 4.

210 *C* 3 34 10.

211 *D* 43 13 1 *pr.*

212 *D* 43 13 1 1.

213 *D* 43 13 1 3, 4, 6.

214 *D* 43 13 1 7.

He who fortified the banks of a river had to present a ten year guarantee to cover potential damage which could arise from such fortification.[215] He was forbidden to impede navigation.

The right of members of the public to draw water was recognized, on the condition that neighbours and owners on opposite banks were not harmed (*ut vicinis non noceant*).[216] Anyone was entitled to install pipes to divert water, but again on the condition that he did not cause deterioration of other pieces of land or harm to other peoples' water use.[217]

It can therefore be argued that the *usus publicus*, being the right of every member of the public to use any water, was limited by legislative measures to control competitive use, as well as by an obligation to use water reasonably, ie with due consideration to others' similar rights of use.

[215] *D* 43 15 1 3.

[216] *D* 43 20 3 1.

[217] *D* 43 20 3 5.

CHAPTER III.II

ROMAN-DUTCH LAW

"[Common] things as it were by their very nature
are equally allotted to everyone and can be occupied,
in so far as that common and promiscuous user does no harm;
for without the use of air and water no one
can live or breathe"

S van Leeuwen
CF 2 1 6

"[Common things] have never been brought under the
control of any person, because they seemed to be enough
for everybody ... [h]ence too they pass also to the first
taker, whoever he be, because by Divine liberality
an equal right in them has been furnished
to all mortals"

J Voet
Ad Pand 1 8 3

CHAPTER III.II
ROMAN-DUTCH LAW

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ROMAN-DUTCH LAW

2.1. THE LAW OF THINGS

Roman-Dutch jurists were not unanimous on the classification of things. It is, however, possible to draw some general similarities as far as the classification systems of the most important authors of the seventeenth and eighteenth centuries are concerned.

Things were described by Grotius as everything external to man which can be of use to him.[1] Because water, being the subject of this investigation, qualifies as a "thing" in terms of this definition, and because the final objective of this study is to evaluate the nature and basis of rights in respect of water, it is necessary to determine the relationship between man and water, and therefore to classify water in the law of things. Although two divergent classification systems were distinguished by some authors, ie. according to the nature of things, on the one hand, and according to their relationship to humans,[2] on the other, the second is of more direct relevance for the purposes of this.

There were several grounds for the classification of things in Roman-Dutch law. In this chapter, the distinction between things on the basis of the relationship between humans and things, is considered. A distinction was drawn between things allocated in terms of human and divine law.[3] The majority of Roman-Dutch authors drew a distinction between things belonging to someone as against things belonging to no-one,[4] where "divine" things usually sorted under things belonging to no-one (*res nullius*). Such things

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1 *Inl* 2 1 3. Et vide Van der Keessel 2 1 3; Fockema Andreae 167 : *"Zaken daarentegen zijn de objecten van deze genotsrechten"*.

2 Grotius *Inl* 2 1 4; Van Leeuwen *CF* 2 1 3; *RDL* 2 1 1; Voet 1 8 1, 11; Huber 2 1 2, 9, 12; Van der Keessel 2 1 4.

3 Grotius *Inl* 2 1 15; Voet 1 8 1.

4 Van Leeuwen (*RDL* 2 1 8) called it *res alicuius in nostro patrimonio* and *res nullius extra nostrum patrimonium*. See also Voet 1 8 1; Van Leeuwen *CF* 2 1 2; Huber 2 1 12.

included things consecrated to religious purposes (*res sacrae*), burial grounds (*res religiosae*) and fortifications (*res sanctae*).[5] Some jurists also included under *res nullius* things which could be occupied, but which belonged to no-one until such occupation.[6] Such things included wild animals as well as things which had been ***abandoned.[7] Other jurists added to *res nullius* things which could never be occupied or belong to someone, but were common to all by the *ius gentium* or *ius naturale*.[8] [9] These things were however sorted under *res alicuius* by the majority of jurists, and will therefore be discussed under that heading.[10]

Things belonging to someone (*res alicuius*) were divided into things belonging to all men in common (*res communes*), things belonging to the state (*res publicae*), things belonging to smaller societies of men (*res universitatis*) and things belonging to individuals (*res singulorum*).[11] Under *res communes* sorted natural resources such as the sea, the sea-

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5 *Grotius* Inl 2 1 15 ("*ende onder God toe-behoortig wierden by die Romeinen gehouden de gewijde zaken, de graven der dooden, stads-vesten*"); Voet 1 8 1, 5, 6, 7; Van Leeuwen *CF* 2 1 10-17. Cf Huber (2 1 24-28) who classified sacred things as the property of the community, and Groenewegen (2 1 8 1, 2) who was of the opinion that temples were the property of those who built them.

6 Van Leeuwen *CF* 2 1 18; *RDL* 2 1 9; Grotius *Inl* 2 1 50 (et vide *derde tafel begrijpende 't eerste deel van het tweede boeck*); Huber 2 1 14.

7 Van Leeuwen *RDL* 2 1 8, 9; *CF* 2 1 18; Van der Keessel 2 1 52; Grotius *Inl* 2 1 51-55 (he added unaccepted legacies to this class of things); Huber 2 1 15.

8 Voet 1 8 1 ("those which are nobody's and which fall under human law are those things said to be common by the law of nations" (Gane tr)); Huber 2 1 14.

9 The *ius naturale* was described as the innate rational understanding by means of which man approves or disapproves of things according to their nature as being good or bad (Van der Linden *Inst* 4 2 1; Van Leeuwen *RDL* 1 1 7). Voet denied the existence of a clear-cut distinction between the *ius gentium* and *ius naturale* (1 8 2, with reference to *I* 2 1 1 and *D* 1 8 2). Et vide Van Zyl *Geskiedenis* 185-204; Venter *et al* 182-184.

10 According to Lee 123-125, neither the classes *res communes* nor *res publicae* was susceptible for occupation. Although running water was *res communes* and public rivers were *res publicae*, members of the public had, at the most, rights of use in respect of both forms of streams.

11 Grotius *Inl* 2 1 16; Voet 1 8 1; Van Leeuwen *CF* 2 1 5; *RDL* 2 1 9 (the class *res publicae* was not accepted as a seperate class here - a division was however made between things *landgemeen* and *volkgemeen* within the class *res universitatis*).

shore, the air and running water.[12] Not all jurists agreed that running water was included in this class, for many preferred to classify rivers under *res publicae*.[13] *Res publicae* belonged to the state in the sense that the government had the power to control the public use thereof.[14] This class included rivers,[15] harbours[16] and public roads.[17] It was not altogether clear what the criteria were to distinguish between rivers, which were *res publicae*, and running water, which was *res communes*. Van Leeuwen probably based the distinction on the common value of the water - he was of the opinion that rivers could be classified as private instead of public, depending on the common value thereof.[18] Voet, probably following the Roman law distinction, based it on perenniality.[19] Huber based it on proprietory rights : while no-one could own natural streams of water, rivers were the property of the state.[20]

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12 Grotius *Inl* 2 1 17; Van Leeuwen *CF* 2 1 6 (those streams of water keeping a continuous flow and which fell from the heaven or arose from the earth); *RDL* 2 1 8, 9, 11 (running water was not included here); Voet 1 8 3, 41 1; Huber 2 1 14 (water passing one's property); Van der Keessel 2 1 17. Some authors also included occupiable things such as wild animals, birds, fish, pearls, uninhabited countries, new islands, shells and precious stones in this class.

13 Grotius *Inl* 2 1 17, 21, 25; Van Leeuwen *RDL* 2 1 11 (he classified it under *res universitatis*, and named it *landgemeen*); Van der Keessel 2 1 17.

14 Van der Keessel 2 1 25; Grotius *Inl* 2 1 25-29; Huber 2 1 17; Van Leeuwen *CF* 2 1 7.

15 Grotius *De Jure Belli ac Pacis* 2 2 12; *Inl* 2 1 25 (such as the Ryn, Waal, Maas, Leck and Yssel, as well as lakes and other navigable streams); Van Leeuwen *CF* 2 1 7, Voet 1 8 8 (perennial rivers); Van Leeuwen *RDL* 2 1 12 (waters, streams, rivers, main water courses, as well as the beds and banks thereof); Huber 2 1 19; Van der Keessel 2 1 25 (excluding city channels, which belonged to those who constructed it).

16 Van Leeuwen *CF* 2 1 7; Voet 1 8 8; Huber 2 1 19.

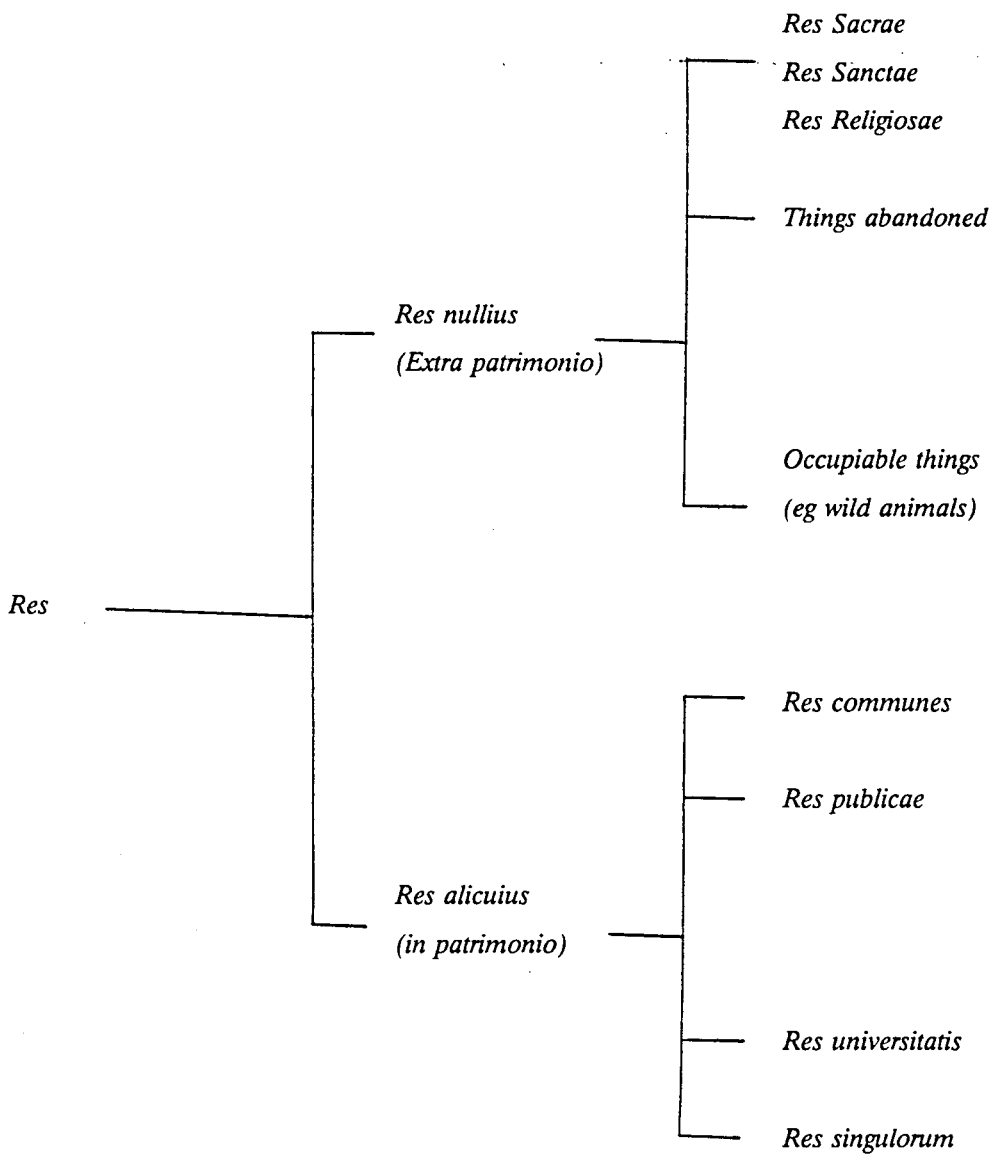
17 Huber 2 1 19; Van der Keessel 2 1 25. Voet (1 8 3, 4, 9, 10) admitted that public roads, shores and river banks were also available for public use (*usus publicus*), but probably meant to exclude it from *res publicae* and include it under *res universitatis* (roads), *res communes* (shores) and *res singulorum* (banks) respectively.

18 *CF* 2 1 6.

19 Voet 43 12 1.

20 Huber 2 1 14, 19.

Schematically, the Roman-Dutch law of things can be illustrated as follows :



2.2. THE CLASSIFICATION OF WATER

Some authors, in accordance with the Roman law classification, sorted running water under *res communes*, belonging to the whole world in common rights of use.[21] The majority, however, held the view that rivers were *res publicae*, belonging to the state.[22]

2.2.1. Res Communes

In Roman law, water was common (*res omnium communes*) to all in terms of the *ius naturale*. Although Gaius named this class of common things *res publicae*, it was submitted that there was no intentional distinction between the two classes, and that both Marcianus and Gaius intended to classify water as things common to all, in terms of the principles of justice and equity.[23] The state however possessed the power of control whenever competitive use led to disputes between users. This was primarily exercised by way of praetorian interdicts. The probable motive for the classification of running water in the class *res communes*, was the nature thereof as a natural resource on which each and all was dependent for survival. Water therefore belonged not to any specified persons or community, but to the environment in general. Therefore no-one could be deprived of his right to use it, just as the case was with the sea and the air. This was in accordance with the principles of justice and equity of the *ius naturale*.

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[21] Some were of the opinion that while running water was *res communes*, rivers were *res publicae* (Van Leeuwen *CF* 2 1 6; Huber 2 1 14; Voet 1 8 8). Nathan 337 et seq relies on Voet to divide the forms of water sources into three of the classes of the classification system : *res communes* was the property of whoever appropriated it; non-navigable rivers were *res publicae* which belonged to the broad public, (while only navigation and the construction of reasonable buildings were allowed); navigable rivers belonged to the state. It is submitted that Voet did not support this view. In the first place, Voet regarded running water as *res nullius* which could not be appropriated (1 8 3). In the second place, he regarded perennial rivers as *res publicae* which already belonged to someone in ownership, and could therefore neither be appropriated by another (1 8 8). In the third place, he regarded all perennial rivers, and not only navigable ones, as *regalia* (1 8 9) (vide 2.2.3. infra).

[22] Grotius *Inl* 2 1 25; Voet 1 8 8 (cf 1 8 2); Huber 2 1 19 (cf 2 1 14); Van Leeuwen *RDL* 2 1 12 (*landgemeen*); *CF* 2 1 6, 7; Van der Keessel 2 1 25.

[23] Chapter III.I supra.

As far as the use of such things was concerned, the principles of justice and equity were still applicable in Roman-Dutch law, in that Grotius specified that the use thereof was free to all,[24] subject to the condition that no-one was allowed to injure others.[25] Grotius expressly added that such things were available not only to citizens, but also to foreigners.[26] No political reservation was applicable as far as these natural resources were concerned. State control was however sometimes necessary to regulate common utilization.[27] Grotius however omitted fresh water from this class, although his motivation that things sorted in the class *res communes* due to their common service and undivisibility, was similarly applicable to natural fresh water sources.[28] Furthermore, he specified that such common things were available to all *men*, and not to all *forms of life*.[29] These two limitations on the nature of common things represented the Roman-Dutch break-away from the main Roman water law principles, as well as from the role of the *ius naturale* in the water allocation mechanism. The reason therefore is that in Roman law, due to the applicability of the principles of justice of the *ius naturale*, no life in need of water could be deterred from using it.[30]

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[24] "*Alle menschen komt toe in't gemeen de zee ende lucht, als zijnde van wegen haer onbegrijpelickheid ende van wegen den dienst die sy int gemeen schuldig zijn, ongedeelt gebleven onder den menschen*" (Grotius *Inl* 2 1 17). Et vide Van Leeuwen *CF* 2 1 6 : "These things as it were by their very nature are equally allotted to everyone ... for without the use of air and water no-one can live or breathe".

[25] *Inl* 2 1 22; Voet 1 8 3 ("When damage of that sort threatens at the hands of corsairs and the like, it is congruent to natural law that such persons should be kept off and the use of the shores denied to them" (Gane tr) (the shores were *res communes* as was running water)); Van Leeuwen *RDL* 2 1 11, *CF* 2 1 6; Van der Keessel 2 1 17.

[26] *Inl* 2 1 18; Van Leeuwen *CF* 2 1 6; Van der Keessel 2 1 22. Voet was of the opinion that only as far as the sea shores (which also sorted in the same class of things) were concerned, foreigners were excluded from the right of use (1 8 3).

[27] *Inl* 2 1 19; Voet 43 12.

[28] *Inl* 2 1 17. Van Leeuwen *RDL* 2 1 11 and Van der Keessel 2 1 17 supported this viewpoint of Grotius, however unsound.

[29] Voet, on the other hand, used the term "all mortals" (1 8 3).

[30] Chapter III.I supra.

Voet also accepted the Roman law principles of allocating some natural resources to all in need thereof.[31] His motivation for this class of things was the fact that these resources yielded sufficient for all, and that the divine providence allocated to all mortals an equal right to such things. He furthermore recognised the state's power to control the use thereof, in the public interest and for the sake of peaceful common use.[32] Unlike Grotius, this author classified running water under this group of things, which represented the school of thought which retained the basic Roman water law principles and the validity of the *ius naturale* in the water law.[33]

Voet's viewpoint of the maintenance of Roman water law principles was also advocated by his predecessor, Van Leeuwen, who motivated the classification of running water in the class *res communes* by the nature of the resource, being indivisible in terms of the *ius gentium*.[34]

The majority of Roman-Dutch jurists however followed Grotius, who was of the opinion that these noble principles of equal yet reasonable common rights of use by all were not applicable to water. Water was *res publicae*, and principles of the *ius naturale* and *ius gentium* were not applicable to the water allocation mechanism.[35]

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31 1 8 1, 3, 9.

32 1 8 3, 4, with reference to *D* 1 18 3, 13 : "It suits a good governer to keep the province entrusted to him calm and peaceful by clearing it of evil persons" (1 8 3).

33 Et vide Van Leeuwen *CF* 2 1 6.

34 *CF* 2 1 6. In *RDL* 2 1 11, he also referred to the applicability of the *ius gentium*, but, like Grotius, he did not apply it to the water law, by omitting fresh water from the class *res communes*.

35 Van Leeuwen *RDL* 2 1 11, 12; Huber 2 1 19; Van Leeuwen *CF* 2 1 6, 7; Van der Keessel 2 1 25.

2.2.2. *Res Publicae*

Res publicae were things which belonged to the civil community of Holland.[36] Although all members of the state were entitled to use it, the government had the right to control such common use.[37] Foreigners were not entitled to the use of these things unless in terms of permission or the payment of tollage.[38]

It had been alleged supra that in Roman law this class of things was synonymous to *res communes*, but in accordance with the merger of the two classes as it was done by Justinian in his attempt to summarise the law in the Institutes, *res publicae* developed to become a separate class in Roman-Dutch law. Many jurists transferred water from the class *res communes* to *res publicae*, and left only the air and the sea in the class *res communes*. This classification, which deviated from that of Roman law, had several implications. First, it meant that water was available in rights of use to the whole civil community, but under control of the government.[39] Secondly, it meant that although water was a natural resource just like the air and the sea, it was however geographically and politically restricted in its common availability, and could not be utilized by each and all in need thereof. This territorial demarcation of river use was probably due to increasing international and intra-national competition, especially with regard to navigation and fishing. Thirdly, the *ius naturale* was no longer applicable to regulate the

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36 Vide n 14 supra.

37 Grotius *Inl* 2 1 24, 26; Van der Keessel 2 1 25; Voet 1 8 8, 9; Van Leeuwen *RDL* 2 1 12, 13.

38 Grotius *Inl* 2 1 26; Kersteman *Woordeboek* sub voce "rivieren" 452; Van der Keessel 2 1 26; Voet 1 8 9; Van Leeuwen *RDL* 2 1 12.

39 Kersteman *Woordeboek* sub voce "rivieren" 452; Grotius *De Jure Belli ac Pacis* 2 2 12; Voet 1 8 8, 9; Grotius *Inl* 2 1 25-28; Huber 2 1 19; Van Leeuwen *RDL* 2 1 12; Van der Keessel 2 1 25. The term "river" was not necessarily used : while Voet sorted only *perennial* rivers in this class, Grotius referred to *strome, ... meren ende andere bevaerbare wateren* as well as their banks and beds, and Van Leeuwen referred to *waters, strome, riviere, hoofweë*. Van der Keessel excluded town canals from the waters sorting under *res publicae*.

use of water, because the principles of justice of the *ius naturale* would not allow political demarcation of water utilization.

2.2.3. *Regalia*

Many Roman-Dutch jurists were of the opinion that, in terms of the most recent customary law, rivers were *regalia*, belonging to the crown.[40] This meant that rivers could not be used freely for certain purposes without the leave of the government.[41] None of these authors however identified *regalia* as a separate class of things in the law of things.[42] The term "*regalia*"[43] means "royal", or "kingly".[44] It is submitted that a description of rivers as royal, implied the strictest governmental power of control, and not necessarily that the crown assumed ownership of the rivers.[45] Although public things, belonging to the state, were available for public use, the government nevertheless had power of control.[46] It is therefore difficult to distinguish between *res publicae* and *regalia* except on the grounds of the strictness of government control. It is therefore submitted that *regalia* were those *res publicae* which were subject to heavy competitive use, such as water, and in respect of which the government assumed the strictest form of control.[47]

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40 Kersteman 162; Voet 1 8 9; Groenewegen 2 1 2 1; 2 1 23; Vinnius *Comm ad Inst* 2 1 12; Huber 2 1 19; Van Leeuwen *CF* 2 1 7. Et vide Hall *Maasdorp's Institutes* 97 et seq.

41 Voet 1 8 9; Huber 2 1 19; Van Leeuwen *CF* 2 1 7; Van der Keessei 2 1 25.

42 Some however expressly stated that the government was *owner* of these things (Voet 1 8 9; Huber 2 1 19).

43 Being a conjugation of *regalis, -e*.

44 Marchant & Charles 476.

45 Cf Voet 1 8 9, who considered it to be the domains of the emperors (*"het recht om regeermacht uit te oefenen"*), with reference to Feud 2 5 6. Et vide Huber 2 1 19, who expressly mentioned *ownership*; De Blécourt & Fisher 123 (*"domeinen"*), 143 (*"rechten die oorspronkelijk den koning of keizer toekwamen"*)

46 Grotius *Inl* 2 1 25, 26.

47 Vide 2.2.6 and n 84 infra.

2.2.4. The distinction between *res publicae* and *res communes*

It was submitted[48] that no distinction between *res publicae* and *res communes* appeared from the classification systems in the Digest. In the Institutes, however, in an attempt to summarise the classification system, Justinian intermixed the terminology of the two main jurists who were quoted in the Digest on the law of things, viz. Gaius and Marcianus, and eventually drew a distinction between public and common things. He sorted running water under *res communes*, and rivers under *res publicae*, without providing a sound motivation for the distinction. This merger of nomenclature resulted in a distinction which had to be justified, and which justification was attempted by many jurists ever since, with confusing results.[49]

In Roman-Dutch law, the influence of the Justinian merger was clear, and was probably one of the reasons for the metamorphosis which the water law had undergone.[50] While only a few jurists retained the classification of water as common, the majority sorted it under public things, which resulted in political demarcation as far as rights of use were concerned. This merger was noticed and discussed by Voet in his commentaries on the Digest.[51] According to Voet, *res communes* was distinguished from *res publicae* by the *ius gentium*.[52] He said that while common things belonged to nobody but could still be

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48 Chapter III.I supra.

49 Vide Kotzé in his comment on Van Leeuwen *RDL* 2 1 8 : "It is well known that the jurists Gaius and Marcianus differ as to the division of things, which difference has caused a great deal of trouble to many. The glossators and others who endeavoured to clear this up, unfortunately, only increased the confusion" (147).

50 Another reason was the increased competitive use of water and thus the need for stricter state control - it is however submitted that strict state control was possible in respect of common things as well.

51 1 8 2, 8 : "No-one who is not altogether a stranger to the law can help knowing that our jurists, intent rather on things than on words, have often described things by inconsistent names, such as are commonly attached to a distinct class..." (Gane tr).

52 1 8 8. He probably referred to 1 8 1, 3 where he described *res communes* as common by the law of nations, which were owned by nobody because there seemed to be enough for everybody, but while everyone could take as much as he needed : "By divine liberality an equal right in them has

appropriated, public things have already been occupied. Although he refrained from giving an opinion on whether these two classes were actually one and the same, he held the view that this *could* be the case, but that due to the character of jurists who often used inconsistent names to name one and the same thing, an unintended distinction could have developed :

> "What wonder then that things which are by Justinian and by Marcianus called 'common by the law of nations', and the use of which is common by the law of nations, are elsewhere found in writers and jurists to be classed under the name 'public'."[53]

The problematic consequences caused by the differences in terminology used by Marcianus, Gaius and Justinian in the classification of things, was also mentioned by Van der Keessel.[54] No-one however came to the conclusion that the eventual distinction between *res publicae* and *res communes* was in fact incorrectly based. Both Voet,[55] Huber[56] and Van Leeuwen[57] drew this distinction in their respective expositions of the classification of things. While Huber and Voet sorted common things under *res nullius*, Van Leeuwen was of the opinion that only things which could not be appropriated, could be *res nullius*, and that common things were *res alicuius*, belonging to all people. Of these three jurists, Voet was, ironically,[58] the only one who repeated Justinian's distinction between forms of water sources : while running water was common, rivers were public. Huber and Van Leeuwen did not burden the water law with the

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been furnished to all mortals" (Gane tr).

[53] 1 8 2 (Gane tr 153).

[54] 2 1 16 : *"Res publicas et res universitatis sub una classe hic auctor comprehendit, plane ut iurisconsultus (in L 1 pr D de rer div) et sic quoque intelligi potest Marcianus (in L 2 pr D eod) si ponamus illum sub rebus universitatis easdem intelligere, quas Gaius (in d L 1 pr) vocavit publicas".*

[55] 1 8 1.

[56] 2 1 13-20.

[57] *RDL* 2 1 10.

[58] In spite of his recognition of the unsound nature of the doubling of classes.

problematic distinction in the law of things - they merely sorted water under public things and left only the sea, sea-shore and air in the class *res communes*.

Be that as it may, what is important for purposes hereof, is that recognition was given in Roman-Dutch law to the incorrect merger of classes by Justinian. The identification of this interpretative mistake did however not lead to it being remedied, since the very authors who identified it, also followed the classification system of Justinian. The problems caused by the practical application of such a doubling of classes, were, by some, solved by removing water from the class *res communes*, and sorting it under *res publicae*. Justification for this step was to be found in the necessity for political demarcation of rivers, being objects of heavy competitive use. The result of this tactical step was that the principles of the *ius naturale* lost its influence on the water law of Holland, in that water no longer belonged to all in need thereof. Although some jurists still advocated the relevancy of the *ius naturale*, few applied it. Principles of natural justice were replaced by strict government control, in terms of which foreigners were excluded from rights of use, and in terms of which forms of life other than humans had no fundamental rights to water for purposes of survival, which was expressly recognised in Roman water law.

2.2.5. The distinction between public and private water

The Roman law distinction between public and private water was not generally accepted by Roman-Dutch authors. While Van Leeuwen, in his distinction between public and common things,[59] sorted perennial running water under common things, and rivers under public things, without referring to the term "public rivers", Voet was more definite on the distinction between forms of water sources, and probably lay the foundation for the distinction which is still adhered to : in his commentaries on the Digest,[60] he confirmed

[59] *CF* 2 1 5.

[60] 43 12.

the Roman law distinction between public and private rivers, as well as between rivers and streams. He said that public rivers belonged to the whole nation, while ownership in private rivers vested in private persons. This was breaking new ground, because nowhere in Roman law were private rivers ever said to be *res privatae*. Although they could be used by private persons exclusively, due to their negligible common value, they were still seen as common to all as far as the classification of things was concerned. In his chapter on the classification of things,[61] Voet did not classify private rivers as *res privatae*. It is therefore submitted that in *Ad Pand* 43 12 he complicated the existing distinction between forms of water even further, viz. by sorting seasonal rivers under private things.[62] Voet therefore distinguished between three forms of water, viz. private rivers,[63] running water[64] and public rivers.[65] These waters accordingly sorted under three different classes of things, viz. *res privatae, res communes* and *res publicae*. No justification was given for the distinction between private waters and running water, or between public rivers and running water, although Voet doubled the distinction between *res communes* and *res publicae*.

In *Ad Pand* 8 3 6, the servitude of *aquaeductus* was discussed. Reference was made to the right of leading the water of a small spring, which ceased to flow during dry periods. In terms of Voet's distinction between public and private rivers, (private rivers being ones with a seasonal flow), it is submitted that here he referred to private water, being *res privatae*, and belonging to the owner on whose land it occurred. Because this owner owned the water, he was entitled to grant servitudes for the use thereof. The passage confirmed the distinction which Voet drew between public and private water being *res*

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61 1 8.

62 In the classification in *Ad Pand* 1 8, he never gave examples of things sorting under *res privatae*, and private water as described in *Ad Pand* 43 12 1 can be argued to be one example of such things.

63 43 12 1.

64 1 8 3.

65 1 8 8.

publicae and *res privatae* respectively. His classification of running water as *res communes* was not referred to again, and it is submitted that the recognition of this division was mere lip-service to that of Justinian.

In *Ad Pand* 1 8 9, Voet was of the opinion that, in terms of the most recent customary law, *all* rivers were *regalia*. Whether this rule once again suspended the distinction between rivers, or whether it merely implied that both public and private rivers, remaining in their respective classes in the law of things, now became subject to stricter state control, is not clear. It is however submitted that this author, like the others, did not intend to suspend the classification of water in favour of a doctrine that the state became *owner* of water, and that the *regalia*-rule merely implied stricter state control.

A clear-cut distinction between public and private water was not drawn by any other Roman-Dutch author.[66] The classification of certain small or seasonal streams or rivers

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[66] Groenewegen 2 1 23 did however make mention of the term "public water". The text was however expressly subordinated to his classification system in 2 1 2, where he was of the opinion that *all* rivers belonged to the crown. In 2 1 23, he was dealing with alluvial ground, specifically in public rivers, and he stated that because public rivers were *regalia*, the alluvial ground was also *regalia*. But this statement did not negate his viewpoint in 2 1 2 that all rivers were *regalia*. His distinction between public rivers and other waters was therefore not drawn for the purpose of differentiating between forms of water sources as far as the law of things was concerned. Van der Keessel also used the term *rivi publici*, without defining (2 1 25), but never referred to *rivi privati*. Van der Merwe 30 et seq is of the opinion that, in Roman-Dutch law, only *public* rivers were *res publicae*, which were things belonging to the state. He relies on Grotius *inl* 2 1 25 for this view. It is however submitted that this passage did not support such a view, since Grotius referred to *stromen, ... meren ende andere bevaerbare wateren*", and not to "public rivers". Neither Van Leeuwen *RDL* 2 1 12, *CF* 1 2 8, Huber 2 1 16 or Van der Keessel 2 1 25 - the other authorities to which Van der Merwe refers - recognised this distinction between public and private rivers as regards the classification of things : Van Leeuwen sorted waters, streams and rivers under *landgemeen*, and made no mention of public rivers. In *Censura Forensis*, he said that both the use and ownership of rivers and harbours were public. It is submitted that the use of "public" in this sense, is rather related to the *usus publicus* as discussed supra, than to the distinction between *flumina publicae* and *flumina privatae*. Huber's reference to public and private *things* did not necessarily bear any reference to the distinction between public and private *rivers*, especially when read with 2 1 19, a passage to which Van der Merwe does not refer. Van der Keessel classified *rivi publici* with *flumina* under *res publicae*, which is a distinction unknown in Roman law and does not support Van der Merwe's grouping either. Van der Merwe also relies on Voet 1 8 8. As was argued supra, this Roman-Dutch author was the only one who can be said to have supported the modern water law principle that a distinction between public and private water existed as far as the law of things was concerned. But Voet's express subjection of this distinction to the customary rule that *all* rivers

or springs as *res privatae* was not recognised either, and it may be argued that Voet was solely responsible for the origin and existence of this distinction in Roman-Dutch law. While in Roman law a distinction between public and private rivers was recognised only for purposes of the application of certain interdicts, and not to re-classify all water, being *res communes*, Voet applied the distinction to the law of things. The majority of authors did however not recognise any distinction between forms of water sources, and sorted all water, irrespective of perenniality, size or navigability, under *res publicae*.[67]

2.2.6. State control

It was said supra that water was *res publicae* in terms of the opinions of the majority of Roman-Dutch authors.[68] This meant that water belonged to the state. One question is who the *state* was.

Grotius[69] was of the opinion that "*[d]e gantsche burgerlicke gemeenschap van Holland ende West-Vrieslandt komen toe de stromen, als den Rijn, de Wael..., de Maes, de Yssel, de Leck, voor soo veel die loopen binnen de palen van Holland*".

Voet alleged that public things belonged to *the whole people* in ownership.[70] Huber said that some public things were the property of the state, and were available for use by

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were *regalia*, again caused turbidity as to his real intention. Schoeman advocates a view of the Roman-Dutch water law similar to that of Van der Merwe (*Sakereg* 20 et seq).

67 Grotius referred to streams, rivers and other navigable waters (2 1 25). Van Leeuwen *RDL* 2 1 12 referred to waters, streams, rivers, *heeren-wegen, wattingen, vaarten,* as well as their beds and banks. Van der Keessel *Dict ad Inst* 2 1 1 distinguished between public streams and town-canals. This is in accordance with Roman law, where municipal water works were excluded from the class *res communes*, and belonged to the municipalities who controlled the water allocation therefrom. (Vide Report I Chapter I supra.) Voet 1 8 3, 8 and Van Leeuwen *CF* 2 1 6, 7 both distinguished between running water and perennial streams.

68 160 supra.

69 *Inl* 2 1 25.

70 1 8 8.

everybody, while other public things were in the power of the supreme authorities alone.[71] Van Leeuwen classified things which he called *landgemeen* as belonging to an entire political community, viz. the community of Holland and West-Friesland.[72] According to the same author but in his other work,[73] public things were the common property of a tribe of people. He was of the opinion that the term "public" (*publicus*) was derived from *populicus*. Such things belonged to the people both in ownership and in rights of use. The crown was however empowered to impose tollages. According to Van der Keessel,[74] the right of disposal of water belonged to the senatorial body, while the rivers themselves belonged to the people.[75] Groenewegen[76] referred to the sovereign, when he discussed the holders of certain water rights, ie. the right to fish in waters. Huber distinguished between forms of the state :

> *"Die den Staet toebehooren, zyn of in de macht van de Overigheyt alleen, of mogen gebruikt worden van alle Burgers en Inwoonders"*[77];

and

> *"Tot de tweede soorte, behoorende de Rivieren, openbare Vaerten, en Havens, die wel den Staet als eigen toebehooren, maer konnen van yder een met varen en visschen gebruikt worden".*[78]

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71 2 1 19.

72 *RDL* 2 1 12.

73 *CF* 2 1 5.

74 2 1 25.

75 *"Flumina apud nos quoque sunt publica, id est, pertinent ... ad totum populum Hollandicum"* (2 1 25). (The author's contextual use of the term *publica* is probably similar to that used in Roman law when reference was made to the *usus publicus*, and does not refer to "public" in the sense of public streams (*flumina publica*) or public things (*res publicae*). Vide Chapter III.I supra.

76 2 1 2 2.

77 2 1 17.

78 2 1 19.

Kersteman probably implied the state to be the citizens :

> *"De stroomen of rivieren, komen de Staat of Republicq, door wiens land zy loopen gemeenschappelijk toe, zo dat het gebruik dezelve alle de onderdanen zonder onderscheid toebehoord".*[79]

Another question is what "belong"[80] meant. On the one hand, if water belonged to the *government*, and "belong" was intended to mean "ownership", then the government was owner of water. But in the first place, rights of use vested in the citizens, and the government was entitled to *control* common use only. In the second place, even the later Roman-Dutch rule that water was *regalia*, did not necessarily imply anything more than that the government was administrator of common water utilization.[81] On the other hand, if water belonged to the *civil community*, and the term meant "ownership", then the members of the public were co-owners of the water. In the light of the classification of water in the law of things, and in the light of the power of control which vested in the state, this could hardly be the case. Nevertheless, it can be argued that authority existed for a viewpoint that water belonged to the citizens in common property,[82] but also for a viewpoint that it belonged to the government in proprietary rights.[83] The majority of

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79 *Woordeboek* sub voce "rivieren" 452.

80 eg. Grotius *Inl* 2 1 24 *"toe-behorende"*; 2 1 25 *"komen toe"*; Van der Keessel 2 1 25 *"pertinent ad populum Hollandicum"*.

81 Vide 164 supra. Et vide Van der Keessel 2 1 25, where the government was said only to possess a right of disposal (*hoc ius de fluminibus disponendi competere*), but cf 2 1 26, where ownership is expressly mentioned (*dominii Hollandiae in flumina competentis*).

82 Voet 1 8 8, Huber 2 1 16, Van Leeuwen *CF* 2 1 5 6 and Van der Keessel 2 1 25.

83 Van Leeuwen *CF* 2 1 7 (royal properties), Voet 1 8 9 (*regalia* or domains of the emperors); Huber 2 1 17, 19. Cf Hall (8-11) who referred to Grotius *Inl* 2 1 25; 2 9 18, Vinnius 2 1 12, Van Leeuwen *RHR* 2 4 2, Voet *Ad Pand* 41 1 7, 18 and Kersteman *Woordeboek* sub voce "rivieren" 452, to motivate his view that the government was *dominus fluminis*, at least as far as public rivers were concerned. There are, however, a few arguments against such a view : in the first place, the Roman-Dutch authors used various terms to describe the nature of the relationship between man and water, (it was referred to as "royal possessions" or *"regalia in feudo"*, "the property of the sovereign", belonging to "the whole civil community of Holland and West Friesland" or to "the earls", or to "the sovereign", or to "the people or the sovereign in their name", or to "no-one in ownership" or to "the

authors were however not clear on the point whether "belonged" implied ownership, and the safest deduction to draw from their contextual terminology is that they at least recognised the common rights of use of all citizens, while the government had the power of control of such rights of use.[84] It is therefore submitted that the Roman-Dutch authors did not necessarily refer to proprietary rights when the term "belong" was used, and the meaning thereof depended on the context : when it was said that it belonged to the citizens, reference was probably made to rights of use, and when it was said that water belonged to the government, reference was made to its power of control.[85]

It is therefore submitted that the state, to whom water belonged, consisted of both the people and the government. While the people had the right to use the water, the government controlled such use, by way of interdicts,[86] levies, tollages and taxes.[87]

As far as the *extent* of government control was concerned, the position was not much different from the Roman law position : while members of the public had rights of use,

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public in rights of use") not necessarily implying that either the civil community or the government was the owner of water. It is submitted that a general deduction that the state was *dominus fluminis*, cannot be accepted unqualified, at least not without ascertaining the contextual meanings of terms such as "state", "belong" and "rights of use". In the second place, Hall does not mention whether his term "public rivers" carried the same meaning than in Roman law. If so, the term referred to certain rivers, distinguished from streams on the grounds of size (*magnitudo*), and from *flumina torrentia* on the grounds of perenniality. And if this is the case, then the majority of the sources which he quotes, do not support his view. The only author who used the term "public river", was Groenewegen *De Leg Abr* 2 1 23, but his use thereof was expressly subjected to his view that *all* rivers belonged to the state.

84 Grotius *Inl* 2 1 26; Voet 1 8 8, 9; Van Leeuwen *RDL* 2 1 12; Van der Keessel 2 1 25. Van Leeuwen was of the opinion that rights of use necessarily implied ownership (CF 2 1 7). The translator of his other work (*RDL* 2 1 11), was of the opinion that the author, where he referred to "belong", probably meant "the use of which is common" (150).

85 Cf Van Leeuwen *CF* 2 1 5, 6 who was of the opinion that rights of use implied ownership. It is submitted that the very existence of servitudes of use (*usus, usufructus* and *habitatio)* denies such a viewpoint.

86 Voet 43 12.

87 Van Leeuwen *CF* 2 1 7; *RDL* 2 1 12; Grotius *Inl* 2 1 26; Van der Keessel *Dict* 2 1 26; Huber 2 1 18. It was submitted (164 supra) that the *regalia* doctrine implied government control, but not necessarily government ownership.

the government had the power to control common use according to the extent of competitive use to which the rivers were subject.[88]

2.2.7. Banks and Beds

In Roman law, the ownership of riparian owners stretched to the river banks, and excluded the beds and the water.[89] Authority exists to support an argument that this position was substantially similar in Roman-Dutch law,[90] namely that the beds were public like the water, while the banks belonged to the riparian owners.[91] In *De Jure Belli ac Pacis*,[92] Grotius had a different opinion. A distinction was drawn between *agri limitati*,[93] *assignati per universitatem*[94] and *arcifinius*.[95] In the last case, the boundary of riparian land was the fictitious middle line of the river. This meant that the bed was not public with the water, but belonged to the respective riparian owners in private property.[96] Voet confirmed this view that owners of *agri non limitati* owned the beds of

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88 Voet 1 8 8, 9; Van Leeuwen *RDL* 2 1 13. Grotius *Inl* 2 1 26 probably also intended to refer to such *ad hoc* power of control, by referring only to larger and navigable waters, and by saying that the reason for state control was "*de bewaringe van de selve stroomen*".

89 Chapter III.I supra.

90 According to Grotius *Inl* 2 1 25, both the beds and the banks ("*...oock den grond van alle de voorsz stromen ende wateren, met den oever voor soo veel die met het water den meesten tijd werd bedect*"), were excluded from riparian owners' proprietary rights. Et vide Van Leeuwen *RDL* 2 1 12; Van der Keessel 2 1 1 25.

91 Van der Keessel 2 1 25 (369).

92 2 3 16, 17.

93 This was land of which the boundaries were artificially indicated and did not adopt the line of the subjacent river bank.

94 This was land of which the boundaries were fixed according to a pre-measured size.

95 This was land of which one or more boundaries followed natural land-lines such as rivers.

96 *De Jure Belli ac Pacis* 2 3 16, 17. It can be argued that Grotius, in the light of the purpose of this work, intended to refer to country borders only, and not to the boundaries between pieces of land. Such a viewpoint is supported by his deviating view in *Inleidinge*.

rivers, but not to the middle line, but those parts where the water ceased to flow only. Covered beds, contrariwise, were public.[97]

Although Grotius was the only authority holding the opinion that the covered beds of rivers were private property, and although his intention to refer to inland property is contentious, this viewpoint gained support in the South African law.[98]

2.3. WATER RIGHTS

From the above, it appears that the power of control of water in Holland vested in the government, while rights of use vested in the members of the public. It remains to ascertain what the contents of the rights of use was.

According to Grotius, the right to use water for purposes of drinking and navigation was available to each and all, irrespective of citizenship or political boundaries.[99] However, the nation on whose property a river flowed, was the owner of the river and could construct weirs or appropriate the product thereof, such as fish.[100] In his *Inleidinge*, he was of the opinion that the civil community was entitled to fishing with rods.[101] Fishing in other ways than with rods was subject to the permission of the sovereign.[102] According to Vinnius, all rights of use in respect of water vested in the public, but the sovereign

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97 Voet 1 8 9; Grotius *Inl* 2 1 25.

98 Vide Chapter III.III infra.

99 *De Jure Belli ac Pacis* 2 1 12.

100 *Quae in flumine nascuntur, eius sunt.*

101 2 1 28.

102 Grotius *Inl* 2 4 18-28; Van der Keessel 2 1 27 (all fishing rights belonged to the earls).

had full control over fishing rights.[103] Groenewegen supported this viewpoint,[104] but Huber, who did not support the *regalia*-doctrine, was of the opinion that fishing rights belonged to all.[105] Van Leeuwen, with his view that rivers were *landgemeen*, regarded only fishing with rods as rights which could be exercised without permission of the government, and without paying tollage.[106] In *Censura Forensis*, where this author distinguished between running water and rivers, he regarded fishing and navigation as common rights in respect of running water, but subject to government permission in respect of rivers.[107] Voet was of the opinion that navigation was free for all, but that fishing, diversion and construction in respect of public rivers was subject to the permission of the government.[108] Kersteman also supported this view, except that he did not restrict this right to public rivers, but applied it to all rivers and streams.[109] Van der Keessel also shared this view that fishing rights were subject to government permission and statutory restrictions, as far as it was done other than with rods.[110] He however restricted this right to fishing in "public rivers", which probably referred to larger rivers which were subjected to competitive common use, and where reasonable and peaceful common use was hardly possible without government control. He also expressly referred

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103 2 1 12.

104 2 1 2 3.

105 2 1 19.

106 *RDL* 2 1 12; 2 3 7.

107 2 1 6.

108 41 1 6; 39 3 1.

109 *Woordeboek* sub voce "rivieren".

110 2 1 27, 28. This was subject to the prohibition on angling with small fish as bait, or fishing in certain months of the year (March, April and May).

to "more important fish species".[111] According to Groenewegen, the right of fishing was not common to all, but was the sole right of the sovereign.[112]

It therefore seems as if the majority of Roman-Dutch authors agreed that fishing with rods was allowed to all, but that other forms of fishing, which came down to the large-scaled collection of more important fish species, was subject to government control, especially in larger rivers which were subject to heavy competitive use. Other forms of water utilization were mostly regulated by statutory restrictions, permits or even tollage. Few clear rules however existed on the use of water for purposes other than fishing and navigation, probably due to the fact that water was not a scarce commodity in Holland, with a resulting lack of competitive use for consumptive purposes.[113]

Vos,[114] who is of the opinion that the Roman water law was substantially accepted in Roman-Dutch law, is therefore not totally correct as far as water rights are concerned, since the government exercised considerably stronger control over certain uses of public water than in Roman law.[115] This was however done without interfering with the underlying principle that the state did not become *dominus fluminis*, but remained mere administrator in the public interest. Stricter government control was necessitated by

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111 2 1 27 : *"de wetten die de vroonvis, of de salm, steur en elf aangaan"*.

112 2 1 2 2. In Waterland, however, this rule did not apply, but the Roman law rule of fishing rights for all, was applicable.

113 Hall *Origin* 7 : "The climatic conditions of Holland rendered any leading of water for irrigation, which is the chief purpose for which large quantities of water are constantly diverted from a flowing stream, totally unnecessary, and for this reason the old writers are almost silent upon the subject of the diversion of water from public streams, save when they are merely repeating precepts of Roman law taken from the Digest. They are chiefly concerned with the use of rivers as waterways and the ownership of the river-beds, and of such land as might be reclaimed from the invading waters, and, to a lesser degree, with rights of fishing in the public streams".

114 *Principles* 2.

115 "It seems hardly necessary to state that water rights in a country where water is scarce must differ very materially from those rights in a land where an access of natural water adds materially to the difficulties of life" (Hall *Origin* 7).

heavier competitive use by members of the public, especially for purposes of navigation and fishing.

2.4. CONCLUSION

* Roman-Dutch lawyers still recognised the existence of common things (*res omnium communes*), although, additional to this, a separate class, named after Gaius' class *res publicae*, was recognised. This doubling of classes containing *communia*, was probably a result of Justinian's interpretation of the classification of things, as set out in the Institutes.

* *Res publicae* was the class of things belonging to the state. "Belonging to the state" probably meant that although the government assumed the power to control the utilization, the civil community was entitled to rights of use. Ownership did not vest in anybody. There was however a school of thought which called it *regalia*.

* Although some jurists still classified water as *res communes*, the majority sorted it under *res publicae*. This transfer of water to *res publicae*, implied a political demarcation of water use. But not only were *peregrini* excluded from water use, the exclusion also applied to non-human life.

* The state controlled public use by imposing tollages and levies, and subjecting certain uses to government permission. Erstwhile Roman law praetorian interdicts were still recognised, although their enforceability is contentious.

* The beds of rivers were public, as was the water, although Grotius, in one of his works, advocated that it belonged to riparian owners of *agri non limitati*.

CHAPTER III.III

SOUTH AFRICAN LAW

"All laws are, or ought to be,
an adaptation of principles of
action to the state and conditions
of a country and to its moral and social position"

Elder v Burris
6 Humph Tenn R 366

"It seems hardly necessary to state that water
rights in a country where water is scarce
must differ very materially from those rights in a land
where an excess of natural water adds materially
to the difficulties of life"

C G Hall
1939

CHAPTER III.III
SOUTH AFRICAN LAW

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SOUTH AFRICAN LAW

3.1. THE LAW OF THINGS

3.1.1. The Classification of Things

Since little primary authority is available to ascertain what the nature of the law of things in the earliest days of South Africa was, it is necessary to refer to literature on the subject. South African jurists are however not unanimous on the nature of the South African law of things. The common use of Latin terminology and references to Roman and Roman-Dutch authorities, however proves the generally accepted origin of the South African law of things.

The majority of authors support a multiplex classification system, in terms of which things are sorted either according to their role in the legal commerce, or according to their physical nature.[1] The classification of things according to their nature did not have its origin in Justinian law, but was supported by some Roman-Dutch authors. The classification relating to the role of things in society, was derived from the *Corpus Iuris Civilis*.[2] The classification of things in terms of this system depends on their susceptibility to ownership.[3]

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1 Erasmus, Van der Merwe & Van Wyk 224; Van der Merwe *Sakereg* 27.

2 Vide Chapter III.I supra.

3 Van der Merwe *Sakereg* 28. The author refers to the term *"private eiendomsreg"*. What this is, is not clear. It seems as if it bears reference to whether ownership vests in the state or the citizens, which difference leads to a question of the contents of ownership. Elsewhere the author gives the following opinion : *"Die staat is egter nie eienaar van res publicae in privaatregtelike sin nie omdat res publicae tot algemene nut en gebruik van die publiek is"* (31) . If ownership *"in privaatregtelike sin"* is meant to be something similar to *"private eiendomsreg"*, the criterion for the distinction between private and public ownership lies in the use thereof, which is comparable to the distinction between *dominium directum* and *dominium utile*, which was advocated by the glossators, as well as to the *dominium eminens* theory of Grotius (Van der Merwe *Sakereg* 171-172; Visser "Ownership" 44 et vide n 55).

According to Van der Merwe, things within the legal commerce (*res in commercio)* are, first, things belonging to private individuals (*res singulorum*) and secondly things belonging to bodies corporate (*res universitatis*).[4] He also sorts things belonging to nobody (*res nullius*) under this heading.[5] Things which fall outside the legal commerce (*res extra commercium*) are *res omnium communes, res publicae* and *res divini iuris*.[6] The author mentions running water as an example of *res omnium communes*, together with other natural resources such as the air. These things are freely available for public use. The class *res publicae* includes, inter alia, public rivers and harbours. They differ from *res omnium communes* in that they belong to the state (but not in private ownership[7]) although destined for public use. The main criteria for the difference that Van der Merwe draws between public and common things, are the extent of government control, and the rights of individuals to appropriate parts of these things.[8] Although the state has the jurisdiction to control the use of both *res omnium communes* and *res publicae*, more severe control measures are possible in the case of *res publicae*. It is however submitted that the extent of restrictive measures with which the state can burden the public use of things, is no proper criterion to justify a distinction between classes in the law of things.[9] As far as the right to appropriate parts of things is concerned, it is submitted that, if public rivers are sorted under *res publicae*, the characteristic of appropriability is also attached to *res publicae*, and not to *res omnium communes* only.

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4 *Sakereg* 28. The author does not refer to the classification systems of either Gaius or Marcianus as contained in *D* 1 8 1 *pr* and 1 8 2, but merely to that of the Institutes. He however refers to *D* 1 8 6 1, where Marcianus was quoted in his explanation of the classification system which he advocated (28 n 62).

5 *Sakereg* 29. Note however the fact that he places this class on a seperate level, ie. not as a third class of *res in commercio*, but as a seperate class of things as against *res alicuius*.

6 *Sakereg* 29.

7 Vide n 3 supra.

8 *Sakereg* 32.

9 It is the duty of the state to promote the public interest, and this can even be done by placing a severe statutory burden on individual rights, (including rights of ownership), irrespective of the classification of the object in the law of things (Van der Merwe *Sakereg* 177). So much the more does it have the power to restrict *public* rights of use in the public interest.

Nathan[10] divides things into five main classes, viz. things common to all (*res communes)*, public things (*res publicae*), things belonging to state bodies (*res universitatis*), things belonging to no-one but capable of appropriation (*res nullius*) and things belonging to individuals (*res singulorum*). The author describes common things as things belonging to no-one in particular, but of which parts can be appropriated.[11] It is submitted that if this is the case, there is little difference between common things and *res nullius.* He furthermore describes *res publicae* as things which have already been appropriated, namely by the whole public or people of the state. It is however difficult to see how the public at large can appropriate these things in ownership. It seems as if he merely refers to rights of use,[12] which is however not the only characteristic of ownership.

Lee[13] identifies classes similar to those of Nathan. He however denies that any of the things which sort under *res communes* or *res publicae* are susceptible for occupation or appropriation. He does not set out the grounds of distinction between public and common things, except by stating that common things are common to all mankind.

It is evident that the distinction between *res publicae* and *res omnium communes* was generally accepted amongst South African authors. Although they refer to Roman law as the original system from which the South African law of things was derived, the lack of recognition of both these classes by the jurists quoted in the Digest, receives no attention. The Institutes is the main source referred to by these authors. As was said earlier, a study of Roman law as the origin of South African law can hardly be profound without an investigation of (or at least reference to) non-congruent texts on the same subject in the Digest and Institutes.[14]

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10 337-341.

11 338.

12 "And as the use of them is common to all..." (339).

13 123.

14 Vide Chapter III.I supra.

It is submitted that the recognition of both *res publicae* and *res communes* in a single classification system is tautological, especially where *res universitatis* is recognised as well. If "rights of use" is used as the criterion to distinguish between classes in the law of things, then common things, things belonging to the state and things belonging to municipalities should all sort in a single class, as it was done by Gaius in his classification system.[15] If the "power to control the utilization thereof" is regarded as the criterion for a distinction between classes of things, then a single class will also suffice, because all things available for common use are subject to state control, whether the state is represented by the government, a municipality or some legal body. Even natural resources, historically regarded as freely available to all, are subject to state control in the public interest. To use "susceptibility for private ownership" as the criterion is unpractical, unless reference is made to a specific characteristic of ownership, because things are either susceptible or not, which justifies only two classes of things.

It is submitted that rights of use (*usus*) should be the basis of a distinction between classes of things, as was done in Roman law.[16] The classes would then be as follows : things available for use by the owner only (*res singulorum*), things available for use by no-one (*res nullius*), things available for use by each and everyone (*res omnium communes*) and things available for use by members of a certain body corporate only (*res universitatis).* The state would, in all cases, have the statutory power to control the use of these objects in the public interest, either by restricting the legitimate users in their powers of use, or by allowing other users, like the public at large, to use it for specified purposes (*usus publicus*).

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[15] He called this class *res publicae* and stated that it belonged to no-one in ownership, but to all (*universitas*) in rights of use. Marcianus also distinguished classes in the *ius rerum* on the grounds of rights of use, but subdivided common things into those things available to all in the world, and those available to citizens only. Vide Chapter III.I supra.

[16] Vide Schoeman 16-37.

3.1.2. The Classification of Water

The combination of both *res publicae* and *res omnium communes* into a single classification system, as was done by the compilers of the Institutes, caused general confusion as to the classification of water in the law of things. The lack of a proper study of the very origin of the classification of things, allowed this ambiguity to survive in South African law. Gaius sorted rivers in the class *res publicae*, while Marcianus sorted running water in the class *res omnium communes*. It was submitted that these two jurists, writing in different periods and using different terminology for otherwise similar classes, never intended to draw a distinction between rivers and running water. Both merely intended to make it clear that natural running water was available to each and everyone in need thereof, according to the principles of justice.[17]

The co-existence of both *res omnium communes* and *res publicae* in a single classification system, necessarily meant that rivers and running water came to be sorted as opposite objects, each sorting in a different class, which in its turn necessitated justification for such a distinction. This was not easy, since running water could hardly be argued to exclude rivers. In Roman-Dutch law, the distinction which was drawn in the Digest between forms of water sources, based on the sizes of streams (but actually intended merely at demarcating the application of the interdicts and not at amending the classification of things), was used to justify this inconvenient differentiation. It was stated that public rivers (being perennial ones) were the only ones qualifying as *res publicae*. The untenable distinction between rivers and running water now became a more logical distinction between perennial rivers as opposed to all other kinds of smaller water sources.[18]

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[17] Vide Chapter III.I supra.

[18] Vide Chapter III.II supra.

Van der Merwe accepts this distinction, and states that running water is *res omnium communes*, while public rivers are *res publicae*.[19] He gives no explanation for the distinction, except by defining public rivers as perennial ones.[20] It therefore seems as if "running water" should be defined as all water not qualifying as perennial rivers. He never uses the term "private rivers" as opposed to public rivers.

Schoeman,[21] distinguishing between *res communes* and *res publicae* on the grounds of the former being "common to all the inhabitants of a state" and the latter being "property held by the state for the benefit of all its inhabitants generally", mentions only public rivers, and sorts them under the latter. Under the former, he sorts the air and sea, but not running water. He does not mention any other forms of water besides public rivers.

Nathan[22] regards perennial streams to be *res publicae*, because they are common things which have been taken in possession by the state on behalf of the public. Other running water falls under *res communes*, a class consisting of things belonging to no-one in particular.

Lee[23] distinguishes between flowing water, public rivers and private water. Flowing water falls under *res communes*, public rivers under *res publicae*, and private rivers probably under *res singulorum*.[24]

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19 *Sakereg* 30-31.

20 *Sakereg* 34.

21 17-20.

22 338.

23 123-125.

24 "Private rivers are a matter of private right and call for no further reference in this place" (124).

De Wet[25] differs from the accepted classification of water *ab initio*, by rejecting the contents and meaning of *Digesta* 1 8 2 1. He is of the opinion that in the early days of South African law, the state was *dominus fluminis*, in that it controlled the use of water by members of the public. Although it seems as if he therefore regards all water to have been *res publicae* in the same sense that this term has been used by other jurists, he does not expressly classify water in the law of things. He does however not distinguish between rivers and running water.

It is clear that the distinction between rivers and running water survived in our law, which is submitted to be unfortunate because of the illogical effects of such a classification, and the artificial distinctions between kinds of water sources which it enforces. It will be indicated infra, that the practical water law since the earliest days has not been in harmony with this classification. It will also be motivated that the Roman law classification of all water being common things (*res omnium communes*) in terms of the universal principles of justice, but the use thereof being subject to state control, is an effective system which is rather time-proven than time-expired.

3.2. PRE-CODIFICATION WATER LAW IN SOUTH AFRICA

3.2.1. Public and Private water

It has been said that the water law which was applied and developed in South Africa was not in congruence with the classification of rivers as *res publicae* and running water as *res omnium commues*, or with public rivers as *res publicae*, private rivers as *res singulorum* and other water as *res omnium communes*.[26] The distinction between public and private rivers was originally created to justify the distinction between rivers and running water

[25] *Opuscula* 7 et seq.

