

**BUSINESS PLAN: FRAMEWORK FOR RESEARCH,
EDUCATION AND TRAINING IN THE WATER SECTOR
(FETWater): PHASE III**

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1.0 INTRODUCTION

In 1996 the Department of Water Affairs and Forestry (DWAF) requested support from the United Nations Educational Scientific and Cultural Organisation (UNESCO) and the World Meteorological Organisation (WMO) to assess education and training needs for integrated water resources management in South Africa. These organisations agreed, and the assessment was conducted in 1998 at national, provincial and community levels. The assessment evaluated the education and training needs and capacities of the DWAF and linked them with the needs of other government departments, non-governmental organisations and the private sector.

The assessment took into account various imperatives, including South Africa being a country in transition, its affirmative action policy, staff and career development concerns, capacity building required for achieving sustainable development, and the need to link and interact with efforts by southern Africa and the international community. The conclusions of the assessment stated *inter alia* that:

- The implementation of South Africa's National Water Act would be seriously impaired unless human resource needs and related competencies in the water sector could be timely met.
- Recent concepts in water resources management have direct implications for South Africa's integrated water resources management approach and education and training would be required for its practical implementation.
- Opportunities to further links with southern Africa and the international community to have South Africa's training, education and capacity building needs met should be explored to the fullest.
- Although the education and training capacity of South Africa's tertiary institutions is relatively high, many gaps, weaknesses and threats were identified, relating mostly to:
 - A gap in structured consultation between water academics, the Department of Water Affairs and other employers about competency needs;
 - A gap in structured networking among water academics about curricula and employers' needs;
 - Uncoordinated proliferation of *ad hoc* education and training and continuing education and training products and their questionable cost-effectiveness;
 - Limited links with the private sector; and
 - Bureaucratic approaches to qualification, certification and accreditation.

In addition, the independent review conducted after the implementation of the Second Phase of the framework for research, education & training in the water sector (FETWater), indicated the great success of the FETWater programme, which has been shown several achievements. The evaluators expressed satisfaction with the FETWater model (for management and implementation), and have noted that networking was a very important method to use for capacity building. The assessors suggested that the model used in Phase III should be embraced going forward to attain sustainability. According to the review, the sustainability of the programme lies within the training and capacity building as well as the many training courses, training manuals and curriculum programmes that were developed by the FETWater programme.

The FETWater 7th annual general meeting and the Steering Committee held in August 2011 identified new capacity building needs and requirements as informed by new challenges in the water management landscape. The new capacity building needs and requirements take into consideration the following salient issues:

- Advancement of technologies in the water space
- Climate change and variability
- Strengthening of water regulatory regime and development of regulatory tools
- Local government capacity building using water as a catalyst for economic growth and development
- Developing stronger inter-governmental relations
- Specialized skills and knowledge to manage water taking into account the whole value chain (i.e. strengthening the interface between water resources and water services) and more importantly indivisibility of the hydrological cycle.

The envisaged mechanisms for review and alignment to support water management institutions will be facilitated through participation of networks in regional structures thereby consolidating the Water Resources/Water Services interface and capacity building support. A national capacity audit in the water sector in South Africa is being undertaken and the results and outcomes will influence implementation of Phase III. The most crucial directive that phase III Networks work plans will embody will come from the National Water Resources Strategy (NWRS-2). FETWater Phase III will be guided by the priorities set in the National Water Resources Strategy -2 for the next five years.

1.1 FETWATER AND THE WRC

Framework Programme for Research, Education and Training in the Water Sector (FETWater) is a programme that supports training and capacity building networks in integrated water resource management in South Africa. The programme was first implemented in 2003-2007 as phase 1 and then in 2007 – 2010 as phase 2. The Department of Water Affairs (Former DWAF) and UNESCO (with Fust Funds) funded both phases of the programme. While the first phase was implemented by the DWAF, the Water Research Commission (WRC) implemented FETWater phase 2. An independent review of Phase 2 indicated that the WRC successfully and effectively implemented the programme as an appointed implementing agent (IA). The WRC used its experience and sharpened tools in project management to manage FETWater projects and other activities. The WRC is committed to assist DWS and the country in the development and training of human capacity in the South African water sector. Therefore, appointment of the WRC to implement Phase III will reinforce our commitment and collaboration effort with the Department of Water and Sanitation (DWS) and other institutions.

1.2 AIM

The aim of this plan is to point out critical issues and activities that the WRC will undertake in the implementation of Phase III to ensure that the objectives of FETWater Phase III programme are effectively and efficiently realized for the benefit of the South African Water Sector. This plan is focused on what can be done in the year 2014-15 financial year. Therefore, the WRC will annually develop (or update) new business plan in accordance to emerging views or strategies articulated by DWS and other stakeholders. While the FETWater programme Phase III may not address all the capacity needs in the water sector, the WRC will work with all stakeholders to contribute to meeting most of the critical human training and capacity building needs.

1.3 OBJECTIVES

The WRC will in the process of the implementation of Phase III, promote the following objectives of FETWater:

- To create opportunities for learning and sharing knowledge;
- To strengthen human capacity development in the water sector through networking;
- To link with other committed national, regional and international institutions or networks to sharing and transfer knowledge;
- To identify and prioritize training needs of the country;
- To support and complement existing capacity building initiatives, programmes and activities related to water management;
- To stimulate new initiatives to address short-term and long-term capacity and training needs of South African water sector;
- To strengthen partnerships and collaboration in SADC and Africa in human capacity building, water management and innovation.
- To strengthen regional academic institutions and other human capacity development service providers through networking
- To develop future generation of experts in water science and management, particularly from previously disadvantaged groups.
- To strengthen cooperation between South Africa research institutions and academic institutions of the Flemish Community.

To ensure accreditation, support, and uptake of the courses developed by the networks, the WRC will work closely with the Water Chamber at the Energy and Water Sector Education and Training Authority (SETA) with regards to Integrated Water Resources Management (IWRM) training. In this regard, FETWater will facilitate the following as part of the Phase III:

- Establishment of an expert groups for IWRM training with links to the SETA. This will be done in close collaboration with Cap-Net who has already done work in this regard;
- The development of unit standards and skills programmes from existing short courses for submission to the SETA and registration with SAQA