[26] 188 supra.

as far as the law of things was concerned, and was developed to become the cornerstone of the South African water law. It is however submitted that this distinction was more belaboured and developed in the literature than in legal practice.

3.2.1.1. Water law in the Cape before 1856

Hall, being the main South African jurist who has undertaken an in-depth investigation of the development of the South African water law since the earliest years of civilisation in the Cape, is of the opinion that three periods of water law existed until 1856.[27] During the first, the government exercised control over the streams of Table Bay Valley, in order to obtain peaceful common use of the streams. During the second period, the state was *dominus fluminis*.[28] During the last period the state lost its supremacy as far as water was concerned, and riparian owners obtained ownership of the water. For reasons which will be motivated in the following paragraphs, it is submitted that a water law system which converted from state control to state ownership to riparian ownership, is strained and unnecessarily complex. The water law in early South African years was an administrative system, and the classification of water in the law of things was not affected by the development of the water law, although the measure of state control was tightened or relaxed according to the demand therefor, influenced by the scarcity of water in particular times and areas, as well as the extent of competition and disputes amongst water users.

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[27] *Origin* 11 et seq. Et vide Hall "Water rights" 160.

[28] The term means "owner of the river". This term was created by South African jurists and was not derived from Roman law. It has often been used to indicate that the state was in possession of the power to control the use of water, and not necessarily that it was the owner thereof.

The first period described by Hall was from 1655 to 1740, a period in which a series of *placcaets* were issued[29] to control the quantitative and qualitative use of the streams of Table Bay Valley,[30] for the sake of equitable common use by the inhabitants of the area, as well as for the sake of the functioning of the government's corn-mill.[31] Although Hall is of the opinion that these control measures were only exercised over *public* streams, no such an intent can be deduced from the contents of the placcaets :

> *"[D]e stroom van de spruijte daer de schepen haer water halen te wassen",*

and

> *"[V]oorgemelte spruijte ofte reviere daer't drinck water gehaelt wort"*

It rather seems as if control was exercised over those streams which were subject to common and competitive use, irrespective of their size or perenniality, because save for the author's failure to define the term "public river",[32] Table Bay Valley hardly contained any streams which would classify as *flumina publica* as defined in the context of Roman law.

According to Hall, this position of government control was gradually replaced by a system where the state was *dominus fluminis*. He motivated this statement with five examples :

First, he refers to a resolution of the Political Council in 1761, in which the public use of certain streams, which was regulated by granting turns of use, was referred to as

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29 10 April 1655 C 680 OPB 53; 25 April 1657 C 680 OPB 66; 2 January 1689 C 681 OPB 26. Et vide Hall 12 n 5.

30 Visagie 65 is of the opinion that these placaats were ultra vires, because the Political Council did not have legislative jurisdiction granted by the States General.

31 This appears from the words *"alzoo de meulen en de ander zaeken daar door verhindert worden"* in one of the placaats.

32 Which has last been defined in the Digest (*D* 43 12 1 1-4).

"bezondere gunste".[33] According to the author, no *right* to water could have existed if it was described as a *favour.* The state was therefore owner of water, arbitrarily granting favours to use it.

In the current Water Act,[34] various provisions exist in terms of which the minister can assume control of water utilization, and allocate permissions (*vergunnings*) or authorisations (*magtigings*)[35] to users. This take-over of the power of control does not imply that the minister becomes owner of the water in these public streams, since section 6 expressly excludes the possibility of ownership in respect of public water. The power which vests in the minister to allocate these permissions, is merely an administrative measure to control common water use in the public interest, and to limit disputes due to competitive use. The minister therefore does not allocate water because he is owner, but because he is the administrator in the public interest.[36] The same situation existed in Roman law. Although water belonged to nobody in ownership, but was available for common use by members of the public, the praetor had the jurisdiction to control common water use in the public interest, which jurisdiction he exercised mainly by issuing interdicts. State control is an administrative measure which seldom affects the classification of things. The turns to use water granted by the Political Council were therefore not necessarily an indication of a re-classification of water in the law of things.

The second example which Hall uses to support his viewpoint that the government has became *dominus fluminis* since the middle of the 18th century, was the case of one Joel

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33 C 53 573 dated 15 December 1761.

34 Act 54 of 1956.

35 Section 62 (2B), (2H).

36 Cf s 56(4), where ownership of government water works is vested in the minister, but vide the definition of "government water work" in s 1, where the water contained therein is included, and by implication the right of ownership in respect thereof is exercised by the minister. This must be seen as an anomaly in the Act. Et vide s 3(c) of the Mafeking Waterworks (private) Act of 1932 prior to its amendment in 1967.

Ackerman. In 1763, he obtained a piece of land which, due to the occupation of his predecessor, had not been allotted a turn of water. Ackerman did however need a turn of water, and therefore started using water from the adjoining stream according to his needs. This lead to a dispute with his neighbours, who were leading water strictly in accordance with their turns. In adjudicating this dispute, the Political Coucil re-allocated the water of the stream, and included a turn for Ackerman. According to Hall, this example illustrated that owners of land were not entitled to water rights by virtue of their ownership of the land, and that the state was therefore owner of water.

It is submitted that this conclusion is not necessarily correct. An alternative is that Ackerman's land lacked a turn of water merely because his predecessor did not need a turn, and that water which he would have been able to use, was divided between the other riparian owners. The eventual allocation of a turn was not a *favour* from the government, but merely the recognition of the requirements of another member of the public in the water allocation system which is controlled by the state. Furthermore, the dispute was caused by the harm which the newcomer inflicted on his neighbours by leading water which they were entitled to, and not by interference with the property of the state. The state, in casu represented by the Political Council as controller of over-exploited streams, merely acted as arbitrator to obtain a fairer system of turns. The interference by the state did not prove that the state was the owner of the stream. The stream was a common asset which was subject to a dispute due to competitive use, and of which the use of water was controlled by the state in the public interest.

Thirdly, Hall mentions that the Company agreed with some riparian farmers up-stream of the corn-mill on a system of turns of irrigation, in such a way that the functioning of the mill would not be harmed. Hall is of the opinion that the government needed the water to turn the mill, and that they ran the mill to the detriment of the farmers, and "this it did by reason of the fact that it exercised its rights as *dominus fluminis*".[37]

[37] *Origin* 15.

In response it can be argued, in the first place, that the functioning of the mill was in the public interest, and not in the interest of the Company alone. In the second place, the Company, as a competing water user, tried to solve a dispute with other users by entering into an agreement. No arbitrary allocation of leading turns occurred. The turns were agreed on by all the parties. In the third place, no water use occurred to the detriment of the other users and to the benefit of the state, since all the users agreed to the turns. The event can rather be viewed as proof of the government's recognition of the water rights of these riparian owners. The agreement was concluded in such a way that the water use by upper owners did not harm the functioning of the mill. This was nothing else than an attempt to agree to a fair system for the apportionment of scarce water. If the mill was allowed more water in terms of the provisions of the agreement, the parties probably agreed thereto not because they were subjected to the government's *ownership* of water, but because a reasonable share is not necessarily an equal share, but rather so much as was reasonably required for specific purposes. A larger share in the water of a certain stream, or even a preferent share, does not necessarily imply ownership of the water in favour of the beneficiary.

Fourthly, in 1787, one J H Redelinghuys was punished with a prohibition on water diversion, because he violated an agreement on water turns. According to Hall, this is a further example of the strict enforcement of the Company's rights of ownership of water.

However, when the flow of an over-exploited stream is controlled by way of a system of irrigation turns, surely a system of control would be necessary to ensure the effective functioning thereof. The imposition of sanctions in cases of the receipt of complaints by injured water users, is just a way to control the system of turns of water use. In Redelinghuys' case it was expressly declared that he was punished "*tot voorkoming van verder gebruik en onaangename klagten die daar uit zouden spruiten*". The sanction was therefore imposed to protect co-users, and not because the state exercised its rights of ownership.

The final example which Hall uses to motivate that the state was *dominus fluminis*, was the investigation which the Political Council undertook in 1805 into the water use of upper riparian owners of the Eerste River in Stellenbosch. This investigation was undertaken at the request of lower owners who were discontented with excessive water diversion by upper owners. To settle the dispute, a system of rules for dividing the water was introduced. According to Hall, this step testified of the right of ownership which the state exercised over water.

However, it is clear that the Eerste River was utilized in peaceful common use in the period before 1805. Over-utilization eventually necessitated interference by the state. If the state was *dominus fluminis*, why did it allow freedom of water use until 1805? Furthermore, the regulating system was a result of a dispute between users. The state was requested to assume control, probably because the erstwhile peaceful common use gradually became disturbed by increased competitive use. The decision of the state to issue rules for common use, does not imply that it took over the ownership of the water so regulated, just as it did not become *dominus fluminis* of the streams in Table Bay Valley when *placcaets* were issued to control the use thereof. Furthermore, Hall mentions that disputes in respect of the water of the Eerste River continued until the twentieth century. If this was the case, why did the settlement of disputes in later years not imply ownership anymore?[38]

A few further arguments can be raised against Hall's theory of *dominus fluminis* :

In the first place, the government never interfered with the rights of use of streams not subject to competitive use, although inhabitants also made use of these streams. The state interfered, usually on request, when disputes arose between water users.[39] If the

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[38] The author is of the opinion that the *dominus fluminis* system disappeared early in the nineteenth century.

[39] Vide *De Wet v Cloete* 1829 1 Menz Rep 405; *Haupt v Clerk of the Peace, Stellenbosch* 1847 3 Menz Rep 553.

government was *dominus fluminis*, why were some streams left to unregulated common use?

In the second place, government control of scarce resources was known since Roman times,[40] and is still generally known in various legal systems. In fact, the state normally has, as one of its functions, the jurisdiction to interfere in its peoples' rights, to encourage order. Never, however, does ownership pass to the state as soon as it is necessary to regulate the use of some object in the public interest.

In the third place, it is hardly logical that the *dominus fluminis* system suddenly became valid after a hundred years of rule in South Africa, without any material change in the practical situation, or a statutory order. If the principle of *dominus fluminis* applied in Roman-Dutch law at the time of the occupation of the Cape, it is not clear why it did not come into force in the Cape immediately, but only after a hundred years. It is submitted that this system was no more in force in South Africa than it was in Holland. It is somewhat presumptuous to jump to the conclusion that the state was anything more than the administrator of water in the public interest.

As far as the climatological differences in Holland and South Africa are concerned, the lack of freely available water in the Cape necessitated stricter government control in order to ensure peaceful common use of the water sources. This resulted in a larger number of streams being subjected to state control than was the case in Holland. In Roman law, it was mainly those streams utilized for navigation and fishing which were controlled, because smaller streams were seldom the subject of disputes between competitive users, and moreover, disputes rather occurred amongst non-consumptive users. In Roman-Dutch law, only the large, perennial and navigable rivers were controlled by rules, because the superfluous availability of water in that country negated competitive use for purposes other than navigation. In the Cape, rules to regulate

[40] Vide Chapter III.I supra.

common use were initially necessary for all those streams in Table Bay Valley which were used for common household purposes. The scarcity of water when irrigation practices developed, subjected the majority of streams to state control, irrespective of perenniality or navigability. This adaptation of the role of the state in water utilization did not influence the classification of water in the law of things. Water was still common to all, belonging to no-one in ownership.

According to Hall, the system of *dominus fluminis* was gradually converted to a system where the riparian owners were owners of water. This conversion process was initiated at the time when the Landdrost and Heemraden arbitrated disputes concerning water utilization. The rules crystallising from these decisions were strongly aimed at vesting ownership of water in riparian owners. It must however be remembered that riparian owners were the main irrigators, subjecting streams to extensive use, and causing the majority of disputes. The cases dealt with by the Landdrost and Heemraden were therefore mainly between riparain owners, giving the impression that these farmers were the only ones entitled to water use. The development of what Hall calls "riparian ownership" was therefore not a new water law system triggered by a new viewpoint held by the Landdrost and Heemraden, or by the influence of English law principles of private ownership, but merely the result of an armchair-investigation of reigning practice during this period.[41] Never was water released from state ownership in favour of riparian ownership. Water was, as always, the property of no-one in particular, but available for public use - which was, incidently, mainly use by riparian owners - and subject to government control in cases of competitive use and resulting disputes.

It is submitted that the attempt to give validity to a water law system of state ownership for a period of a hundred years, and then to find justification for its decline in favour of a system of riparian ownership, is unfounded and unnecessary complex. A simple historically founded system of state control over all water subject to common use, without

[41] Vide Lewis 22; Hall *Origin* 21-26, 29-31.

involving the law of things, is justifiable by all the water-related incidents of the early South African era.[42]

The Landdrost and Heemraden were abolished in 1827,[43] and replaced by magistrates with very limited jurisdiction. As far as water was concerned, the Supreme Court, which was established in 1828, regarded itself as the only tribunal which could decide water cases.[44] This unpractical situation was tempered by Ordinance 5 of 1848, in terms of which some functions of the Landdrost and Heemraden were vested in the magistrates.[45]

3.2.2.2. Water law since 1856

In 1856 Bell J, in the case of *Retief v Louw*,[46] drew a distinction between rivers and streams.[47] According to the court, only *rivers* were *res publicae*, although no criterion was laid down to justify the distinction. However, the words

> "[T]he stream may not in strict sense be capable of receiving the name of a river, which in the language of the Institutes is said to be public ... but it is undoubtedly a rivulet or perennial stream",[48]

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42 Et vide Resolutions of the Political Council C1 29 August 1656; C6 25 April 1686; C6 10 February 1687.

43 By Ord 33 of 19 December 1827.

44 Hall 32. This was in the case of *Myburgh v Cloete* 3 Menz Rep 564.

45 Cf *De Wet v Cloete* 1829 1 Menz Rep 405; *Cloete v Ebden* 1835 Menz Rep 293, *Du Toit v Malherbe* 1847 3 Menz Rep 299, *Haupt v Clerk of the Peace, Stellenbosch* 1847 3 Menz Rep 553; *Attorney-General Colonial Government v Hart* 1847 3 Menz Rep 558.

46 1874 4 Buch 165 175-176. Although it was decided in 1856, this case was only reported in 1874.

47 This was the first time that mention was made of a distinction between forms of water sources in South African water law.

48 176.

could be an indication that there was no intention to deviate from the Roman law criterion of *magnitudo*.[49] Be that as it may, what the court called "streams" were divided into water rising on the land of an owner on the one hand, and perennial streams (which were *res communes* in terms of the Institutes) on the other. Bell J based this distinction on a quotation from Groenewegen,[50] read with one from Voet.[51] He also discussed natural law as justification for the classification of running water as *res communes*, but without reference to the original text in the Digest.[52] It is however submitted that neither Groenewegen, nor Voet or the Institutes supported such a distinction.[53] The fact that the court referred to the Institutes but not to the Digest, resulted in a denial of the lack of a distinction between rivers and other running water in the opinions of Gaius and Marcianus. The court's distinction also negated the lack thereof in the Roman-Dutch and early South African water law and the law of things.

Although Bell J relied heavily on natural law principles ("by nature itself as it were")[54] to justify the distinction which he drew between forms of water sources, he sorted these forms in three different classes in the law of things, viz. *res publicae*, *res communes* and *res privatae*. He did not motivate why natural law would allow some water sources to be unavailable for use by each and all in need thereof. It is submitted that this classification of water in the law of things, was done directly under the influence of Justinian's merger of the classification systems which had been recognised in the Digest. An attempt to accommodate this dual classification of common things, is however a rather strained attempt. Nevertheless, this decision represents the formal importation of the Institutes'

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[49] ie. that streams were distinguished from rivers by their size.

[50] *CF* 2 1 6.

[51] 8 3 6.

[52] *D* 1 8 2. The judge referred only to *I* 2 1 in his discussion of natural law.

[53] Vide Chapters III.I and II supra.

[54] Et vide Chapter VI infra.

merger of the Digest's classification of things, as far as the water law is concerned.[55] The confusion which this merger caused in Roman-Dutch law was now adopted into the South African water law, to last till this day.[56]

In 1866, the court stated that water rising on someone's property falls within his undisputable and exclusive right of use.[57] Although this viewpoint is in congruence with *Codex* 3 34 4, and not necessarily in negation of the classification of water as *communis*, Hall, in his discussion of the decision, is of the opinion that it was based on a passage from Voet.[58] He links the distinction between forms of water sources to this decision, and says that the court failed to expressly state that only *private* water which rises as such, falls within the owner's exclusive use. It is submitted that the court did not intend to recognise a distinction between public and private water, following the decision in *Retief v Louw*.[59] The recognition of an exclusive right of use of springs on one's land, could be nothing but the allocation of a reasonable share of the water, which is still *communis* as far as the classification of things is concerned. Because few springs yield a stream of water so strong that it is apportionable prior to the confluence thereof with the water of other streams in the lower reaches, such negligible streams were seldom subject to competitive use and disputes. And when they were, the vested rights and reasonable requirements of lower owners restricted the exclusive right of use of an upper owner.[60] It is moreover to be noted that the court did not state that the water of these springs was the sole *property* of the landowner on whose land it occurred. Only a *right*

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55 Hall has no comment on this fallacy. He was only concerned about the blatant rewriting of Angell's viewpoint of Anglo-American law, as contained in his work *A Treatise on the Law of Watercourses*.

56 Vide Chapter IV concerning the status of water under the Water Act of 1956.

57 *Silberbauer v Van Breda and the Cape Town Municipality* 1869 5 Searle 231.

58 *Ad Pand* 8 3 6.

59 1874 4 Buch 165.

60 Vide the discussion of the interpretation of *C* 3 34 4 by De Villiers CJ in *Vermaak v Palmer* 1876 6 Buch 25 35-36.

of use was allocated. No recognition was therefore given by the court to a distinction between forms of water sources as far as the law of things was concerned, as was done in *Retief v Louw*.[61]

In 1874, in the case of *Hough v Van der Merwe*,[62] the same error of reasoning as in *Retief v Louw* occurred, as far as the classification of water in the law of things was concerned. De Villiers CJ argued that running water was common to all because the public interest demanded that water, as a natural resource, should belong to everybody in need thereof. This argument is in accordance with the viewpoints of both Gaius and Marcianus, as well as with the principles of the *ius gentium* and *ius naturale*. But the court proceeded and qualified running water as : "meaning, I apprehend, flowing water of a public stream".[63] No explanation was given why only the water of public streams was available to all, especially in the light of the judge's argument about the public interest. But unlike the decision in *Retief v Louw*, the court did not distinguish between *rivers* as falling in the class *res publicae*, and *perennial streams* falling in the class *res communes*. In the opinion of the chief justice, all *public streams* were *communis*. If the court hereby intended to negate the erroneous distinction between *res publicae* and *res omnium communes*, this would have been a revolutionary decision in the water law, which would have corrected an interpretation error transferred from legal system to legal system since the Justinian period. Unfortunately, the court did not define *public streams*, and in the course of the decision, no distinction was drawn between public streams and other forms of running water. Contrariwise, the court subsequently referred to "running water" only. It is therefore submitted that this decision does not serve as proper authority for the establishment of a distinction between public and private water in the South African law.

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61 1874 4 Buch 165.

62 1874 4 Buch 148.

63 153.

In the same year, the same judge decided a case in which he set out grounds for the distinction between public and private water.[64] First, he stated that a stream of water did not qualify as private water merely because it dried up during the heat of the day in dry seasons.[65] This meant that the court intended to include even weak streams - which sometimes ceased to flow due to excessive heat - into the class *public streams*. What remained to qualify as private water, were mere trickles of water which tended to dry up not only in the course thereof, but even at the sources. A perennial spring, however weak or however negligible its yield, of which the water flowed down to lower land, was a public stream even if it sometimes dried up in its *course*. Secondly, even the water of a non-perennial spring did not qualify as private if it had been flowing down in a known and defined channel for the benefit of lower owners for more than thirty years.[66]

In terms of this decision, those streams qualifying as private water were extremely limited, and really included only negligible trickles of water, flowing from non-perennial springs. This viewpoint explains why the court did not deem it necessary to explain why the relatively strong river in *Hough v Van der Merwe* was described as a public river. This also explains the viewpoint of the court in *Silberbauer v Van Breda*[67] (based on Voet 8 3 6), where it was held that owners on whose land springs occurred, had a right to the exclusive use of the water thereof. It however did not mean that these very weak water sources were excluded from being classified as *communis* in the law of things. Although all water was still public, certain negligible streams which could hardly be the source of competitive use, could be used by the person on whose land it occurred, to the exclusion of lower owners, unless they had vested rights, or unless the stream had for many years been allowed to flow down to their benefit. If this view of what private water was, can be seen as an application of the general rule that all water is common, rather than as a

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64 *Vermaak v Palmer* 1876 6 Buch 25.

65 33.

66 35-36. This viewpoint was derived from *C* 3 34 4, 6.

67 1869 5 Searle 231.

separate class of things, and if this rule is justified by the negligible role of such trickles as far as public use is concerned, then the South African law was placed on the right track by the decisions in *Hough v Van der Merwe*[68] and *Vermaak v Palmer*[69]. Because then the distinction between public and private water was to be found in the administrative control of water, and not in its classification in the law of things.

This approach was however short-lived. In 1880, in an appeal case concerning a similar dispute than in *Vermaak v Palmer,*[70] the same chief justice used the opportunity to finally clear up the problematic distinction between public and private water.[71] With this decision, a new direction was taken. In defining private streams, not only trickles were included, but all seasonal rivers, and streams as well.[72] The criterion for a stream to be public was perenniality, as well as the capability of the stream for common use.[73] The court however evaded the question what perenniality meant, by confirming the view of the court *a quo* that the relevant stream was a perennial one. The judge did however find it strange that a river which sometimes totally ceased to flow, and sometimes only flowed two or three times a year after good rain, was perennial. Had he followed the view in *Vermaak v Palmer*, this question would have been self-answering, in so far as only small trickles of water, of which not even the sources were perennial, and which did not benefit lower owners, were private streams. A dry river, which flowed only once or twice a year, did not qualify as private water. It is clear that the distinction which De Villiers

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68 1874 4 Buch 148.

69 1876 6 Buch 25.

70 1876 6 Buch 25.

71 In *Van Heerden v Weise* 1880 1 BAC 5.

72 8.

73 With this second criterion, the court came close to what could be called a pure South African definition of public water, because since the earliest days, state control was exercised over all streams which were subject to common use for purposes of drinking, washing, cooking, stock-watering and irrigation. For the Roman and Roman-Dutch views that only perennial streams were controlled, there was little room in the South African practical situation. The judge however overlooked the profound implications of his own criterion and still clung to perenniality as well.

laid down in this appeal case was not even credible in his own view. Unfortunately, this new distinction was the last word, and it sent the approach towards public and private water in a new direction.[74]

Barry JP, in the same case, found support in the decisions in *Hough v Van der Merwe*[75] and *Vermaak v Palmer*,[76] and therefore built on De Villiers' erstwhile viewpoint. He referred to the Digest[77] and to a passage from Voet[78] and, "in the absence of decisions of our own courts", also to American authorities[79] to motivate his decision :

> "[T]o constitute a watercourse as a stream of water, the size of the stream is not important; it may be very small and the flow of the water need not be constant, but it must be something more than a mere surface drainage..."[80]

With this statement, Barry JP rejected perenniality as a distinguishing characteristic of public streams but, (although he denied it), he retained the size of the stream as criterion. Mere trickles were the only streams in respect of which owners could vest exclusive rights of use.[81] In addition, he imported a defined channel with banks and beds

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74 Hall is more positive about the new direction of the water law : "This was breaking new ground, for never before had a clear distinction been drawn between private and public streams, nor the importance of this distinction emphasized, as he proceeds to do" (*Origin* 48).

75 1874 4 Buch 148.

76 1876 6 Buch 25.

77 *D* 43 12; 8 3 17; 43 20.

78 43 12.

79 Cf Hall who was of the opinion that Barry JP based his whole decision on American law (*Origin* 49).

80 16. The judge quoted this from an American decision by Mr Justice Bigelow (of which the case name he did not mention (9 Cush 174).

81 The same applied to flood rivers, although the judge did not discuss the inclusion of these rivers any further than referrring to *torrentia* in the same breath as surface drainage.

as a futher characteristic of what he called "permanent rivers".[82] Authority was found in a passage of Voet,[83] where a river was described as *collectio aquae intra certas ripas.*[84]

It therefore seems as if the judicature, since 1874, tended to recognise the classification of things as set out in the Digest, viz. that all running water was *communis*. In cases of negligible trickles originating from non-perennial springs, the owner of the land on which it rises, could use it to the exclusion of others, unless the water had been flowing down for the benefit of others for some years. Some criteria to determine when a stream of water could be regarded as not available for the upper owner in exclusive use, were in due course defined by the courts, and included the perenniality of the source, a defined channel with bed and banks, the capability of it to be used in common, and whether or not it joined some larger stream.

In 1882, the chief justice had to decide whether a man-made channel could qualify as a public stream.[85] He used the Roman law principle of *existimatio circumcolentium* as a directive in the question whether a stream of water was public or private : the fact that the surrounding community had already used it commonly for some period of time, would be strong evidence against an approach that it was a private stream. This view

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82 This is an American term, which he linked to Roman law with reference to the term *flumina perennia*, which was described as *quod semper fluat*, used in *D* 43 12. But the Roman law definition of permanent rivers was based on perenniality, a characteristic expressly rejected by Barry J. The depth of this comparison lay in the fact that the Roman law distinction between permanent and seasonal rivers was not vested in the classification of water in the law of things, but was merely an administrative method to determine which streams had to be controlled by the state. In Roman practice, only perennial streams required state control, but in South Africa, state control was necessary over all rivers which were commonly used, irrespective of perenniality, the reason being that water is a scarce resource in South Africa. This is probably why Roman law could still be of value in South Africa.

83 43 12.

84 Barry JP repeated this view in *Southey v Schombie* 1881 1 EDC 286, although his colleagues Shippard J and Buchanan J still required perenniality.

85 *Myburgh v Van der Bijl* 1882 1 SC 360. The definition of a public stream in the current Water Act of 1956 was probably partly derived from this decision, as far as the phrase "whether or not its conformation has been changed by artificial means" is concerned.

was in congruence with that in *Hough v Van der Merwe*,[86] where it was decided that long user by a lower owner excluded the upper owner from exclusive use, and that such a stream therefore did not qualify as a private stream.[87] This meant that even the water from a non-perennial spring or source was part of a public stream, if it had been flowing down and used commonly by lower owners. With this, he added a further criterion to those which had already cristallised from the judicature to ascertain when an upper owner was entitled to exclusive use of water rising on his land.

In 1891, in *Struben v Cape Town District Water Works Co*,[88] the court once again had the opportunity to illustrate the distinction between public and private streams. The court confirmed that the existence of a known and defined channel would refrain an upper owner from using the water thereof exclusively.[89]

In *Southey v Southey*,[90] Maasdorp J also followed the broad interpretation of public streams, by deciding that a dry river, the flow of which was only sometimes visible above the ground and which had a clearly defined channel and a constant subterranean flow and which could be used for common purposes, was *communis*. The terms "public" and "private" streams were however never used by the judge - he regarded all perennial streams to be *communis*. This view was not in accordance with Roman or Roman-Dutch law, nor with that which was already generally accepted by the courts. Moreover, the authority to which the court referred did not support a view that only perennial streams

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86 1874 4 Buch 148.

87 In *Jordaan v Winkelman and the Colonial Governmnent* 1879 9 Buch 86, a similar test was laid down : "The object of enquiring into the length of time during which the water flowed down to the lower proprietors is not to ascertain whether they had acquired any prescriptive rights, but in order to ascertain the nature of the stream" (88).

88 1892 9 SC 68.

89 75.

90 1905 22 SC 650.

were common.[91] He however used the term "perennial stream" as a synonym for what was called "public streams" in previous cases, referring to all running water with the exception of weak trickles which did not flow in defined channels and were not capable of common use.

The conclusion is that since 1856, and especially under the leadership of De Villiers CJ, a gradual development of the South African water law principles occurred, which remitted to the principles of the Roman water law.[92] Unlike the generally accepted idea held by many jurists, most of the principles which crystallised out in this period, were in accordance with those of the old systems. Foreign law passages were mostly used as illustrations. The distinction between public and private water developed from an earlier approach that rivers were *res publicae*, streams *res omnium communes*, and springs *res privatae*, to a mere administrative distinction in terms of which all water was classified in the same class in the law of things, but negligible trickles were available for exclusive use due to its relative worthlessness for common use. These trickles were called "private water", while all other forms of water were called "public water". This distinction left room for even dry rivers, which flowed only once or twice a year, or of which the main flow was underground, to be classified as public rivers, available for regulated common use.

3.2.2. Riparian ownership

In the judicature of the nineteenth century, an approach took root which influenced the South African water law until this day. This was that running water, being *communis*, belonged not to everybody, but to riparian owners only.

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91 674-675.

92 Cf De Wet *Opuscula* 19 who is of the opinion that no clear water law principles were laid down in the nineteenth century.

In Roman law, water was *communis*, belonging, in terms of the principles of the *ius naturale* and *ius gentium*, to each and everyone in need thereof. In Roman-Dutch law, these rights of use were limited, and it belonged to the civil community only. No indications existed that only riparian owners were entitled to use water.

The first reference to this principle can be traced to a 1856 judgment. Bell J, in *Retief v Louw*,[93] referred to the stream in dispute and said "it is undoubtedly a rivulet or perennial stream which, in the language of the Institutes is said to be common, that is common to the different persons entitled to it, *in respect of the land through which it runs*".[94] The riparian owners' sole entitlement to water however applied to "perennial streams" only, and not to "rivers".[95] In both the texts on which he relied for this viewpoint,[96] no support can be found for the allocation of the water of perennial streams to riparian owners only. On the contrary, the Roman jurists were specific on the point that all running water was *communis* in terms of the *ius naturale* and *ius gentium*, which systems were based on universal principles of justice and equity for all. Bell J, ironically enough and in spite of his restriction of water rights to riparian owners only, expressly stressed the relevance of natural law in the water law. From the work of Groenewegen[97] he quoted :

> "Common things ... which on account of the common use that all have a right to by nature, cannot, by the laws of nations, be divided : therefore flowing water, which, collected either from the rain or from the veins in the earth, makes a perpetual current. These things, by nature itself as it were, are attributed to, and may be occupied by, any one, provided that

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93 1874 4 Buch 165.

94 176. Italics supplied.

95 The court distinguished rivers from perennial streams by their relative size.

96 *I* 2 1 and *D* 43 20.

97 *CF* 2 1 6.

> the common and promiscuous use is not injured, for without the use of air or water no-one could live or breathe."[98]

But in the same breath he deprived non-riparian owners of this vital resource :

> "In my opinion ... after considering the authorities ... the flowing perennial stream which ... by nature enters the lands ... and flows through them ... is *the common property of the proprietors of these two parcels of land, and of all the other proprietors of land lying on the course of the stream.*"[99]

The only authorities to which the court referred, were the two texts mentioned above, although the court added that it had also consulted other sources "which would take too much space to mention here".[100] What these sources were, and whether it included foreign law, is not clear. The lack of any reference to foreign law,[101] as well as the judge's use of the terms "that is" and "in my opinion", creates the impression that the principle of riparian ownership was a personal interpretation of Roman and Roman-Dutch law.

When dealing with the next question, viz. exactly what these riparian owners' rights encompassed, he referred to foreign law, but then retrospectively tried to use this authority to verify the doctrine of riparian ownership which he imported. However, the Scottish law which he quoted did not support him. From English law, but stressing that it was originally derived from Roman law, the court used the doctrine of *cuius est solum eius est usque ad coelum et ad inferos*[102] to prove that "there can be no doubt that the

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98 176.

99 176. Italics supplied.

100 176.

101 In a following paragraph the judge tried to answer a further legal question, and stated that he consulted Scottish law in the absence of any further Roman and Roman-Dutch authority. It therefore seems as if he considered foreign law to answer this second question only.

eius est usque ad coelum et ad inferos[102] to prove that "there can be no doubt that the proprietor of a water-course is owner of the water which flows over the land, as distinguished from those who have no right in the land at all".[103] In the Anglo-American water law, a principle existed that the owners of riparian land were also owners of the beds of rivers *usque ad medium filum fluminis*.[104] Because ownership could therefore be vested in the beds of streams, the *ad coelum* principle was of relevance, which meant that the owner of the bed was also owner of the water flowing therein. In Roman law, on the other hand, riparian owners were not owners of the beds *usque ad medium filum fluminis*, which meant that the *ad coelum* princple did not apply as far as the water in the rivers were concerned. Therefore a stream of water in Roman law did not flow *over* the land of an owner, but beyond it, as his property stretched to the banks of rivers only. It is therefore submitted that the acceptance of the *ad coelum* principle as far as the water law was concerned, was ill-considered, as it could not logically apply unless the *usque ad medium* principle was also accepted.

The random importation of English water law principles by the court, testifies to a misapprehension of the very basis of the English water law. The court, for instance, quoted passages from Anglo-American law sources concerning their "public" streams, which had nothing to do with the *ad coelum* principle, since this principle was only applicable to "private" streams in that legal system, while the distinction between public and private streams in that system was far removed from that advocated in South African law. In Anglo-American law, all private rivers were the property of riparian owners, and only navigable estuaries were excluded and called public rivers.[105] As a limitation on these rights of ownership, members of the public automatically had rigts of use in respect

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[102] This meant that an owner of land was also owner of everything above and beneath the land. Hereafter it will be referred to as the *ad coelum* principle.

[103] 177.

[104] This meant that the boundary of a piece of land was a hypothetical line in the middle of the river. Hereafter it will be referred to as the *usque ad medium* principle.

[105] Vide Anglo-American law 223, 223 infra.

of the waters of navigable private rivers.[106] As far as non-navigable private rivers were concerned, members of the public who wanted to make use of the water thereof, had to register servitudes. All riparian owners alongside a river were regarded as co-users, as a result of their ownership of a moving substance. A riparian owner could not vest ownership on a particular part of the stream of water, although he did so on a particular part of the bed. Each was however entitled to make use of a reasonable share of the water, with due consideration to the similar rights of other riparian owners.

It seems as if these principles of Anglo-American law were unknown to the court when the *ad coelum* principle was imported into the South African water law, to suit the judge's interpretation thereof. While these foreign courts arbitrated disputes amongst riparian owners concerning their co-use of private rivers, Bell J used these decisions to illustrate his principle of riparian owners being owners of South African public rivers.[107] The judge finally based his conclusion on what he called the basis of foreign law, viz. "the general good of all", although he was of the opinion that "all" referred to riparian owners only, and that "the general good of all" was therefore something different from the Roman natural law "common good".[108]

It is submitted that the court in *Retief v Louw*[109] imported the principle of riparian ownership from Anglo-American law without simultaneously importing corresponding water law principles, and that the judge tried to justify this importation by the universal principles of the public interest. That which was called the public interest, was a term

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[106] These rights are comparable to the Roman *usus publicus*. Vide Chapter III.I supra.

[107] Cf *Williams v Morland* 2 B&C 910 : "Running water is not in its nature private property" (Holroyd J) and "All the king's subjects have the right to the use of flowing water" (Littledale J); *Evans v Merriwether* 3 Scamm Ill R 492 : "There may be and there must be allowed of that which is common to all a reasonable use... The law here, as in many other cases, acts with a reasonable reference to public convenience and general good, and is not betrayed into narrow strictness, subversive of common use, nor into an extravagant looseness which would destroy private rights".

[108] Vide Chapter IV.IV infra.

[109] 1874 4 Buch 165.

far removed from that in either the Anglo-American or Roman legal systems, because the exclusion of non-riparian owners' interests from the public interest was neither what the Anglo-American water system intended, nor did it respect the Roman natural law principles of justice and equity.

The principle of riparian ownership was half-heartedly accepted by the court in *Hough v Van der Merwe*[110] with the words "every individual of the nation, *those especially who have land adjoining*, are entitled to use the water for their private purposes."[111] The case however dealt with a dispute between *riparian owners* concerning water for irrigation, which gave the court little opportunity to take a stand about water rights in general, ie. concerning those of non-riparian owners as well. In Roman-Dutch, Scottish, English and French law, the court found support for the view that riparian owners had reasonable rights of use of public water for purposes of irrigation, as long as they did not deprive lower riparian owners of their rights to use water for household purposes and stock watering. De Villiers CJ quoted a passage from *Linlithgow v Elphinstone*,[112] which proved that the court did not hold the view that water was common to riparian owners only :

> "Water is scattered over the face of the earth in rivers, lakes etc. for the use of animals and vegetables".[113]

Only in 1881 was the question of riparian ownership addressed again, and this was once more by De Villiers CJ, who used the dispute to set out several of his views concerning

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[110] 1874 4 Buch 148. Cf De Wet "Hundred years" 32-33.

[111] 153. Italics supplied.

[112] 3 Kame's Dec 331.

[113] 153.

the water law, and to clear up turbidities created by previous decisions.[114] The judge was of the opinion that the doctrine of riparian ownership was derived from Roman law :

> "In course of time, however, the rights of riparian proprietors, as distinct from those of the general public, came to be defined."[115]

The authority on which he relied was *Digesta* 8 3 1, where Antonius and Verus were quoted in their allegation that public water had to be apportioned according to the sizes of the riparian land. As a point of fact, riparian owners were nowhere mentioned in the specific text.[116] It merely stated that when water in a river was utilized for irrigation, it had to be apportioned according to the irrigated areas. The authors of this text probably intended nothing more than to suggest a fair system to apportion the water of sources which were subject to heavy competitive use.

In actually having to apportion the water of the stream involved in the dispute, the court moved away from the question of riparian ownership - to which a lengthy discussion was earlier granted - and recognised the rights of the public at large : "The rights of each riparian proprietor ... are limited *by the rights of the public* ... and by the common rights of the remaining riparian proprietors".[117]

It is therefore doubtful whether the principle of riparian ownership was ever accepted by the courts. It was, on unsteady foundations, imported by a single decision, half-heartedly confirmed by two others, but never applied. Nowhere were the rights of non-

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[114] *Van Heerden v Weise* 1880 1 BAC 5.

[115] 9.

[116] *D* 8 3 1 17.

[117] 9.

riparian owners ever expressly denied. The question was never again addressed by the judicature until it was included in legislation at the turn of the century.[118]

3.2.3. Authority

The establishment of the distinction between public and private water as it crystallised out in the judicature of the nineteenth century, was the result of the opinions of various judges in their interpretations of Roman and Roman-Dutch law, as supplemented by principles from the water law systems of foreign countries such as England, America, Scotland and France. Justification for the acceptance of foreign law was found in the fact that these systems originated from the same source as the South African law, viz. Roman law, as well as in the lack of sufficient authorititave texts in Roman and Roman-Dutch law, due to climatological differences.

In *Retief v Louw*,[119] the court dealt with the distinction between public and private water with reference to Roman and Roman-Dutch law only.[120] The conclusion was that all running water (*res publicae)* as well as springs (*res privatae*) were *communis*. Only in addressing a subsequent question, viz. the allocation of the available water, did the court find it necessary to refer to foreign law. The judge justified this step as follows :

> "As the laws of all these countries, Scotland, England, America and France, have the civil law for their foundations, and upon this subject of land and water rights are not stinted or confined by any peculiar municipal regulations of these countries, arising out of the genius of their people or the particular frame of their government, but are founded upon the universal and immutable principles of sound reason and general justice - the foundation of the laws of all countries, I believe I may say civilized or uncivilized - I consider their

[118] Cf Nunes 305; De Wet "Hundred years" 33. Et vide 238 et seq infra.

[119] 1874 4 Buch 165.

[120] *D* 43 20; 39 3 1 13, 22; *I* 2 1; Groenewegen 2 1 6; Voet 8 3 6.

> authority as available for the decision of this case as if they were part and parcel of the Roman-Dutch law, which, strictly speaking, is the law of this country."[121]

With this motivation of the appeal court as justification for the acceptance of principles from foreign law, courts in subsequent cases seldom found it necessary to explain why they relied on foreign law.[122]

In *Hough v Van der Merwe*,[123] the chief justice based his distinction on *Institutiones* 2 1 1, as well as on his personal interpretation of this text : "meaning, *I apprehend*, flowing water of a public stream".[124]

Bell J, in *Retief v Louw*,[125] set the example for this tendency to supply personal interpretations in a field where authoritative texts were scarce :

> "The law, in short, says *what common sense enforces...*"

and

> "...which in the language of the Institutes is said to be 'common', *that is*, common to the different persons entitled to it, in respect of the land through which it runs"

and

> "*in my opinion*, after considering the authorities..."

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[121] 180.

[122] Vide Hahlo & Kahn 508 et seq concerning the incorporation of foreign principles in our law.

[123] 1874 4 Buch 148.

[124] 153. Italics supplied.

[125] 1874 4 Buch 165.

In *Vermaak v Palmer*[126] and *Van Heerden v Weise,*[127] De Villiers CJ also made generous use of personal viewpoints, which appeared from his words "as we are agreed";[128] "it is sufficient for the purpose of the present to say that *in our opinion*...";[129] and "I deem it right to state briefly what I concieve to be the law of this colony".[130] In the lastmentioned decision, he did however refer to authority, and even more than he did in any previous cases concerning the origin of the distinction between public and private water, he referred to Cassius, Celcus and Ulpian.[131] As regards the reasons for the distinction, he referred to Baldus[132] and Vinnius.[133] For the characteristics of public streams he referred to Vinnius,[134] and regarding long user, he relied on Diocletian and Maximilian.[135] He supported the doctrine of riparian ownership with a text from the Digest.[136]

Barry JP, in the same case, also tried to adhere to Roman and Roman-Dutch law.[137] However, because he was of the opinion that no court or common law sources have ever classified a river which dries up once in a while, as a public river, and because, in the

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126 1876 6 Buch 25.

127 1880 1 BAC 5.

128 *Vermaak v Palmer* 1876 6 Buch 25 33.

129 *Vermaak v Palmer* 1876 6 Buch 25 35.

130 *Van Heerden v Weise* 1880 1 BAC 5 7.

131 *D* 43 12 1 2, 3.

132 *Ad Dig* 1 8 3.

133 *Ad Inst* 2 1 3. On this point he even quoted English sources, eg. *Mason v Hill* 5 B&AD 24.

134 *Ad Inst* 2 1 1.

135 Probably *C* 3 34 7.

136 *D* 8 3 1.

137 Cf Hall *Origin* 49 who is of the opinion that the court based its whole decision on the American law.

South African practical situation, there existed a need for such a classification, he decided to refer to American law, where the climate was similar to that of South Africa.

In *Struben v Cape Town District Waterworks Co*,[138] the court once again relied on Scottish law, because, after an "independent investigation", the court found that it was sufficiently in accordance with South African law. In *Southey v Southey*,[139] Maasdorp J did not experience difficulty to refer to English law to illustrate his viewpoint either :

> "To ilucidate the matter, I may take a passage from a judgment of Lord Cranworth in *Chasemore v Richards*[140] based on the same principles as our law..."[141]

It appears from the foregoing that the courts tried to base the water law on that of Rome and Holland. Where these sources did however not supply satisfactory answers for typical South African water questions, the courts, often apologetically, referred to foreign law, with the justification that it was based on the same system as the South African law, and furthermore that it was in fact only referred to for purposes of illustration, and not as primary sources. No court investigated these foreign water law systems in such depth as to realise that some were materially divergent from the Roman water law principles.[142] Where neither common nor foreign law principles were of any help in the arbitration of a dispute, the judges relied on their personal judgment and on "common sense", as well as on principles of the *ius naturale*. Their judgment was often not well-considered and later gainsaid.[143]

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138 1892 9 SC 68.

139 1905 22 SC 650.

140 1859 7 HoL 349.

141 674. Et vide *Colonial Government v Pietermaritzburg Corporation* 1900 21 NLR 287 291-292.

142 Vide 3.2.7. infra.

143 Et vide Wessels *History* 400-401 on the correct approach to the importation of foreign law : "The proper course to adopt is ... to determine what principles of the English law are to be incorporated into our law, to formulate these principles so that they harmonise with the principles of our law, and then

Be that as it may, the South African water law of the nineteenth century can be said to be mainly of Roman origin, supplemented with principles and doctrines from foreign law, where circumstances required it.

3.2.4. Banks and beds

The question of the rights of riparian owners in respect of the beds and banks of rivers, came before the court in 1882, in *The Municipality of Beaufort West v Wernich.*[144] De Villiers CJ decided, without any reference to common law sources, that the principle of *usque ad medium filum fluminis* existed in South African law as a rebuttable presumption[145] as far as *agri non limitati*[146] were concerned. The presumption could be rebutted by, for instance, the contents of the title deed and diagram. If the boundary of a piece of land was indicated as a straight line, it followed the bank of the river.[147] This decision introduced the English principle of *usque ad medium* into the South African law.[148]

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to give them legislative sanction; in other words, to have a clear idea of what you are taking over from the English law, and to know that there is little or no likelihood of a conflict between what you take over and what you already have... In this way modern English ideas may be incorporated into our system of law in a correct and scientific manner instead of in the haphazard way in which it has been done in the past".

144 1882 2 SC 36.

145 42.

146 ie. land adjoining rivers without clearly described boundaries.

147 The bank is the point from where the land starts to descend to the water level. Et vide Uys 1042-1043, who is of the opinion that no definite criteria exist, and that land-surveyors use their discretion, usually regarding the bank as the normal high water mark.

148 Leonard SC, in his address, however relied on Roman-Dutch law (Voet 43 12 13 15 and 1 8 9) where the public right to the use of river banks was discussed. He also referred to the principle *sic utere tuo ut alienum non laedas*, to support his allegation that an owner may not use a bank to the detriment of the public. Although this restriction burdening the public rights of use of the banks, was reversed in favour of the public, the judge seemed not to have considered it when deciding that the riparian owner was not the owner of any land below the line from where the slope to the water level started.

One problem with the decision is the question to whom the beds of streams adjoining *agri limitati* belonged. It was probably unissued crown land, or even, as in Roman law, *communis*, together with the water in the stream. But this would mean that certain pieces of the river bed were private land, belonging to riparian owners,[149] while others were crown land or *communis*.[150] The question becomes even more complex if it is asked to whom the water flowing over private beds on *agri non limitati*, belonged. In terms of the *ad coelum* principle, anything above and beneath an owner's land is included in his proprietary rights. In cases of *agri non limitati*, where ownership stretched to the middle of the river, the application of the principle would imply that the water also belonged to them. Therefore, if water was *communis* as it was in Roman law and according to various decisions, it would be in conflict with the *ad coelum* principle.[151] If, however, water was the property of the owners of the beds, the water in a river would have been private in some parts, and in other parts it would have belonged to the state or the members of the public. Years later the legislature apparently also struggled with this question, and enacted that rivers could be public for certain parts only.[152]

A second problem accompanying the incorporation of the *usque ad medium* principle in our law, was that the corresponding *ad coelum* principle was not incorporated as well. Therefore, when the boundaries of certain pieces of land were moved from the banks of rivers[153] to the middle thereof,[154] the rule that water was not *communis* anymore, but the private property of the owners of beds, should have been imported as well, as was the case in English law. To draw this argument to its logical conclusions, was attempted by

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149 In cases of *agri non limitati*.

150 In cases of *agri limitati*.

151 Which principle was declared to be applicable in the South African water law by the court in *Retief v Louw* 209 supra.

152 Section 1 "public streams" of the Water Act 54 of 1956. Vide Chapter IV.II infra.

153 Where the boundaries were in terms of the Roman and Roman-Dutch law.

154 In terms of the *usque ad medium* principle.

the court in *Van Heerden v Weise.*[155] But in this decision, the court decided that not ownership, but merely a right of used vested in the riparian owners. The court still intended water to be *communis*, as was the case in Roman and Roman-Dutch law. What De Villiers CJ in the *Beaufort West*-case[156] apparently wanted to do, was to incorporate some English principles into South African law without abolishing current Roman-Dutch principles - a futile attempt, since the Roman and Anglo-American water law systems were based on different principles. Either the Roman natural law principles ought to have applied, in terms of which water was *communis* of each and all and belonged to nobody in ownership, or the Anglo-American law ought to have applied, in terms of which the rights of ownership of riparian owners vested in the beds of rivers, and therefore the water as well, and that the rights of non-riparian owners were excluded unless included by agreement or servitude. In such a system, no room existed for Roman natural law, in terms of which running water with its bed was excluded from ownership. In other words, when river beds qualified as private property, the water ought to qualify as well, in terms of the *ad coelum* principle.

It therefore seems that the English law principles dominated, in that De Villiers CJ imported them one by one, by means of the various court cases on this subject. His judgments during the period 1874 to 1882 should not be read in isolation because, separately viewed, each would bring about a different and illogical attempt to reconcile English and Roman water law principles. He was bound to a series of factual disputes before he could find the opportunity to incorporate the whole English water law. The legislature, in an all-encompassing approach, later grasped this subtle trick of the chief justice, and made an attempt to consolidate it by way of legislation. The success of that attempt deserves a separate discussion.

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[155] *Van Heerden v Weise* 1880 1 BAC 5.

[156] *The Municipality of Beaufort West v Wernich* 1882 2 SC 36.

3.2.5. Ground water and flood water

In *Southey v Southey*,[157] Maasdorp J held that ground and flood water was public water if it flowed in a known and defined channel.[158] He based this on his opinion that flood water and ground water percolating through the ground, was an integral part of the stream. This argument was supported by authority from English law, which he deemed to be authoritative because it was derived from the same origin as the South African water law. His only reference to Roman law was the following :

> "Although this conclusion could be readily deduced from the Roman law, where the floods of winter as well as the moderate flows of summer are regarded as forming the perennial stream, it is very satisfactory to find that judges of high authority have come to the same conclusion."[159]

In *Hiscock v De Wet*,[160] the court was of the same view, viz. that if a public stream submerged and reappeared lower down, it remained a public stream.[161]

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157 1905 22 SC 650.

158 For a channel to be known and defined, it was not necessary that the exact location and depth thereof had to be determined, as long as it could be ascertained where the water was running (*Ohlsson's Cape Breweries Ltd v Artesian Well-Boring Co Ltd* 1919 CPD 125).

159 676.

160 1871 1 BAC 58.

161 Et vide *Southey v Schombie* 1881 1 EDC 286. In his exposition of the South African water law, Roos 48 used the decision in *Southey v Southey* 1905 22 SC 650 as authority to distinguish between different forms of water. He divided water into three classes, viz. first rain, surface and flood water, which belonged to the owner on whose land it occurred, secondly ground water which was public water when flowing in defined channels, and thirdly spring water, being public water when it had a perennial flow, as against private streams, which were too weak to be used for common purposes.

3.2.6. State Control

In Roman law, state control was exercised in the form of praetorian interdicts.[162] In Roman-Dutch law, state control was exercised by imposing levies and tollages and taxes on water use, especially for purposes of navigation and fishing, as well as by the issuing of rules, regulations and prohibitions to control the use of certain sources, the obligation to obtain government permission or permits for certain uses[163] and the delegation of discretionary powers to subservient government organisations, for instance the delegation of the control of fishing rights to the earldom.[164]

In the earliest South African law, state control was exercised by way of legislation, contained in the *placcaets*.[165] In the nineteenth century, no water legislation existed, and control over the common use of public water was exercised by the courts. Because the courts did not have the power to create law but only to administer it, it seems as if no government control over water use existed. For that reason, the courts were searching for principles which would obviate disputes even without formal statutory rules to control common water use. In a country where water was a scarce resource, such a system was a far-fetched ideal. The courts used both common law and foreign law as valid authority to construct such a system. Unfortunately, some foreign law principles were contradictory to common law principles. It is ironical that in this period of no government control, the courts struggled to develop and refine the distinction between public and private water, the function of which distinction was originally in Roman and

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[162] Vide Chapter III.I supra.

[163] Groenewegen 2 15; Voet 1 8.

[164] Van Leeuwen *RDL* 2 1; Van der Keessel *Dict ad Inst* 2 1 1.

[165] Vide 188 supra.

Roman-Dutch law developed for the very purpose of determining the application of government control.[166]

Be that as it may, the fact is that state control was of little importance in the nineteenth century. Public water was held to be *communis*, available for common use, which use had to be exercised with due consideration to the similar rights of others. The old natural law principles of justice were relevant in the absence of clear rules. It is clear that the distinction between public and private water was drawn to determine the limitations on the rights of water users, and that the use of private water was, due to its negligible common value, relatively free of limitations. In this administrative sense, South African water law hardly differed from Roman and Roman-Dutch law.

In the late nineteenth century, the legislature noticed the dilemma of uncontrolled common use of public water, and probably realised that common sense, man's feeling for righteousness, and principles of justice were not sufficient to ensure peaceful common use of a scarce resource. The noble principles of natural law therefore had to make room for statutory and enforceable rules concerning the use of water. This did not imply a drastic change in the South African law, or in the classification of water in the law of things. It only implied stricter administrative control, to suit the practical requirements of a country which was different in climatological conditions from that of its legal predecessors.

No water law system was ever free of some form of state control, yet the strictness of control measures was adapted to suit the political and hydrological conditions, which affected the criteria for the distinction between public and private water.

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[166] The courts were however not under the apprehension that this was the function of a distinction between public and private water. The distinction was often regarded to be relevent as far as the law of things was concerned, which is far-removed from a mere administrative function (Vide *Van Heerden v Weise* 1880 1 BAC 5 8).

3.2.7. Anglo-American Law

As was mentioned above, many principles in South African law were, although often subtly, derived from foreign law, and especially from English and American law. These two systems were simultaneously discussed by Angell in his *magnum opus*.[167] Despite the impression created by the courts in the nineteenth century water cases, Hall is of the opinion that references to the American and English legal systems were derived directly from this work.[168] It is therefore necessary to shortly set out what this author deemed to be the contents of Anglo-American water law at that stage.

A distinction was drawn between public and private streams.[169] A clear distinction was also drawn between ownership and rights of use in respect of streams. The two distinctions were however not equivalent : some private streams, viz. navigable private streams, were private in ownership, but available for public use. Others were also private as far as rights of ownership were concerned, but were available for the exclusive use of one owner. Navigable streams were either private in ownership and available for public use, or public in both ownership and rights of use. The former were those above the cotidal line, and these were called "boatable" streams. The latter were those beneath the cotidal line, viz. estuaries, being directly influenced by the tides of the sea. These parts of rivers were called "navigable" streams. Scematically, this can be illustrated as follows :

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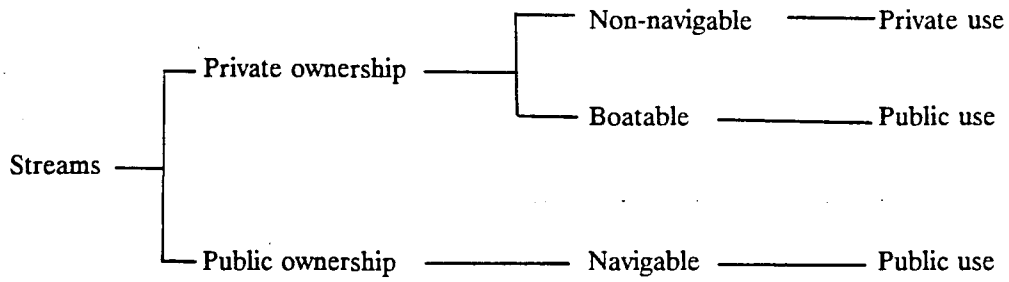
[167] *A Treatise on the Law of Watercourses.*

[168] *Origin* 36.

[169] The author used the term "watercourses" to indicate all streams consisting of banks, beds and water. Perenniality played no role to establish whether a stream was public or private, but the size and navigability was of relevance.



3.2.7.1. Private rivers

3.2.7.1.1. Non-navigable private rivers

An owner obtaining land over which a private river flowed, simultaneously obtained a real right of private property (hereditament) in respect of the water.[170] Because the stream was running over the land naturally, he actually inherited this right in terms of the *ius naturale*, and based on the fact that the land and the water was inseparable. A further reason why ownership in the water vested in him, was the Roman law principle of *cuius est solum eius est usque ad coelum et ad inferos*.[171] This principle did not apply in Roman law as far as water was concerned, because no ownership vested in the beds of rivers. In Anglo-American law, however, rights of ownership stretched to the hypothetical middle line of a river bed, and therefore the ownership of beds made the *ad coelum* doctrine relevant.

Although Angell named the right which an owner vested in the natural water on his land a "real right of private property", it was a restricted right, which did not have all the

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[170] Angell I 5; V 414; IV 90.

[171] This meant that an owner who owned land, necessarily also owned everything above and beneath the land.

characteristics of ownership. The reason therefore lay in the mobility of water, as well as in the natural law principle that water was available for the common use of all the owners on whose land it flowed. Angell was however of the opinion that owners did not possess much more than *usufructus* :

> "The right of property in the water is usufructuary, and consists not so much of the fluid itself, as of the advantage of its momentum or impetus."[172]

The underlying principle of this rule vested in two Roman law doctrines, viz. *sic utere tuo ut alienum non laedas*,[173] and *aqua currit et debet currere, ut currere solebat*.[174]

The riparian owner in Anglo-American law therefore had a real right in respect of the water running in a bed of which he was the owner. Although the water was not *bonum vacans* and therefore in totality susceptible to occupation, ownership in that part of the water which he actually used, vested in the owner.[175] The volume which he was allowed to actually use, divert or impound, was determined according to the principle of reasonableness, which regulated the common use of *communis*. Criteria for reasonable common use crystallised out in the English and American courts, and can be summarized as follows :

* In terms of the doctrine of *sic utere tuo ut alienum non laedas*, no riparian owner was allowed to use water to the detriment of other owners with similar rights.[176]

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[172] IV 94.

[173] This meant that an owner was not allowed to use his property to the detriment of others.

[174] In terms of this doctrine, water must be allowed to flow where nature sends it.

[175] *Mason v Hill* 5 B&AD 24.

[176] IV 97.

* What a reasonable share was, depended on the value thereof for the user, the similar rights of lower owners, the size and nature of the stream and the different uses to which the stream could be appropriated.[177]

* A riparian owner had an exclusive right of use of the water runnning over his land.

* The use of water for irrigation was, except in arid areas, deemed to be artificial use, aimed rather at the welfare of the user than the fulfilment of vital requirements of man and beast.[178] It would therefore be unreasonable use when an owner used water for irrigation to the detriment of the domestic water requirements of his neighbour.[179] The courts however made it clear that no strict rules could be laid down to establish reasonable use, but that it depended on the circumstances, and that it could be determined by the courts.[180]

* A riparian owner had to allow water which he diverted but failed to use, to flow back to the channel from where it was diverted, before it left his land.[181]

* Water may be used for industrial purposes only with due consideration of the domestic and stock watering requirements of other owners.[182]

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177 IV 116.

178 Vital use of water was called "natural" use, to distinguish it from artificial use. In *Evans v Merriwether* 3 Scamm Ill R 492 the court put it as follows : "These wants must be supplied, or both man and beast will perish."

179 *Arnold v Foot* 12 Wend NY R 330.

180 *Evans v Merriwether* 3 Scamm Ill R 492; *Perkins v Don* 1 Rooth's Com R 535; *Arnold v Foot* 12 Wend NY R 330.

181 *Perkins v Don* 1 Rooth's Com R 535.

182 *Evans v Merriwether* 3 Scamm Ill R 492.

* Pollution was unreasonable and illegal.[183]

For non-riparian owners, the possibility existed to procure rights in respect of private streams, in the form of servitudes. Such a right was, according to Angell, an incorporeal right.[184] It could be obtained by the owner of land on which no natural stream was running, and it burdened the land of a riparian owner. It could be obtained by way of contract,[185] prescription,[186] long user and the reservation thereof during property transfers.

3.2.7.1.2. Boatable private rivers

Boatable rivers belonged to riparian owners in proprietary rights, in terms of the *ad coelum* principle. Members of the public were however entitled to the use thereof, even without the necessity to register servitudes. This automatic public right of use was however restricted to fishing and navigation, with navigation being preferential in cases of competition.[187] The public was also allowed to make reasonable use of the banks for purposes incidental to the legitimate uses of water. As far as other uses were concerned, these rivers were no different from non-navigable private rivers.

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[183] Angell IV 136 et seq.

[184] IV 141-142. He more specifically called it an "incorporeal hereditament" or "easement". The term "easement" was derived from the French word *aise*, which is a benefit granted to someone without profit for the grantor. In the *ius civile*, these real rights were called "praedial servitudes", but in common law they were "easements".

[185] "Deed, device and record" (Angell V 168).

[186] This was for a period of twenty years.

[187] Angell XIII 558.

It is submitted that the public right of use, being an automatic servitude in favour of the public at large, to use the property of riparian owners, was in many ways similar to Roman law *usus publicus*.[188]

3.2.7.2. Public rivers

Public rivers were those parts of rivers beneath the cotidal line, in other words estuaries in so far as they were influenced by the tides of the sea.[189] The beds and banks of these rivers belonged to the state, and not to the riparian owners. Rights of use vested in the public.[190]

Anglo-American law differed from Roman law mainly regarding the fact that the doctrine of *usque ad medium filum fluminis* was not applicable in Roman law. A riparian owner was not owner of the bed of a river. The *ad coelum* principle was therefore not applicable either, as far as water rights were concerned. Running water and their beds were public in Roman law, ie. belonging to no-one in ownership, available for public use (*usus publicus*) and subject to government control. Because of this legal position, there was no room for the principle of riparian ownership. This principle was furthermore contrary to the principles of the *ius naturale* and *ius gentium*, in terms of which water belonged to all in need thereof in rights of use.

To incorporate principles and doctrines from both the Roman and Anglo-American water law, would therefore necessarily cause inconsistencies. This is what happened when the colonial courts tried to merge the water law principles of these systems, which is submitted to have been the cause of the uncertainties which occurred in the water law of the pre-codification period.

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[188] Vide Chapter III.I supra. Et vide Angell XIII 535.

[189] This included the ebb and flow.

[190] *Royal Fishery in the River Bonne (case of) Davies* ? R 49.

3.2.8. Water Rights

From the foregoing, it seems as if running water was, in early South African law, regarded as *communis*, which belonged to nobody, but was available to all in rights of use. The court, in due course, exhumed an old and forgotten yet merely administrative principle from Roman law, being the distinction between public and private water, and elevated it to a distinction in the law of things. This had the result that private water, being weak trickles, were regarded as *res privatae*. Other water was available for common use by members of the public, and was called public water. Due to disputes resulting from heavy competitive use, peaceful common use became an illusion, and the courts were inundated with water disputes. The courts started tampering with the term "public water", in order to find a system which would bring about peaceful common use. From Anglo-American law, the principle of riparian ownership was introduced, probably in the expectation that defining a smaller group of legitimate water users, would limit user competition and make peaceful common use a reality. It followed that river beds were included in riparian owners' ownership, and that the *ad coelum* principle would then be applicable, to make them owners of the water as well, not only to the exclusion of non-riparian owners, but also to the exclusion of the natural law principles of common use. This system was however never applied to the exclusion of the water demands of non-riparian owners. In this artificial situation, the legislature, when codifying the water law at the turn of the century, intervened.

The question what the rights of riparian owners encompassed, however remains.

3.2.8.1. Public Water

During the earliest years of the Dutch government in the Cape, each and everyone, whether sailor or inhabitant, was entitled to use the water of the streams in Table Bay Valley for purposes of drinking, washing, farming, gardening etc. Where common use led to disputes, the government issued rules to enforce peaceful common use.

Under the English reign, no drastic new statutory water rights came into effect, and relatively uncontrolled common use proceeded. Disputes were arbitrated by the Landdrost and Heemraden, whose judgments were mainly based on principles of justice and equity. Since 1856 the courts, increasingly charged with the arbitration of disputes, searched for a system of water rights in more seriousness. In *Retief v Louw,*[191] Bell J, after deciding that the stream in question was common to all those over whose land it was running *ex necessitate rei*, considered the question of water rights. He decided that because the Scottish, English, American and French water law systems were also derived from Roman law, and were moreover all based on "the universal and immutable principles of sound reason and general justice" originating from "the genius of the people",[192] and by lack of suitable common law rules, these were applicable in South Africa "as part and parcel of the Roman-Dutch law". The important principle which he adopted from all these systems, was the existence of equal common rights of reasonable water use with due consideration to public convenience and interest, and without injuring the similar rights of others.[193] This principle is reconcilable with the Roman-Dutch authority which he mentioned,[194] which provided that each and everyone, in terms of the *ius naturale*, had a right to use *communis*, and that it, in terms of the *ius gentium*, could not be apportioned. Nature itself provided that each could use it without harm to others, because nobody could live without it. His conclusion that riparian owners were the only ones entitled to such reasonable rights of use, was however an unfounded legal interpretation of the factual questions in the foreign cases to which he referred, and furthermore in contrast with the "general common good" which he motivated so thoroughly.

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[191] 1874 4 Buch 165.

[192] 180.

[193] In the American law, reasonable use was defined as use necessary for vital needs, and not to advance prosperity (*Evans v Merriwether* 3 Scamm Ill R 492).

[194] Van Leeuwen *CF* 2 1 6.

To riparian owners, he allocated preferential rights of use, which allocation was based on his personal interpretation of foriegn law,[195] and on the principles of natural justice.[196] The order in which he classified water rights was first, the support of animal life, secondly, the increase of vegetable life, and thirdly, the promotion of mechanical appliances.[197] The extent of permitted use for each of these purposes depended on the question to what extent it prejudiced other owners in the exercise of their similar rights. He explained the system by stressing the fact that all lower riparian owners first had to satisfy[198] their water requirements for maintenance of animal life,[199] before water was available for the other purposes.[200] This preferential order was further limited in that riparian owners were not allowed to use water recklessly or *in vicinem vicini.*

Although Bell J found support for this allocation system in foreign law, he never quoted any decisions as confirmation. He revealed that it was his personal interpretation of the system of justice of the natural law.[201] This however exposed him to criticism.[202] In spite of his conspicuous attempt to base the judgment rather on natural law and his personal interpretation of the common law than on foreign law, he was severely criticised for his blatant importation of foreign law into the South African water law.[203]

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195 *"[A]nd it seems to me* that the uses..." (181). Italics supplied.

196 "that the uses which the proprietor ... may make of the water of the stream, is, *from the very nature of things*, to be classed in the following order..." (181). Italics supplied.

197 181.

198 Satisfaction implies the irrelevancy of the requirements of lower owners.

199 ie. "the support of life, for human beings and cattle upon their land".

200 Vide Juta *Leading Cases* 442 for the practical problems which a distinction between the water requirements of animals and plants can bring about.

201 He used the words "from the very nature of things"; "it seems to me"; "if I am right as to the consecutive uses to which water may be applied".

202 Hall *Origin* 36.

203 Hall *Origin* 36; De Wet *Opuscula* 12. De Villiers CJ, in a series of decisions a few years later, totally ignored this attempt of Bell J.

In *Hough v Van der Merwe*,[204] De Villiers CJ relied on "the law of all polished nations" for his viewpoint that all running water was *communis*. He quoted a Roman law text[205] and a Scottish case[206] as support for his view, but just like Bell J, justified it with the principles of natural justice and the public interest.[207] Like Bell J, but without reference to *Retief v Louw*[208] or any other decision, he set out a preferential order for water use. He however did not restrict those entitled to use water to riparian owners, probably because it would contradict his plea in favour of natural justice and the public interest, in terms of which he sees public water as *communis*, and which he emphasises in the same paragraph.[209] The court divided water rights into two classes, viz. for ordinary and extraordinary use. Ordinary use was the use of water for the support of animal life, and, in cases of riparian owners, for household purposes. Extraordinary use was the use of water for all other purposes. Upper owners were not allowed to use water for extraordinary purposes if they thereby deprived lower owners of their water for ordinary purposes. He motivated the preferential order with the principles of general justice and public interest :

> "It would be *manifestly unjust* to allow the upper proprietor to make an extraordinary use of the water if he thereby deprives the lower proprietors of their ordinary use"[210]

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204 1874 4 Buch 148.

205 *I* 2 1 1.

206 *Linlithgow v Elphinstone* 3 Kame's Dec 331.

207 "But to admit of such property with respect to the river itself, considered as a complete body, would be inconsistent with the public interest, by putting it in the power of one man, to lay waste a whole country." (153).

208 1874 4 Buch 165.

209 153. The judge nevertheless rendered lip-service to Bell's principle of riparian ownership : "But every individual of the nation, *those especially who have land adjoining*, are entitled to use the water for their private purposes". Et vide *Van Heerden v Weise* 1880 1 BAC 5, where the court recognised water rights for non-riparian owners as well : "the rights of each riparian owner ... are limited by the rights of the public *and* by the common rights of the riparian proprietors". Italics supplied to both quotations.

210 153.

and

> "[T]he right to the ordinary use is derived from necessity, the right to extraordinary use from convenience".[211]

The court found support in Roman, Roman-Dutch, French, Canadian and English law, merely to illustrate that the allocation system was so fair that it was accepted world-wide.[212] In his final conclusion, he expressly subjected the use of water in this sequence to the principle of justice and equity, and to the interests or similar rights of others.[213] Reasonable use was determined by looking at the circumstances in each case. He also set a final condition, viz. that when water was used for irrigation, it had to be returned to the stream from which it had been diverted.

Just like Bell J, the judge subtly avoided the necessity to base his decision on foreign law, by relying on the universal principles of justice and equity.[214] Unlike Bell J, he also avoided relying on his personal opinion. He regarded the principle of justice as sufficient motivation for his allocation system, especially because he could illustrate it with the similar principle in the legal systems of "all polished nations".[215]

The practical application of the preferential sequence came before the court in 1897.[216] The case concerned the claim of lower owners that the upper owners should allow water to pass for their extraordinary use. The court said that the current allocation system was

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211 153-154.

212 That he did not intend to use these authorities for anything more than an illustration of the judgment, appears from the fact that he laid down the rule first, and then referred to authority.

213 Juta *Leading Cases* 443 is of the opinion that the question of what reasonable use is, is one of the most difficult questions in the water law.

214 Vide Hall *Origin* 44, who is of the opinion that this avoidance of foreign law was for the sake of personal status considerations.

215 153.

216 *Van Schalkwyk v Hauman* 1897 14 sC 214.

not suited for the advanced irrigation development in South Africa, but that the preferential order was standing law. He decided that all the irrigators had to reduce diversion so that the lower owners could receive a share. From the decision, it appears that reasonable use was not determined with reference to the water requirements of a particular owner, but with reference to the joint requirements of all the owners, together with the capacity of the stream. Although it appeared from the decisions in *Retief v Louw*[217] and *Hough v Van der Merwe*[218] that if a certain upper owner needed all the remaining water (after all the others were satisfied in their ordinary use) for extraordinary use, he could divert it without consideration of the lower owners, the court in *Van Schalkwyk v Hauman*[219] was of the opinion that the requirements of lower owners had to be considered nevertheless.[220] If an upper owner required X amount of water to ensure his harvest, but the use of X would deprive a lower owner of his harvest, the upper owner had to sacrifice a part of his harvest so that the lower owner could save part of his. The criterion, according to De Villiers in *Struben v Cape Town District Water Works Co*,[221] was the harm which the lower owner suffered due to the upper owner's use.

3.2.8.2. Private Water

In Roman law, all running water was *communis*. An administrative distinction existed between public and private water, and little or no state control was exercised over the use of private water.[222] An owner on whose land it occurred, could use it as if it was his

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217 1874 4 Buch 165.

218 1874 4 Buch 148.

219 1897 14 SC 214.

220 Cf Juta *Leading Cases* 454 who alleges that a reasonable share in water depended on the demand therefor : "Whatever water a riparian proprietor does not require for irrigation (or extraordinary use) is *a priori* in excess of a just and reasonable share".

221 1892 9 SC 68.

222 Vide Chapter III.I supra.

property. Nowhere was private water declared to be *res privatae*. In *Digesta* 1 8 it was said that almost all rivers were public, and this was probably why little attention was paid to water rights on private streams.

In Roman-Dutch law, the extent of state control was limited to navigable perennial rivers, because superfluous water availability restricted competitive use to navigation. A political demarcation of water rights also occurred, to the extent that some jurists were of the opinion that certain streams belonged to the state in ownership, and were available for the use of the civil community only. No reference was made to private water.

In South African law, all water was available for public use, but in cases of disputes the state interfered by allocating water to certain users for certain purposes. The distinction between public and private water was for ages not referred to.

In the nineteenth century, the courts incorporated the distinction into South African law, and even distinguished these forms of water as far as the law of things was concerned.[223] The term private water was developed to refer to negligible trickles only, which were of little common value, and which the owner of the land where they originated, was entitled to use exclusively, unless lower owners had vested rights.

In *Retief v Louw*,[224] Bell J distinguished between water rising *on* an owner's land,[225] and water runnning *over* his land.[226] While the lastmentioned, even if the stream was very

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[223] The reason was that the courts, in an attempt to create an allocation system, searched deep into old Roman water law principles, and exhumed terminology which was not necessarily suited to the South African practical situation.

[224] 1874 4 Buch 165.

[225] With reference to Voet's *erumpens in suo*, in *Ad Pand* 8 3 6.

[226] 172 et seq.

weak, was *communis*,[227] the firstmentioned fell within the ownership of the landowner who could divert and use it or allow it to flow down. The court never referred to the terms public and private water, but drew a definite distinction between the classification of forms of water sources, based on the size and common value thereof. From later decisions dissention appeared on the issue of whether such small streams[228] were subject to ownership or mere rights of use.[229] The only clarity was that the owner of the land where the spring rose, had a limited right of exclusive use of the water vested in him. Except for Bell's decision, there was therefore no clear common law authority that private water was simultaneously *res privatae*. An owner on whose land water rose was, mostly, a preferential user of otherwise *communis*.

3.2.9. Conclusion

* Many South African authors recognise both *res publicae* and *res communes* as classes in the law of things, in accordance with the classification system set out in the Institutes, as well as by some Roman-Dutch authors. The inconsistencies resulting from such a classification system, which complicate the practical

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[227] This was *communia* of riparian owners only (177).

[228] In due course named "private streams".

[229] In *Silberbauer v Van Breda and the Cape Town Municipality* 1869 5 Searle 231, it was said that it was impossible to dispute the law that an owner could do what he wanted with water rising on his land. In *Erasmus v De Wet* 1874 4 Buch 204 it was decided that an upper owner was entitled to free use of the water on his land. A similar right of use was granted to upper owners, in *Dreyer v Ireland* 1874 4 Buch 193. It is significant that the courts in these two cases allocated the exclusive right of use not only to the owner of the land where the spring occurred, but to all upper owners. The court of appeal cleared the question in 1869, by admitting that a right of exclusive use existed in favour of the owner on whose land the spring occurred, but only on the condition that it did not flow down in a known and defined channel to lower land. In *Hough v Van der Merwe* 1874 4 Buch 148, two such qualifications were fixed, viz. that the water did not flow down in a defined channel, and that it did not flow down for the benefit of lower owners for more than thirty years. In *Van Heerden v Weise* 1880 1 BAC 5, a further limitation was laid down, viz. that the spring may not be the source of a public stream. These qualifications as to the nature of private streams however brought little clarity on the question as to the rights of the upper owner, and on whether Bell J was correct in his view that he was the *owner* of the water rising on his land.

application of the system,[230] are dealt with by sorting public rivers under *res publicae*, private rivers under *res privatae* and other running water under *res communes*. About the definitions of these terms, and especially the criteria for the distinction between public rivers and running water, little consensus exists.

* Although a distinction between forms of water sources as far as the law of things is concerned, was recognised in a few important decisions, it was obiter, and was never applied : in the majority of cases the distinction was only used to restrict the application of the preferential order of water rights, and not to exclude certain smaller streams from public rights and award them to private ownership.

* The principle of riparian ownership was imported into our law by the court in *Retief v Louw*.[231] This principle was however based on ill-considered English law principles, and was, moreover, never applied consistently or to the detriment of non-riparian owners.

* Foreign law was referred to by the courts in the alleged absence of clear Roman and Roman-Dutch law principles as far as the water law was concerned.

* The principle of *usque ad medium filum fluminis* was incorporated from the English law into the water law as far as *agri non limitati* was concerned, but the coherent principle of *cuius est solum eius est usque ad coelum et ad inferos,* was negated. This meant that although riparian owners owned the beds of streams, they were not the owners of the water running therein as well.

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230 Vide Chapter III.I supra.

231 1874 4 Buch 165.

* Common use of water was, until the end of the nineteenth century, not controlled by legislation, and the courts assumed control by formulating rules - such as preferential water rights - to ensure peaceful common use of a scarce commodity.

* The courts accepted a principle of reasonable common use, which was applied by way of a system of preferential water rights. Reasonableness was also the Anglo-American foundation of water rights, as well as that of Roman law, where *iustitia* and *equitas*, as constituents of the *ius naturale*, formed the basis of the water law.

* It is submitted that, in a roundabout way, the courts formulated a water law system not so far removed from the Roman law system : based on reasonable common use, water was *communis,* of which the common use could be regulated by the state, depending on the necessity therefor.

3.3. CODIFICATION OF THE SOUTH AFRICAN WATER LAW

3.3.1. The law of things

3.3.1.1. The Cape

It was said supra that the courts of the nineteenth century acted as creator of the water law, because of a lack of legislation and government control over common water use. The personal opinions of judges, the arbitrary importation of foreign legal principles and the fact that the factual disputes before the courts restricted them from creating an integrated water law system, caused much uncertainty concerning the nature of the South African water law. By the turn of the century, this led to a realisation of the need for a codified water law system. The rapid development of irrigation practices also led to increased competitive use of water as a scarce resource, again leading to increased

disputes for the courts to solve.[232] Discord necessitated control, because peaceful yet unregulated common use is hardly possible in a country where severe competitive use is made of the available water resources.[233]

The first pieces of water legislation were aimed at specific and generally problematic water questions, for instance the leading of water over riparian land to those entitled to it for purposes of irrigation, as well as the apportionment of water.[234] In 1906, the extent of the problems concerning water law, led to an attempted codification of the whole field,[235] an attempt mainly based on the rules which crystallised out in the courts of the nineteenth century. Because the legislature attempted to meet practical needs, old water law theory was neglected and basic principles went by the board.

The first important law concerning water matters in the Cape, was the Right of Passage of Water Act of 1876.[236] This act did not refer to the distinction between public and private water, but allocated a right of passage of water to anyone entitled to use the water of dams, springs, reservoirs or any other water sources. In the absence of any specification on the conditions which entitled one to water, the principles of the common law were applicable.

In terms of the case law of the time when this act came into force, a clear distinction between public and private water was recognised. Only weak trickles were excluded from the definition of public water, ie. streams which, during dry periods, ceased to flow

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232 Vide *Utilization of Flood Water* 111 et seq.

233 Et vide the report on the Cape water situation by Ham Hall 59-60. Another reason for the necessity for statutory water control, according to Ham Hall, was the "wandering nature of water".

234 According to Ham Hall 60-63, *ad hoc* legislation aimed specifically at irrigation, was not sufficient, and there was a need for a proper and codified water resources administration system.

235 This codification attempt finalised an intense public debate around the contentious decision in *Southey v Southey* 1905 22 SC 650, which is discussed in Chapter IV.II infra.

236 Act 24 of 1876.

not only in the course, but also at the sources. But if the water of such a weak stream had been running down for the use of lower owners for more than thirty years, it did not qualify as a private stream, however weak the source.[237] Such a negligible trickle was available for the exclusive use of the owner on whose land it rose.[238] These private streams were not necessarily *res privatae*, in other words it did not belong to the upper owners in rights of ownership.[239] The upper owners' exclusive rights of use were attributable to the omissible common value of such private streams, and not to the classification thereof in the law of things. All water was *communis*, belonging to the public at large in common rights of use.[240] The courts however referred to natural streams only, and it is not certain what the position concerning water rights regarding man-made water sources was. In Roman law, such water works were classified as public places (*publici loci*), which were classified in the class *res universitatis* in the law of things.[241] They belonged to the municipality in ownership, but the water therein was available for public use (*usus publicus*).[242]

It is therefore submitted that the 1876 act did not revoke the common law situation as far as water rights were concerned. Although it was not meant to codify the water law, it did contribute to clear up some uncertainties in the common law : first, it solved a practical point of dispute by negating the necessity to register a servitude of *aquaeductus*

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237 *Hough v Van der Merwe* 1874 4 Buch 148; *Vermaak v Palmer* 1876 6 Buch 25.

238 *Silberbauer v Van Breda and the Cape Town Municipality* 1869 5 Searle 231.

239 Although some courts were of the opinion that they were *res privatae*. Vide 3.2.2.2. supra.

240 In *Retief v Louw* 1874 4 Buch 165, the court was however of the opinion that only perennial streams were *communia*, and that "rivers" belonged to the state. The court furthermore decided that these perennial streams, being *communia*, were available for the use of riparian owners only. The court in *Hough v Van der Merwe* 1874 4 Buch 148 confirmed, but did not apply this lastmentioned principle. The legislature (in the 1876 act) did not accept the riparian principle either, since the objective of this act was to legalize the passage of water used by legitimate *non-riparian* users.

241 Chapter III.I supra.

242 The municipalities usually allocated specific rights and turns to use the water, lay pipelines (*aquaeductus*) to carry it and imposed levies to finance it (*C* 11 42 2, 3, 6, 7, 8, 10, 11).

in cases where water had to be led to the irrigation farm. Secondly, it negated the principle of riparian ownership incorporated in the water law by the court in *Retief v Louw*.[243] Thirdly, the act negated the recognition of a distinction between public and private water.

The Irrigation Act of 1877[244] provided that, in so far as natural rivers, streams, creeks, watercourses, dams, reservoirs, vleys and embankments which were by their nature common to two or more owners, were situated within irrigation districts, the power of control thereof vested in the irrigation boards.[245] The phrase "which by nature is common to two or more owners of land" can be interpreted in two ways. First, it can refer to the mere physical extent of the source : if it was situated across a boundary between two pieces of land, the source was naturally common to the two owners. Secondly, it can be interpreted to have referred to the common law legal position : water was common when, due to the perennial flow, the size of the source and the common opinion, it was capable of common use. This would mean that even if a water source was in totality within the borders of a single piece of land, it could be common to two or more owners due to the capability thereof for common use. It is submitted that the second interpretation is more in touch with the prevailing opinion : if a weak trickle, with negligible common value, found its way over two pieces of land, it was regarded by the courts as private water, and not subject to state control, and it can hardly be argued that the legislature intended to refer to such. If the section referred to "common" in the second sense, ie. capable for common use, it excluded weak trickles from state control. The act was clearly aimed at sources from which irrigation could take place.[246] The 1877 act therefore regulated streams subject to competitive use only, but did not recognise a

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[243] 1874 4 Buch 165.

[244] Act 8 of 1877.

[245] The wide variety of sources referred to by the act indicates that no formal distinction between forms of water sources was recognised, in spite of the courts often distinguishing between springs, rain water, surface drainage, rivers, streams, rivulets etc.

[246] Vide the preamble of the act.

formal distinction between public and private water, or forms of water sources. This submission is confirmed by the provision that irrigation boards were established at the request of owners[247] - this would, in practice, happen in cases of heavy competitive use only.

In 1882, the 1876 act was substituted by the Right of Passage of Water Act.[248] While the 1876 act never expressly referred to running water,[249] but probably included it by implication,[250] the 1882 act expressly included *rivers, streams,* springs, dams and reservoirs. The provision that anyone with legal water rights was entitled to lead water over the land of another, without defining what "legal water rights" was,[251] once again involved the common law.

By 1882, development in the case law had influenced the common law position. In *Van Heerden v Weise,*[252] the court[253] extended the definition of private water to also include, besides weak trickles, non-perennial rivers and streams. The court therefore excluded the typical South African river - which flowed strongly in the rainy season and was then capable of common use, but often ceased to flow in the dry season - from the definition of public rivers, and allocated the sole use thereof to individual owners.[254] In 1882, the

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247 Section 2.

248 Act 26 of 1882.

249 It only referred to dams, springs and reservoirs.

250 "...or any other sources" (s 33).

251 Section 2.

252 1880 1 BAC 5.

253 By mouth of De Villiers CJ, who had a major influence on the making of the water law by the courts, in that he was the presiding officer in the majority of the important late nineteenth century water cases.

254 Cf the decision of Barry J in the same case, who contrariwise rejected perenniality as the criterion to distinguish between public and private rivers.

same judge, in *Myburgh v Van der Bijl,*[255] however dove-tailed his view on the distinction between public and private streams, to match the more general view, viz. that non-perennial streams could also be public, namely if they had been running down to lower land for some time, and if they could be used in common.

At the time when the 1882 act came into force, a river was therefore, in terms of the common law, *communis* if it had a perennial flow, but also if the flow was non-perennial but the stream was capable of common use. Water originating from non-perennial springs was private water. The act failed to recognise this distinction, and referred to springs, without distinction, together with other water sources. It however only supplied the right of leading water to holders of "legal water rights". If perennial streams and streams from perennial sources which could be used in common, were capable of common use, while small trickles were available for the exclusive use of owners on whose land it occurred, then "legal water rights" in favour of the public referred to these larger streams only. When the act therefore referred to legal water rights, it ought to be interpreted as the right of the public to use the water of those rivers and springs which were either perennial or supplied sufficient water for common use.

The Water Act of 1899[256] was promulgated to regulate water rights and to solve disputes. This was the first attempt by the legislature to codify the water law. It was probably inspired by increasing user pressure on the limited water sources of the Cape, due to rapid irrigation development, which was indicated by Ham Hall in his report on the water situation in the Cape Colony in 1898.[257] To obtain this goal, a water court was

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[255] 1882 1 SC 360.

[256] Act 40 of 1899.

[257] *Irrigation Legislation in the Cape Colony* 59-60. Ham Hall advised that the wandering nature of water, rapid irrigation development and increasing water disputes necessitated a proper and codified water administration system. He however also recommended the revision of the water allocation mechanism as developed by the courts in the nineteenth century.

instituted[258] which, inter alia and in so far as it had not been done by agreement, could define reasonable water rights on *perennial streams*[259] in accordance with prescriptions for equitable allocation as laid down in the regulations.[260] The act however did not define "perennial streams".

Except for the decision in *Struben v Cape Town District Waterworks Co*[261] in 1892, where a further criterion, viz. the existence of a known and defined channel, was laid down to ascertain whether streams were public, no further development in the water law occurred since the 1882 act. This meant that a public stream of water was then a stream of water flowing in a known and defined channel, of which the source was perennial, which was excluded from exclusive use by a single owner on the grounds of its size and the common opinion, and which was capable of common use. A private stream was a mere trickle which was of little common value. Perenniality was no criterion to determine whether a stream was public or not, since streams which ceased to flow during the dry season, could also be public if they complied with the abovementioned conditions. The act confirmed this difference between *perennial* and *public* streams by expressly referring to perennial streams, and not to public streams. It is however peculiar that, where the courts recognised the inclusion of flood rivers (which were not perennial) in the definition of public rivers, it did not provide for the declaration of irrigation districts to cover these rivers too. It is submitted that the reference in the act to perennial streams, was ill-considered and that the intention was not to negate the development which the definition of perennial streams had undergone.

Statutory control over perennial public streams can however be argued to be an indication that the distinction of the court between public and private streams was of

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258 Section 1.

259 Section 11.

260 This was probably done to comply with the recommendation of Ham Hall (62).

261 1892 9 SC 68.

mere administrative interest, and did not exist as far as the law of things was concerned. This was a view similar to that of Roman and Roman-Dutch law.[262] Another similarity with Roman law, was the heavy emphasis on reasonableness of common use. Water rights were, as far as possible, exempted from state control and left to unregulated common use. The institution of the water court to lay down criteria for determining reasonable use of perennial streams, emphasised this attitude.

The Irrigation Act of 1906[263] was also aimed at the consolidation of the rules regulating the utilization of streams. The distinction between public and private streams, which was developed and refined by the courts over so many years, was once again recognised by the act. A distinction was however drawn between perennial and intermittent streams. A stream was perennial if it flowed in ordinary seasons for the greater part of the year in a known and defined channel, and if the water thereof was capable of being applied to the common use of the riparian proprietors.[264] This definition was similar to that of public streams as defined by the courts and previous legislation. This step was a subtle attempt to streamline the predecessors' outdated terminology of perennial streams with the courts' distinction between public and private water : it used the terminology of the old act, but the definition of a public stream as defined by the courts. The motive for the distinction was however not clear, since both forms of streams were subject to the provisions of the act : intermittent streams were not available for exclusive rights of use of riparian owners, neither were they subject to their rights of ownership. Furthermore, to complicate matters even more, two more forms of water were distinguished in the act, which forms were closer related to the erstwhile private water as far as water rights were concerned : the first was rain water and surface drainage, which formed the sole and

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[262] This view can also be attributed to the report of Ham Hall, who recommended that all water ought to belong to the people, but subject to government administration, a view closely related to historical views (62, 65, 66, 68).

[263] Act 32 of 1906.

[264] Section 3(c).

undisputed property of the owner on whose land it occurred;[265] the second was water rising on an owner's land, in respect of which he was entitled to exclusive and unlimited rights of use and enjoyment, although he was not the owner thereof.[266] It therefore seems as if the main distinction between forms of water sources concerned the classification thereof in the law of things : while rain water was *res privatae*, other forms of water did not belong to anybody in particular, but rights of use were allocated by the provisions of the act. This was probably *res publicae*, in that it belonged to no-one specifically, but could be used by members of the public, which rights of use were restricted by statutory provisions. As far as this class of water was concerned, a distinction was drawn between spring water and other streams, which distinction was based on the identity of the users : while spring water was available for exclusive use by single riparian owners, other streams were available for reasonable use by all riparian owners. The distinction between perennial and intermittent streams fit in here as a further ramification of streams (other than springs), which distinction was based on the purposes of use : while perennial streams were available for irrigation, domestic and drinking purposes,[267] intermittent streams could be utilized for irrigation, agriculture, drinking, domestic and manufacturing purposes, and could even be impounded.[268] Schematically, the threefold distinction of the act can be summarised as follows :

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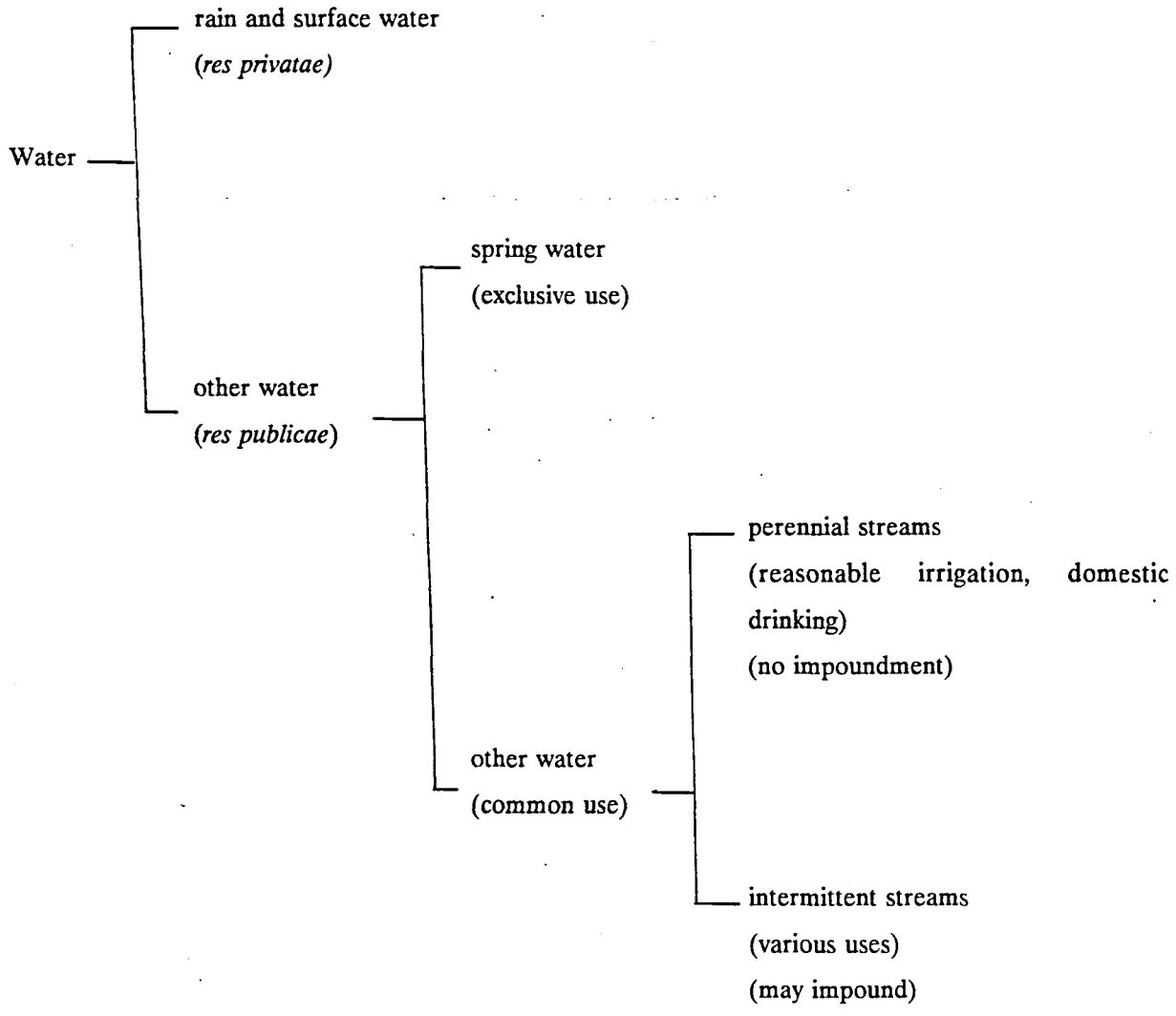
[265] Section 5.

[266] Section 4.

[267] Section 6.

[268] Section 7. It is submitted that the underlying motivation for the distinction was to bring clarity to the uncertain position concerning flood rivers (or the so-called "dry rivers"). Vide the discussion of surplus water Chapter IV.II infra.



For the first time since the question of proprietary rights in respect of private water was sorted out by the court in *Vermaak v Palmer,*[269] did the question as to the classification of water in the law of things reappear. The allocation of rain and surface water to ownership of certain owners, negated the mere administrative distinction between forms of water sources, as was the case in Roman law as well as in the common law. This meant that not all forms of water were common anymore - surface drainage and rain

[269] 1876 6 Buch 25.

water was private property. The reason for this distinction can probably be traced to the decision in *Retief v Louw*,[270] where the distinction between forms of water sources was rooted in the law of things.[271]

The definition of perennial streams was supplied with a proviso in the 1906 act, the origin of which cannot be traced from the authorities.[272] The proviso provided that when a stream complied with the conditions of a perennial stream for a certain distance only, it was a perennial stream for that distance only. This meant that the same stream of water could be partially perennial and partially intermittent. This furthermore meant that it could be diverted and impounded for specified purposes for certain distances, but for others not.

3.3.1.2. The Transvaal

In the Transvaal, only two acts were promulgated to codify the water law. Codification in the Transvaal started only two decades after that in the Cape, probably due to the lesser degree of population density and the resulting lack of competitive water utilization. Furthermore, the Transvaal water legislation was *ab initio* aimed at codification of the water law, whereas the Cape legislation initially experimented with *ad hoc* legislation.[273]

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[270] 1874 4 Buch 165.

[271] Vide 3.2.1.1. at 188 supra. This view negated the recommendations of Ham Hall, viz. that all water should belong to the people (vide Chapter III.IV infra).

[272] According to De Wet ("Water" 34) the proviso was probably derived from the decisions in *Kock v Theron* 1906 23 SC 120 and *Van Heerden v Weise* 1880 1 BAC 5, where the same river was in the first case declared to be perennial, and in the second to be intermittent. Traces of this principle were also to be found in Anglo-American law, where rivers were private above the cotidal line, but public below it. Vide 223, 223 supra.

[273] Hall 64 also mentions Act 17 of 1887, an act promulgated to regulate water rights in Ventersdorp and Klerksdorp. The author alleges that the provisions of this act proved that the state was the owner of water. It is however submitted that it rather proves the opposite, viz. that water was *communia*. When competitive use led to disputes, an agreement was made, which was confirmed by legislation in order to execute it.

The criteria used by the courts of the late nineteenth century to ascertain whether a stream was public or private, were also used by the legislature to formulate a formula for the distinction. In the Transvaal act of 1894,[274] a "public stream" was expressly defined as against a "private stream", this being the first time that legislative force was given to the distinction which had been drawn by the courts. A public stream was a stream of water flowing in a defined channel, irrespective of whether the bed was dry during any period. A private stream was a spring or course (*loop*) which was not perennial, and could not be divided, and did not flow in a defined channel.

Without prematurely discussing water *rights*, it is necessary to mention that the act[275] provided that owners on whose land private water occurred, could use it at will. The possible technical ambiguities from the distinction between these two classes of water are conspicuous, and it only makes sense if it is interpreted in the light of the nineteenth century decisions. According to the courts, all running water was *communis*, but the stream was excluded from common use if it was of negligible common value due to its weak flow. To ascertain which streams were of negligible common use and which were not, some criteria were laid down by the courts, including the existence of a known and defined channel, the perenniality of the source, the confluence with another stream and the common use to which it was subject. These factors usually determined the degree of competitive use, and therefore the necessity for government control. This same principle was contained in the 1894 act : where a stream of water was of such a nature that it would probably become subject to competitive common use at some stage, it couldn't be utilized by a single owner exclusively, but had to be divided and then subjected to government control in order to ensure peaceful common use. Streams of which the sources were not perennial, and which did not run in defined channels, were hardly more than trickles of little common value.

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[274] Act 11 of 1894 *"tot regeling van het gebruik van water uit publieke stroomen in de ZAR"*.

[275] Section 2. Note however that the marginal note said that such water "belonged" to such owners.

As far as the classification of water in the law of things was concerned, the act did not materially deviate from the common law principles either : the allocation of private water to the wilful use by private owners, did not necessarily imply that such users became owners of the water, and that the water was *res privatae* instead of the common law classification as *res communes*, because rights of use was not the only characteristic of ownership. Similarly, the restriction placed on riparian owners' common rights of use of public water[276] did not mean that such water belonged to the government in ownership. It is submitted that the distinction between public and private water was of mere administrative value, and did not deviate from the classification thereof as *communis*.

The Irrigation Act of 1908,[277] which was aimed specifically at the regulation of rights in respect of *public streams*, defined the term "public stream", but not "private stream". The definition included some of the common law criteria, viz. capability of the stream for common use, and flow in a known and defined channel for the greater part of the year.

Section 44 regulated the use of water which was not public. Water rising on the land of an owner was available for his sole and exclusive use, as long as it had not reached a public stream or formed the source thereof.[278] The second qualification restricted the waters in respect of which exclusive rights could be vested, to weak trickles, which never became capable of common use, or of which the channel did not become known and defined at any stage.

Water falling on or running down onto an owner's land was his sole and undisputable property as long as it remained on his land and did not join a public stream.[279] This

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[276] Section 2.

[277] Act 27 of 1908.

[278] Section 44(1).

[279] Section 44(2).

water, unlike that of section 44(1), was the *property* of the riparian owner. However, as soon as it converged with a public stream, ownership which vested in the riparian owner, lapsed. The distinction between forms of water sources as far as the classification of things is concerned, was similar to the Cape counterpart of the act,[280] but different from its Transvaal predecessor. It is significant that in both the Cape act of 1906 and the Transvaal act of 1908, those water sources which were classified as *res privatae,*[281] in practice included weak trickles of water only. This viewpoint, even though it was called by inconsistent names and classifications, was in accordance with the common law viewpoint, viz. that the weaker the stream, the less probable it was that it would be subjected to competitive use, and the less the necessity for government control over common utilization.

Like the Cape act, the Transvaal act contained a proviso in the definition of "public water", providing that where a stream complied with the conditions of a public stream only for a part thereof, only that part was deemed to be a public stream.

3.3.1.3. Natal

In Natal, the water law was mainly regulated by two acts, which appeared on the statute-book in 1887 and 1891 respectively.

The Irrigation Act of 1887[282] provided that the governor could declare certain streams to be available for irrigation. He was also empowered to declare irrigation districts and rights of aqueduct. It seems as if streams were not otherwise (ie. unless when allocated by the governor) available for public use for irrigation, which was a position far removed from the common law.

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[280] Act 32 of 1906.

[281] This included rain and surface drainage.

[282] Act 26 of 1887.

The Irrigation Act of 1891[283] enabled any owner of land within the Colony, when he wished to improve his land by way of irrigation works or impoundment, to apply for a loan for the construction thereof. This act did not only refer to private streams or intermittent streams, but to all streams. This means that the principle of riparian ownership did not apply in Natal. But it also means that all water was *communis* and available to all.

3.3.1.4. The Union of South Africa

The water law of the Union was codified in 1912 in the Irrigation and Conservation of Waters Act[284] which, unlike the impression created by the short title, was placed on the statute-book to codify the rules concerning the use of water for, besides irrigation, also domestic and industrial purposes. Because the long title expressly stated that the act was concerned with the regulation of the use of *public water* only,[285] this was also the only form of water which was defined. Only in section 8 was the term "private water" mentioned, but without it being defined.

A public stream was defined as a natural stream of water which, when it flowed, flowed in a known and defined channel, and of which the water was capable of being used for common irrigation.[286]

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283 Act 26 of 1891.

284 Act 8 of 1912.

285 This restriction can be argued to be the first sign of the mere administrative nature of the distinction between public and private water, in accordance with the common law - only those streams which required state control to regulate competitive use, were controlled by the act. Other streams, without being classified as *res privatae*, were still available for common use. Cf the discussion of s 8 in 3.3.1.4.3. at 254 infra, as well as the argument that "surplus water" replaced the erstwhile "intermittent streams", 257 infra. Vide in general Hall *Origin* 33.

286 Section 2.

3.3.1.4.1. Perenniality

A distinction between perennial and intermittent streams no longer existed. In this sense, it was a final diversion from the Roman law distinction, where rivers were divided in *flumina perennia* and *flumina torrentia*. But if the distinction between public and private water is viewed from the viewpoint of the purpose thereof, it is not far removed from Roman law : the distinction was drawn to comply with a practical need, viz. government control to ensure peaceful common use. In Rome, perennial rivers, due to the importance of navigation and fishing, were the only rivers subjected to competitive use to such an extent that state control was necessary. Therefore, although all forms of running water (*aqua profluens*) were *communis*, interdicts were issued mainly to control the use of large, perennial rivers. In South Africa, on the other hand, irrigation was of ever-increasing importance. Every river of which the water was in some way, even by way of impoundment, capable of being used for irrigation, was subjected to severe competitive use, and in due course required state regulation to ensure peaceful common use. This was probably why perenniality was no longer a suitable criterion to determine the applicability of legislative measures. What is however important, is that the principle was the same, ie. that the measure of submissiveness of a stream to public competitive use, was the main criterion for a distinction between public and private water, and that the distinction was not based on the law of things.

3.3.1.4.2. The proviso

The peculiar proviso of the previous colonial acts was taken over in the national water act, which meant that streams could be public for certain distances only.[287] This meant further that the public parts of a stream were subject to rights of use as provided in section 11, while the private parts were subject to rights of use as stated in sections 8 or

[287] Section 2 "public stream".

9.[288] Where a stream therefore suddenly submerged to such an extent that the remaining surface water was no longer capable of being used for common irrigation, the owner of the land where this occurred was entitled to use the remaining water exclusively.[289] Moreover, where the water of a stream at a particular place spread out to form a wetland, and lower down converged again, the wetland-part did not contain public water, and the riparian owner could use it exclusively.[290] Furthermore, if legislation prohibited irrigation in a certain area, eg. a national park, the stream serving that area was not a public stream for that part.[291]

3.3.1.4.3. Private water and streams

Section 8 of the act contained brief provisions concerning water which did not qualify as public water. The heading of this chapter read "Use of public and private water", and the marginal note of section 8 read "Private streams and water". It is submitted that an intention appears from these headings that all water excluded from the definition of "public water" in section 2 was "private streams" or "private water". The wording of section 8 itself, however, contained neither the term "private stream", nor "private water". There were nevertheless signs of two forms of non-public water, viz. in sections 8(1) and

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[288] This also meant that a court could allocate the water of a part of a stream only (*Ex Parte Breed* 1929 Watermeyer Rep 3).

[289] Section 8(2). This was only the case if the submerged water did not comply with the criteria of a public stream anymore. *Potgieter v Bauscher* 1929 Hall Rep 234; *Ex parte Taylor* 1932 Watermeyer Rep 97; *Louw v Dorman* 1924 Hall Rep 96; *Ex parte Transvaal United Trust and Finance Co Ltd* 1931 Watermeyer Rep 36; *Naudé & Schlebusch v Cloete* 1951 Vos Rep 83.

[290] *Great Fish River Irrigation Board v Southey (Rooispruit)* 1928 Hall Rep 237.

[291] It however seems as if the question whether water is capable of being used for common irrigation was rather determined according to economical principles, ie. the mere existence of legislation prohibiting irrigation in a certain area was not sufficient to deprive a stream of its capability of being used for common irrigation : *Bon Accord Irrigation Board v Pretoria Municipality (2)* 1921 Hall Rep 16; *Allen & Louw v Tamsen & Van Biljon* 1932 Watermeyer Rep 85. In *Sundays River Irrigation Board v Van Ryneveld's Pass Irrigation Board* 1921 Hall Rep 65 it was decided that where a stream was unfit for irrigation as a result of the quality of the water, it remained a public stream (although it lost its characteristic as "normal flow").

(2).[292] Section 8(1) provided that everyone was entitled to exclusive and unlimited use and enjoyment of all water rising on his land, provided that this right will not interfere with rights of use vested in lower owners in respect of water which had been running down for the greater part of the year for their benefit for at least thirty years, or with other existing rights. As far as the law of things is concerned, section 8(1) did not refer to a class of things other than that in which public water sorted. A spring, where a stream of water rises from the ground, could not comply with the conditions of public streams, since no "known and defined channel", or "common use" was as yet of relevance. Only when such a stream converged with a public stream, or started displaying the characteristics of a public stream as defined, could it be defined as public water.[293] Until then it was a source, and subject to exclusive use. If the water thereof was sufficient for common use as far as the volume was concerned, but not for common use *for purposes of irrigation*, lower owners could demand continued rights of long user. The allocation of such sources to rights of exclusive use was not done because of their nature as *res privatae*, but merely because the stream of water therein was too weak to justify statutory common allocation and control.[294]

Section 8(2) provided that water falling on or naturally running down to the land of an owner, was his sole and unlimited property as long as it remained on his land and did not converge with a public stream. This section distinguished this water from other forms of water sources as far as its classification in the law of things was concerned, viz.

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[292] Cf De Villiers "The eighth section" 247 et seq who, in the first of a series of articles on the act, came to the conclusion that s 8 did not refer to public water.

[293] Cf *Bon Accord Irrigation Board v Pretoria Municipality (1)* 1921 Hall Rep 6, where it was decided that where a spring was the source of a public stream, it formed part thereof, and was not available for rights in terms of section 8(1). Et vide *Transvaal Consolidated Land & Exploration Co Ltd v Escom & others* 1947 Vos Rep 33; *Struben v Certain Riparian owners* 1948 Vos Rep 42. In these cases, to protect springs from exclusive rights of use, the courts ignored the amendments introduced into this provision, since it has substituted s 44(1) of the 1908 act. The wording of s 8(1) is however clear, and expressly repealed that of the 1908 act.

[294] Vide 3.3.2.3.1. infra for an argument on whether section 8(1) applied when a spring was the source of a public stream.

as *res privatae*, in agreement with the 1906 and 1908 acts. These sources of water consisted of rain water and surface drainage, which have not yet reached a defined channel, and which were of negligible common value. But what is important, is that the land owner on whose land such water occurred, was the *owner* of the water, and not only the holder of an exclusive right of use, as in the case of spring water. This distinction between *res privatae* and *res communes* was therefore originally drawn in the 1906 act, probably based on the contentious decision in *Retief v Louw,*[295] followed in the 1908 act and finally vested in the water law by the 1912 act. The motivation therefor is uncertain, since the nature of the rights of use between section 8(1) and section 8(2) water were hardly different. The distinction was moreover contradictory to the common law, as well as to the natural law view that *all* running water was *communis*, while the practical situation did not necessitate such a deviation.

3.3.1.4.4. Public water and streams

Section 9 imported the first distinction between public *water* and public *streams* into the South African water law. This section provided that all water which converged with a public stream, was public water.[296] [297] It also provided that ownership could not be vested in respect of such water, but that the use was regulated by the act. The rest of Chapter II dealt with public streams, and not with public water. This only makes sense if public water and public streams were synonymous. If one however looks at the quality of water, a confusing distinction existed : if public water was all water converging with a public stream, and heavily polluted water converged with a public stream, then the

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[295] 1874 4 Buch 165.

[296] The provision probably originated from the decision in *Southey v Southey* 1905 22 SC 650. Et vide *Breyten Collieries v Dennil* 1912 TPD 1061, where the court was of the opinion that the language in s 9 was ambiguous : "The language of the section is a little involved" (1065).

[297] This does not mean that if a stream, somewhere lower down, converged with a public stream, that the whole stream, back to the source, contained public water. The water would be public from the confluence downwards only. (*Ex parte The Municipality of Somerset West & The Cape Explosive Works Ltd (1)* 1936 Watermeyer Rep 181).

water was public water in accordance with the definition, but it was not a public stream anymore, because it was not a natural stream of water anymore, neither was it capable of being used for common irrigation. If the distinction was rather drawn between a public *channel* and *public water*, it would have made more sense, because then only one of the terms would refer to the water itself. As such, all water flowing in a public channel and which was capable of being used for common irrigation, would have been public water, where a public channel was a known and defined channel.[298] It would have been even better if the distinction had been done away with, because it was confusing and unpractical, as well as historically unsound.

3.3.1.4.5. Normal flow and surplus water

A distinction between normal flow and surplus water, the idea of which was basically derived from the 1908 act, appeared in a sophisticated form in the 1912 act.[299] Normal flow was the actual and visible and natural flow[300] which could be effectively utilized under a system of direct irrigation but without storage.[301] Surplus water was the water in the bed of a public stream which was not normal flow.[302] According to De Villiers,[303] this distinction was necessary to accommodate irrigators who wished to utilize more than

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298 Et vide De Wet "Water" 33-36.

299 Sections 10(1),(2),(3), 14. Hall *Origin* 97. The term "surplus water" had already been used in the 1906 act, yet with a more literal meaning, viz. the unutilized water of a public stream. In the 1908 act, a distinction between normal flow and surplus water was drawn, based on the difference between the summer and winter flow in rivers (s 2).

300 Section 10(2). De Villiers "Normal flow" 124.

301 Section 10(1). Hall is of the opinion that effective irrigation had to be measurable in economic terms, and therefore polluted water would not qualify as normal flow. This viewpoint also appears from the decision in the *Sundays River Irrigation Board v Van Ryneveld's Pass Irrigation Board* 1921 Hall Rep 65.

302 Section 10(3).

303 "Normal flow" 123.

their reasonable shares, by impounding flood water.[304] A prerequisite for water to qualify as normal flow, was that it had to be surface drainage, to distinguish it from flood water.[305] A river which obtained its flow from flood water only, was therefore not subject to common use, but could be utilized or impounded by a single owner without recognition of the requirements of others.[306] The distinction between surface drainage and flood water remitted to the common law provision that water could be public only if the source was perennial,[307] so that the flow ought not to be dependent on rainfall. As long as the source was consistent, it is not relevant whether the stream sometimes ceased to flow as a result of heat or drought. This case was decided in the nineteenth century, while the courts were burdened with the task to adapt the Roman and Roman-Dutch water law systems to the South African practice, where a scarcity of water allowed fewer private streams. Therefore, to escape from the distinction between public and private water on the basis of perenniality, it was decided that a stream could still be public even if it was not perennial, as long as it had a perennial source. This definition excluded only such streams from the definition of public streams which were of little common value due to the weak and unstable flow, or the character thereof as flood rivers. During early legislation, the qualification of a perennial source disappeared as well, and flood rivers were, due to their periodical common value, included in what was called public rivers. This must have been a severe blow to owners who, in terms of common law, utilized the water of flood rivers exclusively, due to their nature as private rivers. There was therefore a need to compensate these owners for the loss of water for impoundment, since flood water was anyway hardly of any value if not impounded. Therefore it was unpractical to deprive those owners who were willing and able to utilize

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[304] Surplus water could be utilized by an upper owner in volumes as much as he needed for effective primary and secondary purposes, even without considering the requirements of lower owners (s 14).

[305] Surface drainage however had not always been part of the flow, but part of the mean annual run-off only (*Ex parte Molteno Municipality* 1917 Krummeck Rep 158). Surplus water was determined with reference to the mean flow over years, and not to a single flood.

[306] Section 14. It was decided in the *Ex parte Molteno Municipality* 1917 Krummeck Rep 158 that certain floods had to serve to flush *seekoegate*.

[307] *Hough v Van der Merwe* 1874 4 Buch 148.

it, and therefore saving it from running down uselessly,[308] from their rights to do so.[309] This was probably the reason for the distinction between normal flow and surplus water.

The question is whether surplus water was still *communis*, and whether it was distinguished from normal flow in the law of things. The act declared it to be public water and therefore the property of no-one. It was therefore still *communis*, but excluded from common rights of use and allocated to exclusive use as a result of its lack of common value.

In the end, the complex water classification system of the 1912 act was not so far removed from the Roman, Roman-Dutch and early South African systems. Running water was divided into *communis* and *res privatae*. Under *communis* sorted public streams and section 8(1)-private streams. Under *res privatae* sorted section 8(2)-private streams. Public streams were divided into normal flow and surplus water, of which normal flow was subject to common rights of use, surplus water to serviceable exclusive rights of use, and private streams to unlimited exclusive rights of use. Schematically, the water law allocation system of the 1912 act can be illustrated as follows :

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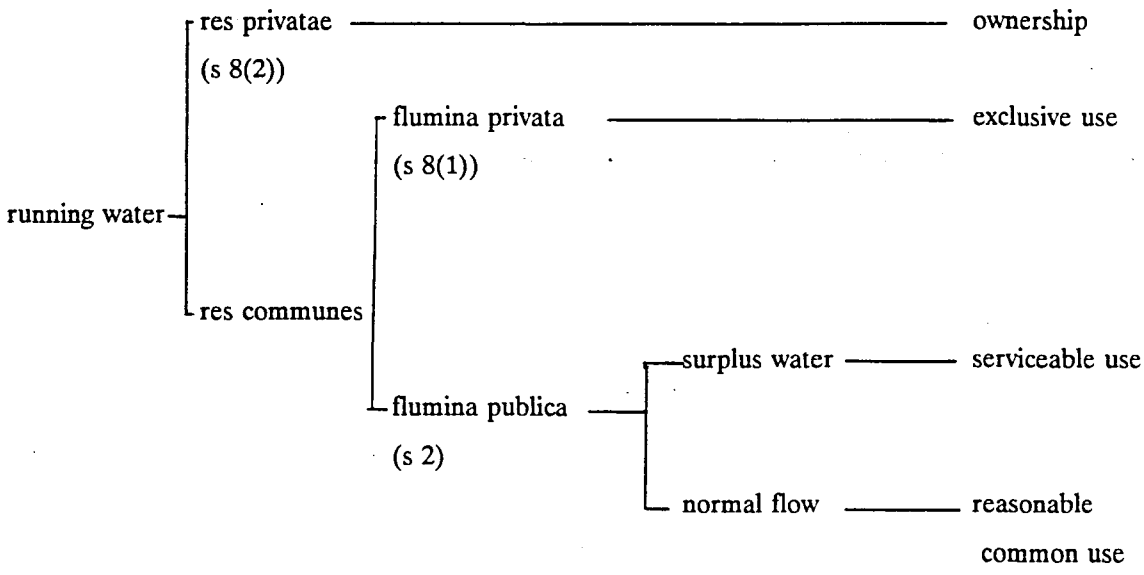
308 This term is used with due respect for the conservation-orientated view that water which is allowed to run down freely and naturally can never be seen as running down uselessly. Vide Uys *Koedoe* 101 et seq. In this sense it is however meant to refer to human use only.

309 Vide Lewis 322-323, where this viewpoint was shared by Van Zyl and Louwrens, in a report of the Irrigation Commission in 1923. Et vide *Great Fish River Irrigation Board v Southey (Grass Ridge)* 1927 Hall Rep 177 184, 186.



The distinction between perennial and non-perennial streams has disappeared in practice, and was replaced by a distinction between common usable and non-usable streams. State control was effective over all *communis*, and was mainly exercised through the provisions of sections 2, 11, 8(1) and 14. The only real breakaway from the old authorities was the transfer of rain water and surface drainage to *res privatae*, the final succumbing to a history of confusion about the true interpretation of *Digesta* 43, *Codex* 34 3 and Voet 8 3 6.

3.3.2. Water rights

3.3.2.1. The Cape

As was said above, the 1906 act was the first attempt to codify the water law in South Africa. Earlier legislation was aimed at specific water problems, and did not amend the common law relating to water rights.

Before the 1906 act came into force, water rights were as set out in *Retief v Louw*[310] and *Hough v Van der Merwe.*[311] According to both decisions, water was available for reasonable common use in terms of natural law or the natural state of affairs or the public interest. Bell J was the first to formulate a preferential order in terms of which water rights were allocated : the use of water for purposes of animal life was primary use, while secondary use was the use of water for purposes of vegetation, and tertiary use was for mechanical purposes. In *Hough v Van der Merwe,*[312] De Villiers CJ distinguished between ordinary and extraordinary purposes, where ordinary use was the use of water for purposes of necessity, and extraordinary use for purposes of convenience. Ordinary use included domestic use and use for the maintenance of animal life.

In the Irrigation Act of 1906, this preferential order was retained partially : section 6 allocated reasonable rights of use to riparian owners for irrigation. These rights were however subjected to reasonable rights of use for domestic and drinking purposes, as well as to existing rights and new statutory rights. From this, it is clear that use for domestic and drinking purposes enjoyed preference to irrigation, but subject to owners' exclusive rights of use in respect of the sources thereof.[313] No mention was made of mechanical purposes. Moreover, due to the use of the term "reasonable", it seems as if an upper owner was not allowed to exhaust a stream for domestic purposes - he was only allowed to use so much of the water which left enough for other owners. In *Retief v Louw,*[314] it

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310 1874 4 Buch 165.

311 1874 4 Buch 148.

312 1874 4 Buch 148.

313 Section 4 : "Every person is entitled to the exclusive and unlimited use and enjoyment of all water rising on his own land : provided that nothing in this section contained shall affect the right of a riparian owner to a reasonable share of water which, rising on the land of an upper proprietor, flows down for the greater part of the year beyond such land in a known and defined channel and has for a period of at least thirty years been used by such riparian owner or shall affect any other existing rights".

314 1874 4 Buch 165.

was stated clearly that where an upper owner needed all the available water, it was not necessary for him to consider the requirements of lower owners.[315]

It is submitted that section 4 did not necessarily refer to non-perennial streams only, as was argued by both Hall and De Villiers. The reason is that the proviso already referred to a stream complying with the criteria of a public stream.[316] Where a spring occurred on an owner's land, and the water originating from it immediately started to run in a known and defined channel, and the flow was strong enough to be used for common irrigation,[317] then the owner could use it exclusively, even if he thereby cut off the flow to lower owners.[318] The reasonable rights of use of section 6 did not derogate from this expressive exclusive right of use. The only other provision in which rights in respect of perennial streams were allocated, was section 10, which however applied to surplus water only, and allocated rights in respect of such water to non-riparian owners.

As far as non-perennial streams were concerned, section 4 was once again applicable. Furthermore, sections 7 and 9 drew a distinction between the water of such streams used for irrigation and for other purposes. Water for irrigation could be diverted but not impounded, while water for domestic, agricultural, industrial and drinking purposes could be impounded. Non-riparian owners were also allowed to share in the water of non-public streams, but with the consent of the water court only, and if riparian owners' requirements had been complied with.

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315 181. Et vide *Hough v Van der Merwe* 1874 4 Buch 148 154.

316 In the 1912 act, on the other hand, where not only capability of common use, but capability of common use *for irrigation*, was required before a stream was a public stream, the stream referred to in the proviso was not a public stream.

317 It thus qualified as a public stream *ab initio*.

318 This was subject to existing rights of long user.

From the above, it is clear that the legislature, in the 1906 act, followed the principle of water rights as set out in *Retief v Louw*,[319] and that non-riparian owners had no water rights unless it had been granted by the court, and then from superfluous water only. Furthermore, no distinction was drawn between perennial and intermittent streams as far as state control was concerned. The administrative distinction between public and private water in Roman law was not applied by the 1906 act to distinguish between perennial and non-perennial streams. The distinction recognised by the act concerned the classification of things : while rain water and surface drainage were *res privatae*, other forms of running water were *res communes*.

The use of water for irrigation was degraded on the priority list of preferential water rights : with regard to perennial streams, irrigation made way for reasonable domestic and drinking purposes, and with regard to intermittent streams for domestic, agricultural, industrial and drinking purposes.

Finally, there is no reason to interpret any of the provisions of the act[320] as restrictive in respect of that of section 4. It is submitted that the legislature deemed it affordable to allocate springs to rights of exclusive use. This did not imply that, after 1906, every owner of land in the Cape could suddenly cut off the water of all the springs on his land, since rights of long user remained recognised water rights. The majority of the important and usable streams in the Cape probably had vested communities of users around it by 1906. Moreover, if long user could not be proved, there was still the opportunity to obtain permits from the water court. The protection which the act provided to retain existing rights, afforded further protection against the arbitrary diversion of water. Few public streams were anyway dependent for their flow on springs alone, and it is submitted that the diversion of spring water would, at that stage, hardly have retarded the water law in South Africa.

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[319] 1874 4 Buch 165.

[320] Sections 5, 6, 7, 9 and 10.

3.3.2.2. The Transvaal

The 1894 act defined the terms "public stream" and "private water", which definitions were however not mutually exclusive. It seems, however, that private water referred to very weak trickles of water only. According to the act,[321] an owner on whose land private water rose, could use it at will, while owners of land adjoining public streams had rights of reasonable use for domestic and agricultural purposes. They could also impound it, but not to the detriment of other owners.[322] This water could furthermore be diverted, but could not be used beyond the boundaries of the land, and, where it was possible, unused water had to be led back to the stream. Unlike the 1906 act, this act contained no reference to the preferential order of water rights, a system which was at that stage already well-settled in the Cape. It seems as if reasonableness was the basic principle underlying both the classification of water and the allocation of water rights.

The following water act in the Transvaal[323] made it clear that, in the allocation of exclusive rights of use, no reference was made to springs as sources of public streams.[324] If a spring yielded a stream of water which had never flown for the greater part of the year, or which had, but could not provide sufficient water for common use, the owner of the land on which the spring occurred had an exclusive right of use, provided that this streamlet never joined a public stream and therefore formed a part of the source of a public stream. It is clear that this section referred to small trickles of water only.

Section 44(2) also referred to non-public water only. As soon as surface drainage started to gather in a stream, and the volume was sufficient for common use, and it flowed for

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321 Section 2.

322 Sections 4, 5.

323 Act 27 of 1908.

324 Section 44(1).

the greater part of the year, then the owner of the land lost ownership in respect of the water. Once again it is clear that this section referred to very weak streams only.

As far as public streams were concerned, a riparian owner had a reasonable right of use of the water for maintaining animal life and for domestic purposes, as well as for the irrigation of crops.[325] In exercising this right he was, in the first place, obliged to comply with all other provisions of the act. Section 46(2) was one of the provisions which had to be respected as such. This section allocated water rights for the maintenance of animal life, which rights were not allocated to riparian owners only. Section 46(5) contained another provision to which the riparian owner was subject in exercising his reasonable right of use. This subsection provided that a riparian owner was not allowed to utilize the water of a public stream for irrigation if he thereby deprived lower owners of their existing rights of use for primary purposes.

In exercising his right in terms of section 46, the riparian owner was, in the second place, not allowed to interfere with rights lawfully obtained. These probably included contractual rights, rights obtained from the water court or a river board,[326] testamentary rights and rights obtained by prescription.[327] In the third place, the riparian owner was not allowed to interfere with similar rights of other riparian owners. This restriction was closely related to the term "reasonableness", as well as to the view that public water was *communis*, which could be utilized by all.[328] Finally, the water, in so far as it was not used, had to be led back to the stream.

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325 Section 46.

326 Section 46(8).

327 Vide De Villiers "Primary use" 11.

328 This proviso differed from that of section 46(5), in that owners who utilized water for primary purposes when the act came into force, were protected, even if their rights were relatively extensive in comparison to "reasonable" rights in terms of s 46(6). In terms of s 46(5), a riparian owner was not allowed to irrigate if he thereby deprived lower owners of water for domestic purposes. In terms of s 46(6), he was not even allowed to use water for domestic purposes if he thereby harmed the reasonable share of a lower owner.

As far as surplus water was concerned, a river board was empowered to allocate it to riparian owners for diversion.[329] A river board could also grant permission for water to be impounded.[330] Such water fell within the ownership of such owners, even if it intermixed with the water of a public stream.[331]

The principle of riparian ownership was firmly vested in the Transvaal water law, and only sections 46(2) and 47(1) made provision for the use of water by non-riparian owners. Not even the water court had the discretion to deviate from this principle.

3.3.2.3. The Union of South Africa

Water rights in terms of the Irrigation and Conservation of Waters Act of 1912 were mainly set out in Chapter II of the act. These provisions were mainly based on that of the Transvaal act of 1908, although some provisions showed clear signs of the Cape act of 1906.

3.3.2.3.1. Exclusive use

As far as water rights in respect of streams which were not public were concerned, the provisions of the 1908 act were largely followed.[332] There was however some difference : where section 44(1) of the 1908 act allocated to an owner exclusive rights of use of springs *unless it reached a public stream or formed the source or a part of the source thereof*, section 8(1) of the 1912 act provided that such an exclusive right of use existed *unless the water flowed down for at least thirty years in a known and defined channel and was used by a lower owner, and unless it interfered with existing rights.* This proviso

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329 Section 47(1).

330 Section 48(1).

331 Section 48(3).

332 Section 8(1).

increased the number of springs in respect of which owners had exclusive rights, since the 1908 act made it impossible for such rights to be vested in respect of any spring of which the water at some stage joined a public stream, because then the spring was a part of the source of the public stream. In terms of the 1912 act, an exclusive right of use could well be claimed in respect of such a spring, as long as the water was not utilized by a lower owner.

Section 8(1) was in fact closer related to section 4 of the Cape act, although the application thereof was not exactly the same. This was a result of the definition of the term "public stream" : in terms of the 1906 act, a perennial stream was a natural stream of water which flowed for the greater part of the year in a known and defined channel, and which was capable of common use. In terms of the 1912 act,[333] a public stream was a natural stream of water which flowed (when it flowed) in a known and defined channel, provided that the water thereof was capable of being used for common *irrigation*. In the first place, the proviso of section 4 of the 1906 act referred to a perennial stream, since the stream which was described, complied with all the conditions set for public streams. The stream described in the proviso to section 8(1) of the 1912 act was however not necessarily a public stream as defined, since the stream in the proviso had to be capable of common use, while a public stream as defined had to be capable of common use *for irrigation*. If the water of a spring therefore formed a streamlet which was capable of being used for some common purposes but not for common *irrigation*, then the upper owner had no right of exclusive use, due to the effect of the proviso, but the stream was still not a public stream. It can consequently be argued that the 1912 act excluded a larger number of springs from the right of exclusive use than the 1906 act had done.

In the second place, the proviso-stream of the 1912 act had to flow for the greater part of the year, before excluding the right of exclusive use. The definition of a public strēam, however, was a stream which, when it flowed, and whether or not it was dry

[333] Section 2.

during any period, flowed in a known and defined channel. The stream of the proviso was therefore a more dependable stream than a public stream. In the 1906 act, on the other hand, the stream of the proviso differed in no way from a public stream. For this reason, the proviso of the 1912 act excluded a smaller number of streams from the exclusive right of use, viz. not all public streams, but public streams which flowed for the greater part of the year only.

The direct adoption of the proviso of the 1906 act into the 1912 act, did therefore not necessarily carry the same interpretation than in the 1906 act, because the definition of a public stream was not taken over as well. Nevertheless, in both these acts, other than in the 1908 act, the right of exclusive use was applicable to all springs, irrespective of whether or not they formed part of the sources of public streams.

This interpretation of the application of the proviso is contrary to those of both Hall and De Villiers, who are both of the opinion that section 8(1) of the 1912 act referred to the *sources* of *private streams* only. De Villiers motivates his view with mere logic : he is of the opinion that an interpretation to the effect that section 8(1) also referred to public streams, defeated the sense of the whole act as well as of the rights of riparian owners.[334] He found support in the decision in *Van Heerden v Weise*,[335] as well as in the marginal notes and headings of Chapter II of the act. In respect of the decision in *Van Heerden v Weise*,[336] he is of the opinion that the decision was still of effect, because "[v]iolent

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[334] "The eighth section" 247. The author is of the opinion that each riparian owner could apportion his spring, which could, in effect, cause all public streams to be cut off. About this possibility, he came to the conclusion : "The results are startling, nay catastrophic" (251).

[335] 1880 1 BAC 5 9 : "When once the public nature of the stream is established, the rights of each riparian proprietor, whether at its source or along its course, are limited by the common rights of the remaining proprietors" and " [t]he general rule that a person may deal as he chooses with water rising on his own land is subject to the limitation that the water thus rising is not the source or the main source of a public stream" (9-10).

[336] 1880 1 BAC 5.

subversions of the common law are not brought about save by clear words".[337] It is submitted that the words of the 1912 act were clear enough to override the view of the court on the sources of public streams. Section 8(1) expressly provided that the exclusive right of use was restricted by long user only, while in *Van Heerden v Weise*[338] it was decided that it was also restricted if the spring was the source of a public stream. The clear wording of the act made an appeal on either logic or the common law or the intention of the legislature unnecessary.

In the first place, section 8(1) referred to "all water rising on his own land". The only exceptions to this rule were long user and existing rights. Section 138 however provided that no common law rights in respect of public streams remained if in conflict with Chapter II. "Existing rights" therefore only referred to rights from contract, inheritance, prescription etc., and did not restrict the exclusive right of use in respect of the sources of private streams.

In the second place, the principle of riparian ownership was expressly subjected to all existing rights, *as well as to the provisions of the act*,[339] and therefore also to the right of exclusive use of section 8(1).

In the third place, the proviso contained in the definition of the term "public stream" provided that if a stream complied with the conditions of a public stream for a part thereof only, it was a public stream for that part only. Therefore, if the water of a spring did not comply with the conditions of a public stream *ab initio*, it was a public stream only from the point where it started to comply with the conditions, and the spring itself did not form part of the public stream. For such a spring, the provisions of section 12

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337 254.

338 1880 1 BAC 5.

339 However, not to rights derived from contract (*Van Niekerk v Du Toit* 1957 2 SA 226 A).

did not apply, and section 8(1) was the only section regulating water rights in respect of such water.

In the fourth place, section 9 provided that all water joining the water of a public stream, was public water. The term "join" does not necessarily imply that such water was public water for the full extent of its flow, ie. up-stream as well, if only it joined the public stream at a lower point only - it was public water from the point where it joined and downwards, and it stopped being public water from the point where it was diverted from the public stream. It is therefore submitted that section 9 did not have retrospective effect. But even if it had, section 12 was subject to section 8(1).

In conclusion, it is submitted that both Hall, De Villiers and those courts which still followed the source-principle, were wrong in their opinions that section 8(1) did not refer to the sources of public streams as well. In practice therefore, owners could use springs, which fed stronger streams which were capable of being used in common, but of which the lower owners did not make use for the prescriptive period, at will, irrespective of whether or not the springs were the sources of public streams. The legislature was probably of the opinion that the exclusive right of use would not bring about practical harm, and that it could therefore be afforded to award springs to such rights. Few strong and important rivers were so heavily dependent on springs that the liberal use of the water of springs by the owners on whose land it occurred, would cause the whole river to dry up. Unusable surface drainage played an important role in the forming of rivers.[340]

The next question is whether the right of exclusive use also included the right to impound. In terms of the dictionary definition of the term "use", it meant something different than "consume". To "consume" is "to use the whole or the remainder". It can even be interpreted to include waste. To "use", on the other hand, is "to cause to serve

[340] Section 10(2).

for a purpose".[341] In Afrikaans, it is translated as "*voordeel*" or "*nuttigheid*".[342] It therefore seems that the right to *use* water did not literally imply that the user could divert or impound all the water without being able to beneficially utilize it. Only that which he could beneficially use, could be diverted or impounded. If the "exclusive right of *use*" is interpreted in this narrower sense, clarity and logic is at once attached to this otherwise confusing provision in the act.[343]

Section 8(2) was taken over directly from section 44(2) of the 1908 act, and was also similar to section 5 of the 1906 act. The allocation of ownership in respect of rain water, in so far as it had not yet converged with a public stream, had therefore become a well-established principle in the South African law. Without derogating from the criticism against a distinction between drainage and other water in the law of things, the allocation of exclusive rights to such water is justifiable in the light of the negligible common value thereof. Except where such water gathered in pans, it was of insignificant common value,[344] and the legislature probably regarded it affordable to leave it to exclusive use.[345]

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341 *Oxford Dictionary* 1352.

342 *Tweetalige Woordeboek.*

343 Et vide De Villiers "Secondary use" 277.

344 Cf *Breyten Collieries v Dennil* 1912 TPD 1061, where the court deemed such pans not to be *communia*, due to the negligible volume thereof (1066).

345 Why it was necessary to vest private ownership in respect of such water, instead of merely allocating exclusive rights of use as was the case with springs, is not clear, especially because little practical difference existed between the rights of use regarding these two classes of water. The only logical explanation for this distinction between drainage and spring water, lies in the definition of the term "use", as was explained supra (270). Where the owner of s 8(2)-water could deal with it at will, including wasting it or using it up, the exclusive user of s 8(1)-water was restricted to the diversion of so much as he could beneficially use. The reason why rain water was therefore allocated in ownership, lay in the extent of the rights of use. Et vide Hall *Water Rights* 25-26.

3.3.2.3.2. Public water

As far as water rights in respect of public water were concerned, a clear distinction was drawn between normal flow and surplus water. The most important rights regarding normal flow were set out in section 12, namely that each riparian owner was entitled to the reasonable use[346] of the normal flow of a public stream, but with due consideration to existing rights and of all the provisions of the act.[347] "Existing rights" probably referred to rights arising from contract, prescription, inheritance etc. only.[348]

The provisions of the act to which section 12 was probably subject, were sections 8(1), 11(2),(5),(6), 13 and 21, as well as regulations 1 to 10 of the Parliamentary Regulations. Riparian owners were entitled to the secondary use of the normal flow of a public stream, but only if this did not interfere with the primary rights of lower owners.[349] Riparian owners were furthermore entitled to tertiary use, provided that it did not interfere with the secondary rights of lower owners.[350] A riparian owner was therefore not entitled to a reasonable right of use of water for domestic, irrigation and industrial purposes simultaneously : first there existed rights of use for domestic purposes, and when the reasonable needs of all the riparian owners were met, water was available for secondary and then for tertiary uses. In fact, section 11 did not actually allocate water rights, but only lay down a preferential order in which rights could be exercised by those entitled to it.[351] Section 12 was the actual provision in terms of which users were

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346 Vide regulations 2-10.

347 Including the Parliamentary Regulations.

348 De Villiers "Primary use" 11; ss 24, 138; reg 5(a). Cf *Ex parte Kirstein* 1917 Krummeck Rep 172, where the court was of the opinion that it also referred to rights in respect of the sources of public streams, as intended in s 44(1) of the 1908 act, to protect the holders of such rights from the exclusive rights of use.

349 Section 11(5), as confirmed in reg 3(a).

350 Section 11(6).

351 De Villiers "Primary use" 7.

allocated with water rights in respect of the normal flow of public streams. It is submitted that, except for the well-established principle of riparian ownership in this provision, a strong similarity existed with the basic Roman water law principle of reasonable common use by all, with due consideration to the similar rights of others, a principle supported and inspired by the *ius naturale*.[352] The preferential order to which this right was subjected, was a practical measure of control, which did not derogate from the basic principles of justice and equity. Section 12 was also closely related to both section 6 of the 1906 act and section 46(6) of the 1908 act, except that section 12 referred to normal flow only, a term which, in the 1906 and 1908 acts, had not yet had a similar status, but which, in practice, were the erstwhile perennial streams, and therefore nevertheless congruent.

Primary use was the use of water for the maintenance of animal life, *and, in cases of riparian owners*, also for household purposes.[353] This is the only provision in the act which deviated from the principle of riparian ownership. Yet it was nowhere confirmed or recognised as a water law principle. De Villiers[354] regards it as an allocation of water rights to persons other than riparian owners, for use for stock watering. In the following provision, where the allocation of water rights was expressly laid down,[355] there was however no trace of the allocation of water rights for non-riparian owners for purposes of stock watering. The provision did however accommodate section 11(2) in its proviso, which subjected water rights to all the provisions of the act. As such, animal life enjoyed a preferential right to water, in that no riparian owner was allowed to exercise his reasonable right of water use without considering the water requirements of animal life.

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352 This principle also appeared clearly from the regulations. And in *Du Plessis v Philipstown Municipality* 1937 CPD 335, the principle of common use appeared clearly. The problem is that reasonableness and justice ought to be flexible terms which correspond with the public interest, yet restrictions such as riparian ownership and preferential rights turn reasonable use into a strict and artificial formula.

353 Section 11(2).

354 "Primary use" 8 et seq.

355 Section 12.

De Villiers[356] is of the opinion that the right of section 11(2) referred to *common law* public streams, because, in terms of the common law, the broad public had water rights in respect of public streams of which they were now, due to redefinition of the term, bereaved in favour of riparian owners. He argued that the recognition which section 11(2) granted to the common law position, was imported into the act even though it did not fit in with the strict principle of riparian ownership. For this reason, the old definition of public streams also had to survive in spite of the riparian principle. It is submitted that such an interpretation is a forced introduction of a rule which was clearly amended by legislation. Section 11 provided that the water of a *public stream* served for the specified uses. This term was expressly defined, and to argue that it actually intends to refer to an erstwhile definition of a public stream, is untenable.

Section 13 provided that a riparian owner could impound so much of the normal flow of a public stream as he was entitled to in terms of a lawful distribution. A "lawful distribution" probably referred to a right in respect of water which an owner obtained in terms of an agreement, or a share to which he was entitled in terms of a provision of the act. In the *Bon Accord* case,[357] the court specified this provision by declaring that an owner could impound so much as would advance economical agriculture.[358] If an owner had on his land a spring supplying sufficient water for common irrigation, which ran in a known and defined channel, the stream would qualify as a public stream, but the owner had exclusive use, in terms of section 8(1). The question is whether he could impound the water. It was submitted supra that he could not utilize more than he needed for his own beneficial requirements. This quantity ie. his actual need, was his lawful share, which belonged to him in terms of a statutory distribution. He was, in terms of section 13, allowed to impound this share. If he was however a non-riparian owner who bought

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[356] "Primary use" 8 et seq.

[357] *Bon Accord Irrigation Board v Pretoria Municipality* 1921 Hall Rep 6, 16.

[358] This decision is in accordance with an interpretation of the term "use" so as to refer to beneficial utilization only.

a riparian owner's reasonable share for secondary purposes, this was also his lawful share, which he could impound. It seems as if section 13 was closely related to section 12. Because a lawful share could hardly be more than the restricted rights allocated in section 12, it is submitted that the right to impound ought to have been subjected to the same statutory rights which the reasonable shares of section 12 had been subjected to.[359]

The use of the normal flow for industrial purposes, could only happen with the consent of the water court.[360] The particular provision made it clear that the preferential order of water rights[361] did not deviate from this provision. This meant that although section 11(6) provided that a riparian owner could use water for tertiary purposes only after lower owners had fulfilled their secondary needs, he was still not allowed to do it without the permission of the water court. On the other hand, it also meant that the court could allocate water rights for tertiary purposes, even if it was contradictory to the preferential order of section 11. This right of water withdrawal for tertiary purposes was further subject to renumeration, if the order of court interfered with existing rights.

From the above, it therefore seems as if the allocation of reasonable rights of use in respect of the normal flow of a public stream in terms of section 12, was subject to, first, the exclusive right of use of the upper owner on the spring, secondly, a possible court order concerning tertiary rights, thirdly, rights arising from contract, fourthly, secondary rights only after the fulfilment of lower owners' primary rights, and finally, tertiary rights only after lower owners' secondary needs had been fulfilled. Although this severely restricted right seems to be far removed from the Roman law reasonable right of

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359 This distinction which the act drew between use and impoundment, confirms the above argument, viz. that an owner was, in terms of section 8(1), not allowed to divert more than he could beneficially use. Therefore, the right in terms of section 8(1) could be distinguished from that in section 12 merely by the fact that owners using water in terms of section 8(1) could use the water for any purposes, without considering lower owners' primary, secondary or tertiary requirements.

360 Section 21.

361 In terms of s 11.

common use, the reason was the need for increased administrative control to ensure peaceful common use of a scarce resource. This same potential state control existed in Roman water law, but was not exercised to such a severe degree of interference with common use, because of a lesser need therefor.

As far as surplus water was concerned, the provisions of sections 14 and 20 applied. Each riparian owner was, subject to existing rights[362] and the provisions of the act,[363] entitled to the use, diversion, impoundment[364] and conservation of the surplus water of a public stream, for primary and secondary use.[365] He was also entitled to use such water for power generation or tertiary purposes, but subject to the permission of the water court.[366] The diversion of surplus water was mainly subject to the principles of reasonable consideration of the requirements of others,[367] while impoundment was subject to allocation by the water court.[368] These provisions represented state control for the benefit of peaceful common use.

It is submitted that the common rights of use in respect of surplus water were closely related to the common law rights of use in respect of *communis*, even more than the

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362 Parliamentary Regulation 21.

363 Sections 15-18.

364 The impoundment of surplus water was however subject to ministerial permission in areas declared as "protected areas", by the Irrigation Amendment Act 46 of 1934 (s 2, amending s 15 of the 1912 act).

365 Section 14; regulation 19.

366 See in general De Villiers "Surplus water" 408 et seq. Et vide *Ex parte Union Government* 1915 Vos Rep 1 47-69, where it was decided that surplus water was the exclusive property of the person entitled to it in terms of the act; *Great Fish River Irrigation Board v Southey (Grass Ridge)* 1927 Hall Rep 177; *Ex parte Rand Water Board* 1916 Krummeck Rep 102; *Ex parte Molteno Municipality* 1917 Krummeck Rep 158; *Smartt Syndicate v Richmond Municipality* 1919 Krummeck Rep 284.

367 Section 18; reg 19.

368 Sections 15-17, 19, 20.

degree to which normal flow was subject thereto.[369] The disappearance of the distinction between perennial and non-perennial streams and the subjection of both to state control, would imply excessive state control, ie. also over water sources which did not need it due to it not being subject to heavy competitive use. The distinction between normal flow and surplus water tempered such excessive control, by returning surplus water to rights of reasonable common use. The distinction between surplus water and normal flow was nothing else than the re-importation of the distinction between *perennia* and *torrentia*, yet under new names.[370]

3.3.3. Conclusion

* Although the water law proceeded through various phases of development and has undergone a number of changes since the turn of the century, the basic common law principles of state control, the classification of water in the law of things, and water rights, were largely retained, albeit in disguised form.

* The most important permanent change brought about by legislation, was the distinction drawn between forms of water sources in the law of things. While all running water was historically *communis*, rain water and surface drainage were sources singled out by legislation and transferred to the class *res privatae*. The reason therefore lay in confusing interpretations of *Codex* 3 34 4, Voet 8 3 6 and the Roman law interdicts of *Digesta* 43. The result thereof was that such sources,

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[369] The main difference between the rights in respect of normal flow and surplus water, was that a preferential order applied in the case of normal flow, in terms of which all primary needs downstream had to be fulfilled before irrigation could take place. As far as surplus water was concerned, an upper owner could exhaust a source for primary and secondary purposes, if he could use it beneficially.

[370] In *Hough v Van der Merwe* 1874 4 Buch 148, it was decided that only streams which dried up not only in the course but also at the source, were excluded from the definition of perennial streams. This was mainly the water of flood rivers. This definition was in accordance with the general attitude found in the judicature of those years. Because South Africa hardly possessed any perennial rivers in the literal sense of the word, the courts redefined the term "perennial", in order to adapt the Roman-Dutch law to South African conditions. Because surplus water was essentially the water of flood rivers, it can be argued that this re-introduced the old distinction.

often being the sources of large streams, were removed from statutory controlled common use. While the water of springs was subject to exclusive rights of use - which in practice hardly differed from the rights which the "owners" of rain and drainage water had - such spring water was nevertheless not *res privatae* but state-controllable *res communes*.

* A further important change which water legislation brought about, was the acceptance of the principle of riparian ownership, which was taken over from the decision in *Retief v Louw*,[371] which was based on some Anglo-American water law principles. To compensate non-riparian owners for their loss of water rights on what was previously *communis*, the courts were empowered by legislation to grant rights of use of water to non-riparian owners, which negated the value of the incorporation of the principle.

* Perenniality disappeared as a criterion to distinguish between public and private water. At first it was attempted to retain the criterion, but water scarcity probably enforced the amendment of the definition of perenniality, until it was far removed from the linguistic term. Only in the 1912 act was this term finally disposed of.

* A distinction was created between surplus water and normal flow. This was to compensate water users who made beneficial use of flood water by impounding it - while the definition of private streams excluded flood rivers, these waters were available for impoundment and utilization by those who went to the trouble to impound it. When the definition of private streams however later on included flood rivers as well, the prescribed reasonable rights of use made it illegal to continue these practices. A distinction was therefore drawn between normal flow and flood water (named surplus water) to remove flood water from the standard

[371] 1874 4 Buch 165.

allocation mechanism. It is submitted that this step proved the artificiality of the retention of the distinction between public and private water.

* A preferential order of water rights in respect of public water was developed by legislation. This was merely an attempt to formulate a system to ensure orderly common use of a scarce resource due to heavy competitive use, and did not in principle deviate from the common law.

CHAPTER III.IV

THE WATER ACT 54 OF 1956

"Die wetsontwerp is in baie opsigte, na my mening, 'n voortreflike wetsontwerp. Ek hoop dit sal 'n sieraad wees in die juridiese voorhuis"

Dr Albert Hertzog
Debatte van die Volksraad
1956

"Is dit tegnies onmoontlik om 'n ordentlike Waterwet met minder as 50 000 woorde op te stel?"

J C de Wet
THRHR 1956

CHAPTER III.IV
THE WATER ACT 1956

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THE WATER ACT 1956

4.1. COMMENCEMENT

The Water Act 54 of 1956 came into force on 13 July 1956, to consolidate and amend the laws in force in the then Union of South Africa relating to the control, conservation and use of water for domestic, agricultural, urban and industrial purposes.[1] The English text was signed by the then governor-general, and has since the adoption regularly been amended, viz. by 24 Water Amendment Acts. It consists of some 182 sections, and has been critized as being unnecessarily verbose :

> *"Die grootste teleurstelling, wat mens vind by die deurlees van die nuwe voorgestelde wet, is die ontsettende woordrykheid daarvan. Is dit tegnies onmoontlik om 'n ordentlike waterwet met minder as vyftigduisend woorde op te stel? ... Mens kan nou eenmaal nie glo dat al die duisende woorde volstrek noodsaaklik is om die bedoeling van 'n wetgewer, wat weet wat hy wil, weer te gee nie."*[2]

4.2. PURPOSE

According to the then Minister of Irrigation, the Water Act was enacted in an attempt to depart from the erstwhile water law principle of "riparian ownership",[3] and thus to move back

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1 Long title of the original act. This title has, since 1956, been amended several times, and was eventually substituted in 1975 (by s 26 of Act 42 of 1975) for the purposes of the consolidation of the laws relating to the control, conservation and use of water for domestic, agricultural, urban and industrial purposes; to make provision for the control, in certain respects, of the use of sea water for certain purposes; for the control of certain activities on or in water in certain areas; for the control of activities which may alter the natural occurrence of certain types of atmospheric precipitation; for the control, in certain respects, of the establishment or extension of townships in certain areas; and for incidental matters.

2 De Wet "Water" 30. Et vide Findlay "Private Water" 140.

3 "Riparian ownership" referred to the principle which developed during the nineteenth century to the effect that water rights belonged to riparian owners exclusively. Cf De Wet "Hundred years" 35 : *"[The 1956 act]* is nevertheless a half-hearted attempt to restore to the community the rights lost by a process of judicial legislation, and the doctrine of `riparian rights' is by no means dead".

closer to the erstwhile principle that the state was the so-called *dominus fluminis*.[4] The reason for this step was the scarcity of water under pressure of the ever-increasing water user sectors, due to general development as a result of the growth of mining and industry, as well as urbanization and the developing irrigation technology. These user sectors were not necessarily riparian owners :

> "The water of our rivers, which is severely limited, has to be utilised in the best and most beneficial way for the development of South Africa as a whole. It cannot be limited to only those who possess riparian land"[5]

The ratio behind the enactment of the Water Act was thus, first, to attempt to establish a system in terms of which, subject to existing rights, the state was in a position to obtain the power to apportion the available water in the public interest,[6] and secondly, to properly accommodate urban and industrial water use in the statutory water allocation mechanism, while the 1912 act was mainly aimed at the allocation of water for purposes of irrigation. The accommodation of these other user sectors did, however, not affect the allocation and distribution system only, and could therefore not be accommodated by the mere insertion of a provision recognizing these user sectors. This is so because the recognition of these users created new aspects to be addressed, such as pollution.[7] Moreover, the 1912 act has been

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4 *Assembly Debates* 5 June 1956 7244 et seq. This expression implied that the state was the *manager* of the waters, yet it had often been interpreted as the state being *owner* of the waters. Vide Chapter III.III supra.

5 *Assembly Debates* 5 June 1956 7244; Hall *Commission Report* 3.

6 *Assembly Debates* 5 June 1956 7245. Vide Chapter VI infra.

7 *"Weens al hierdie ontwikkeling het die wet wat byna veertig jaar gelede aangeneem is, ondoeltreffend geword om aan die vereistes wat deur die nuwe toestande geskep is, te voldoen. Dit is herhaaldelik gewysig in 'n poging om met die tyd tred te hou, maar die nuwe lap dreig nou om die ou kledingstuk stukkend te skeur en 'n nuwe wet wat voorsiening sal maak vir die veranderings wat ingetree het en nog in die toekoms verwag kan word, het nou dringend noodsaaklik geword. Die essensiële oogmerk van enige nuwe wetgewing moet wees om te verseker dat ons waterhulpbronne bewaar word en tot die grootste voordeel vir die hele land aangewend word, en enige nuwe wet moet so opgestel word dat met inagneming van die openbare mening en behoud van die beginsel van die oewereienaarsreg, administratiewe masjinerie opgerig kan word waarvolgens 'n behoorlike ewewig in die verdeling van water tussen die landbou, stedelike gebruik en die nywerheid gehandhaaf sal word"* (Hall *Commission*

amended so often that it was regarded as an opportune time to reconsider the act in its entirety. This had been done by the Hall Commission, which submitted its report in 1951.

4.3. THE HALL COMMISSION

In April 1950, by Government Notice,[8] a Commission of Enquiry was appointed by the Governor-General of the Union. The Commission consisted of C G Hall, C O Ehrlich, L C Benckendorff, S J Rabie and G H van Ginkel Bekker, to whom were added G J Meiring and F W Combrink (to replace Bekker) later in 1950.

The Commission received instructions to investigate and report on

* the effect of the current water laws on the social and economic development of the country;
* the amendment and consolidation of the laws to provide for the utilization of water resources in the best interest of the nation;
* all other matters regarding the utilization of water,

and to draw up proposed legislation which would implement such recommendations.

The Commission undertook extensive trips countrywide, heard evidence of 451 witnesses from various user sectors, and submitted its report on 16 August 1951. As a result of its investigation, the Commission made several recommendations, including :

* that existing rights which have been beneficially exercised ought to be protected;

Report 3).

[8] Government Gazette No 4363 GN 873 of 21 April 1950.

* that riparian ownership is a workable system;[9]
* that the final control of water resources ought to vest in the state;
* that strict state control ought to be exercised over industrial water use;
* that strict state control be exercised over the utilization of ground water, especially in dolomitic areas.

At the time of the Commission's report, the system of riparian rights was contained in section 12 of the Irrigation Act, providing that every riparian owner was entitled to the reasonable use of the normal flow of a public stream to which his land was riparian. This right of use was available for either domestic, agricultural or industrial purposes. When it was used for irrigation, it was subject to primary use (ie. stock watering and domestic purposes) by lower owners.[10] Moreover, the "reasonableness" of the right of use was qualified in the Parliamentary Regulations. As regards surplus water, a riparian owner was entitled to divert surplus water onto his land, or to store it for irrigation and domestic use.[11] Storage works could be protected under sections 15 and 16, but downstream riparian owners could apply to the water court for the allocation of a reasonable share, whenever they felt aggrieved by the excessive use or storage of surplus water by an upstream riparian owner. It therefore seems that, as long as a riparian owner used no more than a reasonable share of water for irrigation, allowing sufficient normal flow to pass for downstream primary use, he was free to develop his irrigation works to its maximum extent. This freedom of irrigation development, restricted by downstream owners' primary rights only, was what the Commission sought to protect :

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9 *"Die beginsel van die regte van oewereienaars is so sterk in ons reg verskans dat enige verandering in die waterreg die bestaande regte van oewereienaars wat tans voordelig aangewend word ten volste in aanmerking geneem moet word en daardie regte moet ongeskonde behoue bly tot voordeel van hulle deur wie se ondernemingsgees en voortdurende inspanning die besproeiing van uitgestrekte landbougebiede 'n waardevolle bydrae tot ons volkshuishouding lewer"* (3). The Commission recommended better utilization of unutilized water which runs to the sea. For this reason, the Commission was against a system of absolute state control and the redistribution of water. It is however submitted that what it wished to protect, was beneficial irrigation rather than riparian rights, but that it regarded the protection of these rights impossible except through the maintenance of the system of riparian rights.

10 Section 11(5).

11 Section 14.

"Dit lyk asof daar net een manier is om voedselvoorrade merkbaar te vermeerder en dit is deur die behoud van bestaande gebiede wat onder besproeiing is en die gebruik van ons surplus water om die uitbreiding van dié gebiede te verseker."[12]

The Commission recommended that only water which was not utilized beneficially by riparian owners for irrigation, could be subjected to a new system in terms of which state control replaced riparian ownership. It seems as if the Commission regarded the riparian ownership-principle to be the only means to protect existing irrigation, yet it is submitted that it was in fact *irrigation* for which protection was sought, and not for *riparian ownership* : "Riparian ownership" per se did not comprise of irrigation only, it also implied similar rights of use for urban and industrial purposes. Be that as it may, the Commission did not even consider *other* legislative means to protect existing irrigation, and thus recommended that riparian ownership remains intact. It is submitted that the same protection could have been obtained by merely subjecting a new allocation mechanism, which was *not* based on riparian ownership, to existing beneficial irrigation rights as far as normal flow was concerned. This was in fact done in the Commission's proposed bill,[13] yet the concept of riparian ownership was nevertheless retained : in terms of clause 14, a riparian owner was entitled to reasonable use of his fair share of normal flow for urban and agricultural purposes, subject to lower owners' domestic and stock watering requirements.

4.4. NEW CONCEPTS INTRODUCED BY THE 1956 WATER ACT

The main amendments recommended by the Commission and which were accepted in the 1956 act, were state control of water resources in the public interest (within control areas), water boards, advisory committees and pollution control measures.[14]

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12 3.

13 Clause 7.

14 Vide in general De Wet "Water" 30 et seq; *Assembly Debates* 5 June 1956 7246.

Another important amendment was the change in the recognised purposes of water use. The erstwhile "primary" and "secondary" uses were combined and called "use for agricultural purposes". "Tertiary" use was now separated into use for urban and use for industrial purposes. No new water uses were however recognized, and neither were old uses abolished.[15]

It was said supra that the Hall Commission recommended the retention of riparian ownership, especially for the sake of the protection of existing and beneficial irrigation. It however also recommended increased state control of the existing water sources, to obtain central control of the public water which was *not* used for beneficial irrigation, in the public interest. This proposal of an allocation system in terms of which both the principles of riparian ownership *and* the so-called *dominus fluminis* co-existed, was realized by retaining riparian owners' preferential rights in respect of normal flow, but adding a ministerial discretion to declare various forms of control areas. In these areas, control was assumed in the public interest, and the minister was empowered to allocate water rights to a variety of water user sectors. It was argued[16] that the introduction of control areas was a welcome return to Roman-Dutch principles, where water control vested in the state. This was in fact true in the sense that, in Roman-Dutch law, like in Roman law, water belonged to all in common, subject to state control, which control was merely exercised in cases of disputes due to competitive use. But the retention of the system of riparian ownership cannot be reconciled with any of the old systems : it was a creation of the South African courts due to intermingled interpretation of Roman, Roman-Dutch and Anglo-American law. Moreover, in terms of Roman and Roman-Dutch law, water did not belong to the state and the state was not *dominus fluminis,* but merely administrator in the public interest.

In terms of the 1912 act, provision was made for river and irrigation districts, which were established to control the common use of water. These measures did not constitute an

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[15] Vide De Wet "Water" 43 et seq.

[16] *Assembly Debates* 5 June 1956 7257-7259.

alternative allocation mechanism of which the power vested in the state, but the provision which the 1956 act made for control areas, vested extensive powers of water control and allocation in the minister, which powers he could exercise in the public interest.

In terms of the Water Act, six forms of control areas can be declared :

A subterranean government water control area can be declared when the minister is of the opinion that it is desirable in the public interest that the abstraction, use, supply or distribution of subterranean water be controlled.[17]

A government water control area is declared in respect of land which is likely to be affected by a government water work or in respect of an area within which the abstraction, utilization, supply or distribution of the water of any public stream should be controlled in the public interest.[18] The declaration of such an area vests in the Minister almost complete control of water in any public stream or public water in any natural channel in the area. Control is exercised in that the Minister is empowered to issue permits for water utilization to specified riparian owners.[19] The Minister may declare a government water control area to be an irrigation district,[20] in respect of which an irrigation board is established,[21] exercising the powers vested in the minister.[22]

If the Minister is of the opinion that the construction of water works in an area for the accumulation, abstraction, impoundment, storage or use of private water, may reduce the availability of water in a public stream in a government water control area, he may declare

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17 Section 28.

18 Section 59(1)(a) and (b).

19 In terms of ss 62, 63.

20 Sections 71, 73.

21 Section 79.

22 Section 75.

it to be a government drainage control area.[23] In such an area, nobody may construct water works for storage of private water without the authorization of the minister.[24]

A catchment control area is declared where land is required for the protection of any portion of the catchment area of a public stream, or where the flow of a public stream should, in the national interest, be regulated or controlled by damming, cleaning, deepening, widening, straightening or altering the course of the channel, or by taking such other steps which might be necessary for the purpose of lessening the possibility of damage to riparian land in the event of a flood.[25] The declaration of such an area entitles the Minister to suspend landowners' rights, and to enter upon and take possession of the land concerned in order to carry out any work which he may deem necessary to fulfil the purposes of such a declaration.[26]

A dam basin control area is declared whenever any particular area should, in the public interest, be reserved for a dam, being a government water work to be constructed at some future date.[27] Control over such areas is exercised by the minister, by means of issuing permits for certain activities and for water utilization.

When an area is, in the opinion of the minister, likely to become submerged by any water, and such water would be suitable for the practice of any water sport, he may declare it to be

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23 Section 59(5).

24 Section 62A.

25 Section 59(2).

26 Section 61(1).

27 Section 59(4)(a).

a water sport control area.[28] The right to use this water for any water sport vests in the minister,[29] and he can make regulations for its control.

4.5. CONCLUSION

The main change which the water law has undergone since the commencement of the Water Act in 1956, was increased state control. The minister was continually granted increased powers to interfere in the exercise of *ex lege* water rights in the public interest. These extended powers especially applied to private water, ground water, precipitation, the control of impoundment and emergency measures in the event of water scarcity.

What is currently, after 24 amendments, left of the erstwhile statutory water allocation mechanism, is already far removed from the original system. Suggestions for the necessity of a revised Water Act and water allocation mechanism have been made,[30] which necessitates an in-depth evaluation of the current system, with due regard to the status of water and the rights attached to it.

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[28] Section 164*bis*.

[29] Section 164*bis*(2). In this section the minister is the Minister of Sport and Recreation (currently the Minister of Sport) acting with the concurrence of the Minister of Water Affairs (s 164*quat*).

[30] *Assembly Debates* 21 June 1984 9744.

CHAPTER IV

THE LEGAL STATUS OF WATER

"Dit spreek tog vanself dat water,
wat nie openbaar is nie, privaat water is,
en dis dan onnodig om 'n selfstandige omskrywing van
privaat water te hê"

G Findlay
1973

THE LEGAL STATUS OF WATER

INTRODUCTION

The legal status of water directly determines the rights which may be vested in respect thereof. It has been submitted supra[1] that neither the Roman nor Roman-Dutch law had a defined water law system. On the contrary, the rules of water distribution and utilization was a mere application of their systems in terms of which things were classified. The classification of water as *res communes* in terms of the *ius naturale* therefore implied that it belonged to each and all in need of it, that it could not be appropriated and it had to be utilized in a reasonable way, with due regard to the similar rights of use of others. The importance of the classification of water and thus its legal status in terms of the law of things, can therefore not be ignored when the water law is evaluated.

Various distinctions between the legal status of forms in which water occurs, are still drawn today. The main distinction, viz. that between public and private water, is however the result of an incorrect interpretation of the Roman law of things, which was initiated by Justinian's incorrect summary of the texts of the Digest regarding the classification of things. Be that as it may, the distinction has become thoroughly vested in the South African water law.

In this chapter, the distinctions between public and private water, public water and public streams, normal flow and surplus water, as well as the legal status of wetlands, ground water and the sources of water, will be critically evaluated, in order to indicate whether the statûs-based distinction between types of water can still be justified in a revised water allŏcation mechanism.

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[1] Chapter III.

As far as ecobiotic water requirements are concerned, the status of water in terms of the law will determine the water rights which may be vested in respect of water sources by this user sector, if any. It may for example be argued that if a stream of water running through a conservation area can be classified as a private stream in terms of the Water Act, then the owner or trustee of the land may use the water for conservation purposes, but if the water is public water, the use thereof for other than the lawful purposes (urban and agricultural water use) in terms of the act, will be illegal. This is however an unsatisfactory situation, since modern conservation principles require legal protection of the water requirements of ecobiota, irrespective of the status of the water source involved. The distinction between water sources with regard to the legal status thereof, and therefore the very distinction between public and private water, is thus evaluated in this chapter, in an attempt to develop principles for a water allocation system which will accommodate more than human water needs, and which is aimed at integrated environmental and water resource management.

CHAPTER IV.I

PRIVATE WATER

"Private water is water you had better not go to court
about, for it may cost you more than its worth. In fact it is not
worth reading the act to try and find out what it is. Grab the
water on the ancient principle of first come first served
and put the onus on any claimant
to the contrary"

George Findlay
1973 THRHR

CHAPTER IV.I
PRIVATE WATER

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PRIVATE WATER

1.1. DEFINITION

The term "private water" is defined in the Water Act of 1956,[1] which act represents the first direct statutory recognition of this term.[2] In terms of the act, private water is all water which rises or falls naturally on any land or naturally drains or is lead onto one or more pieces of land which are the subject of separate original grants, but is not capable of common use for irrigation purposes.[3] Whenever an owner of land obtains, by artificial means, on his own land a supply of water which is not derived from a public stream, such water is *deemed* to be private water.[4]

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1 The Water Act 54 of 1956.

2 It is the first time that this term has been specifically defined since the codification of the South African water law. In Roman law, *flumina torrentia* were private rivers (Chapter III.I par 1.6), which term was not used by Roman-Dutch jurists, except Voet. In the South African law, the courts exhumed this term again, and several criteria were laid down to distinguish it from public streams. The legislature used the term "intermittent streams", but never gave any recognition to the term "private water". De Wet *Opuscula* 23 and "Water" 37 denied the necessity to define this term : "*Naas 'n omskrywing van 'openbare water' is 'n omskrywing van privaat water oortollig en verwarringstigtend. Dit spreek tog vanself dat water, wat nie openbaar is nie, privaat water is, en dis dan onnodig om 'n selfstandige omskrywing van privaat water te hê. Die invoeging [van] so 'n omskrywing stig verwarring want dit skep die indruk dat daar moontlik nog 'n derde kategorie van water kan wees, nl water [wat] nog openbaar nog privaat is. Afgesien hiervan is daar die moontlikheid dat die twee omskrywings nie presies by mekaar inpas nie, en probleemskeppende lakunes laat, of, erger nog, mekaar oorvleuel en bots*". Et vide Findlay "Private Water" 140 et seq, who does not necessarily criticize the fact that this term has now been defined as against "public water", but rather the "unanalitical" draughtsmanship which causes confusion as to the nature of private water : "[The field of private water] is by no means the most confused part of our present code, but it is a part of the law which could be, and should be, very simply and scientifically dealt with. It therefore illustrates very well how the existing law avoids clarity and the use of well-tried legal concepts". Et vide Rabie "Rivers II" 187.

3 Section 1 "private water".

4 Section 6(2). Vide Hall *Hall on Water Rights* 56, who is of the opinion that this section was introduced into the Water Act to confirm the appellate decision in *Union Government (Minister of Railways and Harbours) v Marais* 1920 AD 240.

From the definition, it thus seems that private water may include rain water, spring water, water derived from boreholes, wells, dams, vleis and furrows. The two phrases "but is not capable of common use for irrigation purposes"[5] and "which is not derived from a public stream",[6] prima facie seem to refer to the same qualification, viz. that for water to qualify as a private stream, the stream should be so weak, that it cannot be applied for common irrigation. But such a conclusion is tempered by the phrase "one or more pieces of land which are the subject of separate original grants", which implies that even a relatively large or perennial stream *which serves several subdivisions of a single original grant*, may qualify as a private stream. The size of the stream or the common usability of its water is therefore not the criterion to distinguish between public and private streams. The origin of the water is not the criterion either, although the legislature went to great lengths to describe the sources thereof. In fact, there is hardly any source of water excluded from being capable of yielding private water, as long as the stream is not of value for common irrigation on more than one separate original grant.[7] Despite the comprehensive description of the term "private water", it seems that private water is any water which cannot be used for common irrigation on more than one original grant.[8] But if neither the nature of the source, the common usability of the

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5 In the definition in s 1.

6 Section 6(2).

7 It can however be argued that water derived from a public stream by way of furrows or pipes, is not private water, although it might not be capable of being used for common irrigation, due to the definition of "public water" (s 1), which includes "any water ... derived from the bed of a public stream". It is however submitted that water which is lead from a public stream by any of the above artificial methods, complies with the definition of private water as well, in so far as such water "is led on to*(sic)* one or more pieces of land".

8 The question as to what "common irrigation" means, was discussed by De Wet, who came to the conclusion that the phrase could not mean anything else than that the water had to be sufficient to economically justify the making of irrigation works : "*Streng letterlik gesien, sou mens van besproeiing kon praat waar water aangewend word om 'n paar bome aan die lewe te hou of 'n akkertjie blomme nat te hou, maar dit is tog seker nie wat die wetgewer bedoel het nie*" (*Opuscula* 27). Vide in general Findlay "Private Water" 140 et seq : "In the law as it stands the nearest one can come to a real test is a quantitative test" (141), but : "This is a negative test and it is quantitative. It is not expressed as a definite quantity on its own. It is a quantity inadequate to a particular purpose. When we turn to the purpose we find that it again is not definitely described nor is it determinable. The word 'capable' is of course unfortunate. The water may be brackish, or polluted, or too remote to be

water or the size of the stream is the criterion, it ought to be asked what the function of the distinction between public and private water is. In Roman law, the function was to exclude those streams which were not susceptible to common use and were thus not subject to competitive use, from state control. Private water, as it is currently defined, can be subject to competitive use, although by owners of subdivisions of the same original grant only. There is thus little reason to exclude such streams from state control, since such control is usually necessary where competitive use, and consequently user disputes, occur, irrespective of whether the competing users occupy subdivisions of a single or more than one original grant.

The water court has the jurisdiction to determine whether a stream contains private or public water.[9] If an owner wants to use water on his land according to his statutory water rights, he will first have to ascertain whether the water is public or private in terms of the definitions of the act. He thus has to ascertain whether the water is or is not capable of being used for irrigation on two or more original grants. In practice, this can be a very difficult question to answer, which makes it unsafe for an owner to merely accept that the water on his land is public or private and then use it as such, because his assumption may be rejected by a water court on application by another aggrieved owner. But on the other hand, the water court is the only means to determine whether an owner may exercise exclusive rights of use in respect of a certain stream. It therefore seems as if it would be wise to approach the water court before use is made of water which prima facie seems to be private water, in order to obtain certainty.[10] This is an unsatisfactory position which is, moreover, unnecessarily complicated.

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capable of use. But I assume here that it is quantitative because the reference to 'common use' suggests that the water *can* be used, but not in that way" (145).

9 Section 40(d).

10 Cf Findlay "Private Water" 146 who suggests that the uncertainty may be solved by "grab[bing] the water on the ancient principle of first come first served and put[ting] the onus on any claimant to the contrary", because he regards going to court about a term which is so poorly defined, not worth the while.

1.2. HISTORICAL BACKGROUND

1.2.1. The origin of the distinction between private and public water

1.2.1.1. Roman law

In Roman law, the term "private water" was unknown.[11] A distinction was however drawn between private rivers (*flumina privata* or *torrentia*) and public rivers (*flumina publica* or *perennia*).[12] Private rivers did not flow perennially, but in the rainy seasons and for the lesser part of the year only. All running water was *res communes* in terms of the classification of things, which meant that private *rivers* (*flumina privata*) were not private *things* (*res privatae*).[13] These flood or seasonal rivers could however be used by the owners of the land on which they occurred, as if they were *res privatae*, because they had little common value, which meant that an absence of competitive use obviated the necessity for government control or the allocation of water rights.

1.2.1.2. Roman-Dutch law

In Roman-Dutch law, the classification of running water as *res communes* made way for the classification of rivers as *res publicae*.[14] Voet was the only author who still recognised "private rivers", although it was submitted that, in the light of the objective of his work - viz. to comment upon the Digest - this recognition was mere lip-service to the Roman praetorian interdicts, which were of dubious practical relevance in Roman-Dutch law. This author furthermore sorted such "private rivers" under *res privatae*, which was a

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[11] Chapter III.I (par 1.6.) supra.

[12] Furthermore, all rivers were distinguished from brooks (*rivi*) by their size (*magnitudo*) as well as by the opinion of the surrounding community (*existimatio circumcolentium*).

[13] *Van Niekerk & Union Government (Minister of Lands) v Carter* 1917 AD 35. Vide Chapter III.I supra.

[14] Chapter III.II supra.

classification unknown in the Roman law of things. Other authors drew no distinction between public and private water, streams or rivers.[15]

1.2.1.3. Anglo-American law

In Anglo-American law,[16] a clear distinction between public and private water was recognised. Private water was the water of rivers above the cotidal line, which belonged to riparian owners in proprietary rights. The underlying principle of this rule was the doctrine of *usque ad medium filum fluminis*.[17] (In the Roman and Roman-Dutch water law systems, this doctrine did not apply, and riparian ownership stretched to the banks of rivers only, while the beds were public like the water itself.) Coherent with this doctrine, was the doctrine of *cuius est eius solum est ad coelum et ad inferos*.[18] This meant that riparian owners were also owners of the *water* of boundary rivers up to the fictitious middle lines of such rivers.

1.2.1.4. Precodified South African law

Although it is quite clear that the Roman *flumina privata* were something far removed from the Anglo-American private rivers, the courts, in an attempt to formulate a proper water law system to suit South African climatological circumstances, relied on the Anglo-American interpretation of the term, and combined that with Voet's opinion of *flumina privata*, to come to the conclusion that private rivers were part of our law, and that it

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15 Some however used the terms "perennial river" or "public river", but without defining it or distinguishing it from other forms of water sources.

16 This term refers to those parts of the English and American water law systems which were discussed by Angell in his work *A Treatise on the Law of Watercourses*, to which the South African courts referred when they formulated a water law system for South Africa in the nineteenth century. Vide Chapter III.III supra.

17 This meant that riparian owners' proprietary rights stretched to the fictitious middle lines of rivers, in cases where rivers formed the boundaries of their land.

18 This meant that an owner of land also owned everything beneath and above his land.

could be classified as *res privatae* in the law of things.[19] Because Roman, Roman-Dutch and Anglo-American water law principles were not reconcilable *inter se* or with the South African climatological and hydrological conditions, the sometimes ill-considered attempts of the courts to haphazardly incorporate principles of all three systems, put the South African water law under considerable stress and confusion, which eventually necessitated legislative reform.[20]

1.2.1.5. Codified South African law

In the earliest colonial water legislation, no distinction between public and private water was drawn.[21] In the course of statutory development of the water law, however, perennial streams came to be distinguished from intermittent streams, and eventually a distinction between public and private streams and water was recognised. This distinction was mainly based on the common value of streams, especially for purposes of irrigation.[22] Small streams, which were of negligible common value, were excluded from the definition of public streams. The intensification of water demands for purposes of irrigation, lead to the gradual extension of the definition of public streams, so as to include every stream, however weak, which could possibly be drained to serve agricultural needs. This naturally reduced the definition of private streams so as to finally include only the water of relatively weak springs and surface drainage derived

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19 The courts also found support for this conclusion in Voet 8 3 6 (*Retief v Louw* 1874 4 Buch 165; Hall 47). Vide Chapter III.III (pre-codification section) supra.

20 Vide Wessels *History* 400 : "The proper course to adopt is ... to determine what principles of the English law are to be incorporated into our law, to formulate these principles so that they harmonise with the principles of our law, and to give them legislative sanction; in other words, to have a clear idea of what you are taking over from the English law, and to know that there is little or no likelihood of a conflict between what you take over and what you already have"; and "In this way modern English ideas may be incorporated into our system of law in a correct and scientific manner instead of in the haphazard way in which it has been done in the past" (401).

21 Chapter III.III supra.

22 In fact, the main purpose of water legislation was to solve the water allocation problems of irrigation farmers who concentrated around the more important rivers and streams, and whose competitive use increasingly lead to disputes. Vide *Assembly Debates* 5 June 1956 7245.

from rain water. A distinction was also created between private *water* and private *streams*, based on the law of things : while private water belonged to owners on whose land it occurred in ownership, private streams were allocated to such owners in rights of exclusive use. This rather unsound distinction had also been developed in the nineteenth century, from the confusion which was experienced by the courts concerning the legal status of water *erumpens in suo*. The inability of the courts to ascertain the real position of ownership of water in the legal system, probably also inhibited the legislature from taking a stand in this regard. Allocating rain water and surface drainage to ownership, and spring water to rights of exclusive use, was a safe yet temporising attitude.

1.2.1.6. The Water Act of 1956

The Water Act brought relief to this situation, by combining spring water, surface drainage and rain water under one definition of "private water", and allocating it not to proprietary rights, but to the "sole and exclusive rights of use and enjoyment" of owners on whose land such water occurs. This step once again removed certain forms of water sources from being classified as *res privatae* in the law of things, which was more in accordance with the Roman and Roman-Dutch legal systems where all water was *communia* in terms of the principles of justice and equity.[23] By doing away with

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[23] Findlay "Private Water" 141 is of the opinion that the phrase "sole, exclusive and unlimited use and enjoyment" (which was the terminology used in the original version of the 1956 act, but which was, since the publication of Findlay's article, somewhat tempered by one of the amendment acts (45 of 1972), so as to exclude (and rightly so indeed) the term "unlimited" from the wording of s 5(1)), is nothing else than "poetic language" for ownership. In the light of earlier legislation, where private *water* and private *streams* were distinguished, and where only private *streams* were subject to ownership, while private *water* was subject to exclusive use, the legislature ought to be taken on his word when he expressly amended this position. The term "ownership" was probably intentionally abolished in favour of a historically sound classification of all water as *communia*. The right of exclusive use is a severely restricted right, and if the legislature really intended to classify private water under *res privatae*, he would have used state control measures (statutory limitations on the rights of use) more sparingly. Allocating certain water sources to private property, is moreover contrary to the policy to submit the national water sources to stricter state control (*Assembly Debates* 5 June 1956 7244). The author himself is often found to struggle with the consistent application of his theory. See his argument on prescription (144) and on the vesting of limited real rights (143) and on the change in terminology since the 1912 act (145). In favour of Findlay's viewpoint is the interpretation rule of *expressio unius est exclusio alterius* : the heading of s 6 reads

ownership on private water, this water once again became classifiable under *res publicae*, which meant that rights in respect thereof could be controlled by the state, like those in respect of public water.[24] This meant that there remained little difference between public and private water as far as potential state control was concerned,[25] and the only traceable difference was the common value of the streams involved, which caused the legislature to differentiate between the water rights which he allocated in respect of these two kinds of water.[26] But, as was said supra, the requirement of "original grants" implied that even private water was capable of common and competitive use, although on subdivisions of a single original grant only.

1.2.2. The function of the distinction

The probable reason for retaining the distinction between public and private water, lies in the words "subject to ... rights ... existing at the commencement of this act",[27] which seems to be a much affected consideration subjacent to the allocation mechanism of the

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"ownership of public *and* private water", yet no mention is made of private water in the section itself. Public water is however expressly excluded from ownership. Applying the doctrine, this could mean that the legislature intended *not* to exclude private water from ownership as well. An interpretation rule such as this, is however only applied to ascertain the intention of the legislature, when it is not clear from the words which are employed. It is submitted that the wording of s 5(1) is clear, and that the interpretation rule is not needed to ascertain whether the legislature intended ownership when he used the term "exclusive use". Et vide *Hall on Water Rights* 49 who is of the opinion that the incorporation of s 6(2) into the act is probably the factor which deprived owners of their "ownership" of water. Et vide Vos *Principles* 8.

24 Cf *Human & Human v Lourens* 1963 Vos Rep 356 359, where it was held that the water court has no jurisdiction regarding rights in respect of private water.

25 Cf Findlay "Private Water" 141 who is of the opinion that private water is water which is "virtually free from the provisions of the act ... water which is not worth bothering about". This is partly true in respect of the original act, but, gradually, state control of private water was increased by the various amendment acts.

26 Vos *Principles* 8.

27 Section 5(1).

Water Act.[28] It seems as if the legislature realized that exclusive rights on what was previously known as "private water", determined the economic survival of some smaller landholders who were not within reach of, or who had no common or statutory rights in respect of public water, but were dependent on exclusive rights to use the water of erstwhile private water sources on their land.[29] To do away with the concept of private water by subjecting all water to rights of reasonable common use,[30] could economically ruin these interest groups. Moreover, the legislature also addressed the unfair effects of retaining the concept of private water, for instance in cases where owners had both public and private water on their land : it intercepted this possibility of doubled rights to a certain extent, by the restriction contained in section 6(3). In terms of this section, an owner who obtains water by artificial means from a source other than a public stream, is not allowed to use the water of a public stream as well, if such use would cause waste.[31] This provision is in accordance with the historical principle that the use of water was subject to similar rights of others, so that wastage came down to unreasonable use.[32] Section 6(3) is, however, not the only section which was incorporated into the act to address the misuse of exclusive rights of use in respect of private water. Restrictions on, inter alia, the wastage, pollution, disposal, sale and transfer of private water, are scattered through the Water Act, in order to regulate water use, which raises the question as to the remaining function and value of the "exclusive right of use".[33]

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[28] This protective clause is repeated in ss 4, 9, 9A, 10, 12C(2), 15, 16 and 17. Et vide De Villiers' comment on a similar feature of the 1912 Irrigation Act : "...the 'existing rights' ... to which the act is never tired of referring" ("Existing Rights" 4).

[29] Cf Findlay "Private Water" 140 who is of the opinion that the legislature and the Department of Water Affairs are very indifferent about the value and importance of private water for the individual landowner.

[30] In terms of s 9 of the Act.

[31] Vide 1.3.3.1. infra.

[32] Chapters III.I and III.II supra.

[33] Which question will be addressed in 1.3.4. and 1.3.5. infra (323 et seq).

Be that as it may, it is submitted that the objective of protecting irrigators who were not within reach of public streams could have been reached without retaining the concept of "private water". A proper water allocation mechanism would not allow the uneconomical apportionment of practically unapportionable water sources so as to deprive erstwhile holders of exclusive rights to "private water" from reasonable allocations of such water. But by subjecting all water to state control, and thus making it apportionable, a provision such as section 6(3) would have been superfluous. Furthermore, owners whose private water sources yielded more water than they could beneficially use, could be restricted in their use thereof, and they could be restrained from misusing private water, without the circuitous method of first allocating to them a right of "sole and exclusive use and enjoyment" and then restricting such right by a variety of statutory provisions.[34]

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[34] Vide 1.3.2. infra. This method of regulating water rights, viz. to first allocate a water right and then to restrict such right with a superabundance of restrictive measures, is one of the reasons why De Wet's criticism of the verbosity of the Water Act is not without merit : "*Die grootste teleurstelling, wat mens ondervind by die deurlees van die nuwe voorgestelde wet, is die ontsettende woordrykheid daarvan. Is dit tegnies onmoontlik om 'n ordentlike Waterwet met minder as vyftigduisend woorde op te stel?. Daar moet êrens 'n groot skroef los wees as 'n wet, wat maar net die waterreg reël, die helfte van die woordruimte in beslag neem wat die ganse Griekse Burgerlike Wetboek neem. Mens kan nou eenmaal nie glo dat al die duisende woorde volstrek noodsaaklik is om die bedoeling van 'n wetgewer, wat weet wat hy wil, weer te gee nie*" ("Water" 30). Et vide Findlay : "The 1956 act on the contrary has proved a sorry rehash with very little to recommend it - an inaccurate dish of farmers' language and legal uncertainty ..." ("Private water" 140). But cf Dr Hertzog, chairman of the select committee on the 1956 Water Bill, during the second reading of the bill : "*Die wetsontwerp is in baie opsigte, na my mening, 'n voortreflike wetsontwerp. Ek hoop dat dit 'n sieraad sal wees in die juridiese voorhuis*" (*Assembly Debates* 5 June 1956 7261). Et vide Hayward in the same debate : "*Hierdie wetsontwerp is nie alleen groot in vorm en in wese nie, maar ook groot in sy oorsprong en in sy skepping*" (7264).

1.3. RIGHTS IN RESPECT OF PRIVATE WATER

1.3.1. "Sole and exclusive use and enjoyment"

The sole and exclusive use and enjoyment of private water vests in the owner of land on which it is found.[35] This right of exclusive use is subject to sections 5(2), 12, 21-24, as well as to "rights lawfully acquired and existing at the commencement of the act",[36] and lower owners' rights to the reasonable use of private water flowing onto their land, which they have used beneficially for thirty years.[37] It is submitted that these are not the only provisions to which the right in respect of private water is subjected. Before substantiating this submission, the restrictions expressly imposed by section 5(1), deserve discussion.

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[35] Section 5(1). Vide Findlay "Private Water" 142-143 who is of the opinion that the holder of this right is not necessarily the upper owner : if he allows the water to run down to neighbouring land, such neighbour receives the exclusive right in respect of the water.

[36] Vide n 28 supra.

[37] Section 5(1) (proviso).

1.3.2. Restrictions imposed by section 5(1)

1.3.2.1. Section 5(2)[38]

A person entitled to the use and enjoyment of private water may not, unless under the authority of a permit issued by the minister, sell, give or otherwise dispose of such water to any other person, to use it on any other land, or convey such water for his own use (except for domestic purposes and stock-watering[39]) beyond the boundaries of the land on which such water is found.[40] This restriction, supporting an argument that the right to the use in respect of private water is not ownership,[41] deprives the exclusive right of use of its negotiability, and raises a question as to the content of the remainder of the right.

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[38] This subsection was inserted by s 2 of the Amendment Act 45 of 1972, which symbolised the gradual tightening of state control in respect of the erstwhile tight of "free and unlimited use and enjoyment" of private water. During the assembly debate on the second reading of the bill on 28 April 1972, the Minister of Water Affairs motivated the necessity of adding this clause, by stating that it would be in the public interest to restrict the use of private water (6174-6175). This amendment also gave substance to the ideal of the legislature to gradually re-assume its position as *dominus fluminis* (*Assembly Debates* 5 June 1956 7258) and annul the English law principle of riparian ownership. Cf De Wet "Hundred years" 35 : "Although the Water Act of 1956 has gone a long way towards correcting the errors that had their origin in judge Bell's *obiter dictum* in *Retief v Louw* [1874 4 Buch 165], decided in 1856, it is nevertheless a half-hearted attempt to restore to the community the rights lost by a process of judicial legislation, and the doctrine of 'riparian rights' is by no means dead".

[39] Section 5(3).

[40] Section 5(2). The reason for this restriction on owners' rights of exclusive use of private water, was explained by the Minister of Water Affairs as follows : "*Hierdeur sal ooreising van reeds beperkte waterbronne tot nadeel van die eienaar self, asook van laerliggende eienaars, verhoed kan word*" (*Assembly Debates* 28 April 1972 6175). Note that conservation of the water system per se was not envisaged - sustained human exploitation was the only consideration.

[41] The power of disposal is one of the qualities of ownership (Van der Merwe *Sakereg* 170). Et vide Hall *Hall on Water Rights* 49 : "The owner of the land has no longer any right of ownership, for his right of use is confined to the land on which the stream is found".

1.3.2.2. Section 12[42]

This section provides that no person shall use more than 150 cubic metres (m^3) of water per day for industrial purposes, unless under the authority of a permit.[43] The restriction expressly also applies to, inter alia, private water and underground water.[44] It restricts the free nature of the right of exclusive use by limiting *quantitative* use.

The standards of the original section 12(1)(a) were, by amendment,[45] incorporated into the current section 21(1), in extensive directions regarding the purification of water used for industrial purposes.[46] Although section 21 does not expressly refer to private water, the generic term "water" is used, and together with the historical origin of section 21, as well as the fact that section 5(1) has been made subject to both sections 12 and 21, justifies the conclusion that section 12, (read with section 21 to which section 5(1) was also subjected), limits the *qualitative* use of private water.

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[42] Substituted by s 7(1) of the Amendment Act 96 of 1984. Vide n 46 infra.

[43] Section 12(1). S 21(1)(a) furthermore stipulates that any water so used, should be purified or treated in accordance with prescribed standards.

[44] Section 12(5). Although s 12(1) does not refer to "public" water only, but to "water" in general, the legislature nevertheless found it necessary to add a section in which it is stipulated which forms of water are referred to.

[45] The section has been amended five times since then (By s 2 of Act 56 of 1961; s 11 of Act 42 of 1975; s 13 of Act 108 of 1977; s 18 of Act 96 of 1984; s 20 of Act 68 of 1987) during a process of 23 amendments to the Water act, of which the most recent one was Act 16 of 1991. This process caused Findlay to comment as follows : "As a result of muddled thinking, subjected to extensive patchwork, this legislation masqueraded as a legal code" ("Private Water" 140).

[46] In the original act, s 12 only required that a person who used water for industrial purposes, should *advise* the minister of his intended purification actions, and obtain a permit for certain large volumes of water.

1.3.2.3. Sections 22 to 24

The provisions contained in sections 22 to 24, are aimed at the prevention of water pollution, and are expressly applied to private water as well.[47] In terms of section 24(2), the minister may reduce or suspend a user's rights in respect of water, if the pollution control measures of sections 21 and 22 are not complied with. This provision vests extensive power of control in respect of private water in the minister, and justifies a question as to the value and right of existence of what remains of the right of exclusive use.

Since private water is intended for sole and exclusive use, the motivation for the applicability of pollution provisions is not vested in the common use which is made of it, but probably rather in the long-term effects which pollution of even small sources may have, due to the fact that all water eventually forms part of an integrated cycle. If these sections are thus environmentally inspired, ie. for the sake of the conservation of fresh water systems, the far-sightedness of the legislature is commendable.

1.3.2.4. Existing rights

The phrase "rights lawfully acquired and existing at the commencement of the act", as employed in section 5(1), can be interpreted in two ways. First, the second part ("and existing at the commencement of the act") can be argued to refer to common law rights and rights from previous acts in respect of private water, as if it read "rights lawfully acquired, *as well as* rights existing at the commencement of the act". Secondly, this second part can be argued to refer to the first part of the phrase ("rights lawfully acquired"). In this meaning, the phrase can read "rights lawfully acquired *which* existed at the commencement of the act". The Afrikaans version of section 5(1) supports the

[47] Sections 22(1)(a), 23(1)(a), 23A(1). S 5(1) was however not made subject to s 23A, but this can probably be attributed to the fact that s 23A was only inserted in 1971, and the legislature merely failed to amend s 5(1) to include a reference to s 23A as well. (Section 23A was repealed in 1978, but it was never made effective.)

second interpretation, viz. by reading *"wettig verkreë regte wat by die inwerkingtreding van hierdie wet bestaan"*. If this is the true meaning of the phrase, common law rights in respect of private water, and rights in terms of previous legislation are not deemed to persist, and can be accepted to have fallen away with the commencement of the 1956 act.[48] The question then remains what the nature is of rights which were lawfully acquired and which existed at the commencement of the act.

According to Findlay, these rights include rights obtained by contract only.[49] De Villiers,[50] referring to the phrase "nothing in this section contained shall affect any other existing rights", which occurred in the 1912 act,[51] submitted that it only included negotiated rights, ie. contractual rights, rights obtained by prescription, grant, long user, or similar particular title. Therefore, rights referred to as "rights lawfully acquired" are, even more so, only such negotiated rights. De Wet[52] is of the opinion that this phrase says what would have been the position if the section never existed, viz. that the common law position continues. This view is, in a sense, objectionable, because the very intention of the legislature was to repeal the common law, and to retain contractual rights only.[53] If not, all the provisions which have been expressly subjected to existing rights, are of

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48 Vide n 28.

49 144. Et vide *De Villiers v Barnard* 1958 3 SA 167 A 180.

50 10-11.

51 A phrase which lent itself to an even broader interpretation, ie. not expressly excluding common law rights (s 8(1)).

52 "Water" 38-39.

53 This view is supported by De Villiers : "[O]melettes cannot be made without breaking eggs, and laws cannot be changed without changing rights and duties : it would be case of attempting the impossible if an act, which fundamentally alters and largely sweeps away the common law, were to try to maintain in continued existence the full rights which every riparian owner possessed as such by virtue of the pre-existing Roman-Dutch and statute law" (5). He also motivates his view with the contents of the title of the act, viz. to amend the laws in force in the Union relating to the use of public streams.

little value, and so is the very attempt to codify the water law.[54] He is however correct in the sense that rights acquired by contract will not fall away if this phrase was left out. Vos[55] includes rights protected by section 25(a) and (b), rights from deed of servitude, agreement or order of a competent court and other lawfully acquired rights.[56]

1.3.2.5. Vetustas

The final restriction on an owner's right of exclusive use of private water, which is imposed by section 5(1) of the act, is a right of reasonable use, acquired by a lower owner by way of thirty years beneficial use of the water. This restriction is contained in a proviso to section 5(1), and was taken over from the 1912 Irrigation Act.[57] Originally it was derived from nineteenth century water judicature, where De Villiers CJ,[58] never mentioning *Codex* 3 34 4 from where he probably obtained his idea,[59] wanted to protect smaller water users from losing their water as a result of the precarious definition of "private water", and its distinction from public water, and to withhold owners on whose land large yet non-perennial streams occurred, from using water in unreasonable quantities. The proviso was frivolously incorporated into early water legislation, with

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[54] "It is impossible to suppose that the legislature passed this elaborate act and the still more elaborate 'parliamentary regulations' with the object of achieving a nullity" (De Villiers "Existing Rights" 5).

[55] 25.

[56] Cf *Ohrigstad Besproeiingsraad v Slabbert* 1967 Vos Rep 361 363 : "*As die respondent op welke wyse ookal 'n geldige reg verkry het ... dan moet die applikant na my mening daardie reg eerbiedig en sy regte ... word pro tanto aan bande gelê*". (The court was deciding this with reference to ss 4(1)(a) and 89(1)(g), which provisions were also subjected to existing rights).

[57] Section 8(1). Vide *Van Niekerk v Du Toit* 1957 2 SA 226 N.

[58] In *Vermaak v Palmer* 1876 6 Buch 25.

[59] Cf the address of Hertzog (the chairman of the Select Committee on the Water Bill (SC 21/56), during the debate on the second reading of the bill on 5 June 1956), who was of the opinion that this provision originated from English law (*Assembly Debates* 5 June 1956 7258).

alternating meanings depending on the nature of the distinction between public and private water.[60]

It is submitted that the disappearance of the perenniality test as a criterion for the distinction between public and private water, which resulted in only water not capable of common use on more than one original grant in qualifying as private water, made it hardly necessary to protect lower owners, since the majority of streams where lower owners could make beneficial use of the water, now qualified as public water, and they obtained water rights anyway.[61] The criterion of capability of the stream to be used for *common irrigation*, can be questioned here, because it seems as if streams which are capable of being used for *any* common purposes and are utilised as such, are excluded from exclusive rights anyway. The definition and extent of the upper owners' exclusive rights of use of private water should, without this proviso, determine the whole legal position.

1.3.3. Restrictions not imposed by section 5(1)

Additional to those restrictions on an owner's right of the exclusive use of private water which are imposed by section 5(1), the act contains a variety of provisions which further reduce the free exercise of this seemingly comprehensive right, the effect of which restrictions inevitably raises the question of what is left of this right, and whether its retention in the water law can still be justified.[62] These questions inevitably lead to the

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[60] Vide Hall *Hall on Water Rights* 48-49 and 53 et seq for the distinction between long user and prescription.

[61] This proviso could be relevant only in cases where some water did flow down, but in sufficient volumes for purposes than common irrigation only. Et vide Hall *Hall on Water Rights* 47-48.

[62] Cf Vos *Principles* 8, who is of the opinion that the right in respect of private water is a strong and comprehensive right : "All the above forms of private water, being the exclusive property of some person, are the subject of ownership. Consequently the owner may possess or store such water, or use, alienate or even waste it. It follows that the owner can part with these rights in the ordinary way, ie. by sale, lease or donation, or he may lose his rights by prescription".

further question of whether the distinction between public and private water can still be justified.

1.3.3.1. Section 6(3)[63]

Section 6(3) provides that, whenever the acquisition of water by artificial means makes an owner's legal use of public water wasteful, the lastmentioned use is not permitted. Although this provision was probably inserted into the act for the sake of distributing *public* water, it nevertheless affects rights on private water, and implies that the right of exclusive use is also a controlled right and not, as it might appear from the face of it, a right sublime to the water allocation mechanism of the water law. Although the wording of section 5(1) could create the impression that private water is uncontrolled water, being a bonus for an owner on whose land it occurs, the occurrence of this water could materially influence or even replace his rights in respect of public water, an indication of the indirect involvement of the state in the use of private water. A decision as to whether the occurrence of private water on an owner's land is of such a volume and can be so utilised that it renders his use of public water wasteful, depends on the water court.[64] A severely restricted right to the use of what could be a sometimes unreliable source of water, is by this provision set to replace a statutorily well-controlled and protected right in respect of public water, which could, in cases of drought, cause user disputes.[65]

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[63] This provision has escaped amendment since 1956.

[64] Section 6(3).

[65] *Hall on Water Rights* 57 is however of the opinion that if the "deemed private water" can be obtained by a method which entails considerable and continued expenses only, then rights in terms of ss 9 and 10 are not affected. It is however submitted that the water court is empowered to consider only the volume and function of the private water, and not the degree of difficulty to obtain it : the section is applicable only when such water has already been obtained, and not when it was merely ascertained that such water existed. An owner will therefore not be forced to exploit such water if it was not his intention to do so. The section implies that an owner is free to exclusively use such water, if he is willing to exploit it at his own cost and then sacrifice his quota of public water in so far as the use of both is wasteful. The section does not necessarily encourage the artificial exploitation of water.

1.3.3.2. Section 9C[66]

Section 9C directs that dams with a safety risk must be registered.[67] The section is also applicable to the impoundment of private water, which indicates that private water is not excluded from state control. The principle subjacent to this provision is the protection of the public interest.[68]

1.3.3.3. Sections 12B and 12C[69]

Section 12B(2) provides that water removed from a mine, may be used for domestic purposes connected to mining operations only, unless under the authority of a permit. Whenever the water found in a mine is not derived from a public stream, and is deemed to be private water in terms of section 6(2), section 12B serves to restrict a mine owner's right to the use thereof. The necessity to obtain a permit to use the water for any other than domestic purposes connected to mining, indicates strict state control of private water.

Section 12C qualifies the right to sink boreholes for searching or abstracting water in areas which have been declared to be areas subject to the provisions of this section. If any person proposes to sink a borehole in such an area, he must give notice in writing

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[66] This provision was inserted into the act by s 5 of the Amendment Act 96 of 1984, with the purpose of preventing the loss of life and economical damage. Et vide Department of Water Affairs *Management of Water Resources* 6.71-6.73.

[67] Dams with a safety risk are dams with a storage capacity of more than 50 000m^3 and a vertical wall height of more than 5 metres (s 9C(1)(a)), or other dams which are as such declared by the minister in terms of s 9C(2).

[68] Vide Chapter VI infra. One conclusion which could however be made, is that the right of exclusive use includes the right of impoundment (Vos *Principles* 34).

[69] Section 12B was inserted into the act by s 11 of the Amendment Act 68 of 1987. The motivation for the incorporation of this section was, according to the Minister of Water Affairs, the increase of state control over underground water, in accordance with increased geohydrological knowledge, in the public interest (*Assembly Debates* 20 August 1987 4359-4360).

to the director-general of his intention, and he must keep a journal of progress according to the prescriptions in subsections (1)(a) to (f), (2) and (4). The water in such an area is private water in terms of section 6(2), unless it is obtained from a public stream as defined. Although the probable purpose of this provision is rather to obtain geohydrological data than to control the abstraction of ground water, it nevertheless restricts the free use and enjoyment of private water.

1.3.3.4. Section 26

Section 26 authorises the minister to make regulations relating to, inter alia, wastage or pollution of public water and damage to the environment caused by water.[70] The issuance of such regulations could contain severe interference with or restrictions on exclusive rights of use which an owner has in respect of private water. This can be argued to imply that the right of exclusive use is merely a right of beneficial use, far removed from ownership, where wastage, damage to or destruction of the object is allowed. It is however clear that these limitations are aimed at the protection of the public interest. The question is, if private water is available for *exclusive* use and not for *common* use, why the holder of the right of use is restricted from wasting or polluting the water. The public interest could not be affected by water pollution if such water is not available to members of the public to share in. On the other hand, if the purpose of the provision lies in the conservation of water sources as an integrated resource, then the second half of section 26(b) is superfluous.[71] The limitation of section 26(b) thus restricts what is left of an owner's right in respect of private water even further, another

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[70] Section 26(b). Regulations which have been issued under this section, are R287 of 20 February 1976; R256 of 13 February 1981; R2834 of 27 December 1985; R244 of 7 February 1986.

[71] This second half of the subsection, protecting the environment from damage caused by owners' use of water, was only inserted in 1984, by section 15 of the Amendment Act 96 of 1984. It can therefore be argued that in 1956, the legislature did not intend to protect environmental interests with s 26(b), and in 1984 it was still not interpreted in such a way, otherwise the additional phrase would not have been added.

indication of the validity of a question as to the value of the distinction between public and private water.

1.3.3.5. Section 28

If it is desirable in the public interest that the abstraction, use, supply or distribution of subterranean water[72] be controlled, the minister may declare a subterranean government water control area,[73] in which area the right to use and control the water vests in the minister,[74] which he can allocate in his discretion.[75] No-one is allowed to abstract or use the water without the necessary permission.[76] Unlike in section 12B, not only the purposes for using ground water are restricted, but the total right to use such water. It seems that an exclusive right to the use of underground water is only freely available if such water does not occur in a subterranean government control area, or is not abstracted from a mine.

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[72] Vide Chapter IV.IV for the definition of "subterranean water".

[73] Section 28. In the original act of 1956, the objective of this control measure was to prevent undue depletion of underground water resources. It was however substituted in 1987 (by s 17(1) of the Amendment Act 68 of 1987), and the objective was stated to be, first, the conservation of underground water, and secondly, the *public interest* (*Assembly Debates* 20 August 1987 4358-4362; s 28). The public interest is a favourite yet undefined term generously employed in the act, which grants to the minister a free discretion, and which is in accordance with the policy of increased state control of the water resources of South Africa (Department of Water Affairs *Management of Water Resources* 10.3 et seq). Vide *SA Industrial Cellulose Corporation v Umkomaas Town Board* 1960 Vos Rep 264 270, 271 : "To my mind the expression 'in the public interest' ... does not mean anything so narrow as the general interests of the particular localities which may be affected by the matter in question; it means those interests that concern the Public at Large, but not necessarily every part of the public". The court used nuisance as a criterion to determine the public interest (but note that the court was specifically dealing with the concept as it appeared in s 11(2)(b)). Et vide Chapter VI infra.

[74] Section 29.

[75] Section 32B. Vide n 73 supra.

[76] Section 29(a)(b).

1.3.3.6. Sections 56 and 59

In terms of section 59(4), the minister may declare a dam basin control area, whenever it is in the public interest that an area be reserved for a dam, irrespective of whether the area includes the bed of a private stream. In such an area, the construction of certain permanent works, including water works, as well as the exercise of normal farming operations, are suspended.[77] Compensation is however due for damages which an owner may suffer as a result of the application of this provision.[78]

The minister may construct a government water work for conserving, utilising, storing, preventing waste or pollution of, controlling or abstracting any water.[79] The control of water in such a water work vests in the minister, who is empowered to supply and distribute the water therein.[80] The rights and privileges of ownership in respect of a government water work vests in the state.[81] It is submitted that private water is not sublime to this ministerial power, first, because no express reference is made to public water only, and secondly, because the purposes for which the government water work may be constructed, include purposes which have already been subjected to state control in respect of private water, eg. the prevention of pollution and wastage as well as the

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77 Unless these operations are continued in terms of a permit (s 59(4)(b)).

78 Section 59(4)(c). The state will probably obtain the land on which a private water source occurs prior to the declaration of the area as a dam basin control area.

79 Section 56(1).

80 Section 56(3)(a).

81 Section 56(4). This is the only place in the act where mention is expressly made of "ownership". In terms of the act, this also implies ownership of the water contained in the water work (s 1 "government water work"). This is not in accordance with Roman and Roman-Dutch law, where the class of things called *res universitatis* existed as a separate class of things in the law of things. Under this class sorted *loci publici*, which were places and structures of public value, but which were constructed and managed by municipalities or other bodies in which the ownership thereof vested. Water works such as reservoirs, aqueducts, pipes etc., sorted in this class, but nowhere was ownership in the *water* which was stored or transported therein, assumed by these bodies (Vide Chapters III.I and III.II supra).

control of underground water. If this submission is correct, section 56 potentially imposes a severe restriction on the right of exclusive use.

The minister may declare an area which will be affected by the construction of a government water work, or an area where the use of public water should in his opinion be controlled in the public interest, to be a government water control area.[82] In such an area, the right to the use and control of water in any public stream or natural channel vests in the minister.[83]

In terms of section 59(5), the minister may declare a government drainage control area, if the construction of water works for the utilization of private water will result in the reduction of the availability of water in any public stream in a government water control area.[84] It is submitted that this subsection grants the minister absolute power to assume control of private water in a government drainage control area and, without compensation, to suspend the right of exclusive use which an owner in such an area has in respect of the private water which occurs on his land, in so far as the use of water works is concerned. No protection is granted for owners who are economically dependent on their private water, or who were deprived of their rights in respect of public water by a water court order in terms of section 6(2). The only way in which the availability of water in a public stream can be reduced as a result of the impoundment

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[82] Section 59(1).

[83] Section 62(2).

[84] This subsection was inserted into the act by section 21 of the Amendment Act 68 of 1987, in accordance with the tightening of state control of the national water resources. In his address during the second reading of the bill on 20 August 1987, the deputy minister of Water Affairs motivated the insertion of the clause as follows : *"Die ontwrigtende uitwerking wat die toelaat van verdere onbeheerde benutting van private waterbronne in hierdie sensitiewe gebiede gaan hê, kan nie goedsmoeds aanvaar word nie en in die openbare belang word die Staat deur omstandighede gedwing om in sulke gevalle in te gryp in 'n poging om 'n billike balans tussen die benutting van hierdie twee wedersyds afhanklike bronne te vind"* (*Assembly Debates* 20 August 1987 4361).

of private water, is when such private water have reached a public stream, were it not for the impoundment.[85]

1.3.4. The nature and contents of the exclusive right of use

From the above, it appears that the right of "sole and exclusive use and enjoyment", is a right severely restricted by statutory control measures which, as was repeatedly submitted, raises the question as to its nature and right of existence.

1.3.4.1. Ownership

Findlay suggests that it is a right of ownership, and therefore classifies private water as *res privatae*.[86] Such a view is objectionable, since it is not in accordance with the common characteristics of ownership. Ownership is described as the most comprehensive dominion over a legal object, obtained by one of a *numerus clausus* of ways of acquisition of ownership. It implies that the owner can deal with it at will, and dispose of it, change it, consume it, burden it, neglect it, destroy it, enjoy it, possess it and vindicate it. It is an independent and elastic right which will always recover to its full extent when any limited real right which burdens it, is terminated. Ownership is of indefinite duration, and is terminated by transfer, expropriation, sequestration, prescription, execution, statutory provisions, destruction, or the death of the owner. It can be burdened privately by the vesting of limited real rights, such as servitudes. Restrictions on ownership can also be imposed by the state, which will happen in the public interest.[87]

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[85] The general idea that water is not private water when it is the source of a public stream, is rebutted by (inter alia) this section. Vide 326 infra. Et vide Chapter IV.V infra.

[86] Vide n 23 supra. Et vide Hall *Hall on Water Rights* 47; Vos *Principles* 8.

[87] Van der Merwe *Sakereg* 169 et seq; Birks 1 et seq; Visser "Ownership" 39 et seq; Lee & Honoré 260 et seq.

The right of exclusive use which is created by section 5(1) of the act, does not comply with any of the traditional characteristics of ownership.[88] It is created by statute, and not by way of the effect of the principle of *cuius est eius solum est ad coelum et ad inferos*, since that was never accepted in the South African water law.[89] The right to dispose of it, is excluded by sections 5(2) and 12B. The right to use and enjoy it, is restricted or can be suspended by a variety of provisions discussed supra. The right to abuse it, is restrained by sections 22 to 26. Statutory restrictions are imposed in favour of public sharing of water, and not to prevent public inconvenience.[90] Furthermore, the legislature expressly abolished the express reference to ownership (as far as rain water was concerned) which was contained in section 8 of the 1912 act, and subjected rain water, together with spring water, to exclusive use. This clear terminology should not be misinterpreted as "ownership".[91]

It is suggested that private water qualifies as common things (*communia*) like all other water, belonging to no-one, being subject to government control, but being of such negligible common value for irrigation, that the owner on whose land it occurs, may use it solely, yet subject to statutory restrictions. The right of sole and exclusive use and enjoyment is not ownership, but merely a limited real right, in favour of a certain owner, and this right can, at any time, be suspended in the public interest. Furthermore, the clear intention of the legislature ought not to be ignored in favour of an euphonious theory.

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88 Cf Vos *Principles* 8 who is of the opinion that the exclusive right of use does possess these characteristics. Et vide n 62 supra.

89 Vide Chapter III.III supra.

90 Cf *SA Industrial Cellulose Corporation v Umkomaas Town Board* 1960 Vos Rep 264, where nuisance was used as one of the criteria to determine the public interest. Vide n 73 supra.

91 In 1917, the court in *Ex parte Kirstein* 1917 Krummeck Rep 172 confirmed this view in no unclear terms (but cf *Breyten Collieries v Dennil* 1912 TPD 1061). Et vide Chapter IV.V (par 5.1.3.2.2.) infra.

1.3.4.2. Beneficial use

It can, on the other hand, be argued that the right of exclusive use is merely a right of preferential and beneficial use, instead of ownership. The term "use" is not defined in the act. According to dictionaries, it exists as against the term "consume". Whereas "consume" refers to using up, or even to waste, "use" is to beneficially apply or to utilize, which implies a restricted right, excluding waste.[92] Such a meaning attached to the word "use", is in accordance with the statutory limitations placed on the right, as discussed supra. It could therefore be argued that the right of exclusive use is not a severely restricted right of ownership, but merely the power to use common property to the exclusion of the requirements of other users, as far as such use is beneficial. Therefore even impoundment is allowed, as long as the user does not store more than can be beneficially utilised. This interpretation is also in accordance with Roman law, where an owner of land had a preferential right to water rising on his land.[93]

If the right of exclusive use, read with all the restrictions which the act places thereon, is therefore viewed merely as a preferential right to use as much water as can be beneficially utilised, then the problems which jurists experienced with the status of the sources of public streams,[94] are largely solved, because then upper owners can hardly cut off the flow of public streams by depleting the sources and tributaries. Such an interpretation is in accordance with the allocation of preferential rights in respect of tributaries of public streams, in section 9(1)(e). And then the definitions of "public water" and "public streams" do not have to be distorted to save public streams from desiccation.

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92 *Oxford Dictionary* 247, 1352; *Bilingual Dictionary* sub voce "*verbruik*" and "*gebruik*".

93 *C* 3 34 4.

94 Vide n 96 infra. Et vide Chapter IV.V infra.

It was argued supra that the right is statutorily restricted as far as qualitative and quantitative use are concerned. Moreover, it is restricted as far as the purposes of use are concerned, as well as far as the circumstances in which it may be used, are concerned. It can, moreover, be suspended or divided. The right of exclusive use is therefore a statutory preferential right of beneficial use for particular purposes and in particular qualities and quantities, as far as the public interest or the control of government water works are not injured thereby.

1.3.5. The right of existence of the exclusive right of use

A final question which remains, was repeatedly referred to in the above discussion. This is whether the right of sole and exclusive use and enjoyment still deserves a right of existence, in the light of what remains of it while subject to all the restrictions which have been discussed supra.

It is submitted that if the so-called right of sole and exclusive use and enjoyment is not ownership, but a mere statutory right of preferential yet beneficial use of private water in prescribed qualities and quantities and for prescribed purposes, it is nothing more than a statutorily controlled right of use. Although it has been argued that private water is water which the legislature does not regard worth bothering about, it is submitted that various provisions in the act prove the opposite. In fact, the position is similar to that which applies to the reasonable right of use in respect of public water. This right is also statutorily controlled as far as quality, quantity and purposes of use are concerned. Section 6(1) could just as well have been amended by deleting the word "public", so as to read "then there shall be no right of property in respect of *water*, and the control and use thereof shall be regulated as provided in the act".[95] Such wording would have been

[95] The terminology of this phrase, as it stands, was taken from the report of the Commission of Enquiry which preceeded the act (clause 10 of the proposed act, on 46 of the Report). Hall however clearly dealt with the questions of public and private water separately, which left no uncertainty as to whether he intended to confer rights of ownership in respect of private water. The take-over of clause 10 was therefore done out of context, which indicates a failure on the side of the

in accordance not only with the historical water law position, where *all* water was common and subject to state control, but also with the actual water allocation and control mechanism contained in the Water Act.

Therefore, in the light of ever-tightening state control over the exclusive right of use, which was brought about by (almost) annual amendments of the act, it is submitted that so little remained of the exclusive right of use (in that it is neither "exclusive" nor "sole") that it can, in principle, hardly be distinguished from the statutory controlled water rights in respect of public water, normal flow and surplus water, which will be discussed in due course. It can thus be argued that the maintenance of this term is mere lip-service to what was earlier submitted to be an ill-considered yet traditional interpretation of the sources of the South African water law.

1.3.6. The right of existence of the distinction

It has been argued that no distinction exists between private water and public water as far as the law of things is concerned. All water is common property, but the extent of restrictions on the rights to the use thereof, differs. Whereas private water is subject to severely restricted rights of exclusive use, public water is subject to prescribed rights of use, allocated to accomplish reasonable common use. The original motivation for a distinction between public and private water was to ascertain water rights : if a stream was private, an owner's water rights could be restricted by vested rights of long user only. If it was public, it was restricted by reasonable rights of use of all riparian owners. The criterion was thus the capability of a stream for common use, where only those subject to competitive use required control and apportionment. However, in 1956, in order to apportion water more fairly between all members of the public, and to phase out the principle of riparian ownership, the Water Act re-instated state control in respect of *all* water to a large extent. Recognising that water in South Africa was an increasingly

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legislature to apply his mind to drafting a well-considered provision.

scarce resource, government control was also extended to cover private water. Therefore it ought to be asked whether the distinction between public and private water still deserves a right of existence.

The necessity to control water use by legislative measures, or to empower the minister and other government authorities to exercise control over the use of water, irrespective of whether such water is classified as public or private, indicates that the motive for a distinction, namely whether it can be controlled, has fallen away. If both private and public water are classified as common in the law of things, and if neither the size, the perenniality nor the capacity of a stream to be apportioned, is the criterion for the distinction, and government control is exercised over both forms of water, then there hardly exists any reason for a distinction between the two classes of water. The current criterion is the capability of the stream for common *irrigation* on two or more original grants. Irrigation is not the only user sector of water, and although a stream cannot be applied for common irrigation, it could well be capable of being used for common household purposes, or for the maintenance of natural ecosystems. Moreover, the fact that it is not capable of common irrigation on two or more original grants, does not mean that it is not capable of common use at all, since owners of subdivisions are still common users with similar requirements and disputes than users on original grants. The government should be able to allocate the water of even small streams for purposes other than irrigation.

It is submitted that, in the light of both private and public water being excluded from private ownership and both being controllable by statutory measures, water should be dealt with, with reference to catchment areas, irrespective of the volume of water in different parts of a stream. The distinction between private and public water should no longer be of any relevance during water allocation.

Doing away with the distinction between public and private water, will provide a larger quantity of water which can be allocated to the various user sectors. An argument may

be advanced that the merger of the classes public and private water might deprive certain landowners of their only water, because, if apportioned, the water on their land would be economically worthless, which would negate the value of the land. The answer is that, to dispose of the *distinction* would not imply that the *water* is also disposed of. The only difference would be the rights in respect thereof - all water will be common property, available for apportionment by the government, and no rights of use will exist unless in accordance with an allocation. The allocation mechanisms of the act will merely be extended to also cover what is currently called "private water". In practice, no apportionment of negligible trickles of water will happen - the allocation mechanism will be applied only where the pressure of competitive use calls for it. Every member of the public who has lawful access to water, will be entitled to utilise such water, and apportionment will be of relevance only when such utilisation causes harm to other users. This will mean that owners on whose land small springs occur will mostly be free to continue their exclusive use thereof. But if such use is unreasonable, in that one owner uses more water than is reasonably beneficial to him, and thereby deprives a lower owner of a reasonable share, the apportionment mechanisms of the act may be applied.

Another benefit of doing away with the distinction, is the solution of the question whether the sources of public streams necessarily contain public water.[96] If all water is common property, subject to government control, and rights of use are allocated according to the circumstances, then it will not be necessary to argue that the sources contain public water, while they actually contain private water and are subject to rights of exclusive use. Then every owner, irrespective of the size of the stream to which his land is riparian, is granted a water right, which is reasonable in respect of the capability of the stream and the claimants for its water.

[96] Vide Rabie "Sources" 86; Nunes 298. Vide Chapter IV.V infra.

Doing away with the distinction will, finally, be in accordance with the historically sound principle of extensive state control as it was known in the Roman, Roman-Dutch and early South African water law systems.

1.4. CONCLUSION

* Private water is defined as encompassing all water which rises, falls, drains or is led onto land and which cannot be used for common irrigation, ie. the water of rain, springs, boreholes, wells, dams, vleys and furrows, irrespective of size or source. A probable reason for the distinction between private and public water lies in an attempt to protect existing rights of upper owners in respect of water sources which are not economically apportionable.

* Private water is not *res privatae*, but nevertheless subject to riparian owners' sole and exclusive use and enjoyment. This *prima facie* exclusive right of use has however been severely restricted in terms of the act and its amendments, so that little remained of its character as a sole and exclusive right. The right is restricted by a prohibition on its conveyance, sale or disposal; on using it in excessive quantities for industrial purposes; and on the interference with existing rights or long user. Moreover, the exercise of the right is affected by various statutory control measures, such as a duty to register dams with a safety risk, prescribed purposes of use of water removed from mines, wastage and pollution regulations, the declaration of certain control areas and the construction of dams. The right of exclusive use is not ownership (which is deduced from the clear wording of the act and the characteristics of ownership) but a statutory preferential right of beneficial use for prescribed purposes, and in specified quantities and qualities, as far as the public interest or the control of government water works are not impaired by the exercise of the right.

* As far as both the definition of private water (and thus its distinction from public water) and the right in respect thereof is concerned, it is submitted that ever-increasing state control has in fact negated its right of existence. It is thus submitted that the very concept of private water ought to be abolished, so that all water is *communia* and as such subject to the state-controlled allocation mechanism of the act.

* The distinction between public and private water is not necessarily the only or best way to protect upper owners' rights in respect of indivisible water sources, because private water as it is defined is often as capable of common use by different riparian owners, although by owners of subdivisions instead of original grants.

CHAPTER IV.II

PUBLIC WATER

"In a public river the volume of water need not be constant or large, but it must be something more than mere surface drainage to avoid being a dry river"

Barry J

Southey v Southey 1906

CHAPTER IV.II

PUBLIC WATER

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PUBLIC WATER

2.1. DEFINITION

Public water is defined in the Water Act[1] as any water flowing or found in or derived from the bed of a public stream, whether visible or not.[2] A public stream is defined as a natural stream of water which flows in a known and defined channel, whether or not such channel is dry during any period of the year and whether or not its conformation has been changed by artificial means, if the water therein is capable of common use for irrigation on two or more pieces of land riparian thereto which are the subject of separate original grants or on one such piece of land and also on crown land which is riparian to such stream; provided that a stream which fulfils the conditions in part only of its course shall be deemed to be a public stream as regards that part only.[3]

2.2. HISTORICAL BACKGROUND

In Roman law, the term "public water" had no specific legal connetation. Mention was however often made of related terms in the water law, such as *flumina publica* and *usus publicus*.[4] A public river (*flumen publica*) was a river[5] which flowed perennially.[6] These

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1 Act 54 of 1956.

2 Section 1 "public water".

3 Section 1 "public stream".

4 Vide Chapter III.I supra.

5 A river was distinguished from a stream in respect of its size (*magnitudo*) and the public opinion (*existimatio circumcolentium*).

6 Although the odd standstill in a dry period did not render a stream non-perennial.

rivers were not distinguished from other water sources in respect of status[7] or water rights,[8] but only in respect of the extent of administrative control : because public rivers were large and perennial, they were subject to heavy competitive use for purposes of navigation (for both trade and fishing), and the state had to interfere in otherwise unregulated common rights of use, in order to attain peaceful utilization and sharing amongst all water user sectors. The majority of interdicts issued by the praetors were therefore aimed at *flumina publica*, while *flumina privata* were left to unregulated common use because these smaller rivers caused less user conflict. Nevertheless, all water was common in terms of the *ius naturale*, and the distinction between private water and public water did not derogate from this classification thereof in the law of things.

In Roman-Dutch law, the term "public water" was of little relevance, and authors seldom defined it or opposed it to other terms such as private water. Although it is often alleged that the Roman-Dutch term "public river" referred to navigable rivers, little conclusive proof can be adduced from the sources for the existence of such a definition in Roman-Dutch law.[9]

In the Anglo-American law of things, a clear distinction between public and private streams occurred. Only those parts of rivers situated beneath the cotidal line, ie. estuaries and lagoons, were called "public rivers". The concept of public water was however far removed from that which was known in Roman law, viz. *flumina publica*. In Anglo-American law, public rivers were excluded from riparian water rights, and the use of such water was regulated by the state. Perenniality played no part in the definition of public rivers.

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7 All running water was classified as *res communes*.

8 Water was available for reasonable common use by each and all.

9 Vide Chapter III.II supra.

In early South African law, the concept of public water did not feature at all, until it was defined by the courts in the mid-nineteenth century. The main characteristic of public rivers was their capability of common use. This negated perenniality as a criterion, and, moreover, excluded only negligibly weak trickles of water from the definition of public streams. This attitude was confirmed by legislation, when codification of the water law took place in the early twentieth century. Because irrigation was, at that period in time, the main water user sector, the definition came to be restricted to rivers, the water of which was capable of common irrigation. This was water which was subject to heavy competitive use, and which thus required regulated use. Although the boundaries of the distinction between public and private water had been moved since Roman law, it was submitted supra that the status of water remained basically unchanged. It was soon realised that not all water which was capable of common irrigation, could at best be utilized by the same rules of water allocation, and a distinction came to be drawn between the usual flow and the flood water of a river, as well as between surface and ground water, running and impounded water, etc. These distinctions caused the establishment of a complex allocation mechanism which is, today, unfortunately, not free from confusion. This allocation system is moreover complicated by restrictions in respect of the purposes of use as well as in respect of the user sectors entitled to water rights. Although it is realised that the ideal of "peaceful yet unregulated common use" is unattainable, a fair and proper water allocation system ought not to exclude certain user sectors or purposes of use from water rights, because water is life-essential for all living things.

In order to analyze and evaluate the allocation mechanism of the current water law system, it is necessary to determine the status of public water, its classification in the law of things and its distinction from other forms of water.

2.3. THE STATUS OF PUBLIC WATER AS DEFINED

2.3.1. "Any water"

Unlike in the definitions of "private water" and "public stream", water need not be *natural* to qualify as "public water". Moreover, it can be argued that it also includes water which was artificially pumped or led to or placed in the bed of a public stream, water of unusable quality, and salt, brackish or polluted water. It therefore seems as if the source, the volume or the quality of the water is of no relevance in determining whether water qualifies as public water.

2.3.2. "Flowing or found in the bed of a public stream"

It is required that water must flow or stand in the bed of a public stream, before it can qualify as public water. The "bed" of a public stream is a known and defined channel in which a stream which is capable of common irrigation usually flows. If the channel is not known and defined (eg. a vlei) or the water which usually flows therein is not capable of common irrigation, then public water can never occur in that channel. Therefore a weak stream or flood water which overflows a known and defined channel[10] is not public water,[11] and neither is water which (due to its quality or a statutory restriction) cannot be used for common irrigation. If, however, water of a usable standard or volume or status *sometimes* flows in the channel, then the occasional water of a low quality or volume or status also qualifies as public water, because the occurrence of the irrigation-water affects the channel thereof with the status of "the bed of a public stream".

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[10] Because then the water is probably not capable of common irrigation, because it is often impossible to utilize.

[11] Water which occurs outside the bed of a public stream is not public water, unless it is derived from that channel.

It is not clear why both the terms "flowing in" and "found in" are employed, since water can hardly flow in a bed without being found there. The term "found in" refers to both flowing and stagnant water.

2.3.3. "Derived from"

Water which inundates land as a result of the construction of a dam or weir in the channel of a public stream, is public water, although it does not occur in the bed of a public stream, because it is derived from the bed of a public stream. Water which is led from a public stream for any purpose, from filling a dam to being used for drinking, is public water.[12] Water pumped from an underground channel of a public stream is public water.[13] Water does not become private water when it is lawfully appropriated, firstly because it does not suddenly start complying with the definition of "private water" when it has been appropriated, and secondly because the act does not provide that water is transformed in its status at a certain stage after it has been diverted - it merely states that water derived from a public stream is public water.[14] It is submitted that public water remains public water until no account can any longer be advanced for its whereabouts, or until it naturally drains or is led onto land where it cannot be used for common irrigation and thus starts to comply with the definition of private water.

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[12] Cf De Wet *Opuscula* 30-31 who criticizes the failure of the legislature to specify when water, after being diverted, is no longer public water.

[13] Vide Chapter IV.IV infra; De Wet *Opuscula* 25; "Water" 36; *Union Government v Marais (Minister of Railways and Harbours)* 1920 AD 240.

[14] Cf De Wet *Opuscula* 30-31 who is of the opinion that public water ceases to be public water when it leaves the channel in a natural way, or when it is consumed. Et vide n 12 supra.

2.4. THE STATUS OF A "PUBLIC STREAM" AS DEFINED

2.4.1. The water

2.4.1.1. "A natural stream of water"

It is difficult to say when a stream of water is *natural*, because all water is of natural origin - no water is man-made. Findlay is of the opinion that the term "natural" in the definition is of no value,[15] and De Wet says that it is the *channel* which ought to be natural, because even "artificial" water which ends up in a public river, is public water.[16] This explanation is however unsatisfactory. In the first place, it is not clear what "artificial" water is : even if a stream flows where it would not have been flowing if it had not been for human interference, the water is still not "artificial". Moreover, even if the water is heavily polluted or affected by human utilization methods such as purification, the water is still not "artificial". In the second place, the fact that any water which is found in the channel of a public stream is *public water*, does not necessarily make such water a *public stream*. Although the fact that both the terms "public stream" and "public water" refer to a stream of water could be ascribed to careless draughtsmanship, these definitions cannot be distorted by interpretation. Literally, the two definitions refer to two separate streams of water, of which the definitions exclude each other.[17]

It is submitted that all water is natural water, and that if the legislature intended to exclude water which has been impaired by human activities, eg. pollution or chemical

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[15] He describes it as "a *vana imago* like the *lex naturae*" (144). It is important to note that the proposed act of the Hall Commission of Enquiry specifically referred to the *channel* of a river in this regard : "a watercourse of natural origin..."

[16] "Water" 34.

[17] In the wording of the proposed act of the Hall Commission, the definition of a public stream referred to the *channel* of a river, while the definition of public water referred to the water itself. This was expressly changed in the eventual act, so that both these terms now refer to the *water* (Hall *Commission of Enquiry* 44).

purification, he ought to have done it expressly. If he intended to refer to the channel, he ought to have placed the term "natural" before "known and defined channel". But if that was the intention, it is difficult to explain why the phrase "whether or not its conformation has been changed by artificial means" was added. At the most, water which would not have flown at a specific point, at a specific time and under specific conditions (such as volume, temperature and quality) if it had not been for human interference, can be described as non-natural water. Such water will then not be a public stream, but yet it will be public water, because the naturalness of a stream is no prerequisite for water to be public water.

2.4.1.2. "Stream"

The phrase "stream of water" implies movement. Water must be *moving* in order to comply with the definition of a public stream. This qualification that the water should be running, is emphasised by the term "flows". This qualification distinguishes a public stream from public water, where water which is "flowing or found" in the bed of a public stream, qualifies as public water. Therefore hippo pools and pools in river beds, vleis, impounded water etc. do not qualify as public streams, although they contain public water.

2.4.1.3. "Capable of common use for irrigation on two or more pieces of land riparian thereto which are the subject of separate original grants"

2.4.1.3.1. "Capable"

According to Hall,[18] the capability of a stream for common use depends on all the surrounding circumstances, as well as the nature and degree of use to which it is subject. In terms of this interpretation, the quality of the water ought to influence its capability

[18] Hall *Hall on Water Rights* 19.

of being so used. If, for instance, the degree of eutrophication or salinization or sediment load or chemical content renders a stream of water unfit for irrigation, it is not capable of common irrigation, and it is therefore not a public stream. On the other hand, such water can qualify both as private water (water which is not capable of common use for irrigation) or as public water (water found in the bed of a public stream[19]).

It may be argued that statutory restrictions on the purposes for which water may be used can also influence its qualification as public water in terms of Hall's criterion (in other words, that water ought to be capable of common irrigation in a legal, and not physical, sense). If, for instance, irrigation is prohibited by statute in a specified area, rivers in such an area cannot be said to contain water capable of common irrigation. An example is the National Parks. In terms of section 4 of the National Parks Board Act,[20] National Parks should as far as possible be retained in their natural state. This by implication excludes agricultural practices in National Parks. The rivers therein may therefore not be used for irrigation, and therefore does not qualify as public streams.

In spite of such an interpretation, the definition remains unsatisfactory. De Wet discusses the question of when a stream is "capable" of common irrigation : it is argued that the mere watering of two vegetable or flower gardens can be viewed as common irrigation.[21] The author however comes to the conclusion that *in his opinion* the water ought to be sufficient to economically justify the making of irrigation-works on two or more pieces of land. This criterion, viz. economical viability, seems to be the generally accepted one.[22]

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19 This is so in cases where the water is sometimes of a usable quality, ie. it usually forms a public stream.

20 Act 57 of 1976.

21 *Opuscula* 27.

22 Vide *Allen & Louw v Tamsen & Van Biljon* 1932 Watermeyer Rep 85; *Bon Accord Irrigation Board v Pretoria Municipality (2)* 1921 Hall Rep 16. In *Le Roux v Kruger* 1986 1 SA 327 C, it was said that

2.4.1.3.2. "Common use on two or more pieces of land"

According to De Wet,[23] the term "common" was redundantly retained in spite of the addition of a clause that the water must be capable of use on two or more pieces of land.[24] The requirement of "common use" bears reference to the volume of a stream, which was derived from the Roman law concept of *magnitudo*.[25]

2.4.1.3.3. "Riparian thereto"

Riparian land, in relation to a public stream, is defined as

> "(a) land held under an original grant or deed of transfer of such a grant or under a certificate of title, whether surveyed in one lot or more than one lot, whereon or along any portion of any boundary whereof a public stream exists, and any sub-division of such land; and
>
> (b) Crown land in respect of which no original grant has been made, but the situation of which in relation to a public stream would have rendered it riparian thereto by virtue of the provisions of paragraph (a), if such a grant had been made."[26]

It is required that a stream, to be a public stream, must be capable of common irrigation on two pieces of riparian land. In cases of underground streams, it may be argued that no land can be riparian thereto, because an underground stream does not "exist on or along a boundary" of any land. If a stream has no riparian land, the water cannot be used on two or more pieces of land riparian thereto, and the stream is not a public

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the land had to form an economical unit, ie. that reasonable compensation could be drawn from irrigation. The court admitted that this was relative, and said the circumstances of each case should be considered, such as the size of the area which is to be irrigated (332).

[23] *Opuscula* 27.

[24] The author describes it as "*'n historiese oorblyfsel wat uit onnadenkendheid deur die wetgewer uit die ou omskrywings oorgeneem is*" (27).

[25] De Wet "Water" 34.

[26] Section 1 "riparian land".

stream. If that is the case, then the bed of such a stream cannot contain public water, and the question is what the phrase "whether visible or not" in the definition of public water means, because invisible water in the bed of a public stream can only be water flowing beneath the surface. It is however submitted that, in cases where a known and defined channel exists, a great deal of water often flows beneath the sand in the bed. Such water is invisible water in the bed of a public stream, because that river exists *on* (although not in the strictest literal sense of the word) certain land. Sunken streams can be distinguished from underground water sources which exist in the deeper strata of the earth. The channels of these sources are seldom known and defined, and are not necessarily connected to any surface channel. Only such water can be said not to exist *on* riparian land, and is therefore not a public stream or public water. The problem with such resources is that they neither qualify as private water, because they do not fall or rise or drain or are led *onto* land. The question of the status of underground water will be discussed in further detail infra.[27]

2.4.1.3.4. "Common use for irrigation"

(i) Irrigation

The first national act concerning water matters was promulgated in 1912.[28] As the name indicates, the act was mainly aimed at solving the disputes amongst irrigators concerning the allocation of water for irrigation.[29] In 1956, when the Water Act was promulgated, irrigation was no longer the only user sector which experienced allocation disputes.[30]

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[27] Chapter IV.V infra.

[28] The Irrigation and Conservation of Waters Act 8 of 1912.

[29] *Assembly Debates* 5 June 1956 7245 : *"Dit is dus logies dat daar destyds by die passering van die 1912-wet aan die nut van water gedink was hoofsaaklik in terme van besproeiing"*

[30] *Assembly Debates* 5 June 1956 7244 : *"Die algemene landsontwikkeling met die groei van industrieë en myne en stadsontwikkeling en die behoeftes van besproeiing, al is al hierdie behoeftes weg van die waterbron self, bring dit mee dat die water van ons riviere wat uiters beperk is aangewend moet word op die beste en voordeligste wyse vir die ontwikkeling van Suid Afrika as 'n geheel"*; and *"Intussen* [ie.

However, the protection of existing rights enjoyed high priority,[31] and it was attempted to consider the water requirements of all user sectors without harm to irrigation rights. Unfortunately this resulted in the addition of more user sectors in the allocation provisions, without carefully considering the occurrence of the concept of irrigation throughout the act. In the case of the definition of "public stream", irrigation thus remains the criterion to determine what is public stream.

The volume of water which has to flow in a channel which is sufficient for common irrigation, is materially different from that which has to flow therein to be sufficient for common domestic or industrial use. In cases where a relatively weak stream flows, but the water thereof is sufficient for riparian household purposes of a few riparian farms (yet not for irrigation on more than one), the water is private water in terms of the definition. This means that the upper owner can use it solely and exclusively, even to the domestic detriment of lower owners. This may happen even though there is more than enough water for the upper owner. In utilizing or storing private water, he is not restricted to a reasonable share.

Not all public streams flow in irrigation areas. Where a stream flows through a village or town, or through a stock farming area, it is hardly practical to determine the status of the stream according to irrigation requirements. In an urban area, where little remains of the original grants, and it is difficult to trace where the original boundaries were, an attempt to determine whether the stream is capable of common irrigation is far-

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since the 1912 act] *het daar geweldige veranderinge plaasgevind. Die mynbedryf, sekondêre industrieë en die gevolglike verstedeliking van die bevolking het teen 'n geweldige tempo ontwikkel. Waar die klem van watergebruik vroeër geval het op besproeiing, het die noodsaaklikheid van watervoorsiening vir stedelike en vir nywerheidsgebruik net so belangrik geword*" (7245).

[31] *Assembly Debates* 5 June 1956 7245-7246; Hall *Commission of Enquiry* 3; 13-14; *Beckenstrater v Sand River Irrigation Board* 1968 4 SA 209 A 221 H : "...in my view it is improbable that it would conform to the intention of Parliament, which rather appears to be to ensure that, by the general application of the new Act, whatever may have been done in terms of the laws mentioned in the Schedule will retain its validity and will be governed and given effect to by the provisions of the Act".

fetched. It is submitted that irrigation as the criterion to determine the common usability of a stream, is outdated.

(ii) Common use

It may be argued that the "two or more pieces of land ... which are the subject of separate original grants" ought to be neighbouring pieces of land.[32] Therefore, if the water of a stream on an upper riparian farm is far in excess of the irrigation needs on that piece of land, but irrigation farming is not practised lower down, then the stream is not a public stream. If irrigation is however practised on a farm far down along the stream, then the stream is not a public stream either. Only if the neighbouring farm also irrigates, can it be said that the stream is capable of irrigation on two or more farms. On the other hand, it may be argued that it is not essential that the "two or more pieces of land" should border each other : if one can only find more than one farm along the course of the stream which can both be irrigated from the stream, the stream is a public stream. It is however submitted that streams vary along their courses regarding flow conditions, which variance is often increased by human utilization. The question is then whether the volume of water on farm A should be capable of irrigation on farms A and B, or whether the total volume of the water occurring on the two farms should be so capable.

It is submitted that the network of improbabilities to which logic arguments concerning the phrase could lead, is interminable, and that the "two or more pieces of land" should not be interpreted too literally. It is suggested that whenever the volume of water at a particular point is of such a volume that it could be used for common irrigation, irrespective of whether there are farms where it will be so utilized or where such farms are situated, then the stream is a public stream at that point. This interpretation is

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[32] Vide De Wet "Water" 35 : *"Die moeiliheid met die voorbehoud* [of the definition of "public water" in s 1] *is nou juis dat dit as aanknopingspunt vir so 'n redenasie kan dien".*

moreover in accordance with the proviso.[33] This will mean that if farmer A wants to ascertain what the status of the water in the river on his property is, he should merely answer the question whether the volume at the point of diversion is capable of common irrigation. How much water will suffice common irrigation, will depend on the circumstances, ie. how much water is needed to economically sustain at least two irrigation farms.[34] If farmer A can economically irrigate his crops and sufficient water is left for another such an enterprise, then the stream is a public stream. If not, the water is private water and he can utilize all the water.

2.4.2. The bed

It is required that, for a stream of water to qualify as a public stream, it should flow in a known and defined channel, whether or not such channel has been changed by artificial means.

2.4.2.1. "Known"

According to Hall,[35] "known" means the knowledge by reasonable inference from existing and observed facts in the natural or pre-existing conditions of the surface of the ground. The author submits that the word is not synonymous with the term "visible", nor is it restricted to knowledge derived from exposure of the channel by excavation. This description is in accordance with the interpretation mentioned supra that water flowing beneath the soil in a river should be distinguished from water occurring in the deeper strata of the earth. If, by means of any modern method, it can be ascertained where the

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[33] In terms of the proviso, a stream is a public stream only for those parts thereof which comply with the definition.

[34] The kind of crop grown in the area could be taken as a criterion to determine the capability of the stream.

[35] *Hall on Water Rights* 18.

channel of underground water runs, the stream qualifies as a public stream.[36] If not, the channel is not known, and the water is private, which means that he who exploits it, may use and enjoy it solely and exclusively.

2.4.2.2. *"Defined"*

A defined channel consists of a bed and banks.[37] When a stream spreads out over an area, and these features cannot be distinguished, the stream is not a public stream, irrespective of its capability for common use. The water is not public water either, but neither is it private water (ie. if it is capable of common irrigation). The status of water in vleis[38] and wetlands is therefore difficult to determine, causing uncertainty as to water rights.[39]

2.4.2.3. *Changed conformation*

The phrase "whether or not its conformation has been changed by artificial means" refers to man-made changes in a channel, eg. weirs, canals, ditches, excavations, reclamations, diversions or any structure or waterwork or action which would influence the channel-bound flow-conditions of a stream. This phrase did not occur in any of the previous acts, but was inserted into the 1956 act on the unmotivated recommendation of the Hall Commission. Hall structured his provision as follows : "'Public stream' means a water course of natural origin ... whether or not such conformation has been changed by artificial means ..." The phrase concerning the artificial change was not in conflict with

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[36] *Ohlsson's Cape Breweries Ltd v Artesian Well-boring Co Ltd* 1919 CPD 125 132; *Louw v Dorman* 1924 Hall Rep 96. In the last-mentioned case, it was required that the position of the underground stream ought only to be known within narrow practical limits, and not its exact situation and precise depth.

[37] Hall *Hall on Water Rights* 18 calls it a contracted and bounded channel.

[38] A vlei can however contain a public stream if it is confined within a defined space (*Van der Merwe v McGregor* 1913 CPD 497).

[39] Vide Chapter IV.III infra.

the term "natural", because the only requirement was that the channel should be of natural *origin*.

In the Water Act, however, the term "natural" and the requirement regarding the conformation of the bed, do not refer to the same subject : while the *water* has to be natural, the channel could have been changed artificially. Although dissimilar to Hall's probable intention, the relationship between the two concepts seems to be normal. But unfortunately it is difficult to imagine what a *natural* stream of water is,[40] and it has therefore been suggested that the term "natural" refers to the channel as well. But if that is the case, then, unless it is deemed to mean a channel of natural origin, it is in conflict with the conformation phrase. And when it is read as "of natural origin", the question can be asked whether the legislature would have expressly rejected Hall's terminology, if he intended to say the same thing. Moreover, such an interpretation would be far removed from the true literal meaning of the words. It can only be submitted that the impossibility to ascertain what the meaning of these phrases is, is due to somewhat clumsy draughtsmanship.

2.4.3. The distinction between public water and public streams

It has been suggested supra, that overlapping occurs between the definitions of public water and public streams, mainly due to the fact that both the terms refer to a stream of water, instead thereof that a public stream is defined as the channel in which public water flows. It is however suggested that the intention of the legislature was that public water should be the water in a public stream, where a public stream referred to the channel in which public water occurs. This is how it was proposed by Hall,[41] and also

[40] Vide 337 supra.

[41] In the proposed act of the Commission of Enquiry in 1952.

how the majority of authors interpreted it.[42] The meaning of the words however contradicts this interpretation.

Water can be public water although it is not a public stream,[43] when the stream is not a *natural* stream of water, or when the water is not flowing (eg. stagnant water behind a weir). A public stream is however always public water, because a public stream at all times flows in its channel, whether visible or not. When water flows invisibly, but not in a known and defined channel, the water is neither a public stream nor public water. (It is however not private water either, because it does not fall or rise or drain or is led onto land).

It is submitted that a definition of both the terms "public water" and "public stream", causes uncertainty as to the status of and thus the rights to water. It is advisable that there should be a move away from attaching the condition of movement to water in order for it to fall under the provisions of the act and thus under state control.

2.5. NORMAL FLOW AND SURPLUS WATER

In terms of the Water Act, "normal flow" is, in respect of a public stream, the quantity of water actually and visibly flowing in that public stream which, under a system of direct irrigation, whether by furrows or otherwise, but without storage, can be beneficially used for the irrigation of land riparian to such a stream. The definition is subject to section 53(2), which provides that a public stream shall not be deemed to have a normal flow unless a portion of the actual and visible flow is derived from springs, seepage of any

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[42] De Wet "Water" 34.

[43] Cf *Le Roux v Kruger* 1986 1 SA 327 C 333 where it was said that public water can *only* be found in a public stream.

kind, including return seepage from irrigated land, melting snow, the steady drainage from swamps, vleis, forests or other like sources.[44]

A similar tendency than that which was used to define private water, is employed here, viz. to add a "deeming-clause" elsewhere in the act, to explain the intended meaning. Surplus water is defined in the act as public water, in relation to a public stream, which flows or is found in that stream, other than the normal flow. Unlike the definitions of public water and private water, this term is not defined in terms of certain qualities, but is defined by merely opposing it to normal flow. It means that all the public water found in a public stream which is not normal flow, must necessarily be surplus water.

A distinction between normal flow and surplus water makes sense only if it is aimed at applying different allocation rules thereto. In the South African conditions, the water of flood rivers, which is often capable of common use, but can hardly be so used by merely allocating "reasonable shares", needs a separate set of allocation rules. The qualification in the definition of normal flow viz. that water is only normal flow if it can be used without storage, hints that it was intended to exclude flood-rivers from this definition, so that surplus water includes flood rivers. But if this is the case, then it is difficult to understand why the term "flood water" was not used. According to De Wet,[45] flood water and surplus water are not synonymous, and neither are "normal flow" and "seepage water".[46]

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[44] *Ex parte Molteno Municipality* Krummeck Rep 158. In terms of this case, seepage ought only to represent a material part of the mean annual run-off (MAR), but need not be present all the time when the water is actually flowing. It must in itself be capable of common irrigation (although the definition of "normal flow" does not specify that it should be capable of common irrigation).

[45] *Opuscula* 38-42.

[46] Et vide De Villiers "Normal flow" 124-125.

2.5.1. Historical background

The concept of normal flow was first used in the Transvaal Act of 1908,[47] where it was defined as the average winter flow,[48] as against surplus water, which was the rest of the flow.[49] In the 1912 act, this distinction was somewhat sophisticated, especially as far as the allocation of water rights towards these different kinds of water was concerned.[50] Normal flow was defined as the quantity of water actually and visibly flowing in a public stream which, under a system of direct irrigation from that stream whether by furrows or otherwise but without the aid of storage, could be beneficially used for the irrigation of riparian land. No public stream was deemed to have a normal flow unless a portion of the actual flow was derived from springs, seepage, melting snow, the steady drainage from swamps, vleis, natural or indigenous forests, or other like sources of supply. The water court was moreover the authority empowered to determine which part of a stream is normal flow.[51] The definition of "normal flow" in the 1956 Water Act, as well as the deeming-clause contained in section 53(2) was thus previously neatly contained in a single clause in the 1912 act.

The development of a distinction between normal flow and surplus water during the early codifications of the water law (while the distinction was unknown in the historical

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47 Act 27 of 1908.

48 Section 2 "surplus water".

49 The term "surplus water" was originally derived from the Cape Irrigation Act of 32 of 1906, where the term was not used as against normal flow, but merely referred to the water which was left in a stream after all statutory rights had been exercised, and which could then be allocated by the court to specified applicants (ss 9, 10).

50 In terms of the 1908 act, surplus water was apportionable by the court to specified applicants, and only after the statutory rights of riparian owners in respect of public water have been exercised (s 47). Surplus water was thus dealt with in a similar way than in the 1906 act, ie. as if it was reserve water. As far as the riparian water rights were concerned, no recognition was granted to the distinction between normal flow and surplus water. In the 1912 act, this allocation system was amended to allow riparian owners preferential rights of use in respect of surplus water, as against reasonable shares which could be vested in respect of normal flow.

51 Section 10.

systems), is an indication of the creation of a concept to suit the unique South African hydrological conditions. The scarcity of water in South Africa necessitates intensive irrigation farming, which has to be strictly controlled by a fair water allocation system. Moreover, all water which can be utilized in whatever way, has to be allocated. South Africa however lacks strong, perennial rivers, and many rivers carry flood water only. In a country where water is not as scarce a commodity, these seasonal rivers will probably be ignored during water allocation,[52] but in South Africa they are important water sources for purposes of irrigation, as far as the water thereof can be intercepted and utilized. The water of flood rivers is however hardly usable without storage, due to the flushing and thus shortlived nature of floods. Therefore it can hardly be allocated by means of the same rules as water with a steadier flow-pattern. It is, moreover, costly to provide water works for purposes of the storage of flood water. These practical conditions necessitates a distinction between flood water and that part of the flow which could be allocated by apportionment.[53]

2.5.1.1. *Southey v Southey*[54]

The process of finally including this distinction in legislation, was a rather painful one, which probably had much to do with the public debacle around the decision in *Southey v Southey*, in 1905 :

In 1881, William Southey, a Karoo farmer of the Middelburg district, sued his up-stream riparian neighbour on the Brak river, one Schoombie,[55] for his reasonable share of the

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[52] In the Roman and Roman-Dutch water law systems these rivers enjoyed little attention.

[53] Cf De Villiers "Normal flow" 124 who is of the opinion that flood water can also be normal flow, ie. that although the intention could have been to distinguish between flood water and seepage, the definitions of normal flow and surplus water do not reflect such an intention.

[54] 1905 22 SC 650.

[55] The citing of the case in the Cape law reports reads *Southey v Schombie*, although the respondent is referred to as Scoombie. It is therefore submitted that the citing was incorrect, but for purposes hereof the case will be referred to as cited.

water of the Brak river. The court decided that a river with a constant feed and which was usually flowing, was a perennial river in terms of the common law. In the case in dispute, the Brak river consisted of several springs in its channel which, were it not for large-scale abstraction and impoundment thereof, would have caused a usual flow in the river. It was thus not a "dry river" (flood river), and therefore Southey was found to be entitled to a reasonable share. The court referred to several texts from the Digest,[56] as well as from the Roman-Dutch author Voet,[57] and also to American authorities and the South African judicature[58] to substantiate the decision. It is thus necessary to briefly review the position of flood rivers in these systems :

> In Roman law, flood rivers (*torrentia*) were distinguished from permanent rivers (*perennia*) on the grounds of its perenniality. An occasional standstill of rivers on very hot days during the dry season would not deprive permanent rivers of their status as *perennia* or *flumina publica*. Because of their status as public rivers, these rivers were subject to various interdicts which controlled common use. *Torrentia*, on the other hand, were available for use by owners on whose land they occurred as if they were *res privatae*.[59] It is submitted that technology to control and utilize flood water was still underdeveloped, which caused *torrentia* to be of negligible common value, and not worthy of severe state control measures which were issued to control disputes which arose from competitive use.[60]
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> In Roman-Dutch law, little mention was made of flood rivers. This is probably due to hydrological conditions, where the majority of rivers were perennial and

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[56] *D* 43 12 1; 43 12 3; 8 3 17.

[57] 43 8 12.

[58] *Van Heerden v Weise* 1880 1 BAC 5; *Vermaak v Palmer* 1876 6 Buch 25.

[59] Vide Chapter III.I supra.

[60] Vide the distinction between private and surplus water 364 (par 2.5.3.1.) infra.

strong-flowing (often even navigable). Private rivers rather included smaller or non-navigable streams than the so-called dry rivers.[61]

In South Africa, especially in the Cape Colony where the roots of the South African water law were founded, flood rivers were a common feature of the landscape, and it was soon realised that irrigation was dependent on the utilization of these. Farmers who mastered the art of impounding and diverting these freshets and floods, experienced great success and fame in agricultural circles.[62]

In 1880, in the case of *Van Heerden v Weise*,[63] the first official mention was made of a distinction between flood water and other water. While De Villiers CJ classified all perennial streams which were capable of common use as public, Barry J expressly excluded *torrentia* from the definition of public water, and declared that an owner could use such water at will. On this view did the lastmentioned judge elaborate in 1881, in the case of *Southey v Scombie*.[64] The result of these two decisions was that entrepreneurs were allowed to impound and divert flood water at will.

William Southey thus received legal justification not only to claim a reasonable share of the usual flow of the Brak river, but also to exclusively utilize the regular freshets and floods which occurred after rain and which often caused a significant run-off. But as his

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61 Vide Voet 43 8 12.

62 Vide *Utilization of flood water* Parts I, II. That such farmers also experienced a fair quota of envy and jealousy, is not to be doubted, and is evidenced by litigation concerning flood water utilization, which is discussed infra (352 et seq).

63 1880 1 BAC 5.

64 1881 1 EDC 286.

assets multiplied and his farm developed and his welfare flourished,[65] so did the envy of his brother Charles, pursuing similar welfare. Charles Southey owned a riparian farm bordering that of William Southey, and his complaint was that his brother's selfish utilization, whether lawful or not, of the water of the Brak river bereaved him of his reasonable share. In the subsequent court case of *Southey v Southey* in 1905,[66] William Southey relied on the distinction which Barry J drew between rivers with a usual flow and dry rivers, where only the firstmentioned were perennial and thus apportionable.

Maasdorp J was however confronted by the problem that the Brak river had both a usual flow (viz. springs occurring in the channel) *and* a flood-flow (regular freshets). He reasoned that it was not possible to distinguish between these waters in one channel, and that therefore, when water flows in a known and defined channel, it is part of the perennial river, irrespective of whether it was derived from rain, springs, freshets or floods. This decision attained notoriety, and for two years thereafter, public reaction and confusion was reflected in a heavy flush of correspondence in agricultural, local and colonial newspapers.[67]

Objections were especially raised against the failure of the court to define what a reasonable share was,[68] as well as to the result which the decision had of suppressing farmers' initiative to control erosion and refrain flood water from uselessly running to

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[65] He was, in the neighbourhood, used as an example of how to effectively utilize flood water, irrigate fields, control erosion and stimulate ground water sources and thus springs lower down (*Utilization of Flood Water* 5 et seq).

[66] 22 SC 650.

[67] Viz. *The Cape Argus, The Cape Times, The Field, South Africa, Farmers Advocate, Farm and Stock, The Midland News* etc. In the leading article which appeared in *South Africa* on 16 February 1907, the confusion was expressed as follows : "He [Charles Southey] won, and the law has been established that a man who makes a million blades of grass grow where none grew before is a law-breaker, and consequently an enemy to his fellows" (*Utilization of Flood Water* 155).

[68] "To catch the flood he must have a large furrow and costly irrigation works, and if he is only to be allowed to use a portion of the flood, it is not worth his while to use it at all" (*Cape Times* 1906).

the sea.[69] Claims were made for immediate legislation to rectify the injustice which had been done to the irrigation practice.[70] The objections did not fall on deaf ears, and on 17 July 1906, during a debate in the House of Assembly on an Irrigation Bill, attention was given to the consequences of the *Southey* case, and it was proposed that the question of codification of irrigation laws be referred to a Commission of Enquiry, so as to eventually exclude flood water from the allocation mechanism of the act.[71]

2.5.1.2. Legislation

2.5.1.2.1. The 1906 act

The Irrigation Act 32 of 1906 came into effect on 21 August 1906, to consolidate and amend the laws relating to irrigation and the utilization of streams. In the act, a distinction was drawn between perennial and intermittent streams. While a perennial stream was a natural stream which flowed for the greater part of the year in a known and defined channel, an intermittent stream was a stream into which natural surface drainage water (ie. rain water) flowed. Although the distinction was not altogether clear, it seemed as if it was based on the perenniality of the sources, as was done by Barry J in the cases of *Van Heerden v Weise*[72] and *Southey v Schombie*,[73] ie. in order to

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[69] "What a rude awakening we have had - how our plans for improving this drought-stricken country, like castles in the air, have all vanished" (From a paper read at the Cradock Farmers' Association Meeting in January 1906).

[70] *Utilization of Flood Water* 115, 116, 123, 129, 154, 156-7.

[71] *Utilization of Flood Water* 142-143. It was however argued by Maasdorp "that people were under the impression that the judgement in the [*Southey*] case interfered with the use of flood water, forgetful of the fact or not realising the point that it was flood water in a *perennial* stream that was being adjudicated upon, and not an *intermittent* stream at all"

[72] 1880 1 BAC 5.

[73] 1881 1 EDC 286.

distinguish flood rivers from seepage rivers.[74] Perennial streams were subject to reasonable rights of beneficial use of riparian owners, while intermittent streams could be impounded and diverted by owners at will.[75] The act however also made provision for proprietary rights in respect of rain and surface water (before it reached streams), and exclusive rights of use of spring water. Furthermore, it was pointed out by Juta, that the two definitions did not exhaust the concept of "streams", as they were meant to do,[76] and, moreover, that it did not totally match with the courts' distinction between public streams and private streams.

It is clear that the legislature, intending to specifically subject flood water to rights of exclusive use, intermixed the terminology and definitions used by the courts to finally attach definitions to water which subjected water to five different allocation rules.[77] In 1908, codification of the water law was attempted in the Transvaal, where a clear attempt appeared to address the question of flood water. A similar distinction in respect of the status of water was drawn. Spring water was subject to exclusive rights of use.[78] Rain water was subject to proprietary rights.[79] If any of these two kinds of water joined a public stream, it was public water and as such subject to a preferential order of use.[80] Water which remained in a stream after all the riparian owners have been served, was

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[74] Cf Hall *Hall on Water Rights* 70 who is of the opinion that "intermittent" streams received recognition as public streams (with reference to s 57 (sic)). Et vide 71, where the author, in spite of the terminology, accepts the common law distinction between private water and public water. The act only makes sense if the common law distinction is ignored, and private streams are seen as flood rivers, while public streams are rivers derived from seepage water (s 6).

[75] Section 7.

[76] Juta *Water Rights* 195.

[77] Juta *Water Rights* 5, 31 et seq. This apparently frustrated the courts. In 1910, a dispute was decided on perennial and intermittent streams without a single reference to the act (*De Wit & Vivier v Swart* 1910 AD 239).

[78] Section 44(1).

[79] Section 44(2).

[80] Sections 45, 46.

surplus water and could be allocated or stored according to section 47 or 48. No mention was made of flood rivers.[81] One of the reasons could be the fact that the typical Karoo dry rivers did not occur so frequently in the Transvaal.

2.5.1.2.2. The 1912 act

In the Union Irrigation Act of 1912, a clear distinction was, at last, drawn between flood rivers (surplus water) and seepage rivers (normal flow), ie. those derived from irregular freshets or heavy rain,[82] and those derived from more consistent sources, such as springs, seepage, melting snow, the steady drainage from swamps, vleis, natural or indigenous forests etc.[83] Although the Cape Act raised the initiative for this distinction, only here was it clearly defined and released from its interminglednes with the distinction between public and private water. Public water and private water was separately defined, and normal flow and surplus water represented different quantities of public water, distinguished for purposes of water distribution. Surplus water was subjected to owners' wilful utilization, which included rights of impoundment and diversion. This act finally overruled the decision in *Southey v Southey*,[84] (at least as far as such a conclusion could not be made from the 1906 act).

2.5.1.2.3. The Water Act of 1956

The Water Act of 1956 adopted the concept in principle, but again muddled it by confusing terminology and organisation. It is submitted that the subtle adaptation of the common law principles of a distinction between public water and private water to South

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81 Cf Hall *Hall on Water Rights* 72, 77 who is of the opinion that flood rivers are related to surplus water.

82 Section 10(1).

83 Section 10(2).

84 1905 22 SC 650.

African practical conditions, was an unnecessarily painful process. The original Roman law distinction between public and private water was based on a distinction between regular flow and flood water, and it was not necessary to twist the definitions to suit our conditions. In the end, the act once again basically distinguishes between *perennia* (normal flow), *torrentia* (surplus water) and *rivus* (private water), and the distinction is still administratively based, and not founded in the law of things. All running water is still *communia*, subject to government control (ie. the allocation mechanism of the act, instead of praetorial interdicts).

2.5.2. The status of normal flow

2.5.2.1. "In relation to a public stream"

Although public streams are often subject to floods, while also experiencing regular flow for the greater part of the year (however weak), the legislature expressly excluded this regular flow in streams of which the water was not capable of common irrigation. The term "normal flow" is therefore a concept which only refers to that part of a natural stream of water flowing in a known and defined channel and being capable of common irrigation, which flows visibly and can be used for beneficial irrigation without storage. It is however not clear what the phrase "in relation to a public stream" was intended to mean. If "normal flow" was merely defined as the quantity of public water actually and visibly flowing in the bed of a public stream, without the introductory phrase, much more clarity would have existed, and yet no room for an interpretation of the definition of normal flow as applicable also to private water, would have existed. The possibility of confusion whether streams which contain private water also have a normal flow, can be argued to occur, due rather to the lack of water-tight definitions of the terms "public water" and "private water" and "public stream" than to the inclusion of the phrase "in relation to a public stream" in the definition of "normal flow". It is thus submitted that

the phrase merely serves as a starting point for confusing arguments regarding the applicability of the definition.[85]

2.5.2.2 *"Actually flowing"*

The definition of "public water" refers to water which, inter alia, flows in the bed of a public stream. A public stream is, furthermore, a stream of water of a certain volume, flowing in a specified channel. Moreover, private water is water which falls, rises, drains or is led onto land. All three these forms of water *actually* exists, and *actually* flows, and nowhere did the legislature find it necessary to specify that such water *actually* flows. Especially if it is concluded that normal flow was intended to be nothing else than public water or a public stream, it is hardly necessary to state that normal flow must *actually* flow. If it does not *actually* flow, what is it then doing? If the adverb "actually" refers to the verb "flowing", it is submitted that the verb alone would have sufficed, because water can hardly *flow* without flowing *actually*.[86]

A public stream is defined as a stream of water which flows in a defined channel "whether or not such channel is dry during any period of the year". When the channel is dry, there is no question as to the status of the water therein, and the only reason for including that phrase was to finally break the back of the perenniality test for the status of water. It can therefore not be argued that the river, during dry periods, will still qualify as a public stream and that the term "actually" in the definition of "normal flow"

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[85] It was directly taken over from the 1912 act, but there the term "public water" in the next phrase did not occur. Vide De Wet "Water" 36 who suggested that the term "public water" in the definition should rather be scratched out, for the same reason : "*Die eerste 'openbare' is nie maar net oortollig nie, maar ook misleidend want dit skep die indruk dat daar, behalwe openbare water, ook private water in 'n openbare rivier kan loop, en dit is tog strydig met die omskrywing van 'openbare water'*". It is submitted that the author denies the differences between the definitions of public water and a public stream, and that he created his own definition of a public river, which is supposed to mean the channel of a public stream. The abolishment of the term "public water" would lead to an argument that normal flow could also be private water, because private water can also flow in a public stream.

[86] However, terminology in an act is deemed not to be superfluous or without meaning (*Attorney-General Transvaal v Additional Magistrate of Johannesburg* 1924 AD 421).

was added to exclude such dry rivers. In other words, how can it have normal flow if it does not even qualify as a public stream? If "public stream" was referring to the *channel* and not to the stream of water (as it is submitted that the intention was) then the term "actually" in the definition of "normal flow" would have been of more practical value. Because then a public stream (meaning the river itself, with or without water) does not always contain water, and yet remains a public stream. And then "normal flow" refers to such a public stream during non-dry periods. The confusion of the concept of "actually flowing" therefore rather lies in the confusing definition of "public stream", viz whether it refers to a channel or to the stream of water flowing in the channel.[87] It is however nevertheless submitted that the intention of the legislature will hardly be impeded if the term "actually" is removed from the definition of normal flow.[88]

2.5.2.3. *"Visibility"*

While the definition of "public water" contains no specification concerning the visibility or not of the stream of water, such water cannot qualify as normal flow unless it flows visibly.

De Villiers argued[89] that water was disqualified from being normal flow only when it was *nowhere* visible in the course of the stream. If the water, at some point or points or for some distance or distances, appears above ground, it could qualify as normal flow for the whole course of the stream. De Wet, on the other hand, is of the opinion that the term "visible" ought to be interpreted literally, so that water ceases to be normal flow when

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87 Cf *Viljoen v South African Raillways and Harbours* 1967 Vos Rep 367 376, where it was decided that the water in a stagnant pool qualified as normal flow. This was however in an attempt to justify that the water did not qualify as surplus water, and the status of the water as public or private was thus not given the necessary consideration.

88 Cf De Villiers "Normal flow" 265 who is of the opinion that the flow in a river differs from time to time and from place to place. The actual flow is thus the volume of water which physically flows at point A at time X. Normal flow can never be a mean volume or a constant figure. If it does not have a flow, there is no normal flow, although the river has a *usual* flow of N cumec.

89 With reference to the 1912 Irrigation Act where the terminology was similar.

it disappears beneath the surface.[90] The visibility of public water at a certain point in the course of the river therefore does not render the whole river as one containing normal flow.[91]

It is however agreed that "visible" ought to be interpreted in its literal sense. This will mean that normal flow is a flow at a point, and as long as the flow is visible at the point where the normal flow is to be determined, the condition of the definition is complied with. If the flow sinks away at point X, there is no normal flow at X, and the underground water may be surplus water and dealt with according to the rules of surplus water. If it reaches the geological strata lower than that of the river, it is dealt with according to the rules pertaining to ground water.[92]

2.5.2.4. *"A system of direct irrigation by furrows or otherwise, without storing"*

"Direct irrigation" means that the water should be flowing in such a way that it could be diverted by whichever means straight to the crops, without having to store it or collect it in a usable volume.[93] It is submitted that the phrase could have been shortened to only read "for irrigation without storing", without sacrificing the meaning thereof. This would mean that as soon as the water has to be stored to make it of any use for irrigation, it does not qualify as normal flow anymore. This could happen when the volume of the water is too small or large; or when the water flows past a point where the

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90 *Opuscula* 40.

91 Et vide *Viljoen v South African Railways and Harbours* 1967 Vos Rep 367; Thompson "Waterreg" 20; Vos *Principles* 12.

92 Vide Chapter IV.IV infra. Et vide De Wet *Opuscula* 40.

93 Cf De Wet *Opuscula* 42 who is of the opinion that the gathering of water in a *leidam* does not imply storage. Et vide *In re Mapochsgronden* 1917 Krummeck Rep 167, where the judge held that storing means the preservation of water in the season of abundance for times of scarcity.

existence of normal flow is to be determined, at a time when irrigation is not practised; or when the water requires some qualitative modification to make it useful for irrigation.[94] Surplus water will therefore be any public water which has to be stored first (for whichever reason, being it quality, quantity, temperature or the time when it passes a point) before it can be used to irrigate.

2.5.2.5. *"Beneficial irrigation"*

It can be argued that beneficial irrigation means that only so much water passing a point is normal flow which is necessary to make crops flourish in order to yield an economical harvest.[95] Over- or under-irrigation is not beneficial irrigation. If the flow is therefore of such a quality or quantity that the use thereof would result in the failure of the harvest, or in a lower quantity or quality of produce than would be reckoned economical by a reasonable farmer, the stream does not contain normal flow, but surplus water. If, on the other hand, the stream at a specified point contains more water than can be used for beneficial irrigation, ie. if the farmers downstream will probably drown their crops if each used a fair share, the whole flow cannot be said to be normal flow.[96] In terms of the definition, it seems as if only that quantity of the stream which is sufficient for irrigation, qualifies as normal flow, while all the water over and above such quantity is

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[94] *Sundays River Irrigation Board v Van Rynevelds Pass Irrigation Board* 1921 Hall Rep 65.

[95] According to De Wet *Opuscula* 44, this quantity of water is determined with due consideration to the requirements of all irrigators downstream of a point. "Irrigation" in this sense does not necessarily refer to the irrigation of crops only, but also to veld-flooding : "...and it is undoubtedly becoming more and more important in the development of the country that all the different grass crops whether artificial or natural should be irrigated" *(Smartt Syndicate Ltd v Certain Riparian Owners* 1921 EDC 547). Et vide *In re Kleinberg River* 1918 Krummeck Rep 235; *Sundays River Irrigation Board v Van Rynevelds Pass Irrigation Board* 1921 Hall Rep 65 (in this case it was held that veld-flooding could only be allowed if it will produce substantially beneficial results without waste); *Ex parte Rand Water Board* 1916 Krummeck Rep 102 (in this case it was held that the water of floods could lawfully be utilized to fill up *seekoegate*); *Union Government v Zak River Estates* 1918 Krummeck Rep 195; reg 19 of the parliamentary regulations in terms of the 1912 Irrigation Act.

[96] An example of such a stream is the Assegaai river at Piet Retief.

surplus water. Surplus water is therefore all the water at a point other than that which is required for beneficial irrigation by downstream irrigators.[97]

2.5.2.6. *"Riparian land"*

The legislature did not specify that to qualify as normal flow, the water must be capable of *common* irrigation. If it is therefore ascertained that the water at point X can be used for irrigation without storage, but on a single piece of land only, it still qualifies as normal flow, yet then it qualifies as private water as well. It can be argued that this is why specific reference is made to a "public stream" in the definition of normal flow, where a public stream has to be capable of *common* irrigation. But suppose that, after a heavy downpour, a strong stream comes down in a river channel. The water thereof is capable of common irrigation if it can be impounded. A small volume can however be diverted without storage, but that volume is only enough for irrigation on a single piece of land because, say, only one of the three riparian owners on the stream has a diversion furrow which can divert a part of a fast flowing stream.[98] To declare such diverted part of the water normal flow, would be ridiculous, because it would imply that the owner who diverted it, is entitled to a reasonable share thereof only, in terms of section 9(1). Moreover, such water no longer complies with the definition of a public stream, but is private water.

It is therefore submitted that, instead of repeating the term "public" three times during the first phrases of the definition, the term "common" could rather have been employed in the last phrase. It is moreover submitted that normal flow was intended to be nothing

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[97] Cf *Viljoen v South African Railways and Harbours* 1967 Vos Rep 367 : *"Die normaalstroom behou sy identiteit selfs wanneer die stroom so swak word dat dit in 'n leidam opgegaar moet word, om as sulks nuttig gebruik te kan word"* (376). It is submitted that this view is not in accordance with the strict interpretation of the definition.

[98] Eg. the second weir in the case of *Southey v Southey* 1905 22 SC 650.

other than visible seepage which can be used for common beneficial irrigation without storage.

2.5.2.7. *The source*

In sections 10(1) and (2) of the 1912 act, "normal flow" was defined in similar terms than in sections 1 and 53(2) of the 1956 act. The reason why the definition was, in the 1956 act, spread over two sections, is not altogether clear. According to the provisions of section 53, water qualifies as normal flow only if a portion of the actual and visible flow is derived from springs, seepage, melting snow, drainage from wetlands and other like sources. It seems as if irregular or unsteady sources of supply were intended to be excluded from this list of sources. Nevertheless, it is submitted that the necessity of a steady source of supply can be directly incorporated into the definition of "normal flow" without having to enlist a series of possible sources in a separate section, for which list the criterion is not clearly stated, but ought to be ascertained by interpretation of the intention of the legislature.

It is submitted that the necessity for prior storage ought to be the only criterion, irrespective of the source. If a good rainy season causes an otherwise dry river to flow for a period of time to such an extent that irrigators can divert and irrigate from the stream without storage, that flow ought to be normal flow, available for common use. It must be remembered that the purpose of the distinction between surplus water and normal flow is the expense and effort involved in utilizing surplus water - an owner who is therefore in a position to construct the necessary water works to intercept floods, is to be compensated therefor by granting to him the exclusive right of beneficial use of that water, because he also thereby contributes to the conservation of water and the control of silt-discharge and erosion.[99] Water which is however readily available for

[99] In *Southey v Southey* 1905 22 SC 650, the stream in question used to flow for a period of two months after good rain.

irrigation without storage, has to be shared. For these reasons, the necessity to store water should be the only criterion for a distinction.[100]

2.5.3. The status of surplus water

According to the definition, surplus water is all public water which does not qualify as normal flow. This can include :

* Water derived from some irregular source of supply, eg. heavy seasonal rain.
* Ground water.
* Stagnant water in pools, dams and wetlands.
* Water which, due to its quality or quantity cannot be used without prior storage.
* Water of which the flow is too weak for *beneficial* irrigation.
* Water of a public stream impounded in a dam.

2.5.3.1. The distinction between surplus water and private water

It had been submitted earlier that the distinction between surplus water and private water ought to be considered. Private water is water which naturally falls, rises, drains or is led onto land, which cannot be used for common irrigation. Examples are :

* Rain water gathering in small rivulets, on its way to public streams.
* Spring water which oozes through the ground and runs down to rivers in mountain streams.
* Springs in the beds of public streams which, unless allowed to join other such springs, cannot be used for common irrigation.
* Water pumped from underground.

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[100] But, on the other hand, it often happens in modern times that several riparian owners have flood water works, and consideration ought to be given to the creation of a mechanism which fairly apportions surplus water between these riparian owners.

* Water flowing in areas where irrigation is statutorily prohibited.
* Water unfit for irrigation due to qualitative conditions.
* Seepage in the bed of a public stream which cannot be used for irrigation even on a single piece of land without storing.
* Water which gathers in a pool in the bed of a public stream.

It is significant that several of these examples seem to overlap with the examples of surplus water given supra.[101] It is thus necessary to ascertain the criteria for the distinction between the two concepts.

2.5.3.1.1. The history of the distinction

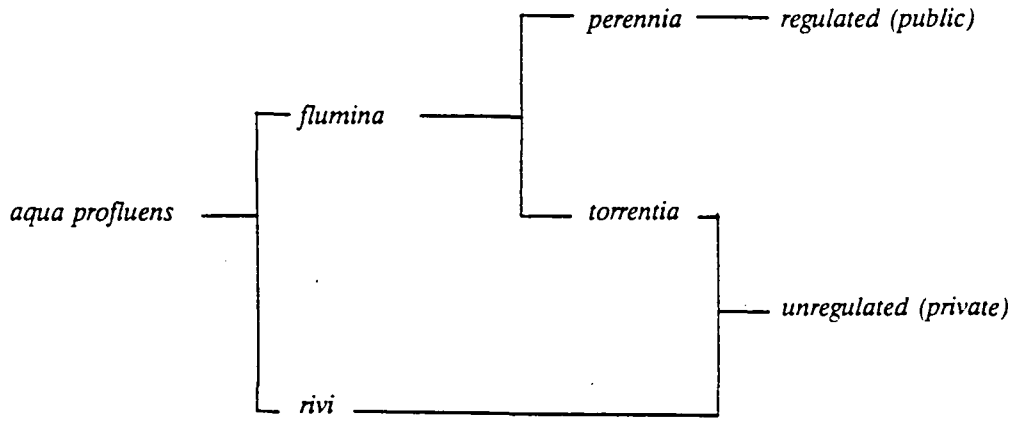
In Roman law, water was, for administrative reasons, divided into rivers (*flumina*) and streams (*rivi*). The distinction was based on the grounds of size (*magnitudo*) and the common opinion (*existimatio circumcolentium*). Moreover, rivers were divided into rivers with a regular flow (*perennia*) and flood rivers, which had a seasonal flow (*torrentia*). And finally, rivers were divided into those which were public, and those which were not. Perennial rivers were public. In the majority of cases, the praetorian interdicts concerning water utilization were only applicable to public rivers, the reason being that these interdicts were mainly concerned with navigation and fishing, for which perenniality was required. Neither *rivi* nor *torrentia* were subject to heavy competition for either navigation or fishing, and could therefore be used by everyone at will.[102] In cases where the common utilization of these rivers was relevant, the praetor would however also issue interdicts to regulate such use. The utilization of flood rivers was however of little economic importance, firstly due to underdeveloped technology concerning the

[101] 364 supra.

[102] The same applied to all private places. It ought to be remembered that these were not *res privati*, but *res communes*, but everyone could use the part thereof which occurred on his land as if it was a private place. If his use however harmed others in the use of their shares, the normal remedies concerning injury would have been available.

impoundment of flood water, and secondly due to the lack of large-scale irrigation. The division of water in the law of things did however not exclude the possibility of state control of *torrentia* whenever it was necessary.

It is submitted that no difference existed between *flumina privatae* (ie. private streams) and flood rivers. Because Roman water law was mainly an administrative system, private water was merely a term to refer to all water which was left to unregulated common use. This included not only weak trickles of water, but also flood rivers. Although these two forms were thus recognized and named separately, they were not distinguished as far as the water allocation mechanism was concerned.



In Holland, due to its climatological conditions, little necessity existed to regulate the common use of flood rivers. Voet was the only author who spared a phrase in describing non-public streams, by saying that private streams were those which ceased to flow in the summer, ie. seasonal rivers. Others described public rivers as perennial, navigable, large, or refrained from defining it or distinguishing it from private water.

In early South African law, no distinction was drawn between public water and private water or between seepage and flood rivers. When irrigation farming developed along the banks of Cape rivers, regulation of common water utilization became necessary. The courts re-introduced the Roman law distinction between public and private water, in an

attempt to determine water rights. It was held in *Retief v Louw*[103] that a distinction existed between spring water (*res privatae*), rivers (*res publicae*), and perennial streams (*res communes*). Although no mention was made of seasonal rivers, the distinction between public and private water was vested in the law of things. This distinction was elaborated on by subsequent decisions, but, in due course and in accordance with practical requirements, the typical South African river was considered in this distinction. It was realised that perenniality in the traditional sense of the word could no longer be the criterion, because that would exclude too many South African rivers from common use. In *Vermaak v Palmer*[104] it was decided that if only a river flowed for the greater part of the year, it could qualify as a public river. Eventually it was held that only mere trickles of water were excluded, which dried up not only in the course, but also at the sources thereof. Although flood rivers were not mentioned, this criterion tended to exclude them from the definition of public water, because flood rivers usually had no perennial sources, and did not flow for the greater part of the year, but often only for a few days or months per year. Another qualification was added, viz. that even if a stream had no perennial source, it could qualify as public in cases of long user. Flood rivers could therefore be public if lower owners could make use thereof and had done so for many years. If they however allowed it to flow by, a single owner who could utilize it could do so exclusively, because then it was private water.

It thus seems as if the courts wished to develop a formula for the appropriation of flood water in dry rivers, but were uncertain as to whether they should be classified under private water or public water. While continuously extending the definition of public water, so as to include more and more dry rivers, they simultaneously restricted the possibility of common use thereof by stating that the source should be perennial or that it should be subject to long user. The typical Karoo river, which experienced only short-lived and heavy floods, was still excluded from common use. In 1880, the court expressly

[103] 1874 4 Buch 165.

[104] 1976 6 Buch 25.

excluded seasonal rivers from public streams, and the perenniality test revived once again.[105] According to such a test, flood rivers contained private water. But the court evaded this logical result of its new test, and decided that dry rivers, which flowed only once or twice a year, were perennial. The court however wondered why this was so, but refrained from drawing the logical conclusion. In terms of this decision, flood rivers were thus public rivers, although not in compliance with the criterion of perenniality. This meant that they were subject to the preferential order of common use which was applicable to public streams. For the first time, a clear (yet unsound) distinction between private water and surplus water was drawn.

Barry J, in the same decision, however sorted flood rivers under private water, by mentioning *torrentia* in the same breath with weak trickles of surface drainage. This he confirmed in *Southey v Schombie*,[106] which was the first case in which the question of the status of flood rivers was directly addressed :

> "On the other hand, a dry river, or a natural well-defined channel, which only receives periodically surface drainage, and no more, is not a public river; nor can a river or streamlet which, breaking out on a man's land, is too weak to be applied to a common use with the lower proprietors, be termed a public river. Such a streamlet, though usually or constantly flowing at its source, has no well-defined course or channel, and struggles along only to be lost or absorbed where it rises or is at most useful to the owner of the land where it bursts out, who may therefore utilize and retain it all for his own purposes"[107]

With this decision, the court classified *torrentia* with other forms of private water, without any distinction. The criteria were capability of common use and a well-defined channel. If a stream of water could not be used by riparian owners in common (whether it was because of the rapid flowing nature thereof which made control impossible, or because

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[105] *Van Heerden v Weise* 1880 1 BAC 5.

[106] 1881 1 EDC 286.

[107] 294.

the volume was too small to make it of common value), it was private water. With this definition, Barry J returned the position to that of Roman law, where common use was the criterion to exclude certain streams from state control. With this he also tempered the perenniality test, which was stretched to its ultimate limits to cover dry rivers, in order to apply the allocation rules to more South African streams. The exclusion of dry rivers from the definition of "public streams" was more practical, because the preferential order of water rights was not suited to the utilization of flood rivers, due to problems in managing them during those years. The effect of this decision as far as the distinction between private and surplus water was concerned, was that it negated any such distinction as far as water rights were concerned.[108]

In *Southey v Southey*,[109] flood water was once again removed private water, and sorted under public water. This was however in cases where such water flowed in the channel of a perennial stream. The Brak river was a public stream, which was once in a while flushed by freshets occurring after good rain. When the usual flow of a river or stream was too weak to be of common value, it was private water, as were the floods coming down in the channel.[110] This did not really solve the problem of dry rivers, because many dry rivers experienced heavy annual floods yet had no regular flow which could be used in common. These channels were often enlarged sluits (dongas), and the floods carried masses of valuable topsoil along. Flood water thus became attached to both forms of water, viz. public and private water, depending on where the flood occurred. The criterion was no longer the capability of common use. A flood in the channel of a public stream could be of the same volume than one in the channel of a private stream, and both could be similarly difficult to appropriate, yet the firstmentioned was public water,

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[108] "In a public river the volume of water need not be constant or large, but it must be something more than mere surface drainage to avoid being a dry river (*torrentia*) and run during the greater part of the year in a definite channel, and in such a quantity as to be capable of being enjoyed by the riparian proprietors in common" (295).

[109] 1905 22 SC 650.

[110] 676-677.

and the lastmentioned was private water. Therefore, a riparian owner who constructed flood weirs and diversion furrows in a dry river, could utilize all the flood water he could gather, but in respect of a public stream, ie. a river with a regular flow (apart from the freshets) he was not allowed to do so, but he had to let the water pass and appropriate only a reasonable share. To do this, was probably less worth the while than not constructing water works at all.

In terms of the 1906 act, perennial streams were distinguished from intermittent streams. Perennial streams flowed for the greater part of the year in known and defined channels, and could be applied for common use. Intermittent streams contained natural drainage water but flowed for the lesser part of the year or could not be applied for common irrigation. This act referred separately to spring water and surface drainage which had not yet joined a stream.

Private water no longer existed as a defined class of water opposed to public water. Water was either spring water, a perennial stream, an intermittent stream or surface drainage. "Perennial streams" were similar to what the courts defined as public water, for which a known and defined channel, capability of common use and a flow for the greater part of the year, were required. What the courts called private water, viz. the water which did not comply with the conditions of public streams, was now divided into flood water, spring water and rain water, each subject to different water rights (viz. beneficial use, exclusive use and ownership respectively).[111]

In the 1912 act, the distinction between public and private water revived, but flood water (now surplus water) no longer sorted under private water, but under public water.[112] To avoid the application of allocation rules applicable to public water in the sense of normal flow to surplus water as well, a separate set of water rights was enacted, specifically

[111] Sections 4, 5 and 7.

[112] Section 10.

applicable to surplus water.[113] The purpose of this development was probably to give recognition to the need to regulate the use of flood water (as distinct from spring and rain water which required little control measures[114]) because of the increasing role which surplus water played in the South African irrigation practice, due to the ability to successfully impound flood water in large dams.[115] It is significant that water rights in respect of flood rivers were not adapted - the water of such rivers was still available to owners for beneficial yet exclusive use, diversion and storage. Sections 17 and 98 et seq however made provision for the state to construct storage works, for which purpose it could expropriate land and in which it vested rights of ownership. These were the first steps towards the state's assumption of control of surplus water, and explains why private water and surplus water were now finally separated in the water law.

The provisions concerning surplus water were drawn from the 1912 act, and incorporated into the 1956 act. In this act, the intention to apply state control measures to surplus water as well, due to its irrigation value, was realised by extensive powers, which vested in the state, to (inter alia) impound surplus water, and then to apportion such stored water for common irrigation purposes. This increased state interference in the utilization of flood water, justified its removal from private water since 1912, leaving only streams which were not capable of common use on more than one piece of original land to remain in this class. (But, on the other hand, state control was also intensified as far as private water was concerned, with a variety of provisions regulating its use). Large storage works however also intercept the normal flow in public streams, since natural rain and spring water which flows down in small rivulets but which is not yet capable of common irrigation, are the main sources of normal flow, as envisaged in section 53(2). The impoundment thereof reduces the normal flow of a public stream,[116] and increasingly

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[113] Section 14.

[114] These are mentioned in section 8 only.

[115] This is reflected in s 15.

[116] Department of Water Affairs *Management of Water Resources* 10.12.

creates dry rivers carrying surplus water only, which the act now intends to conserve by storage.

The conclusion is that rain water and spring water are the two main sources of water for irrigation,[117] but also for other purposes such as urban and industrial purposes. While spring water is usually responsible for the regular flow of streams, rain water is responsible for floods and freshets. Spring water - which seldom independently yields a stream of water capable of common use - is classified as private water in terms of the act, and can be impounded and utilized by the owner on whose land it runs. When it is not cut off, but left to flow down to join others and finally carry sufficient water for common irrigation, it is a public stream, and more specifically the normal flow of a public stream. Rain water which falls on one's land can also be utilized exclusively in this way. If such rain water is however left to run down to reach the channel of a public stream, it is surplus water, but it can still be impounded and used exclusively, as long as the use is beneficial.

The conclusion is that, in a long and haphazard development process, surplus water and private water, which were traditionally synonymous, came to be separated, so that surplus water is currently defined as a form of public water.

It was argued supra that, in terms of the definitions of the terms "surplus water" and "private water", and in terms of the water rights in respect of these two kinds of water, overlapping occurs to such an extent that a question as to the justification of the distinction between private water and surplus water can rightly be raised. In the light of the historical development of the distinction, the main motive for separating surplus water from private water, may appear to be to apply state control to the use of surplus water, since improved technology made flood water as capable of common use as regular flow. Several factors however negate this motive :

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[117] Department of Water Affairs *Management of Water Resources* 6.27.

From regular amendments of the Water Act, as well as from departmental policy declarations,[118] it is clear that private water is no longer regarded as unregulated water. In an arid country like South Africa, the control of common use of all water, irrespective of its volume, is important.[119] The erstwhile proprietary rights were gradually broken down to a statutory preferential right of beneficial use, which reflects the policy of regulated water use. This right of use is similar to that applicable to surplus water, to such an extent that it is not always easy to determine the difference, especially in the light of the overlapping of the definitions of these terms.

It is submitted that ever-tightening statutory control measures in respect of all water negates the necessity for a distinction between types of water sources as far as their status, yield, nature or sources are concerned. The allocation mechanism should rather make provision for the variety of practical conditions in a country where rivers differ largely in their flow conditions, and for basins in the large,[120] than for a formal distinction between the status of water sources, founded on historical nomenclature. Since the majority of streams in South African rivers, however negligibly weak or however strong, are by modern technology to a greater or lesser extent impoundable,[121] more emphasis ought to be placed on the fair appropriation of impounded water, than on the nature and status and origin and yield of such streams in their natural run-off. It ought however to be remembered that natural flow conditions might be important for the conservation of water, and impoundment should therefore not be over-emphasised.

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[118] Department of Water Affairs *Management of Water Rersources* 10.31; *Assembly Debates* 28 April 1972 6174.

[119] Mountain catchments and sources ought to be controlled and protected in particular (Department of Water Affairs *Management of Water Resources* 10.12)

[120] Department of Water Affairs *Management of Water Resources* 6.9, 10.5.

[121] Department of Water Affairs *Management of Water Resources* 6.27.

2.5.3.1.2. The distinction between normal flow and private water

Private water is not capable of common irrigation. It is mostly derived from spring water and rain water which flows in small streams on its way to larger rivers. This water is often diverted onto a single piece of land for irrigation and domestic purposes. Normal flow is that quantity of water which flows in a public stream, which can be used for direct irrigation. It is not required that such water should be capable of common irrigation. Therefore, if in the channel of a public stream a quantity of water passes at a point which is sufficient for direct irrigation, it is normal flow. That quantity may however not be diverted by the riparian owner on whose land the specified point occurs. The owner may divert a reasonable share thereof only. One will then have to examine the channel : if it is a known and defined channel in which a stream capable of common irrigation used to flow, but in which a weaker stream currently flows, it is normal flow. But if the channel usually carries nothing more than such a weak stream, it is probably private water. The problem is that, in terms of the definitions of "private water", "normal flow", "public stream" and "public water", private water may be flowing in the channel of a public stream. It is submitted that a distinction between normal flow and private water which is based on the size of the channel, is not water-tight. It is moreover submitted that unless the term "common" is inserted in the description of "normal flow", it will hardly be possible to determine whether a weak stream is normal flow or private water, yet the rights of diversion differ materially.

2.6. CONCLUSION

In the light of the above comments regarding the classification of water, it is submitted that the Roman law classification, in terms of which the distinction between public and private water was purely administrative, while all running water had a similar legal status, can still be of value today. This was also recommended by Ham Hall in 1898, whose

recommendations were however largely ignored during the subsequent codification process.

As far as the legal status of water in Roman law was concerned, all running water was *res communes*, which meant that it belonged to no-one in ownership, but to each and all in rights of reasonable use, while the state had control over such common use in cases of competition and disputes. As far as the classification of forms of water sources was concerned, public rivers were perennial ones, subject to heavy competitive use, while private rivers were exempt from state control and were left to unregulated use by all. Flood rivers, due to a dearth of technological know-how in utilizing the water thereof, were included in the class private water, to either flow down to the sea or to be utilized by someone who had the means or know-how to impound and divert it. The criterion for the distinction was not perenniality, but the suitability of the stream for common use and the extent to which it was subject to competitive use and disputes. Roman practice proved that - consumptive use not being a major purpose of river utilization - perennial and navigable rivers were the ones most subject to common competitive use, and perenniality was the accepted practical norm to apply the distinction. This norm however varies from country to country, depending on the climatological and hydrological conditions. In Holland, for instance, only navigable rivers were subject to competitive common use. In South Africa, there are hardly any water sources which are not in some way subject to competitive use and thus often the object of disputes, due to arid conditions and the relative scarcity of water. Even flood rivers and seasonal rivers can and have to be utilized in order to provide the population with water for consumptive purposes. Therefore, although the criterion for the distinction between public and private water, ie. suitability for common use, remains intact, the practical application thereof is far removed from that of Roman law, so that in practice there is hardly any source which can be afforded to be sorted in a class of uncontrolled water.

To obtain such an administrative distinction between forms of water in South Africa, the current distinction, based on size, the nature of the sources, the capability of the stream

for irrigation etc, does not suffice. Moreover, impounded water, which currently does not comply with any of the definitions, ought to be as distributable as running water. In times when the storage of surplus water was usually attainable by the rich and ingenious only, it was fair to compensate them by allocating to them exclusive rights of beneficial use of surplus water. In modern times, however, huge reservoirs can be constructed to impound the water of the majority of rivers, and not only flood water is so impounded but in fact the whole flow of the stream.[122] Impoundment should happen in the most suitable areas, and the water so impounded should be available for common use in reasonable shares, irrespective of the sources of such water. The principle of impoundment is to control flood water in the public interest, and it is difficult to see why this water, which is now readily impoundable by individuals due to technological progress, is excluded from common use in cases where it is stored by individuals. Water should be regarded from an integrated viewpoint, and if impounded, it ought to be released, diverted and appropriated by a fair system with the necessary financial implications, irrespective of the steadiness of its origin or its ability to be used with or without storage.[123]

* It is submitted that for all practical purposes the class "private water" may be abolished, so that all water has a similar status as *communia*, subject to state control.

* It is submitted that the current definitions of the terms discussed supra may be replaced merely by a definition of surplus water, so that surplus water is fresh water at a point which occurs in the rainy season and which exceeds the maximum quantity of water occurring at that point in the dry season (ie the low flow).

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[122] Cf the decision in *GJO Boerdery Ondememings v Bloemfonteinse Munisipaliteit* 1988 4 SA 75 A, where it was held that water did not lose its status due to intermixing with other water.

[123] Et vide *Great Fish River Irrigation Board (Grass Ridge)* 1927 Hall Rep 177.

CHAPTER IV.III

WETLANDS

"We all know what a pan is : it is a depression in land
in which water has collected, either directly, by falling from
the clouds, or indirectly by having fallen
on the surrounding country and having been
drained by gravitation into the pan"

Wessels J

Breyten Collieries v Dennill 1912

CHAPTER IV.III

WETLANDS

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WETLANDS

3.1. DEFINITION

A wetland was defined by the Ramsar Convention[1] as an area of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at the low tide does not exceed six metres. For purposes hereof, the term "wetland" will be used to refer to stagnant fresh water resources only, so as to exclude rivers and streams as well as estuaries and lagoons. It is thus restricted to inland vleis, marshes, lakes, pans, dams and impoundments.

3.2. HISTORICAL BACKGROUND

3.2.1. Roman law

In Roman law, the term "wetland", in the broad sense of the word, and in its current meaning, did not exist. *Palus* was however the name for a marsh or a swamp.[2] This did not include dams, lakes, ponds and other sources of standing fresh water. There was, however, a distinction between running water (*aqua profluens*), sea water (*mare*) and other forms of water which were specifically mentioned, such as ponds, lakes, wells, marshes and pans. This third group of water sources received little attention in the law of things and the water law. When standing water occurred in reservoirs or public water

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[1] This is a Convention on wetlands of international importance (especially as waterfowl habitat), an intergovernmental treaty which provides the framework for international cooperation for the conservation of wetland habitats. The Convention was established in 1971.

[2] Marchant & Charles 391.

works, it was classified as *res universitatis*, which meant that the water works belonged to the government body or municipality which constructed, maintained and managed them.[3] As far as *natural* stagnant water sources are concerned, Ulpian was quoted to have distinguished between *lacus* (lakes), consisting of permanent water, and *stagna*. The term *stagna*, literally meaning standing water left by the overflow of the sea or a river, a pool, pond, marsh or swamp,[4] was described by Ulpian as an area which temporarily contained standing water.[5] It therefore seems as if this term was not meant to include a vlei or marsh, but only the temporary overflow thereof, possibly due to excessive rain or inflow.[6] It can be submitted that the term *lacus* was not intended to refer to lakes only, but also to marshes and vleis, as it was described as permanent stagnant (natural) water.[7] *Stagna* and *lacus* were not expressly classified in the law of things, but they were dealt with together with rivers in a few praetorian interdicts.[8] In *D* 43 14 1 6, Ulpian said *possunt* (with reference to *stagna* and *lacus*) *autem etiam haec esse publica*. It was submitted supra that when the term *publica* was used as a verb, it had little to do with the class *res publicae* in the law of things, or with *flumina publica* in the water law, but it rather referred to the *usus publicus*.[9] This meant that, irrespective of who the owner was, the right of use of the object involved, belonged to all in common. The term *possunt* (can) indicates that the *usus publicus* was not always applicable, but the author was not quoted to have added anything else regarding the status of these water sources.

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3 Chapter III.I supra.

4 Marchant & Charles 538; Van Wageningen 2737: *"waterplas, ontstaan door het buiten de oevers treden eener rivier of door eene overstrooming van de zee, stilstaand water, poel, meer, kolk, kreek"*.

5 *D* 43 14 1 4. What is currently known as *seekoegate* would undoubtedly also have qualified as *stagna*.

6 *D* 43 14 1 4. Et vide *D* 39 3 1 2, where reference is made to marshes swollen by rain.

7 Vide Marchant & Charles who defines it as any large body of water (307), while Van Wageningen describes it as *"iedere holte ... waarin water staat"* (1653).

8 *D* 43 14 1; 43 15 1 6.

9 The contents of the *usus publicus* included sailing (*D* 43 14), the strengthening of the structure containing the water (*D* 43 15 1 6) and rights of use similar to those of the previous year (*D* 43 22). Vide Chapter III.I supra.

Neratius said that a landowner was not allowed to prevent the water oozing from marshes (*exundante palude*) to one's land by artificially diverting it to another's land to his detriment,[10] while Ulpian was of the opinion that an owner had a right to retain rain water falling on his land.[11] These texts do not necessarily advance an argument that rain water naturally gathering in vleis or marshes or lakes was *res privatae*. It seems that an owner was rather bound by servitude to receive water naturally occurring or falling on or draining onto his land, and that he could then vest a preferential right to use it, or allow it to naturally run down.[12] Another argument against stagnant water being *res privatae*, is the fact that no servitude could be granted for *aquaehaustus* or *aquaeductus* from any source of water, except from the headwaters or the spring from where it originated.[13] If it was *res privatae*, this would have been possible. The existing descriptions come the closest, in the law of things, to *res nullius* as described by Gaius, ie. belonging to no-one but appropriable by him who can effectively confine it.[14] It could however, in another sense, be viewed as *res privatae* in terms of Marcianus' classification of things, if the doctrine of *cuius est solum eius ad coelum et ad inferos* is applied.[15]

Be that as it may, such water was public in the sense that it could be used by each and all, and an owner who could confine it when it fell or occurred on his land, had the right to use it.

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10 *D* 39 3 1 2.

11 *D* 39 3 1 11.

12 *D* 39 3 1 22.

13 *D* 8 3 9.

14 *D* 1 8 1.

15 Vide Chapter III.I supra.

3.2.2. Roman-Dutch law

Voet, who regarded water bursting out of one's own ground as his property,[16] recognised a servitude of water leading in respect of such water or any other water, but not in respect of the water of wells, pools, fish ponds or lakes, which contained no running water. He thus distinguished between running and stagnant water sources, for a reason not given. It could either be because he denied a right of ownership or any real right in respect of these stagnant sources, or because they did not contain renewable water and could thus be exhausted, so that common use could not be afforded in respect of such limited sources. Nevertheless, the author did not classify stagnant water as either public or private in terms of his view of the classification of things.[17]

Huber referred to water passing one's property (*res communes*) and to rivers (*res publicae*) but never to stagnant water.[18] Van Leeuwen mentioned only water, streams and rivers, and therefore drew no distinction between running and stagnant water.[19] He classified all water as *res communes*. In *Censura Forensis*, he referred to running water which kept a continuous flow only, and divided it into his class of common property.[20] Later on he dealt with lakes, confirming *Digesta* 39 3 1 2, viz. that lakes and pools may or may not be public.[21] The author distinguished between public and private things, but also between things being public in *use* and public in *ownership*. While rivers were public in both ownership and use, the banks were public in use yet private in ownership. But lakes and pools were not classified to any further extent.

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16 8 3 6, 7.

17 Chapter III.II supra.

18 2 1 14, 19.

19 *RDL* 2 1 12.

20 *CF* 2 1 6.

21 *CF* 2 1 8.

Grotius held the opinion that lakes and other navigable rivers belonged to the united states of Holland and West-Friesland in ownership.[22] He was the only author who clearly classified stagnant water in the law of things.

The conclusion is that water rights in respect of stagnant water were, as far as the water law was concerned, of little importance in Holland, while running water enjoyed much more legal attention.[23] Grotius, regarding it as state property, was the only author who expressly dealt with lakes in the law of things. Be that as it may, there existed some agreement that stagnant water, like running water, was available for common use, subject to state control.

3.2.3. South African law

The question of standing water was not very contentious in early South African law. In 1881, in *Landman v Daverin*,[24] a dispute came before the court concerning the water of an erstwhile common dam, fed by springs.[25] The court did not discuss the legal position regarding stagnant water, but relied on Voet 8 3 1 to hold that no ownership of the water vested in the seller of the subdivision, but a mere servitude to use it for certain purposes. In *De Bruijn v Louw*,[26] a pan situated on a boundary between two properties, fed by several fountains on both, was held to be the property of both owners,[27] as far as the water derived from their respective fountains was concerned.

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22 2 1 24.

23 Stagnant water sources however enjoyed attention in the law as far as they served as breeding places for various water birds, which were protected (Van Leeuwen *RDL* 2 3 6).

24 1881 2 EDC 1.

25 In this case, a piece of land belonged to more than one owner in undivided common shares, and so did a dam on the land. When the land was subdivided, the dam fell within the boundaries of one of the subdivisions, and caused a dispute as to the right of use thereof by the other owner.

26 1905 ORC 11.

27 *Coniugium*.

The Irrigation Act of 1912 made provision for standing water, where exclusive use of water rising on a person's land was granted to such person, if it had not flown down in a known and defined channel.[28] Ownership vested in the owner of land on whose land water fell or naturally drained, for as long as it remained on such land.[29] Water referred to in section 8(1) and (2) was private water. A public stream, on the other hand, was defined in section 2 as flowing water in a known and defined channel. It is thus submitted that not even large wetlands contained public water. On the other hand, section 9, which provided that any water which joined or formed part of a public stream was public water, led to an interpretations by several persons that it had retrospective effect, viz. that water was public water even if it joined a public stream lower down its course.[30] In terms of this interpretation, water draining from a wetland and finally joining some public stream, caused the whole wetland to contain public water. Another direction of thought was that a water source had to comply with the definition of a public stream, before it qualified as public water. The Irrigation Act thus lent itself to uncertainty concerning the status of wetlands.

Even if the uncertainty caused by section 9 is disregarded, and wetlands are viewed as private water in terms of subsections 8(1) and (2), then the legal status is not clear either : if the lake or pan or marsh derived its water from a spring, then it was not the property of the landowner, but merely the subject of his exclusive right of use. But if the water fell or naturally drained onto his land, then the water was the private property of the landowner.

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[28] Section 8(1).

[29] Section 8(2).

[30] Vide Chapter IV.V infra.

In *Breyten Collieries v Dennill*[31] the court, for the first time in South Africa, expressly dealt with the status of lakes and pans. The court distinguished between pans on the grounds of the permanency thereof, as well as its common value :

> "I am prepared to concede that, if we were dealing with an extensive lake which never dried up and which, from the uses to which it can be put, such as navigation, fishing etc; may be regarded as *res publica*, that in such case...adjoining owners are to respect each other's rights to the common use of that lake. But where we have an insignificant bed of water covering only a few acres, and which often runs dry, ... I do not think that we can regard it as *res publica* or as an object that has to be protected for the benefit of the adjoining owners".[32]

When it was decided that a certain pan was not *res publica* due to it not complying with the above criteria, it belonged in ownership to the landowner on whose land it occurred. If it crossed a boundary, it belonged to the neighbours *pro divisione parte* (and not in undivided common property). With this, the court rejected previous courts' decisions that each neighbour owned an undivided share and thus vested a servitude of use in respect of all the water. It did however not refer to any previous decisions. Each owner could thus deal with the water on his side of the boundary as he pleased, irrespective of the influence of his actions on the part owned by his neighbour.

The court therefore did not classify wetlands as either private or public *water* in terms of the act, but as *res publicae* or *res privatae*, in terms of the classification system in the law of things. The fundamental maxim on which the court based this view, was the *ad coelum* doctrine, in terms of which an owner was allowed to deal with everything on or above or beneath his land as he pleased, unless it injured others in their similar rights.[33] It was submitted that, as far as the law of running fresh water was concerned, this

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[31] 1913 TPD 261.

[32] 265.

[33] 264. Mason J required *reasonableness* of use by the neighbours.

doctrine was never applied. As far as underground water was concerned, some courts, by implication, relied on the doctrine, but it was never really adopted as part of the underground water law. The law of wetlands seems to be the only part of water law where the doctrine was accepted.

In 1928, in *Great Fish River Irrigation Board v Southey (Rooispruit)*,[34] the court dealt with a public stream which, at a certain point, spread out to form a swamp where no known and defined channel could be indicated. The court decided that the swamp did not comply with the definition of a public stream, and neither did it adopt the status of the public stream which it fed. The court did not express itself on what the legal status of the wetland thus was. Neither did it refer to the 1912 act, or the definitions of private and public water, as opposed to public streams.

In *Ex parte Taylor*,[35] in 1932, the court held that a vlei contained public water, because the flow and channel thereof complied with the definition of a public stream in section 2 of the act.[36] It must be noted that the vlei was a mere swampy or marshy river, which did not contain stagnant water, so that the case should not be considered a proper example of the status of wetlands.

3.3. THE WATER ACT

3.3.1. Natural wetlands

In the Water Act of 1956, private water is defined as water which falls, rises, drains or is led onto land which is not capable of common irrigation. Mention is made of inflow, but not necessarily of outflow so that the water in a lake or pond or pool or marsh can

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[34] 1928 Hall Rep 237.

[35] 1932 Watermeyer Rep 97.

[36] 99.

be private water. The qualification of "common irrigation" confirms, to a certain extent, the decision in *Breyten Collieries v Dennil*,[37] where the common value of standing water was regarded as the criterion to distinguish between such sources being *res publicae* and *res privatae*. But in terms of the act, the criterion is used to distinguish between public and private *water*, and not *res publicae* and *res privatae*. The fact that the water of a certain pool complies with the definition of private water, does not derogate from its classification as *res publicae*. Therefore, while in terms of the *Breyten* case, wetlands were excluded from the statutory water law, the act now included wetlands in its provisions. The definition of public water was also amended to exclude the sources of public streams from necessarily containing public water. If a public stream is thus derived from seepage from a wetland, then the wetland did not adopt the status of public water.

The problem with the inclusion of stagnant water in the provisions of the Water Act, lies in the definition of the term "public stream". If the water of a larger lake, pool or marsh is found to be capable of common irrigation on two or more pieces of original land, the logical conclusion would be that it does not comply with the definition of private water, and is thus public water. But public water is water found in the bed of a public stream, while a public stream is a natural stream of water which flows in a known and defined channel which is capable of common irrigation. Because a wetland does not contain running water and does not occur in a known and defined channel, it is not a public stream and does not contain public water. It is thus neither public nor private water,[38] which is an unsatisfactory position.

Soon after the Water Act had come into force, the supreme court had to deal with a dispute where an attempt was made to prevent an owner from filling up a vlei on his

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[37] 1913 TPD 261.

[38] When it is fed by a public stream, the water may qualify as public water, but still it does not comply with the definition of a public stream.

land.[39] The court did not consider the status of the vlei with reference to the definitions of the Water Act, but dealt with it as if it belonged to the interested owner in rights of ownership.[40]

Considering the quantity and nature of disputes before the courts on wetlands (ie. stagnant water), it seems not to have been of much importance as far as water rights were concerned, probably because these sources did not lend themselves to large-scale irrigation, and were often merely of aesthetic interest (and for some owners rather a nuisance, for occupying otherwise good agricultural soil). In recent years, with the awakening of environmental awareness, more attention had been directed towards wetlands as habitat for unique species, and the role and value of these freshwater systems in the environment has now become vital. The failure of the courts and the legislature to legally classify wetlands and determine public rights in respect thereof, can no longer be afforded. If a wetland is *private property*, then owners can hardly be restricted in their use thereof in an environmentally detrimental way in terms of current legislation. If such sources are regarded as containing *private water*, and thus being *res communes* yet subject to exclusive use, then the state is in a more favourable position to control the exercise of these rights in the public interest.

Nevertheless, the current status of wetlands is not altogether clear. When the water is not capable of common irrigation, it is private water. When it *is* capable of such use, it is not a public stream because it is not flowing, and it is not public water, because it is not found in the known and defined channel of a public stream. Then the common law must apply. The Roman, Roman-Dutch and early South African legal systems provide little certainty but, in terms of the most recent decision,[41] it is *res publicae* and available

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[39] *Benoni Town Council v Meyer* 1959 3 SA 97 W.

[40] In 1961, the court in the same case (*Benoni Town Council v Meyer* 1961 3 SA 316) held that the owner breached a natural servitude when he tried to discharge of water naturally occurring on his land to that of another.

[41] *Breyten Collieries v Dennil* 1913 TPD 261.

for reasonable common use, subject to state control.[42] But if the resource has no permanent character, eg. if it sometimes dries up, it is *res privatae* and thus the private property of the owner, or the common property of the owners on whose land it occurs, *pro divisione parte*. It therefore seems that natural wetlands can have at least four different classifications as far as status is concerned, and therefore rights in respect thereof are rather inconsistent.

It is submitted that, in the light of the main role of natural wetlands as being of environmental rather than economical importance, the water thereof ought to be excluded from private property or exclusive rights of use. It ought to be state-controlled and state-protected common things, with a single legal status as *res publicae*.

3.3.2. Impoundments

The typical South African climatic conditions, and the fact that water is a scarce resource, encouraged the necessity of water storage in dams, reservoirs and weirs. These artificial lakes, also being sources of stagnant water, are of the greatest importance as far as water rights are concerned. They often intercept surplus water, so that what is left to flow down in the majority of rivers in South Africa, is merely the normal flow. The allocation mechanism of the Water Act, to a large extent, revolves around the large volumes of water which is so gathered. Dams, subject to specific rights, therefore have a specific legal status. It is thus necessary to determine where these wetlands fit into the legal classification and allocation mechanism of water in our law.

In terms of Roman and Roman-Dutch law, no distinction was drawn between natural and artificial lakes. A lake was merely defined as a body of permanent water. It was, by some, viewed as *res privatae*, by others as *res publicae*, and by others as government property (*regalia*). In South African law, the courts had to determine the status of dams.

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[42] Vide the provisions of The Mountain Catchment Areas Act of 1970, The Forest Act of 1984, The Conservation of Agricultural Resources Act of 1983, The Lake Areas Development Act of 1975 etc.

The 1912 act provided that water which rose on one's land was subject to his right of exclusive use, and water which fell or drained onto his land was his property. The water of wetlands, eg. vleis, dams, marshes, pools etc., could be included in these descriptions, and thus qualified as private water. Public water was water which joined or formed part of a public stream. A public stream was defined as a natural *stream* of water which *flowed* in a known and defined channel, and it follows that standing water was not public water. No provisions of the act were aimed directly at artificial wetlands.

Impounded water however became relevant, and the status thereof differed from that of natural wetlands and of running water. In terms of section 13, an owner was entitled to store his portion of the normal flow of a public stream in reservoirs outside the channel. In terms of section 14, he also had the right to store surplus water for primary and secondary purposes. In terms of section 9, water which joined or formed part of a public stream, was public water. Where normal flow was impounded in reservoirs outside the channel of a public stream, it was not public water, because it did not form part of a public stream. Neither was it private water, because it did not naturally fall or rise or drain onto the land concerned. The conclusion is that impounded water was neither excluded from ownership in terms of section 9, nor was it an owner's private property in terms of section 8(2), nor was it the subject of his exclusive right of use. The status of water derived from a public stream and impounded in a storage dam could not be determined from the provisions of the act. Section 13 granted to each riparian owner a right to impound his share of the normal flow of a public stream. His share was that part of the water which was allocated to him in terms of the act.[43] Nowhere was it said that his share became his property. He was merely entitled to *use* his share. In the case of normal flow, the use was restricted to *reasonable* use,[44] while, in the case of surplus water, the rights of use were restricted to certain purposes.[45] Although the unsolved

[43] Section 13.

[44] Section 12.

[45] Section 14.

question as to the legal status of impounded water never came before the court since the 1912 act, the legislature nevertheless found it necessary to rectify it in 1956.

In terms of the 1956 act, public water is water flowing or found in *or derived from* the bed of a public stream. This means that impounded water can qualify as public water in terms of the act, and that it does not lose its status when it is diverted from the public stream.

In terms of this act, stagnant water can either be private water, ie. when it naturally falls, rises, drains or is led onto one's land and forms a lake, pool, pan, vlei or marsh, or public water, when it is impounded within the channel of a public stream or when it is stored in a reservoir outside the channel, but derived from a public stream.

But when water naturally rises or falls or drains to form a wetland of which the water is sufficient for common irrigation, it is neither private water nor public water, and the act does not contain any provisions in terms of which the status of such water can be determined.[46] These large natural wetlands, due to slow inflow, are however of little value for irrigation, although they might contain sufficient water to be used as such for a period. They are mainly prized for their value as natural habitat for specific species, and they should therefore have a specific legal status and be subject to specific (mainly non-consumptive) rights, specifically provided for in terms of the act.[47]

The conclusion is that water of a public stream, which is impounded by the person whose share it is, is public water whether it is inside or outside the channel of a public stream. When private water is stored, it remains private water, even if such impounded water is sufficient for common irrigation.

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[46] Ramsden 9.

[47] The water in a government water work belongs to the state in ownership (s 1 "government water work; s 56(3), (4)).

CHAPTER IV.IV

GROUND WATER

"Wanneer iemand het op zich neemt door uitgravingen, of eenig ander middel aangewend aan't oog of de bron van een publieken stroom, de natuur helpen, en't water open te leggen meer dan de natuur zelve zulks heeft gedaan, dan handelt hij met iets dat, even als de stroom zelf, van eenen publieken en gemeenen aard is."

Meyer v De Jhb Waterwerken-Mpy

Kotzé C J 1893

CHAPTER IV.IV
GROUND WATER

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GROUND WATER

4.1. HISTORICAL BACKGROUND

4.1.1. Roman law

In Roman law, the doctrine of *cuius est solum eius est usque ad coelum et ad inferos,* (which implied that an owner of land was also the owner of everything above and beneath the surface of his land, including the ground water) formed one of the cornerstones of the property law.[1] He was thus entitled to search for such water, abstract it, use it and even grant servitudes for its use.[2] This water was not regarded as *aqua profluens*, and did therefore not belong to all in common in terms of the *ius naturale*.[3] Even if a hydrological connection between an underground source and surface water was significant, the owner could not be debarred from using such water exclusively.[4] The water of springs, ie. water which emerged from the ground, was however deemed to be surface water and thus treated as such.

4.1.2. Roman-Dutch law

In Roman-Dutch law, the rules of the water law were aimed at non-consumptive water utilization, viz. navigation and fishing, because the abundance of water made consumptive control measures unnecessary. Moreover, the exploitation of ground water resources hardly plays a role in a country where water is more a nuisance than a scarce

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1 *D* 43 24 11. Et vide Chapter III.I supra.

2 *D* 43 20 4; 43 24 11; 8 3 37; 8 3 10; 43 20 1 6; 39 3 21; 43 22 1 pr, 6.

3 *D* 1 8 2 1.

4 *D* 39 3 1 12; 39 2 24 12. No unanimity exists as to whether a mala fide intention in abstracting ground water could serve as a means to debar him from abstracting the water (*D* 39 3 1 12).

commodity. These were probably the reasons why Roman-Dutch authors hardly ever referred to ground water. Voet, in his commentaries on the Digest,[5] discussed natural springs occurring on an owner's land, and was of the opinion that such water belonged to the owner on whose land it occurred.[6]

In another text in his work,[7] Voet recognised the right of an owner to intercept the spring of a lower owner by digging on his land,[8] and said that unless it was done rather with the intention to harm his neighbour than to improve his land, no claim could be made against him.[9] In another text,[10] Voet was of the opinion that, because water which burst out on his property belongs to him just like ground water, an owner of land could dispose of such water by granting a servitude.

Groenewegen held the view that the existence of malice in the mind of an owner who intercepted the ground water of a lower owner was irrelevant, because it is not possible to actually determine the mind of another.[11] Be that as it may, it seems as if the *ad coelum* doctrine was applicable in Roman-Dutch law as far as ground water was concerned.[12]

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5 39 3 12; 39 3 4; 8 3 6.

6 Cf Van Leeuwen *CF* 2 1 6 who was of the opinion that ground water, ie. water collected from the strata of the earth, was common to all.

7 39 3 4 4.

8 This is confirmed in 8 3 6 6.

9 The author relied on *D* 39 3 1 12; 39 2 24 12.

10 8 3 6.

11 39 3 1 12 : *Sed cum non sit pervestigatio animus hominum quibus nunquam desunt probabilis praetextus, quibus malignitates suas justificant : ideo, ut minor sit litium materia, hic in praxi non observatur* (with reference to *D* 6 1 3 8).

12 Et vide Visser "Ground Water" 419-20.

4.1.3. Anglo-American law

In Anglo-American law, the applicability of the *ad coelum* doctrine was responsible for the status of water : because riparian owners also owned the beds of rivers *usque ad medium filum fluminum*, the application of the doctrine implied that they also owned all water above and beneath their property, ie. including rivers, however large. Ground water was therefore included in proprietary rights, irrespective of the flow conditions. However, it was decided in *Chasemore v Richards*[13] that if ground water flowed in a known and defined channel, rights in respect thereof was subject to the law of surface streams.[14] The law of surface streams basically encompassed a distinction between private streams (ie. the water upstream of the cotidal line) and public streams (ie. estuaries and lagoons below the cotidal line). Riparian owners owned private streams as set out supra, but their rights of use were restricted to reasonable use, with due regard to other owners' proprietary rights. This distinction differed materially from that which developed in the South African law, where private streams were restricted to those which were of little common value. It can thus be submitted that, in terms of *Chasemore v Richards*, ground water in defined channels was, in spite of ownership which vested in it, subject to reasonable rights of use by owners. If not in defined channels, the restriction of "reasonable use" did not apply, and the owner could use it exclusively. The channels being defined did however not derogate from the classification of ground water as *res privatae* in the law of things.

4.1.4. South African law

In South Africa, few sound rules regarding ground water can be drawn from early water law. This is because exploitable ground water was a scarce resource which, due to a lack of technological know-how, played a negligible role in water utilization during the

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[13] 1859 7 HLC 349.

[14] This was however an obiter view. Vide Grobler *Noodwatervoorrade* 18 et seq.

earliest years. In terms of the *ad coelum* doctrine, water which occurred beneath a landowner's property, would belong to him in ownership. Yet it was submitted supra that the *ad coelum* doctrine did not take root in the South African water law.[15] It can therefore be argued that ground water was never private property as a result of the doctrine, unless it can be shown that the surface water law was not necessarily applicable to ground water, ie. if there was an independent set of rules applicable to ground water.

4.1.4.1. Precodification case law

The first (indirect) reference to ground water by the judicature was made by Bell J in the case of *Retief v Louw*.[16] The court held (obiter) that water rising on an owner's land belongs to him in an unrestricted right of absolute property.[17] If this implied that the underground origin of such a spring, as far as it existed beneath the owner's land, also belonged to the owner, then the *ad coelum* rule can be argued to have been accepted as far as ground water was concerned. But the case did not directly deal with underground sources of springs and owners' rights to bore for such water, and such an interpretation is thus rather premature.

In the case of *Mouton v Van der Merwe* in 1876,[18] the court raised doubt as to the validity of Voet's view in *Ad Pand* 8 3 6, viz. that water which burst out on one's land was his property just like the ground water beneath his land. The reason for this doubt was that the author allegedly relied on authority which did not support his view. Moreover, according to the court, the validity of Voet's view has also been questioned by the Privy Council in *Van Breda v Silberbauer*.[19] The court therefore came to the conclusion that

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15 Chapter III.III supra.

16 1874 4 Buch 165.

17 He based his opinion on Voet 8 3 6.

18 1876 6 Buch 19.

19 16 Moore PC 319.

any right of a landowner to water rising on his land was subject to vested rights of lower owners vested to such water, ie water which had been flowing down a regular and defined course for many years. Once again, the court only referred to ground water which naturally burst out, but not to such water which passed the land beneath the surface which was artificially exploited. The only connection of this view concerning the water of springs, with the question of ground water, was the court's reference to Voet 8 3 6, where ground water was specifically equalled to spring water as far as the rights in respect thereof, were concerned. But the court did not discuss this connotation in any further detail. It is significant that the court made no reference to ownership of the water under discussion, and it seems as if nothing more than an exclusive right of use was intended, which right is restricted by other owners' long user.[20] If the status of water which naturally appeared above the ground is also applicable to the underground sources of such springs, then it can be argued that, in terms of this case, subterranean water belonged to the landowner in rights of use, and not in ownership.

In *Vermaak v Palmer*,[21] the question of the legal status of spring water was again addressed. The court relied on texts from the *Codex*,[22] in which the view was held that water rising on an upper owner's land was available for his use, unless it had been allowed to run down to lower land *ex vetere more et observatione*. Furthermore, the court relied on English law, as well as on a decision of the Privy Council[23] and Voet 8 3 6, to cast doubt on the very existence of an exclusive or preferential right of an upper owner in respect of spring water, if such water was capable of common use.[24] Two aspects of this decision are of relevance : first, the legal status of spring water was determined, viz. to be no longer the property of upper owners, but the mere object of an exclusive and

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[20] Et vide *Erasmus v De Wet* 1974 4 Buch 204 : "The use, and free use, of such waters..."

[21] 1876 6 Buch 25.

[22] *C* 3 34 6, 7 and 10.

[23] *Van Breda v Silberbauer* 16 Moore PC 319.

[24] 29-31.

unlimited right of use in cases where the spring itself was not perennial, ie. only weak and non-stable springs which were of little common value and which were not subject to long user by downstream owners. Secondly, a clear distinction was drawn between subterranean and surface water :

> "But there is a wide difference between a stream of water flowing in a known and defined channel over the surface of the soil, and underground waters which rarely, if ever, have a known, constant and defined course, and which generally merely percolate through the earth in no defined stream (nor is it at all clear that even under the Roman law the upper proprietor could divert a subterranean stream which in former times has flown down in a defined and known channel, rising to the surface of the land of the lower proprietor, where the upper proprietor has always been aware of the existence of the stream, and the lower proprietor has always had the enjoyment of the water)".[25]

It therefore seems as if the court distinguished between veins percolating through the strata of the earth, and defined underground streams of which the existence is known to the upper owners, *and* in respect of which lower owners had rights of long user. These lastmentioned rivers were not available for exclusive use like the unknown veins. For ground water to thus be available for exclusive use, it had to flow : first, in *un*defined channels; secondly, in a way unknown to upper owners; and thirdly, without being subject to long user. Yet it was still not the property of the upper owner, and the *ad coelum* doctrine did not apply. It is however important that this was an obiter opinion.

In drawing this distinction, the court paid no attention to the hydrological link between surface and subterranean water, but separated the two forms of water with regard to the rights in respect thereof. As far as subterranean water was concerned, the court paid no further attention to it apart from questioning the clarity of the rule discussed by Voet,

[25] 35. This was the first direct reference to subterranean water in the judicature.

viz. that an owner was free to intercept lower owners' springs by digging a well on his own land.[26]

The question as to the status of and rights to subterranean water was soon thereafter directly addressed, viz. by Shippard J in 1880 in the case of *Hiscock v De Wet*.[27] This was a dispute as to exclusive rights of use in respect of the water of a certain spring. In the light of the previous decisions, such a right was subject to rights of long user, as well as to whether the spring and the stream were perennial. The court found that the source was perennial, but that the stream itself, although it was flowing in a known and defined channel, submerged into the soil and ran underground for some distance. Applying the dictum of Cloete J in *Retief v Louw,* the court was of the opinion that this disappearance of the stream at a certain point rendered the whole stream private, and thus available for exclusive use and not due to prescriptive rights. The court however found that, because the stream originated from a perennial source and not from some inconsistent source, and because the stream, even the underground part, had a known and defined channel, and because the water of the spring had been flowing down for the benefit of lower proprietors for more than 30 years, that the spring could not be appropriated by the upper owner.

The criteria for ground water to be excluded from the right of exclusive use, therefore differed from those laid down in *Vermaak v Palmer*, viz. that a consistent source was required, while the awareness of owners of its existence, was not required. This complicated the definition, because not all underground streams had sources of which the perpetuality could be ascertained. This means that even well-known ground streams in known and defined channels could be used exclusively, if only its sources were inconsistent.

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[26] 8 3 6. Et vide Hall *Hall on Water Rights* 33 et seq.

[27] 1881 BAC 249.

The court noticeably had much trouble in motivating this view in the light of the previous decisions, especially regarding its status, viz. that all underground water was private (although rights of use in respect of such private water could be restricted in respect of certain streams). Eventually the court decided the question on equity rather than existing authority (which is a further example of the problems which the South African courts experienced to develop a sound practical water law system suited to the South African conditions). Be that as it may, the court evaded a conclusion on the rights in respect of ground water, by distinguishing between the case before the court, viz. where a spring which yielded a perennial stream which partly sinks away, is concerned, and a subterranean vein which bursts out on lower land. The criterion for the distinction is not clear, but from some *non sequntur* arguments[28] it can be submitted that it lies in the court's opinion of and feeling for righteousness : first, according to the court, water rights exist *iure naturae*,[29] and not by a presumed grant from long acquiescence, and therefore it is irrelevant whether a stream flows above or beneath the surface, or whether it is well-known or not that the stream exists. Secondly, the court set a series of rhethorical questions, based not on the legal position but on moral justifiability :

> "Is the defendant, as upper proprietor, entitled to divert the whole of the water from Spring No 1, notwithstanding the flow of its waters for upwards of 30 years beyond his land ... for the benefit of the lower proprietors, merely because for a certain distance ... the stream sinks into the earth? The question is not whether the defendant ... might or might not lawfully drain the water, ... still less is it a question of his *right* to draw it for the use of his cattle : but whether he can lawfully cut off the entire supply at its source and lead away in his iron pipes every drop of the water from Spring No 1, so as to effectually prevent it from percolating through the soil or otherwise flowing down ... to the plaintiff's homestead?"[30]

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[28] 259.

[29] Vide Chapter III.I supra on the role of the *ius naturale* and its principles of justice in the water law. Et vide Chapter VI infra.

[30] 259-260.

Thirdly, the moral questions were then answered by the court, once again in an emotional rather than a legal mode :

> "I have given these questions the consideration which the importance of the subject demands, and I come to the conclusion that the defendant had not the right under all the circumstances thus to divert the entire supply of water..."[31]

The conclusion is that the court was of the opinion that it would be unfair to apply the exclusive right of use to subterranean water which flows in a known and defined channel with a consistent source (although beneath the soil), and which is part of an otherwise perennial stream (and which is and had been for years) of value for more than the owner on whose land it originates. In cases where such a stream is unknown and nothing more than an unidentified subterranean vein which accidently bursts out on some land, it would not be so unjust to allow an owner to dig for water, accidently find the vein and thereby to intercept the spring of his neighbour. Yet both forms of ground water are private as far as its status is concerned.

It is submitted that the long reasoning of the decision to express and justify his feeling for justice, is not altogether sound and coherent, and, moreover, a similar but legally sound conclusion could have been reached by relying on the *ad coelum* principle and its applicability in the South African water law, especially because the court was rather clear on the point of the status of all ground water, viz. that it is private : first, if water rights existed *iure naturae*, then the principles of natural justice and equity would not allow the interception of the yield of a spring by the digging of wells on upper land, merely because the nature and location of the subterranean vein is not known and defined. In Roman-Dutch law, authors had already struggled with the morality and fairness of the rule in favour of upper owners : while Voet confirmed the Roman law rule that an owner could intercept the water of a spring on lower land by digging, but could be sued if he acted *mala fide* (*in vicino nocendi*), Groenewegen held the view that even an evil

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[31] 260.

mind did not derogate from such owner's right to so dig for water. Reasonableness thus bowed to practical considerations.

Secondly, it was submitted supra that the *ad coelum* doctrine was never accepted in the water law, due to the rule that running water, as well as its bed, was *res communes* and not appropriable.[32] This meant that an owner of land did not own the beds of rivers crossing his land, and therefore neither the water above and beneath such land. This would mean that when water flowed in a known and defined channel, it was excluded from proprietary rights, irrespective of whether it occurred above the ground or beneath the soil. On the other hand, when no known river existed, the land was *res privatae*, and the *ad coelum* principle applied, and the landowner was thus the owner also of accidental veins in the deeper strata of the earth, and he could search for such water and divert it at will. The application of the *ad coelum* doctrine could thus negate the necessity to invoke the *ius naturae* or moral justice in a rather evasive manner.

It should aslo be noted that the question before the court concerned rights in respect of the water of a spring which was fed by an underground stream in a known and defined channel. The opinion of the court on the status of and rights in respect of other ground water was thus obiter. Be that as it may, the legal status of subterranean water was still not determined to any degree of certainty, and neither were the rights thereon.

In the appeal case, a year later,[33] Dwyer JA, on the question whether water which rises lower down was the same water which had submerged higher up, distinguished between subterranean water and the water of a perennial stream which submerged. Barry JP furthermore relied on the fact that the channel remained known and defined, irrespective of the fact that the water submerged. It is submitted that these criteria to distinguish subterranean water from submerged public streams, brought more clarity, since it was

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[32] Chapter III.III supra.

[33] *Hiscock v De Wet* 1874 1 Buch AC 58.

now clearly based on the question whether the submerged stream was part of the known stream. Only this would render the water flowing above or beneath the known and defined channel public, and exclude it from private ownership.

Only in 1892 was the question addressed again, in the case of *Struben v Cape Town District Water Works Co.*[34] De Villiers CJ, with reference to *Digesta* 39 3 21 and 39 3 1 12, decided that subterranean water was capable of appropriation[35] only if the channel in which it flowed was not known and defined. The qualification of a known and defined channel was supplementd by the *in vicino nocendi* qualification laid down in *Digesta* 39 3 1 12.[36] With this additional criterion, the court by implication rejected the English law principle laid down in *Chasemore v Richards*[37] that the known and definedness of a channel was enough to refrain an owner from using the water exclusively, irrespective of the mala fides of his intention. In terms of this decision, knowledge of such a known and defined channel had to exist before an exclusive right of use was excluded.[38]

The court attempted to make the *in vicino nocendi*-test of Roman law workable and practically applicable, viz. requiring proof not of a digger's malicious mind, but rather of a real knowledge of the course of the stream. It is however submitted that a man's knowledge is as much part of his mind as are his intentions, and neither can be proved

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34 1892 9 SC 68.

35 It should be noted that the court specified that it did not refer to a right to use the water only, but a right to the water itself. Whether this was *dominium*, is not clear.

36 75. The judge relied on *Vermaak v Palmer* 1876 6 Buch 25 to justify this application : "The only instance in which it has ever been suggested in this court that a person might be held liable for diverting underground waters is that of an upper proprietor cutting off a subterranean stream of which he must have known that it flowed down in a defined channel and rose in the lower proprietor's land".

37 1859 7 HLC 349; SC 5 Jur NS.

38 Et vide Grobler who alleges that the court's reference to *Chasemore v Richards* was obiter. This means that even if the court accepted the rule laid down in that case, it would not have constituted proper authority. It is however that it had not been necessary for the court to refer to the rule laid down in the *Chasemore* case, since various South African courts have already laid down similar rules.

by another unless it was embodied by some words or deeds, or by general knowledge based on scientific proof. No wonder that Groenewegen was of the opinion that Ulpian's qualification of *mala fide* was unpracticable. The fact that a lower owner, after an upper owner has excavated and exploited some underground water source, tells the upper owner that his spring now yields less water, would certainly constitute knowledge of a now defined flow of subterranean water. In terms of the court's test, this would be sufficient to deprive the upper owner of his exclusive right to use such water. But that certainly could not have been what Ulpian had in mind when he restricted the exclusive right to such water by the actions *de dolo* or *animo vicino nocendi*.[39] The only way in which an upper owner can be said to have known of the existence of a defined channel, is when scientific proof thereof exists at the time of excavating. This was actually admitted by the court in the words :

> "The water so intercepted comes no one knows whence, and, if not so intercepted, would have gone no one knows whither, but because there is a probability that it would in some way or another have found its way into the river, we are asked to declare that the defendents are not entitled to the benefit of it."[40]

Be that as it may, if it was found that no knowledge of a defined channel existed when an owner drilled for water, such water belonged to him. The court made it clear that he did not only vest a right of use, but that he was the owner thereof.[41] With this opinion, the court was the first to apply the *ad coelum* test to the question of rights in respect of subterranean water. To this test, an exception was however established, viz. that knowledge deprived him of his ownership. This is a perculiar exception to the exercise of a real right. Where the water did however not flow in a known and defined

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[39] *D* 39 3 1 12.

[40] Which the court refused to do.

[41] "But the water recently intercepted from unknown underground channels ... belonged as much to the owners of land as the soil excavated therefrom" (73) and "he is entitled to the water itself, and not merely to the use of it" (75).

channel, it belonged to the owner, and even his knowledge of interception could not deprive him of his right.[42]

Nevertheless, the importance of the decision in this case was, first, that it introduced the *ad coelum* doctrine by implication into the ground water law, and secondly, that a clear test was laid down (even though the practical applicability thereof can be doubted). All ground water was thus private property, but the proprietary right of use could be forfeited when knowledge of a known and defined channel existed.

In the next year, in *Meyer v De Johannesburg Waterwerken-Maatschappij; De Geldenhuis-Maatschappij en Bezuidenhout*,[43] the court departed from the criterion in the *Struben* case[44] by deciding that water or a spring which is a part of the source of a public stream, cannot be used exclusively by the owner who opened it up on his land :

> *"Wanneer iemand het op zich neemt door uitgravingen, of eenig ander middel aangewend aan't oog of de bron van een publieken stroom, de natuur helpen, en't water open te leggen meer dan de natuur zelve zulks heeft gedaan, dan handelt hij met iets dat, even als de stroom zelf, van eenen publieken en gemeenen aard is."*[45]

This added another criterion to the test of whether a stream is known and defined, viz. whether the ground water forms the source of a public surface stream.

The common nature which typifies public streams, thus became attached also to subterranean water, to become the new criterion to distinguish between subterranean

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[42] All of the above was however obiter, because the water in dispute did not flow in a known and defined channel.

[43] 1893 TS (Hertzog) 1 7.

[44] *Struben v Cape Town District Water Works Co* 1892 9 SC 68.

[45] 1893 TS (Hertzog) 15.

water which can be used exclusively[46] when exploited, and that which should be allowed to run down for common use. The test of *Chasemore v Richards* was thus discarded in favour of a test of capability of common use, irrespective of whether it occurred in a known and defined channel. This means that the emphasis moved from the nature of the bed to the volume of the water. The court said that, because it is impossible to know in advance whether or to which extent water which is exploited will otherwise find its way further on, and therefore to determine how the boring would influence surrounding water sources, the test of knowledge is unsuitable. The only question should be whether or not the water derived from the point of excavation is part of a well-known source of an existing and visible public stream. This would be the case only where drilling is done within the channel of such a stream, in order to withdraw that part of the stream which usually flows beneath the bed. Knowledge is therefore only relevant in so far as *"hij weet dat hij de handen slaat aan iets dat van een publieken en gemeenen aard is"*[47] which would only be possible if the public stream and its source are visible and thus well-known : *"alles is zichtbaar, en 'tjuiste gevolg zijner daad kan door hem berekend worden"*.

The court thus distinguished between ground water which forms the source and therefore a part of a public stream, and that which doesn't. If it does form such a source, then the owner who exploits it is excluded from exclusive use in respect thereof, if he knows that it forms such a source. But when the ground water does not prima facie constitute such a source, then knowledge ought not to be questioned. Therefore an owner may exploit ground water and vest ownership, except when he has knowledge that he excavates some source of a public stream. Although the court did therefore not recognise knowledge as a criterion, it did not reject it as a factor.

As far as the rights in respect of the different forms of subterranean water are concerned, the court agreed with the view held by the court in the *Struben* case, viz. that

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[46] No mention is made of ownership.

[47] 16.

subterranean water which was not part of the source of a visible public stream, belonged to the exploiter in *ownership*.[48]

In *De Bruijn v Louw*,[49] Maasdorp CJ confirmed that

> "[t]here is no doubt as to what the common law rights of the proprietors of adjoining properties are with respect to underground waters. There is no doubt that each proprietor is entitled to dig down upon subterranean waters moving in veins and percolations and undefined channels, even though by doing so he may divert the water from a neighbour's well".[50]

This rule was said to be subject to existing servitudes, for which exception the court relied on Voet 8 3 6. It therefore seems as if the court, as far the legal status of subterranean water was concerned, distinguished between water in defined and undefined channels. Like Kotze CJ in the *Meyer* case,[51] the court avoided the knowledge test to determine the status of the water, but returned to the criterion laid down in *Chasemore v Richards*, viz. the definedness of the channel. Only subterranean water in undefined channels was owned by the proprietor of the land beneath which it occurred. If the channel was defined, the water was common, like public surface water.[52] The court did not mention the criterion employed by Kotze in the *Meyer* case,[53] viz. whether or not the water which was artificially exploited formed part of the source of a public stream. This

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48 With reference to Voet 43 12 (*in privati domino*); *D* 43 12 4 (*flumen privatum nihil enim differt a caeteris locis privatis*); *D* 39 3 21; 39 3 4.

49 1905 ORC 11.

50 17-18.

51 *Meyer v De Johannesburg Waterwerken-Maatscappij; De Geldenhuis-Maatschappij en Bezuidenhout* 1893 TS 7.

52 Cf *Chasemore v Richards*, where it was decided that ground water in known and defined channels was not common, but only that the law of surface streams, which differed from the South African law of surface streams, applied. Et vide Grobler *Noodwatervoorrade* 18 et seq.

53 1893 TS 7.

meant that not only water derived from digging in the visible bed of a public stream was excluded from ownership, but also water derived from boreholes on a man's land, if, by some scientific method, the underground channel of the vein was defined. The court did not apply the *ad coelum* test to determine rights in respect of ground water. In terms of the *ad coelum* test, only water beneath the visible bed of a public stream (where the bed is *res communes* like the water itself) would be excluded from being *res privatae*.

Ward J (dissenting) became the first to directly employ the *ad coelum* doctrine to determine the legal status of and rights in respect of subterranean water :

> "Now the owner of land is the owner of the water standing thereon or flowing over or under the surface..."[54]

He however recognised the test of definedness as well, and added to the doctrine the words "and not forming a definite stream". He therefore added a restriction to the application of the *ad coelum* test in the form of the objective test of definedness of the stream, in which he followed previous decisions.

It is interesting that the test of the definedness of the stream developed[55] through attempts by the courts to make the Roman law malice test more applicable. (The Roman law rule was that an owner could appropriate *any* subterranean water, unless by malice.) Groenewegen however objected to the subjectiveness of this test, and thus to the difficulty to prove the restriction. In the *Struben* case,[56] the malice test was turned into a more objective test, viz. general knowledge of a defined stream,[57] which eventually

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[54] 15.

[55] It was originally justified by relying on the similar test in *Chasemore v Richards*.

[56] 1982 9 SC 68.

[57] Taken from the obiter view in *Chasemore v Richards*.

led to the definedness of the stream to be the only criterion to distinguish between subterranean water which could and could not be appropriated by proprietors.

Ward J however re-introduced the subjective malice test (obiter) in his dissenting decision, yet not to *replace* the definedness test, but additional thereto.[58] It seems as if Ward J, on the one hand, came the closest to using the *ad coelum* test to determine water rights on subterranean water, but on the other hand, destroyed the value of such a test by adding two restrictions, viz. the definedness of the stream *and* malice.

In *Snijman v Boshof*,[59] Maasdorp CJ and Ward J once again dissented on a similar question. Because Maasdorp CJ decided a question on the terms of a contract, the only contribution which he made to this question, was an obiter point which he made concerning private subterranean water (in terms of his previous test, that would be water in undefined subterranean channels) viz. that such water was "practically" the property of the landowner, "though as a matter of law that may not be so". This view once again implied that the *ad coelum* principle was not accepted as far as the subterranean water law was concerned. What the judge probably referred to, was the view of some jurists that even private water was *res communes*, yet available - due to its negligible common value - to single owners in rights of exclusive use. As far as the point under discussion is concerned, this meant that even ground water in undefined channels was *res communes*, although available for exclusive use, and that the *ad coelum* principle was not accepted in the subterranean water law, just as it was not accepted in the surface water law.

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[58] 15.

[59] 1905 ORC 1.

4.1.4.2. Post-codification case law

In 1912, in terms of the Irrigation Act, the status of subterranean water was statutorily determined, which initiated a new era in the law concerning subterranean water.[60] Chapter III of the act drew a distinction between subterranean water and other ground water.[61] The term "subterranean water" received a specific meaning, viz. water in proclaimed dolomitic areas only.[62] Such water was deemed to flow in defined channels unless the contrary was proved,[63] but an owner of land beneath which subterranean water occurred, could use it for any purpose, but he was not allowed to dispose of it without the prescribed permission.[64]

It is not clear why it was necessary to deem *subterranean* water to flow in defined channels, since this did not affect water rights in respect thereof. It is submitted that section 26(2) was merely paying lip-service to the courts' much laboured criterion of definedness.

The decisions which followed this act mostly dealt with water which was classified as *underground* water, ie. water which did not qualify as *subterranean* water in terms of the provisions of the act.

In 1914, in the water court case of *Ex parte Pietpotgietersrust Municipality*,[65] it was held that where water continually submerged and rose again in a public stream, the stream

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[60] Vide 4.2.2.1.2. infra.

[61] Sections 25-26.

[62] Section 25.

[63] Section 26(1).

[64] Section 26(2). In terms of s 7(1), the governor-general was entitled to store and distribute underground water.

[65] 1914 Krummeck Rep 19.

remained a public stream and the water remained public water, irrespective of whether the water flowed above or beneath the surface. This decision confirmed the view expressed in *De Wet v Hiscock*,[66] as well as the decisions of several of the courts discussed supra. But until this decision, the courts refrained from using the terms "public water" and "private water" when they were dealing with ground water.

In the same year, in *Smith v Smith*,[67] the court of appeal once again introduced the criterion of malice to determine water rights in respect of ground water. Since this criterion had, in 1892, been transformed to a test of definedness of the channel, Ward J, in his minority decision in *De Bruijn v Louw* in 1905,[68] was the only judge who ever tried to re-introduce the malice test *additional* to the definedness test. It is thus submitted that De Villiers CJ, without proper consideration of the authorities, relied on an obiter statement of the court a quo. In that case,[69] Hopley J extensively discussed the hydrological factors of the case in dispute. Broadly, A drilled for water on his land. His actions however intercepted a once strong fountain on the land of B. B claimed damages arising from the alleged reduction of the yield of his fountain. The court found that insufficient scientific evidence was supplied to prove that there existed a defined channel from the well to the fountain. Although thorough evidence was put before the court to explain the geological surroundings of the fountain, the court was not convinced, and decided that the situation of the fountain sources was merely a matter of a strong probability :

> "It may be that the dyke dams back some water coming to it from underground sources, and it may also be that some of such water overflows or gets through gaps in the dyke - but it has certainly not been proved that such water coming from underground comes by a

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[66] 1880 1 EDC 249.

[67] 1914 AD 256.

[68] 1905 ORC 11.

[69] *Smith v Smith* (1914 CPD unreported).

> defined and known channel. In my opinion it is more probable that it comes from the waterlogged soil to the west by innumerable small tricklings oozing between the strata..."[70]

With reference to the *Struben* case,[71] the court came to the conclusion that a right existed for the upper owner to drill within his own boundaries, even though he might intercept the spring of some lower owner. Without indicating what the relevance or influence of malice or knowlegde would be on the position, the court added that neither of these subjective elements existed in the mind of the defendant.

This was the first decision aimed directly at the solving of a dispute regarding the rights of landowners in respect of ground water in a known and defined channel which was not visible (ie. more than mere submerged public water). The decision indicated the difficulty of proving that water in an invisible underground channel or vein can be known and defined, so that it can be concluded that the probability of scientifically proving the existence of such a channel is negligibly small, because it required specialized evidence to tilt the balance of probability.

In practice, it seems as if the status of underground water cristallized out as being either private, ie. water in invisible veins in the deeper strata, or public, ie. submerged water in visible known and defined channels, although it could (but would probably not) also include scientifically proven defined invisible veins.

The subjective factors of malice and knowledge were not set as criteria to determine the status of ground water, and De Villiers CJ, in the Appeal Court, unfortunately and by ill-consideration, re-introduced these as criteria.

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[70] 263 of the appeal court case, where the decision of Hopley J was fully quoted.

[71] 1892 9 SC 68.

This decision was rightly questioned five years later, in *Ohlsson's Cape Breweries Ltd v Artesian Well-Boring Co Ltd.*[72] De Villiers AJ stated the legal position concerning underground water to be as follows :

* A landowner has a right to search for and appropriate underground water, even if the spring of another is thereby intercepted.

* Three exceptions to this right exist, viz. an existing servitude, malice and a known and defined channel.

The court decided obiter that malice was probably not a valid exception, because it could not co-exist with the exception of a known and defined channel. For this view, he relied (inter alia) on the *Struben* case, where the existence of a known and defined channel was decided to be the very means of determining the existence of malice. He also relied on English law, as well as on Groenewegen 39 3 12.

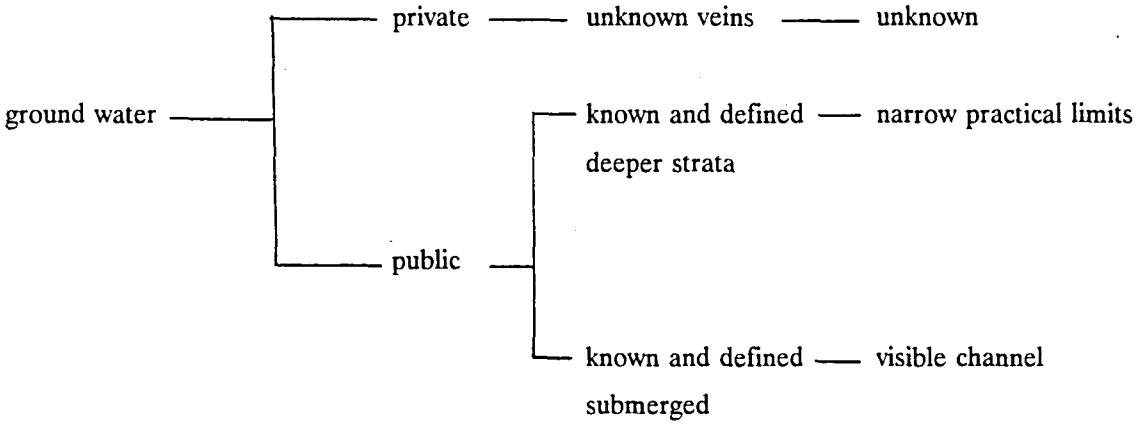
On the question of a known and defined channel as an independent test to determine rights in respect of underground water, the court held that the legal status of water flowing above and beneath the surface in a known and defined channel, was similar, if the qualifications of a public stream were complied with. The court was however not sure whether the common rights of use in respect of such submerged water would be exactly the same as those in respect of surface water, at least as far as the preferential order of reasonable rights of use was concerned. These rights depended on whether the water was capable of common use, and whether Chapter III of the act was applicable.

As far as water in channels in the deeper strata of the earth was concerned, the court confirmed that such water could still (in spite of the improbability thereof as indicated

[72] 1919 CPD 125.

in *Smith v Smith*[73]) qualify as public ground water, as long as such channels were known and defined. Where, in terms of *Smith v Smith*,[74] specialized and exact proof was required to show that such a channel was known and defined, the court now held that it was not required that the precise situation and depth of a vein should be known, but only its position within narrow practical limits - as long as it was not necessary to excavate in order to ascertain its position. It is submitted that this decision may seem to temper the strict requirements of *Smith v Smith*, but in practice it is difficult to see how the position of an underground vein could be ascertained within narrow practical limits without excavation, unless with intensive scientific research.[75]

The decision is of dual importance : First, it finally brought clarity regarding the malice factor, and set down the criteria to distinguish between private and public underground water :



[73] 1914 AD 256.

[74] 1914 AD 256.

[75] Today, naturally, modern tecnological and more effective methods have been developed (Department of Water Affairs *Management of Water Resources* 3.17 et seq, 6.55, 7.14).

Secondly, the decision confirmed that the *ad coelum* doctrine was not valid in the ground water law.[76] Because if it was, known and defined yet *invisible* underground veins would not qualify as public underground water, but would fall within the proprietory rights of landowners.

In the same year, in an Appeal Court case,[77] the same judge was involved in a majority decision where malice was, once again, confirmed as a criterion to determine the status of and rights to underground water. Innes CJ, suprisingly,[78] involved the *ad coelum* principle in no uncertain terms :

> "The principle is fundamental that the owner of land is owner not only of the surface but of everything legally adherent thereto, and also of everything contained in the soil below the surface. And this operation with regard to water on or in the land, though subject to important modifications, is not excluded".[79]

It was argued supra that if the *ad coelum* principle was applicable to underground water law, then a clear distinction would occur between underground water in veins in the deeper strata of the earth, and underground water beneath the beds of visible river channels. Because the lastmentioned channels were *res communes* like the water therein, a riparian owner did not own the beds, and thus not the water above and beneath it either. The application of the *ad coelum* doctrine would thus exclude *all* such veins from being public, irrespective of whether they are known or defined.

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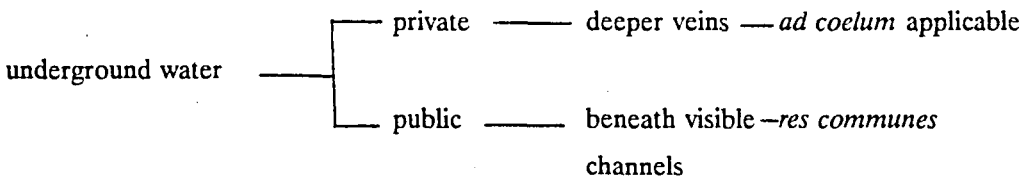
[76] Cf *Breyten Collieries v Dennil* 1912 TPD 1061 where the *ad coelum* doctrine was accepted as part of the ground water law.

[77] *Union Government (Minister of Railways and Harbours) v Marais* 1920 AD 240.

[78] He was the first judge since Ward J in *De Bruijn v Louw* 1905 ORC 11 to accept this doctrine.

[79] 246. The court relied on *D* 39 3 21 and 39 3 1 12, without any reference to previous case law.



Like Ward J, the chief justice qualified the application of the doctrine, by imposing two restrictions, viz. an existing servitude, and malice.[80] Although he referred to Groenewegen 39 3 1 12 who had raised doubt as to the validity of malice as an exclusion to the principle, he subjected his opinion to *Digesta* 39 3 1 12.[81] Never did he refer to the development process which the malice test had undergone in South African courts, where Roman and Roman-Dutch law was adapted to typical South African questions and conditions. Instead, he concluded the confirming argument on the applicability of the malice test with the words :

> "The general principle laid down in the Digest is adapted by Voet (39 3 4) and *undoubtedly* forms part of our law"[82]

As far as the legal status of underground water was concerned, the court confirmed the definedness test to distinguish between public and private subterranean water :

> "The general legal position then is this : subterranean water not flowing in a known and defined channel, but percolating through private property, may be there intercepted and appropriated by the owner in spite of the fact that if not intercepted it would reach the well or the spring of a neighbour or would find its way into a public stream"[83]

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80 "And its operation with regard to water on or in the land, though subject to important modifications, is not excluded" (246).

81 "The high authority of Ulpian cannot be lightly disregarded" (247).

82 247. Italics supplied.

83 253.

It is submitted that this conclusion is not compatible with his acceptance of the *ad coelum* principle, even in the restricted form in which it was accepted. The reason can be explained by an example : A has a well on his land. B also digs for water, but the yield of his well causes a reduction of a similar volume of the yield of A's well. If the vein between the two wells is proved to be known and defined, B is not entitled to appropriate the whole volume of water derived from his well in terms of the test in *Union Government (Minister of Railways and Harbours) v Marais*,[84] even though the vein is not linked with the source of some public stream. The fact that the vein is known and defined, excludes ownership. In terms of the *ad coelum* principle in its original form, B is entitled to everyting beneath his land, which is *res privatae*. In terms of the *ad coelum* principle as modified by the court in the first part of the decision, B is entitled to appropriate the entire yield, unless malice or some servitude can be proved.

It therefore seems that the solution for the dispute between A and B will differ, depending on which of the two views expressed in *Union Government (Minister of Railways and Harbours) v Marais*[85] is employed. It is therefore submitted that the *ad coelum* test is not reconcilable with the definedness test, and the court should either have rejected the definedness test, or not have introduced the *ad coelum* test at all. Moreover, the malice test is not reconcilable with the definedness test either, as was indicated in the *Ohlsson's* case.[86] If malice is part of our subterranean water law, then it should have operated as a restriction on the *ad coelum* test, but not on the definedness test. The only practical solution for the ambiguity which the court now created is to accept the definedness test, like the existence of malice, as one of the exceptions to the *ad coelum* doctrine, and not as a separate criterion.

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84 1920 AD 240.

85 1920 AD 240.

86 *Ohlsson's Cape Breweries Ltd v Artesian Well-Boring Co Ltd* 1919 CPD 125.

It is also significant that the court relied heavily on foreign law, while it only referred to three South African cases on underground water, viz. the *Struben, Meyer* and *Smith* cases,[87] and without much discussion. It is submitted that the court's failure to lay down clear rules on the question of ground water is, to a great extent, due to the lack of proper consideration of principles laid down in previous decisions. It seems that the test of malice was duly re-introduced into ground water law, in spite of the transformation thereof in the *Struben* and *Ohlsson's* cases.[88] Moreover, the *ad coelum* test was introduced in spite of clear indications by previous courts that it never gained acceptance in ground water law, as it did not in surface water law.[89] The reason why the court found it necessary to introduce this test, is not altogether clear, since the only difference which the application of this test had, was in respect of *defined* invisible veins, yet the facts of the case did not concern rights in respect of such veins. Moreover, the court was of the opinion that if water percolated laterally from a public stream into the deeper strata and thus actually escaped the river, it became private, which meant that the *ad coelum* principle did *not* apply.

In *Louw v Dorman*,[90] the water court had to apply the definedness test, and did so according to the practical measures set out in the *Ohlsson's* case, ie. whether it could be defined within narrow practical limits even though the precise depth was not known. Expert hydrological evidence was placed before the court in order to indicate that the channel of an alleged underground stream was known and defined, and the court was satisfied that the channel was known and defined within narrow practical limits :

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87 *Struben v Cape Town District Water Works Co* 1892 9 SC 68; *Meyer v De Johannesburg Waterwerken-Maatschappij; De Geldenhuis Maatschappij & Bezuidenhout* 1893 TS 7; *Smith v Smith* 1914 AD 256.

88 *Struben v Cape Town District Water Works Co Ltd* 1892 9 SC 68; *Ohlsson's Cape Breweries Ltd v Artesian Well-boring Co Ltd* 1919 CPD 125.

89 255.

90 1924 Hall Rep 26.

> "The underground flow may be somewhat irregular and there may even be ... a number of underground channels and small underground reservoirs through which the water passes. We are satisfied, however, that whatever form the flow of the underground water may take, it is all to be found within the limits of the Bokkemans Kloof..."[91]

The court held furthermore that the channel complied with the definition of a "public stream" as far as a known and defined channel is required, and that the underground water was subject to similar statutory water rights than the surface river, if it complied with the element of "capability of common use" as well.[92] This was a step forward from the *Ohlsson's* case, where the court preferred not to give an opinion on whether underground water in a known and defined channel was subject to the rights regulating surface water in known and defined channels.

4.2. LEGISLATION

4.2.1. Introduction

In terms of the Water Act of 1956, subterranean water is water which naturally occurs underground or is abstracted therefrom, within a subterranean water control area declared by the governor-general in terms of section 28(1).[93] The governor-general was empowered to declare a subterranean water control area not only in dolomitic areas, but also in artesian geological areas or when the minister was of the opinion that abstraction might unduly deplete the underground water resources.[94] The increased power which vested in the state to control underground water resources, can be argued to be a further

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91 100.

92 100. Cf *Ex parte Transvaal United Trust and Finance Co Ltd* 1931 Watermeyer Rep 36, where the court decided that underground water had to comply with the definition of a public stream in order to be public water.

93 Section 27.

94 Section 28(1).

indication that the *ad coelum* doctrine did not apply in the underground water law, ie. that such water was *res communes* like other water and was thus available for common use, but subject to state control in cases where common use caused disputes. This also confirms the argument of some courts which held that underground water was utilised in a similar way to private property, but that the law did not vest proprietory rights in an owner but merely an exclusive right of use. Rights in respect of subterranean water remained as in the 1912 act,[95] ie. an owner of land was entitled to abstract or obtain any subterranean water thereunder for his own use for any purpose, subject to certain restrictions.[96]

4.2.2. Background

4.2.2.1. Early legislation

4.2.2.1.1. The provincial acts

In the Cape, due to a lack of steady sources of ground water supply,[97] it was regarded as a necessity to bring about legislative measures to control the use of such water. In the Transvaal, on the other hand, various dolomitic aquifers occurred, which could serve as steady sources of supply. If the common law, in terms of which an owner was entitled to exploit ground water beneath his land,[98] was allowed to stay in force, the desiccation of these sources could soon follow. It was thus necessary to protect these water sources from arbitrary exploitation, and this was done in Chapter IV of Act 27 of 1908. In terms of section 52(1), landowners were entitled to abstract any ground water beneath their

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[95] Section 30.

[96] Section 30(1),(2).

[97] Department of Water Affairs *Management of Water Resources* 3.19.

[98] Vide Hall *Hall on Water Rights* 56 et seq.

farms for any purposes.[99] In cases where such water was derived from dolomitic formations, restrictions were placed on owners' rights to convey the abstracted water beyond their farm boundaries.[100] In terms of section 51, all dolomitic water was deemed to flow in defined channels. This was a mere administrative provision, which did not derogate from the rights of use and the restrictions thereon.[101] It is submitted that section 51 was incorporated into the act to justify state interference with the rights in respect of subterranean water[102] (which, prior to the act, was private water except when it occurred in known and defined channels). Therefore, in order to impose control measures to the use of certain forms of ground water, the legislature found it necessary to ensure that such water be state controlled water, according to the criteria of the common law.

It is however submitted that statutory limitations on public or private rights need no justification if it is imposed in the public interest, and neither ought such rights first be converted into lesser rights in order to apply statutory control measures. State control measures may be applied to both public and private water.

4.2.2.1.2. The Irrigation Act

Statutory control of ground water was continued by the provisions of the Union Irrigation Act of 1912.[103] The legal position was however complicated by section 25. In terms of this provision, subterranean water was no longer any water found beneath the surface of the earth. It was only such ground water which was derived from dolomitic formations and which was *declared* to be subterranean water by notice in the Government Gazette.

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99 Section 52(3).

100 Section 52(2).

101 As contained in s 52.

102 Encountered by s 52(2).

103 Chapter III.

Dolomitic water which was not declared to be subterranean water, as well as non-dolomitic ground water, was excluded from this definition. The reason for this distinction is not clear, since no corresponding distinction was drawn between the status of subterranean water and other ground water.[104] Nowhere was subterranean water declared to be either public or private water.[105] On the contrary, subterranean water was subjected to rights of exclusive use of owners for any purposes,[106] subject to a prohibition on conveyance thereof, and interference with urban use.[107] Other ground water was not allocated, and it is presumed that such water was regulated by common law rules. Subterranean water and ground water were thus seperate classes of water distinct from public water and private water and subject to different allocation rules.

4.2.2.2. The Commission of Enquiry

In 1952, the Commission of Enquiry into Water Matters[108] recommended that the exploitation of ground water should eventually be controlled by the state in order to prevent depletion, but that "so little is really known concerning the conditions under which underground water exists, the natural processes by which it is replenished and the circumstances which are peculiar to all the different geological formations in which it occurs, that it would be premature to attempt to introduce any measures of general control".[109]

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[104] The provision deeming all subterranean water to be flowing in defined channels, was repeated, but did not render much assistance to this question, because water in defined channels was not necessarily public water, and moreover, it was merely a rebuttable presumption.

[105] Cf Hall *Commission of Enquiry* 22 who was of the opinion that the act "virtually gave subterranean water the status of a public stream and prohibited their private exploitation".

[106] Section 26(2).

[107] Section 26(3),(4).

[108] Under chairmanship of C G Hall. Vide Chapter III.IV supra.

[109] 23.

The Commission also recommended that primary underground water resources (artesian areas)[110] ought to be protected from depletion by way of the proclamation of control areas.[111] Furthermore, it was suggested that, in due course, and after a proper basis of understanding had been built up, other sources of ground water which were not included in the definition of subterranean water of the 1912 act, should also be controlled. It was suggested that ground water should, in the meantime, be controlled independently from surface water. These recommendations were included in the Commission's proposed act which formed part of the report.[112]

In terms of clause 33, subterranean water would be water naturally existing in proclaimed dolomitic and artesian areas,[113] and such water would be presumed to flow in defined channels.[114] The exclusive rights of use of subterranean water were extended to all landowners (where urban owners had previously been excluded in terms of the 1912 act) subject to the minister's right to control drilling operations and the abstraction of such water. The erstwhile prohibition of conveyance was now subject to ministerial permission. The limitation on interference with urban water was abolished. It seems as if the main distinctions between the 1912 act and the Commission's proposed act as far as underground water was concerned were, first, extended ministerial control of subterranean water, and secondly, control over artesian water as well.[115] Other ground water was still unregulated. The Commission however suggested that a bill for the control thereof could at a later stage be placed before parliament.

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110 Such sources were in the meantime discovered along the Cape coast.

111 24.

112 Chapter III (cl 33-39).

113 Such areas could be declared in terms of cl 34.

114 This clause was once again repeated to legalise state control of erstwhile private property.

115 A further addition of the proposed act was that drilling details had to be provided in order to build up a better knowledge of underground water (s 37).

4.2.3. The Water Act of 1956

4.2.3.1. Subterranean water

The recommendations of the Commission were largely accepted in the Water Act of 1956.[116] First, both dolomitic and artesian waters could be controlled by the declaration of subterranean control areas in terms of section 28. These control measures covered the main primary and secondary ground water resources of the Union.

Secondly, the minister was empowered to control the exploitation of subterranean water extensively. His powers were even broader than those proposed by the Commission :

> "The Minister may in relation to any subterranean water control area, make such regulations as he may deem necessary for exercising control over the drilling of boreholes for the purpose of locating water for use for any purpose, the sinking of wells and the abstraction, protection against pollution and preservation of subterranean water contained in such area, including regulations limiting the number of boreholes or wells which may be sunk in any such area or the quantity of water which may be abstracted by means of any borehole or well..."[117]

In spite of these wide-ranging powers, section 30(1) granted to landowners rights to obtain subterranean water for any purposes. It is difficult to understand the purpose of the right of use granted by section 30(1), in the light of sections 28 and 30(2) : why would the minister declare an area to be a subterranean water control area if he had no intention to interfere with common law rights on the ground water in such an area? If the legislature wished landowners to enjoy exclusive rights of use in respect of ground water until the minister assumed control, he should not have inserted section 30(1) so as to refer to subterranean water only, since subterranean water is water occurring in an

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[116] Act 54 of 1956. Vide in general Hall *Hall on Water Rights* 98 et seq.

[117] Section 30(2).

area which has *already* been declared a subterranean water control area. Section 30(1) should have encompassed *all* ground water, and only when the minister intended to assume control, should he declare a subterranean water control area and then issue regulations for the exploitation of the water therein. This confusion could have been avoided by substituting the term "subterranean water" in section 30(1) for "underground water". As the provisions were set out, the legal status of and rights to non-subterranean water was still unclear, and it must be presumed that ground water (other than subterranean water) was regulated by common law rules.

Thirdly, drilling operations had to be registered to enable the state to gather information as to the network of underground water resources.[118] The eventual understanding of underground water would probably lead to legislation aimed at controlling underground water other than dolomitic and artesian water.

The provisions concerning subterranean water were, since 1956, amended regularly, viz. by eight amendment acts until 1984, a major substitution of chapter III in 1987, and the most recent amendment in 1990.[119] The amendment act of 1987 encompassed the most extensive revision of the measures controlling ground water and, except for s 32C(3)(c), has not as yet been amended again.

The definition of subterranean water was substantially retained, being natural underground water in a subterranean water control area. The minister's discretion to declare such an area, has been restricted to cases where he is of the opinion that the abstraction, use, supply or distribution of subterranean water ought to be controlled in

[118] Sections 31-33.

[119] These amendments were contained in s 7 of Act 56 of 1961; s 4 of Act 36 of 1971; s 4 of Act 45 of 1972; ss 5 and 6 of Act 42 of 1975; ss 3 and 4 of Act 73 of 1978; ss 2 and 3 of Act 51 of 1979; s 6 of Act 92 of 1980; s 16 of Act 96 of 1984; s 5 of Act 68 of 1990; s 17 of Act 68 of 1987; ss 5 and 6 of Act 68 of 1990.

the public interest. This provision[120] urges him to lay down the necessary control measures in order to justify such a declaration. In terms of the previous state of affairs, the minister could declare such an area, yet the exclusive rights of use of such water vested in landowners, unless the minister decided to suspend such rights and assume control. It was submitted supra that this negated the sense of the declaration of subterranean water control areas. In terms of the amended act, the minister immediately assumed control of subterranean water as soon as a subterranean water control area has been declared, and no rights of use vested in owners, unless so allocated by the minister[121] (or in the case where existing rights have been vested[122]). The provision in terms of which subterranean water was deemed to flow in defined channels, was not included in the new chapter III, which finally buried the definedness test.

It therefore seems as if all ground water, irrespective of the geological source thereof, now has a similar status, but that the minister is empowered to assume control, which subjects such controlled water to statutory allocation rules.

4.2.3.2. Underground water

4.2.3.2.1. Public and private water

Private water is water which (inter alia) naturally rises on land which is not capable of common use for irrigation on more than one piece of original land. The source of such water is the place where it appears above the ground, and it is submitted that it does not

[120] As well as the phrase "as soon as possible after" in sections 31 and 32B.

[121] Sections 29, 31, 32A,B.

[122] Section 30.

qualify as private water before it so rises. Underground water cannot be statutory private water in terms of this interpretation.[123]

A public stream is a natural stream of water flowing in a known and defined channel, capable of common irrigation on more than one piece of original land.[124] No restrictions related to the nature of the source are imposed on water to qualify as a public stream. Ground water can therefore be a public stream if it can be proved that such water flows in a known and defined channel, and if it is capable of common irrigation on more than one piece of original land.[125] The legal status of water is however only of relevance to ascertain the water rights in respect thereof. The act does not confer water rights in respect of public streams as such, but in respect of those quantities of the public water within public streams which qualify as surplus water or normal flow respectively. It is therefore necessary to first determine whether underground water qualifies as normal flow or surplus water.

Normal flow is that quantity of public water which actually and visibly flows in a public stream and which can be beneficially used for direct irrigation without storage.[126] Surplus water is public water other than normal flow. Because it is required that normal flow should flow visibly, ground water does not qualify as normal flow, but as surplus water. Moreover, to be normal flow, the water has to be derived from seepage or some steady source of supply[127] and it is not clear whether the sources of ground water are included in this list of steady sources, especially in the light of rain water being the main

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123 In Roman law, a clear distinction was drawn between water from a natural spring and water artificially drawn from underground.

124 Section 1.

125 *Louw v Dorman* 1924 Hall Rep 96.

126 Section 1.

127 Section 53(2).

source of ground water.[128] Surplus water is available for beneficial use for domestic purposes, stock watering, agricultural and urban purposes by owners riparian to the public stream where the surplus water is found.

In terms of section 6(2), water which an owner obtains by artificial means from a source other than a public stream, is "deemed" to be private water. The sense of having a separate legal class of water, called private water (or water which is deemed to be private water), has been discussed supra[129] and needs no further discussion. This subsection therefore awards to ground water, which does not flow in known and defined channels and which is not capable of common irrigation, the status of private water. As was said supra, the status of water is relevent only to determine rights in respect thereof. Such ground water is thus available for owners' sole and exclusive rights of use.

It therefore seems that, unless found in a subterranean water control area, ground water is either surplus water or "deemed private water", depending on whether it is found in the channel of a public stream or not. But, once again, it is unfortunately true of these definitions, that they either overlap or leave lacunas.

Moreover, when a known and defined channel runs underground, in which a stream of water used to flow, which is now dry except for some aquifers which still contain water, then the water in such aquifers is public water and more specifically surplus water, but not a public stream in terms of the definition. It is, however, also deemed to be private water in terms of section 6(2). No certainty can be obtained as to whether such water is subject to a sole and exclusive right of use and enjoyment (in respect of private water), or to a beneficial right of exclusive use for prescribed purposes (in respect of surplus water). Moreover, it is not always possible to ascertain whether the water is derived from a public stream. This is especially true for water in boreholes in the vicinity of

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[128] Visser "Ground Water" 414.

[129] Chapter VI.I infra.

rivers. Such sources may be linked to the water in the channel so that it forms the underground part thereof, but it may also be a separate aquifer feeding the public stream. Not all known and defined channels are visible on the surface, and water veins in the deeper strata are currently often known and defined to a satisfactory extent to qualify as the channels of public streams.[130] It is moreover difficult to ascertain the nature of such an underground stream, eg. whether it is capable of common irrigation or not. It is submitted that this qualification is determined at a specific point on a river. Thus the strength of the stream at the point of diversion is a clear indication of the capability of the ground water source for common irrigation.

It is concluded that there exists at least three possibilities of status groups in which ground water can be classified, viz. section 6(2) "deemed private water", surplus water, or subterranean water. Each of these legal classes of water is subject to a different allocation rule as far as water rights are concerned.[131] But due to its invisible nature, it is not possible to seperate the sources of ground water into water-tight categories, and any attempt to invest any ground water with an independent legal status, disregards the possible interconnection between ground water sources inter se, as well as the connection between ground water and surface water.[132]

4.2.3.2.2. Rights in respect of underground water

Visser recommends that a uniform categorisation of all ground water ought to be done.[133] This, according to him, could either be done by classifying all ground water as private water, except where it is found in a subterranean water control area, or to define all

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[130] 418; 426.

[131] Vide 430 et seq infra.

[132] Visser 426.

[133] "Ground Water" 426.

ground water as public water, and to deal with it as is currently dealt with subterranean water.

To consider a new status for ground water would necessarily bring about a new system of water rights in respect of ground water. Currently, because ground water is capable of having one of at least three legal classifications, it can be subject to at least three different types of water rights. To select the most favourable ideal status, it is first necessary to determine what rights ought to exist in respect of underground water.

In 1952, the Commission of Enquiry recommended increased state control of underground water, and suggested that, eventually, all forms of underground water should be controlled by the state. This ideal has realized to a large extent in 1987, when the minister was empowered with wide-ranging powers to control underground water resources.[134] Yet very few of the existing South African ground water resources have been subjected to state control.[135]

If ground water can be proved to comply with the definition of a public stream, then it is surplus water,[136] and subject to rights of beneficial use for domestic purposes, stock watering, and agricultural and urban purposes by the riparian owner.[137] [138]

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[134] Vide Department of Water Affairs *Management of Water Resources* 8.3, 8.4, 3.12 for the view of the Department of Water Affairs regarding the practical problems which necessitated the 1987 amendments. Et vide *Assembly Debates* 20 August 1987 4357 et seq.

[135] By 1988, eight subterranean water control areas have been declared, in respect of the most important primary and secondary acquifers.

[136] De Wet *Opuscula* 53.

[137] Cf De Wet 25-26, 31 who alleges that public water which submerges is no longer public water.

[138] A riparian owner is defined as an owner of land whereon or along any portion whereof a public stream flows. It is submitted that only by a distortion of language can an owner be defined as a *riparian* owner of an underground vein (vide Grobler *Noodwatervoorrade* 26; Fuggle & Rabie 304). This is however merely technical, and it is rectifiable by a simple amendment.

If ground water does not comply with the definition of a public stream, it is deemed to be private water[139] and available for the sole and exclusive right of use of the owner who exploits it. But first, it was submitted supra that little practical difference exists between the rights in respect of surplus and private water.[140] Both are in practice an exclusive right of beneficial use for specified purposes. This means that if a lower owner can prove that the upper owner who intercepted his spring draws from a public stream, he is entitled to what is left after the upper owner has fulfilled his own domestic, agricultural, urban and stock watering purposes, ie. he vests a right in respect of the remnant of the stream, and not in respect of a reasonable share. If he cannot prove that both wells draw from a public stream, then the upper owner vests a sole and exclusive right of use in respect of the water, which right is however restricted to beneficial use by quantitative and qualitative limitations. The lower owner can probably claim the rest, which is hardly a lesser right than he would have after proving the underground water a public stream.

Moreover, it is not clear whether the common law restrictions on the exclusive right of use of such private water, viz. definedness of the channel, malice and existing servitudes, are still valid. It is submitted that existing servitudes still hold force as a limitation,[141] but can upper owner A, who intercepts the well of lower owner B, be refrained from doing so because he intended to injure B, or because B can prove a known and defined channel (although he cannot prove a public stream)? It is submitted that, although the act now statutorily grants exclusive rights of use in respect of all underground water not derived from public streams, the causes of common law disputes remain, viz. the interception of wells. There were no further judicial decisions after the 1956 Water Act to answer this question. Therefore the rules developed in the common law to address these practical disputes, ought to remain in force.

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[139] In terms of s 6(2).

[140] Chapter IV.I supra.

[141] In terms of s 5 in which rights are subject to existng rights.

4.3. CONCLUSION

* The statutory rules of the 1956 act did not simplify the question of ground water, but indeed complicated it by adding several legal status groups of and rights to ground water which often, in practice, hardly differ. The impression which one can gather when evaluating the direction in which the ground water law developed, is that ground water is available for beneficial exclusive use when the yield of an underground source is of little common value. When, on the other hand, ground water is of common value to such an extent that it leads to disputes or that it would be unfair to allow a single owner to exclusively appropriate it, the state may assume control by declaring a control area, and re-allocate or retain rights of use.

* Ownership of ground water is no longer possible, in spite of various attempts by the courts to motivate that the exclusive right of use is in fact ownership. For the first time in history, clarity was thus reached as to the role of the *ad coelum* principle in ground water law. The fact that no-one can be the owner of ground water, is in conflict with Roman and Roman-Dutch ground water law, yet in accordance with the surface water law rules of those systems. In terms thereof, ground water belonged to landowners in ownership in terms of the *ad coelum* principle. Surface water was however *res communes*, and so were the beds of running streams. The fact that a riparian owner did not vest ownership in the river bed, excluded him from vesting ownership in respect of water on or beneath such a bed. The probable reason for the distinction between the surface and ground water law, was the lack of importance of ground water, due to underdeveloped technology to exploit such water.

In South Africa, the case is different, and it has been estimated that ground water sources could eventually supply 15% of the total annual water consumption in the

country.[142] In the light of this increased common value of ground water, the historical principle of private ownership of these resources can no longer be afforded. It can be argued that ground water, whether it is "deemed private water" or surplus water, is common to all, but available for exclusive or beneficial rights of use in cases where the common value of particular veins are negligibly small. Rights so vested are however subject to state control whenever, due to scarcity of water, and thus the increased common value thereof, peaceful common use is impaired ie. where the redistribution or suspension of rights would be in the common interest.

* The relationship between surface and underground water ought to be taken into consideration. Without venturing into the fields of other expertise, it can with safety be submitted that rain water, surface water and ground water are integrated elements in a complex cycle.[143] When the utilization of this renewable resource is managed, due regard should be given to the interrelationships between these sources of water. One way in which it can be done, is by granting to all water a similar legal status, which underlies the apportionment thereof.[144] The logic of vesting ownership in a part of the resource which constantly moves about and is difficult to appropriate,[145] is rather contentious. It is therefore submitted that the fundamental principle in considering a new allocation mechanism of water, should be to attach the same legal status to all water.

* To declare all ground water common to all and subject to state control, would not be too drastic a change in our current ground water law system. It was indicated supra that, underlying the complex legal status of ground water as contained in

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142 Department of Water Affairs *Management of Water Resources* 3.20; *President's Council Report* 32.

143 Visser "Ground Water" 413.

144 Et vide Visser "Ground Water" 426.

145 Grotius used the term *onbegrijppelick*.

conflicting legislative and common law rules, an intention of granting to all ground water a similar status can be justified. Ill-considered legal provisions currently stand in the way of a simple allocation mechanism.

* Visser, who hesitantly suggested that the best policy would be to define all ground water public and to deal with it as is currently done in subterranean water control areas, touched the very principle which underlies the whole historical development process of our ground water law, and which still slumbers beneath the complexity of the legal system. In a country where water is regarded as an increasingly scarce strategic resource, it can no longer be afforded to allow a haphazard set of water rights to stand in the way of proper management of ground water in the public interest.

CHAPTER IV.V

SOURCES OF STREAMS

Caput aquae illud est unde aqua nascitur : si ex fonte nascitur, ipse fons; si ex flumine vel lacu, prima incilia, vel principia fossarum, quibus aquae ex flumine, vel ex lacu in primum rivum (communem) pelli solent.

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CHAPTER IV.V
SOURCES OF STREAMS

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SOURCES OF STREAMS

5.1. HISTORICAL BACKGROUND

Much has been said and written on the question of the sources of freshwater streams and especially public streams.[1] The status of and rights in respect of public streams can rightly be said to be one of the most contentious issues in the South African water law.[2] Although the question today still enjoys attention in the courts and the literature,[3] it is not a recent question, since the origin thereof antedates to Roman law.

5.1.1. Roman law

In Roman law, all running water was *res communes.*[4] Ulpian explained exactly what was meant by the "source" of a stream :

> *Caput aquae illud est unde aqua nascitur : si ex fonte nascitur, ipse fons; si ex flumine vel lacu, prima incilia, vel principia fossarum, quibus aquae ex flumine, vel ex lacu in primum rivum (communem) pelli solent.*[5]

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1 De Villiers "The eighth section" 247, "The eighth section again" 20-21; Hall *Origin* 94, *Hall on Water Rights* 21 et seq; Nunes 298; De Wet *Opuscula* 29; Rabie "Sources" 75. Et vide the discussion of the decisions of the South African courts in this regard, 441 et seq infra.

2 This appears from the various conflicting decisions on the question, as discussed in 5.1.3. at 441 infra.

3 The most recent decision on the matter was issued in 1986, while it was dealt with in the literature in 1991. Vide 5.1.3. infra.

4 Chapter III.I supra.

5 *D* 43 20 1 8. In *Ex parte Transvaal United Trust and Finance Co Ltd* 1931 Watermeyer Rep 36, an underground aquifer did not qualify as the source of a stream but the source was where the water first emerged to view. In *Le Roux v Kruger* 1986 1 SA 327 C, it was decided that a stream could have only one source, viz. the point where the stream in fact originated when it is followed up-stream (335). Vide n 105 infra.

As far as its legal status and its classification in the law of things was concerned, no distinction was drawn between the stream itself and its source.[6] An interdict however existed, declaring that water originating on an owner's land could not be used by his neighbours, if such common use was detrimental to his own fields.[7] [8] This rule of preferential use of an upper owner was however subject to established custom or servitudes of drinking and stock-watering.[9] The rule was based on simple justice : "*cum sit durum et crudelitati proximum*".[10] The preferential right of use of the water of a spring on an owner's land, was thus an *exception* to the basic principle that all running water was common to all, which exception applied when it would be unfair against the owner to deprive him of his water requirements if the yield was insufficient for common use. The exception did *not* apply when established rights of common use have already been vested. The preferential right was never described as *ownership*, and spring water thus had no separate legal status from other running water.[11]

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6 Nunes 311 relies on Ulpian for his opinion that in South African law, the status of rivers adheres to their sources. Ulpian described the sources of streams according to their nature only, and made no suggestion regarding the status thereof. Nunes also bases his view on the fact that Roman lawyers were practical lawyers, and that "the distinctional significance of *flumina publica*, as an institution" was sufficient protection for upper owners who lost their rights due to the influence of the status of lower reaches. First, the Roman law distinction between public and private rivers was merely an administrative aid to determine the applicability of certain state control measures, and had no influence on the status of parts of streams. Although it is important to view a river system as an entity (Rabie "Sources" 85-86), the Romans did this by not distinguishing between sources and streams as far as the law of things was concerned. Distinctions between rights on water did however occur, in order to accomplish fair common use.

7 *C* 3 34 6. Et vide *D* 43 20 3 3, where it was declared that water which rised in a river bed belonged to him who lead it away. No specification of the status of the water was given, and it could merely have implied a right of use, and not necesssarily ownership.

8 This was a typical case where competitive common use necessitated state control in the public interest. Such state interference in the common use of *res communes*, did however not derogate from the status of water or its classification in the law of things. Vide Chapter III.I supra.

9 *C* 3 34 6; 8 3 20 2; 43 22 1. Such rights could be lost by non-user (*D* 8 6 17).

10 *C* 3 34 6.

11 The restrictions on the permission to use such water exclusively, indicates that it was of administrative nature only, and that the interdict did not derogate from the classification of the water as *res communes* in the law of things.

5.1.2. Roman-Dutch law

In Roman-Dutch law, little recognition was afforded to a distinction between public and private water.[12] Although some authors referred to public rivers, few defined the term, and Voet was the only authority who dealt with a clear-cut distinction between private and public water. Moreover, his distinction was not merely administrative, but was founded in the law of things : while *flumina publica* were *res publicae*, *flumina privata* were *res privatae*.[13] In *Ad Pand* 8 3 6, he dealt with private water which rose on the land of an upper owner. He said that a stream that rose on an owner's land could be dealt with by the owner at will. While, in terms of Roman law, the upper owner's right of preferential use was excluded in cases of established custom, Voet was of the opinion that the spring water *belonged* to the upper owner, and that he was free to turn the water away from the lower owners, in spite of established custom. Voet denied that a servitude could have been vested by prescription. The reason which the author submitted for his deviating view, was the law regarding subterranean water : he said that if an upper owner was free to appropriate underground water, then he could do the same with surface water. Voet did not specifically refer to private water (which he regarded as *res privatae*) but in order to justify his view in this paragraph, especially in the light of contrasting views in his work regarding public water, he is often regarded to have intended to refer to private water only.[14]

The distinction between private and public water as far as the law of things is concerned, has been discussed supra,[15] and it is thus sufficient to say that, in the light of Voet being the only author who was of this opinion, and in the light of it probably being based on

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12 Vide Chapter III.II law supra.

13 This was in contrast to any previous Roman or Roman-Dutch viewpoint or classification. Vide Chapters III.I and III.II law supra.

14 Et vide Hall *Origin* 33-34, 40-43; *Retief v Louw* 1874 4 Buch 165.

15 Vide Chapters IV.I and IV.II supra.

his view of the distinction between public and private water, it cannot be regarded as being necessarily representative of the legal position regarding the sources of streams in Roman-Dutch law. Be that as it may, it was followed by some South African courts and caused substantial confusion.[16]

In the absence of further Roman-Dutch authority on the subject, the most which can be said of Roman-Dutch law here, is that sources could just as well, like other water, have been *res publicae*. Preferential rights of use of sources could have existed where that would amount to the fairest form of common use, like in Roman law. The reason for the acceptance of such a viewpoint would be the lack of an express distinction drawn by the authors between streams themselves on the one hand, and their sources on the other. Therefore, the sources may be accepted to have differed in no way from the streams themselves as far as their status was concerned. But even such an assumption is mere speculation, and it is safer to conclude that no certainty exists as to the Roman-Dutch law on the question of the status of the sources of streams.

5.1.3. South African law

5.1.3.1. Pre-codification

5.1.3.1.1. Contradictory decisions

In the discussion of ground water,[17] it has been submitted that the case of *Retief v Louw* contained the first reference to the legal status of subterranean water rising above the surface. With reference to Voet 8 3 6, the court expressed an obiter opinion that an owner on whose land water burst out, had proprietory rights in respect of such water.

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[16] Vide 5.1.3. infra.

[17] Chapter IV.IV supra.

This view was confirmed in *Mouton v Van der Merwe*,[18] yet the exclusive right which such an owner had, was never again directly called ownership.[19] In *Vermaak v Palmer*,[20] doubt was however raised as to the validity of the rule in cases where such water was of common value. The court nevertheless acknowledged at least a restricted preferential right of use in respect of water *erumpens in suo*, relying on *Codex* 3 34 6 and 7. In this decision, it was made clear that a distinction had to be recognised between water which naturally appeared above the ground on the one hand, and that which either passed by beneath the soil or was artificially exploited, on the other hand. Since this decision, ground and spring water were no longer dealt with as one and the same thing : ground water had undergone a long and painful development process to finally end up having several possible legal classifications.[21] The water of springs, on the other hand,[22] caused its own unique headaches for the courts, especially as far as its connection with surface streams was concerned :

In *Van Heerden v Weise*,[23] which case is regarded as the most important in the history of the question regarding the sources of streams, the court dealt with rights of exclusive enjoyment of water as discussed in *Codex* 3 34 4-7. De Villiers CJ held that there were two exceptions to the general rule that an owner may deal as he pleases with water rising on his own land : first, such water should not have been shared by lower owners for irrigation by ancient custom. Secondly, such water should not have been the source or

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18 1876 6 Buch 19.

19 Et vide *Dreyer v Ireland* 1874 4 Buch 193: "the upper proprietor may use water flowing through his land in any way he thinks proper" (200); *Erasmus v De Wet* 1874 4 Buch 204 : "[the owner of upper land is] by right of its situation entitled to the use, and the free use, of such waters" (206); *Silberbauer v Van Breda and the Cape Town Municipality* 1869 5 Searle 231: "Now it is impossible to dispute the law that in general a man might do whatsoever he pleases with water rising upon his own property" (240).

20 1876 6 Buch 25.

21 Chapter IV.IV supra.

22 ie. water rising naturally (*erumpens in suo*).

23 1880 1 BAC 5.

the main source of a public stream.[24] Nevertheless, the court implied that the legal status of a stream necessarily also adhered to its source, irrespective of the characteristics of the source itself, ie. whether it complied with the conditions of public or private water. The first exception was in accordance with Roman law, but the second was created by the court, probably in an attempt to accommodate the distinction between private and public water, which differed from the nature of the distinction as it was known in Roman law.[25]

Furthermore, the phrase "the source or the main source" creates difficulty. If the court attempted to distinguish between sources, viz. that only *main* or *only* sources became affected with the status of the stream, it should have inserted the term "only", so as to read "the *only* source or the main source". As it stands, this view affects *all* sources, irrespective of their importance, size, value or contribution to the flow of the stream. This means that even the slightest trickle of water was public, if in some way it contributed to the flow of some public stream lower down. In terms of such an interpretation, it is moreover difficult to explain why the court found it necessary to add "or the main source", since a "source" necessarily also includes the main source. The court did not directly express itself on whether the nature of the right which an upper owner vested in respect of sources which were free of a public character (due to it not feeding a public stream and thus being a source), was ownership, or a mere exclusive right of use. De Villiers CJ however used the terms "exclusive enjoyment" and "the general rule that a person *may deal as he chooses* with water rising on his own land".[26]

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[24] 9. The court added that when once the status of a stream was determined, rights were similar whether at the source or in the course of a river. This dictum was obiter, since the case did not directly concern the sources of streams.

[25] Although the criterion for the distinction was at that stage still held to be perenniality (10), the so-called "dry rivers" of the Karoo were said to qualify as perennial, which was not in accordance with the Roman law criterion of *semper fluens*. Vide Chapters III.I and III.III supra.

[26] 9.

In *De Wet v Hiscock*,[27] it was decided that where a perennial spring yielded a stream of water which was allowed to flow down in a known and defined channel for more than thirty years, the owner on whose land the spring occurred, was not entitled to more than a reasonable quantity of the yield. A distinction was thus drawn between springs which complied with the then definition of public streams,[28] and those which did not. Relying on the spadework done by the appeal court in *Vermaak v Palmer*[29] regarding this matter,[30] the court held that Voet 8 3 6 was only applicable to private streams. The status of the water of a spring was not determined by the character of the stream which it fed, but by the character of the spring itself. This viewpoint was in direct contrast with that which was held in *Van Heerden v Weise*,[31] where it was decided that the status of a spring adhered to its source as well. The court however refrained from even referring to the decision in *Van Heerden v Weise*.

The court expressly questioned the dictum in *Retief v Louw*,[32] where ownership of spring water was held to vest in the landowners on whose land such springs occurred, but never expressly raised an opinion on whether private springs were subject to ownership or merely to rights of exclusive use.

Two divergent viewpoints were thus held by the courts of appeal, viz. the obiter view in *Van Heerden v Weise* that the status of the stream also adhered to the source, and the

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27 1880 1 EDC 249.

28 For which perenniality was required.

29 1876 6 Buch 25.

30 In that case (34-36), the court extensively discussed the judicial interpretations of Voet 8 3 6, and came to the conclusion that "in our opinion the upper proprietor is not entitled to the exclusive and unlimited enjoyment of water rising on his own land, if for so long a period as thirty years, at all events, the water has flown down beyond his land in a known and defined channel for the benefit of the lower proprietors" (35-36).

31 1880 1 BAC 5.

32 1874 4 Buch 165. And also those in *Dreyer v Ireland* 1874 4 Buch 193, *Silberbauer v Van Breda* 1869 5 Searle 231 and *Erasmus v De Wet* 1874 4 Buch 204.

view held in *De Wet v Hiscock* that the source had its own character and status, irrespective of that of the stream which it fed.

5.1.3.1.2. Confusion regarding the contradictory decisions

In 1893, in *Meyer v De Johannesburg Maatschappij; De Geldenhuis Maatschappij & Bezuidenhout*,[33] the court, following *Van Heerden v Weise*, held that the public character of a stream adhered to the spring where it originated,[34] if the spring was the only or most important source of the stream.[35] The court therefore distinguished springs available for exclusive use[36] from those which had a public or common character, on the grounds of the importance of the source, as well as the nature of the stream. This decision brought clarity to the uncertainty created in *Van Heerden v Weise*, where *all* sources were affected by the character of the stream. Now only those which were the *only* sources or the *main* sources were so affected, while others (except in cases of ancient custom) were available for rights of exclusive use. The court once again advanced no opinion on whether the right of exclusive use was ownership or not, viz. whether private streams were private property or not.

Ulpian[37] indicated three different sources of streams, viz. first, springs, secondly, rivers and lakes and thirdly, percolations. The majority of discussions on the subject of sources concerned springs and percolations, while the second kind of source was only addressed by the court in 1900, in the case of *Colonial Government v Pietermaritzburg Corporation*.[38]

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33 1893 TS 7.

34 *"De publieke en algemeene hoedanigheid van den stroom kleeft ook aan de fonteinen waaraan hij zijn oorsprong ontleent"* (14).

35 *"De eigenlijke bron, of de voornaamste bron"* (15).

36 *"uitsluitend gebruik"* (15).

37 *D* 43 20 1 8.

38 1900 21 NLR 287.

With reference to *D* 43 12 1 2-3, as well as to Voet 43 12, *Van Heerden v Weise*,[39] *Vermaak v Palmer*,[40] and *Southey v Schombie*,[41] the court held that if a feeding river or tributary possessed the characteristics of a public stream, it was a public stream in its own right, although it also served as a source of another public stream.[42] The court paid no attention to the criteria laid down in the decisions in *Meyer v De Johannesburg Waterwerken-Maatschappij; De Geldenhuis-Maatscappij & Bezuidenhout*[43] and *Van Heerden v Weise*,[44] viz. that the source adopted the status of the stream which it fed if it was the only or main source thereof. It thus followed the decision in *De Wet v Hiscock*,[45] viz. that the source of a stream had its own legal status, depending on its characteristics, and irrespective of the character of the stream.

In *Snijman v Boshof*,[46] the court touched on the question of the nature of the right which an owner of land vested on a "private fountain", but unfortunately did not clear the issue satisfactorily :

> "It was a private fountain to which the defendent had the right, as owner of the land, and might use it or abuse it or do what he pleased with it ... *he was practically owner of the water, though as a matter of law it may not be so.* This is as far as we can go."[47]

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39 1880 1 BAC 5.

40 1876 6 Buch 25.

41 1881 1 EDC 286.

42 Therefore, "each riparian owner has a natural right to a reasonable use of the water for ordinary and thereafter for extraordinary purposes, but so as not to deprive lower riparian owners of similar advantages" (291).

43 1893 TS 7.

44 1880 1 BAC 5.

45 1880 1 EDC 249.

46 1905 ORC 1.

47 5-6. Italics supplied.

This view is basically in accordance with the views of the majority of the decisions since *Retief v Louw*,[48] in which cases ownership was never clearly recognised.

In *Kock v Theron*,[49] the view held in *Van Heerden v Weise* was once again upheld, when the court decided that certain fountains were private, due to the seasonal character of the stream which they fed. The court never considered the nature or perenniality of the fountains themselves.[50]

The precodification period therefore produced two opposing legal positions viz., on the one hand, that the only or main source of a public stream was necessarily also public and, on the other hand, that a source was only public if it possessed the characteristics of a public stream itself.[51] Neither of the views was in accordance with Roman law, where sources were *res communes*, except where justice required a preferential right of use for the upper owner. Nor was it in accordance with Roman-Dutch law, where, except for the view of Voet, the position was probably similar.[52]

5.1.3.2. Codification

When the law was codified, the statutory definitions of public and private streams affected the law in so far as the status of sources was concerned :

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48 1874 4 Buch 165.

49 1906 23 SC 120.

50 128.

51 As far as tributaries were concerned, this view was however undisputed.

52 Vide 5.1.2. supra.

5.1.3.2.1. The Cape, Transvaal and Union Irrigation Acts

In terms of the Transvaal act,[53] an exclusive right of use existed in respect of streams, except when the water reached or formed the source or a part of the source of a public stream. This position corresponded with that in *Van Heerden v Weise*, in that even negligible trickles which in some way contributed to the flow of a public stream, were excluded from the exclusive right of use. It differed from the view held in the *Meyer* case where the source, to be excluded from the right of use, had to at least be the *only* or *main* source of a public stream.[54]

The Cape act[55] recognised an exclusive right of use in respect of spring water only where ancient custom or existing rights were not affected. This provision resembled closely the Roman law position, where the exclusive right of use was rather an exception to the principle of *res communes*, than a rule.[56]

The 1912 act[57] followed the 1906 act in so far as this question was concerned. Section 8(1) provided that the owner on whose land a spring erupted, was entitled to exclusive use, unless the water was allowed to flow down in a known and defined channel for at least thirty years, and was used by a lower owner, and unless it interfered with existing rights. The qualification of such water flowing down in a known and defined channel, made the distinction between private water and public water relevant. But water flowing down in a known and defined channel was not necessarily a public stream, because a public stream, per definition, also had to be capable of common *irrigation*. For a stream to be excluded from the exclusive right of use, it had to be capable of use for common

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53 Act 27 of 1908.

54 Section 44(1).

55 Act 32 of 1906.

56 Vide Chapter III.III supra.

57 The Irrigation and Conservation of Waters Act 8 of 1912 s 8(1).

irrigation. It only had to flow in a defined channel and be used by a lower owner. Because private water was not defined in the act, a stream which rose on one's land and which was allowed to flow down for common domestic use, was not a public stream, and must be regarded as a private stream. But unless the spring has been allowed to flow down for thirty years, the water must be regarded as private water. This means that all section 8(1) water, irrespective of whether it complied with the qualifications in the proviso and was thus excluded from exclusive use, was private water.[58] If this was the case, then sources could be used exclusively even if they were the sources of public streams, as long as ancient custom or established rights were not harmed.[59]

The act however also provided that all water which joined or formed part of a public stream, was public water.[60] In the light of the above, this view could be interpreted not to have a retrospective effect, ie. water only became public water downstream of the point of the confluence.[61]

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58 Vide Chapter III.III supra.

59 This was directly in contrast to the view held in *Van Heerden v Weise*. Et vide De Villiers "The eighth section" 255 : "as the water forms the source of a public stream, the water is public".

60 Section 9. This section was derived from s 45 of the 1908 act.

61 *Ex parte The Municipality of Somerset West and the Cape Explosives Works Ltd (1)* 1936 Watermeyer Rep 181 : "[W]e do not think that when the Legislature used the words 'forms part of' it intended to refer to the sources of a public stream, but even if those words are capable of that construction, the words *'zich vermengt'* are not capable of that construction" and "This construction of the Transvaal Act supports our view that the words 'forms part of' do not prima facie in their ordinary connotation refer to the source or sources of a public stream" (186). The court expressly rejected the interpretation of De Villiers "The eighth section" 255 (vide n 59 supra). Et vide *Ex parte Kirstein* 1917 Krummeck Rep 172: "[In terms of the retrospective interpretation], s 8 of the 1912 act would at one sweep take away all these rights [ie. common rights of riparian owners in respect of public streams] and deprive the farmers of the water to which they have always been entitled and upon the strength of which their farms have been dealt with and it would, therefore, if it is to be applied as stated, practically amount to a confiscation without compensation of rights which form the chief value of their properties" (175). The court also held that the right of exclusive and unlimited use was not ownership (174). Et vide Rabie "Sources" 85-86.

5.1.3.2.2. Continued judicial confusion

In *Ex parte Pietpotgietersrust Municipality*,[62] the water court dealt with a question of the status of water rising on an owner's land after it had submerged somewhere higher up. The court decided that it was possible that a right of exclusive use could exist in respect of the source of a *public stream.*[63]

In *In re Koster River*,[64] it was decided that a stream originated where its headwaters met, and there was not necessarily one main source only, but often several contributories.[65] This meant that the headwaters were not part of the stream and could thus be subject to section 8(1).

In 1917, in *Ex parte Kirstein*,[66] the court finally expressed itself on the question of the nature of the right which an owner had in respect of water rising on his property. The court referred to the difference in terminology which the legislature employed in subsections 8(1) and (2), and held that subsection 8(1)[67] did not grant rights of ownership to the upper owners on whose land sources of public streams occurred :

> "It might, we think, be successfully submitted that the Legislature did not intend to give the owner the sole and undisputed property in a spring arising in his own land, as it did in respect of water 'naturally falling or draining on the surface of his land', and that therefore

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62 1914 Krummeck Rep 19.

63 This view was in contrast to previous interpretations of Voet 8 3 6, viz. that such exclusive use could only be vested in respect of the sources of private streams. Vide De Villiers "The eighth section" 251 : "The question at once arises, does section 8 in speaking of 'all water rising on his own land' apply to water forming the source of a public stream as well as to water forming the source of a private stream? If it does, the results are startling, nay catastrophic."

64 1916 Krummeck Rep 131.

65 Et vide *Ex parte Transvaal United Trust and Finance Co Ltd* 1931 Watermeyer Rep 36 n 5 supra.

66 1917 Krummeck Rep 172.

67 And especially the phrase "exclusive and unlimited use and enjoyment".

> the rights to the former were limited to 'unrestricted use' which would not necessarily make such water private property, so that the owner might still be restrained from dealing with it in a way and manner prohibited by the Irrigation Act"[68]

The practical differences between private ownership and a right of exclusive use were set out as follows :

> "If that is so [ie. if sources of streams were private property] the owner of the ground on which a spring arises can obviously deal with it in any conceivable way; for instance, he can sell it and have it conveyed to a neighbouring town; he could use it or allow it to be used on non-riparian property; he could sell it to the lower riparian owner who offered him the highest price for it to the exclusion of all others; he could permit it to be diverted into another watershed, etc etc".[69]

Nevertheless, the court held that it was bound to the decision in *Breyten Collieries v Dennill*,[70] where the right in respect of sources was described as private property.[71] It was hesitantly submitted that the *Breyten* decision represented a misinterpretation of the clear terminology and intention of the legislature in respect of subsections 8(1) and (2).

> "With great deference, and subject to correction, we venture to point out that a strong argument to the contrary might be founded upon the employment of the words..." and "it might, we think, be successfully submitted that the Legislature did not intend to give the owner the sole and undisputed property in a spring arising on his own land as it did in respect of water 'naturally falling or draining on the surface of his land'"[72]

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68 174.

69 174.

70 1912 TPD 1061.

71 1066.

72 174.

The court was however even more concerned about the *effect* which private ownership (or even an exclusive right of use, but to a lesser extent so) of sources or springs would have on the *allocation* of water in practice :

> "[Such an interpretation of] s 8 of the 1912 act would at one sweep take away all these rights [ie. common rights of riparian owners on public streams] and deprive the farmers of the water to which they have always been entitled and upon the strength of which their farms have been dealt with and it would, therefore, if it is to be applied as stated, practically amount to a confiscation without compensation of rights which form the chief value of their properties".[73]

Although the court was of the opinion that "such entire change in very important public rights is not to be lightly presumed and will be very reluctantly enforced by any Court of Law", Jeppe J concluded that "when, as here, however, the wording of the enactment is clear, the Courts are bound to apply it".[74] According to the judge, there were however, fortunately, two proviso's to section 8(1) which could be interpreted to temper this drastic interference with erstwhile rights of riparian owners and which could serve to protect them from the new statutory rights of ownership on springs which vested in upper owners. The first was the proviso "that nothing in this section contained shall affect the right of a riparian owner to a reasonable share of water which arises on the land of an upper owner and flows down for the greater part of the year beyond such land in a known and defined channel and has for a period of at least thirty years been used by such riparian owner. The court was however of the opinion that this proviso to section 8(1) hardly contributed to temper this drastic section, because very few owners could prove thirty years uninterrupted use.

Another possible means of protection for the lower owners which the court investigated, was contained in section 9, which read "all water which joins or forms part of a public

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[73] 175.

[74] 175. The opinion was thus merely obiter.

stream shall be public water, the use of which shall, subject to rights lawfully acquired, be regulated by this Act". The court touched the contentious question whether the words "joins or forms part of" could be interpreted as broad as to include the sources, or whether it only affected the water downstream from the point of confluence. Unfortunately, the court found it unnecessary to answer the question, since it was held that the protection which was required for lower owners, could be found in the second proviso of section 8(1), which provided that nothing in section 8 would affect any other existing rights :

> "It seems clear to us, therefore, that when the 1912 act was passed, there was an existing right, enjoyed by all riparian owners, which would have been affected by section 8 and was, therefore, specially protected by the second proviso; and we adopt this view the more readily when we consider what drastic and disastrous consequences would otherwise ensue"[75]

The court therefore merely touched the question of whether the source of a public stream formed part of it, while it was its only cause of existence. It eventually decided that protection existed for the lower riparian owners, because they had existing rights, and therefore fell under the protective measures of the second proviso of section 8(1).

The importance of the case (besides indicating that sections 8(1), 9 and the definition of "public stream" were not above suspicion, and that the question of the status of sources were not solved yet) was to cast serious doubt on the view that sources of streams were subject to private ownership, a view based on Voet 8 3 6 and which has never been properly dealt with.

The question addressed in this case, viz. that a literal application of section 8(1) would drastically affect the appropriation of public streams when all sources were cut off by owners on whose land springs occurred, was addressed again in *Grobler v Retief*.[76]

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[75] 176. Et vide Rabie "Sources" 84-85.

Relying on section 9, the court held that sources of streams adopted the legal status of the streams which they fed, irrespective of their own character. In terms of section 9, all water which *joins* or *forms part of* a public stream, is public water. Section 9 is thus interpreted by the court as another restriction on the section 8(1) right.[77]

The view of the court in *Grobler v Retief* was confirmed by the court in *Bon Accord Irrigation Board v Pretoria Municipality (1)*.[78] In 1928, in *Great Fish River Irrigation Board v Southey (Rooispruit)*,[79] the court held that where a river spread out to form a swamp, and then oozed back to a public stream, the swamp had no known and defined channel, and was thus not a public stream for that part. Although that part formed the source of a lower public stream, it was not public water for that reason because in order to qualify as public, a part of a river had to comply with the definition itself.[80] This decision once again stated the opposite, and indicated that the question of the status of sources has not been solved yet. In 1931, in *Ex parte Transvaal United Trust and Finance Co Ltd*,[81] the court once again confirmed the opposite view, viz. that the source of a public stream was necessarily also public.

Only in 1936 was the issue raised again, and thoroughly considered by Centlivres J.[82] The court took the opposite view to that in *Grobler v Retief*[83] (to which case it did not

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76 1918 Krummeck Rep 214.

77 It is submitted that, unless a retrospective view of a stream is taken, the water rising in a spring does not form part of a public stream before it joins it, and it cannot join it unless it complies with the conditions of a public stream itself.

78 1921 Hall Rep 6.

79 1928 Hall Rep 237.

80 241.

81 1931 Watermeyer Rep 36.

82 *Ex parte The Municipality of Somerset West and The Cape Explosive Works Ltd (2)* 1936 Watermeyer Rep 216.

83 1918 Krummeck Rep 214.

refer) by holding that the source of a stream was not intended to be included by the qualifying words "forms part of" in section 9. This view was closer to that held in *Great Fish River Irrigation Board v Southey (Rooispruit)*.[84] This meant that the source had to comply with the definition of a public stream itself, in order to contain public water, and that the status of a stream did not adhere to its source.[85]

5.2. THE WATER ACT OF 1956[86]

5.2.1. An amended definition

The uncertainty which the courts experienced with the question of whether the source of a stream adopted the status of the stream irrespective of its own character, was addressed in the Water Act of 1956. To qualify as a public stream, a stream of water had to naturally flow within a known and defined channel, and had to be capable of common irrigation. Public water was no longer water which joined or formed part of a public stream, but water which flowed or was found in or derived from the bed of a public stream. This wording was quite clear, in that water, prior to flowing in a known and defined channel or being capable of common irrigation, did not flow in or was not found in the channel of a public stream. The spring which formed the source of a public stream was not public water unless it complied with the definition of a public stream itself. This terminology clearly overruled the view which was introduced in *Van Heerden v Weise*,[87] viz. that the status of a spring adhered to the source thereof. This interpretation is strengthened by the proviso to the definition of "public stream", viz. that

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84 1928 Hall Rep 237.

85 The question as to which streams are sources and which are tributaries, depended on the circumstances, but the fact that it joined lower down did not prevent it from being a source.

86 Act 54 of 1956.

87 1880 1 BAC 5. And which was followed by several courts as indicated.

a stream qualifies as a public stream only for those parts thereof which comply with the conditions of the definition. In terms of section 5(1), the sole and exclusive use and enjoyment of private water vests in the owner on whose land it is found, subject to thirty years beneficial use by lower owners. Private water is defined as water falling, rising, draining or being led onto land and which is not capable of common irrigation. If a small spring occurs on an owner's land, which is allowed to flow down and thus to form one of the sources of a public stream, then the spring contains private water, although it forms the source or part of the source or even the main source of a public stream. Although the right of exclusive use thereof might be restricted by the proviso, it does not mean that the status of the public stream necessarily adheres to its source.

If this interpretation of the provisions of the 1956 act is correct, then the view introduced by the court in *Van Heerden v Weise* was finally overruled by legislation.[88]

5.2.2. Continued judicial confusion

In spite of these provisions of the Water Act, the question came before the court again in 1975, in the appeal court case of *Van Rensburg v Taute*.[89] Wessels AR, without considering or questioning the correctness thereof, relied on an unreported water court case,[90] where it was decided that the common law concerning sources was applicable, because the legislature did not intend to amend it.[91]

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88 Et vide Rabie "Sources" 84.

89 1975 1 SA 279 A.

90 *Du Toit v Krige* (unreported) no 10/70 of 22 October 1971.

91 Vide *Van Rensburg v Taute* 1975 1 SA 279 A 298-300.

With reference to *Van Heerden v Weise*,[92] *Struben v Cape Town District Waterworks Co*[93] and *Ex parte Somerset West Municipality and the Cape Explosive Works Ltd*,[94] the water court in the *Krige* case had decided that a river could have more than one source, and that tributaries, even if they qualified as public streams themselves, were also sources.[95] The principle which seems to have been accepted in the *Krige* case, was that when a stream qualified as the source of a public stream, the status of the public stream which it fed, adhered thereto.[96]

The distinction between the sources and tributaries, as it was set out in the *Somerset West* case was, in spite of the criticism of Beyers J in *Du Toit v Krige,* accepted by Wessels J in *Van Rensburg v Taute*,[97] and he distinguished between headwaters and tributaries :

> *"Waar die ... stroom van oos na wes oor die grens ... vloei, is dit reeds 'n selfstandige openbare stroom, en strome wat op Klein Lang Kloof by die river aansluit is nie bronne van die Dieprivier nie, maar systrome wat privaat water daarna aflei"*[98]

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92 1880 1 BAC 5.

93 1892 9 SC 68.

94 1936 Watermeyer Rep 181.

95 But the court, in the *Somerset West* case, had distinguished between headwaters and tributaries on some uncertain ground, which was not clear to Beyers J in the *Krige* case. The criterion which the court had probably intended, could possibly be found in the *Weise* and *Meyer* cases, in which reference was made to *main* sources, so that headwaters could be seen as main sources, while tributaries were not (444 et seq supra). But it is still difficult to see on what grounds the court distinguished between main sources and tributaries. Vide Nunes 316 who is of the opinion that it is founded on the test laid down in the *Krige* case by Beyers J. But all that Beyers said, is that the test for sources is to view the river upstream, so as not to regard only the starting point (ie. the longest distance from the estuary) as the source. Et vide Rabie "Sources" 85-86.

96 14-15.

97 1975 1 SA 279 A 300.

98 300.

It seems as if his distinction was based on the situation of the sources in relation to the main stream : all the sources contributing to a stream up to the point where it qualifies as a public stream in terms of the definition in the act, are headwaters,[99] to which the status of the eventual main public stream adheres. But all streams contributing to an existing public stream, are mere tributaries, carrying private water.[100] This is, unlike the general interpretation of the appeal court decision,[101] not absolutely in accordance with the decisions in *Van Heerden v Weise*[102] or *Du Toit v Krige*,[103] as it implied that, in some cases, the character of the source determined the status thereof, and not the character of the stream to which it contributed.

According to Burger J in *Le Roux v Kruger*,[104] the criterion of the above courts to distinguish between sources and tributaries, was probably the proximity thereof to the origin of the river.[105] But the court criticized the principle of distinguishing between headwaters and tributaries, as well as of extending the meaning of the term "source" also to streams in the upper reaches which contribute to the flow of a public stream.[106] According to the court, with reference to *Digesta* 43 20 1 8, the source of the stream is the starting point thereof if the stream is followed upstream, and it is usually a spring

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99 ie. "sources", as it was called by Wessels JA.

100 300.

101 Vos *Principles* 9; Rabie "Sources" 83; Nunes 316; De Wet *Opuscula* 29.

102 1880 1 BAC 5.

103 Unreported case no 10/70 of 22 October 1971.

104 1986 1 SA 327 C.

105 "*Soos die stroom stroom-op gevolg word, kom 'n mens by die beginpunt van die stroom - dit is die bron*" (335).

106 333.

within the bed of the stream.[107] Any other tributary is only public if it complies with the definition of a public stream.[108]

> *"As 'n mens sou aanvaar dat water openbare water is voor aansluiting of invloeiing in 'n openbare stroom, dan ontstaan die vraag wat is openbare water en wat nie - waar word die lyn getrek? Om te sê dat die water van 'n bron van 'n openbare stroom openbare water is selfs voor dit in die openbare stroom is, skep groot onsekerheid, veral as daar dan nog gesê word dat 'n stroom meer as een bron kan hê"*[109]

The court stated that the act is very clear on this point :

> *"Die regsbeginsels in Wet 54 van 1956 beliggaam is so duidelik en die gemelde uitsprake so teenstrydig daarmee en skep soveel verwarring, dat dit vir my onmoontlik is om hulle te volg"*[110]

In a recent water court case, *Minister van Waterwese v Oewereienaars aan die Skeerpoortrivier*,[111] Van Dijkhorst J rejected the view of Burger J in *Roux v Kruger*,[112] viz. that the source of a stream cannot contain public water unless the water at that point

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107 342, 335.

108 333. The irony is that the court had little reason to draw this distinction between the source and the tributaries of a stream, since even the source was held not to be a public stream merely because of its status as a source, but it was public only if it complied with the definition (335).

109 335.

110 346. The decisions which the court discussed at length, were *Ex parte The Municipality of Somerset West and the Cape Explosive Works Co Ltd* 1936 Watermeyer Rep 216, *Du Toit v Krige* unreported case no 10/70 of 22 October 1971 and *Van Rensburg v Taute* 1975 1 SA 279 A. The court however also referred to *Ex parte Transvaal United Trust and Finance Co Ltd* 1931 Watermeyer Rep 36, *Struben v Cape Town District Waterworks Co Ltd* 1892 9 SC 68 and *In re Koster River* 1916 Krummeck Rep 131, as well as to De Villiers "The eighth section again" 20-21).

111 TWC4096/92 (unreported) decided on 17 March 1994.

112 1986 1 SA 327 C.

complies with the definition. With reference to several practical examples in which the view of Burger J was applied,[113] the court came to the conclusion that

> *"die anomalië hierbo uiteengesit is sodanig dat dit ernstige bedenkinge laat ontstaan oor die vertolking van openbare strome in Le Roux v Kruger supra"*[114]

and

> *"Ek is van mening dat die wetgewer nie kon bedoel het met die voorbehoud by die omskrywing van openbare water ... dat die geykte gemenereg soos vervat in Van Heerden v Wiese [sic] supra herroep word of gekwalifiseer word nie. Dit is nooit so opgevat nie. Na my mening het 'n openbare stroom die geaardheid tot by sy oorsprong"*[115]

It is submitted that the anomalies in the examples which the court discussed, were not a result of the interpretation which the court in *Le Roux v Kruger* attached to the definition, but to the literal and clear meaning of the terminology of the definition in the act, and that the very proviso allows room for such an interpretation. The intention of the legislature is not sought unless the wording of a provision bears no clear and logical literal meaning. Moreover, the years of academic dispute regarding the status of the sources of streams, as discussed in this chapter, proves that uncertainty has always reigned as to the best practical status : it can thus not be concluded with ease that the legislature "could not have intended" the one or the other of the viewpoints. As long as the proviso remains in the definition, an interpretation such as that of Burger J is perfectly logical and literally in accordance with the terminology.

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[113] The outcome of which the court inter alia describes as "absurd" (40).

[114] 41.

[115] 42.

5.3. CONCLUSION

* It is submitted that the legislature, with the 1956 act, intended to end the confusion which commenced in 1880, when the court in *Van Heerden v Weise*[116] decided that the sources of public streams were excluded from the exclusive right of use which applied to water *erumpens in suo*. This was attempted by the legislature by returning to the position before *Van Heerden v Weise*, where all water arising on one's land belonged to him in rights of exclusive use, unless the water was of common value.[117] This was also the situation in Roman law, where the owner on whose land water rose, had a preferential right of use, subject to rights vested by ancient custom.

* Restrictions on the right of exclusive use were thus concerned with established rights and common value, and not with the status of the water in the lower reaches of the stream.

* In terms of the Water Act,[118] a right of exclusive use existed unless thirty years' beneficial use could be proved by owners in the lower reaches. These rights of lower owners restrict an upper owner's exclusive use, irrespective of the status of the stream at the point where they were exercising these rights.

* The fact that the upper owner's right is restricted, does however not deprive the source of the stream of its status as private water, because it still complies with the definition of private water. Neither do these restrictive rights change the status of the stream at any lower part where the rights are exercised - as long as the water continues to comply with the definition of private water at any specific

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[116] 1880 1 BAC 5.

[117] *Vermaak v Palmer* 1876 6 Buch 25.

[118] Section 5.

* As far as the potential "drastic and disastrous consequences"[126] (which such an interpretation could have for long standing rights of use in respect of public streams) are concerned, Rabie recommends either the abolition of the distinction between public and private water, or increased state control of the use of private water. State control *has* in fact increased during the last few decades,[127] but such increased control necessarily raises the question of the right of existence of the distinction between private and public water, the reason being that the very basis of a distinction between the two kinds of water is the extent of administrative control. This has been the case since Roman water law, but due to a general misunderstanding and incorrect interpretation thereof, the distinction became vested in the law of things. This mistake has however gradually been rectified, especially by legislation, so that the reason for the current distinction is similar to that of Roman law, viz. administrative control. Therefore, increased control over private water is, in effect, wiping out the very basis of the distinction.[128]

* It is therefore submitted that the abolition of the distinction is the logic consequence of the search for a solution of the question as to the status of the sources of streams.

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126 *Ex parte Kirstein* 1917 Krummeck Rep 172 176.

127 *Assembly Debates* 20 August 1987 4361; Department of Water Affairs *Management of Water Resources* 10.3. This is also proved by various amendments of the act.

128 Vide Chapter III.III supra.

point, it is private water, although beneficial rights exercised for more than thirty years restricted the upper owner's exclusive use. Therefore, when restrictive rights exist in terms of section 5(1), the water does not change to public water, or suddenly becomes subject to section 9 rights of reasonable common use.[119] This very clear right applies to all sources and tributaries : when water falls or rises on an owner's land but it is not capable of common irrigation, it is private water and available for the owner's exclusive use, irrespective of whether it joins another stream lower down or whether it contributes to the flow of a public stream.

* The rule is however confused by weak draughtsmanship as far as the definitions of "private water", "public water" and "public stream" are concerned.[120] But neither this fact nor the general fear that the application of the clear and unambiguous intention of the legislature will rule out all public streams,[121] are sufficient reason to ignore the clear terminology of the act[122] and to continue supporting a decision which created law without common law support, in order to meet the circumstances of a specific case.[123]

* It is therefore submitted that the view in *Le Roux v Kruger*[124] was a correct interpretation of the clear terminology of the various provisions of the act, and of the intention of the legislature to overrule the decision in *Van Heerden v Weise*,[125] and the confusion which followed it.

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119 In terms of s 9.

120 Chapter IV.I supra.

121 Rabie 84 et seq.

122 *Ex parte Kirstein* 1917 Krummeck Rep 172 174; *Le Roux v Kruger* 1986 1 SA 327 C 346.

123 A good example of the saying that hard cases make bad law.

124 1986 1 SA 327 C.

125 1880 1 BAC 5.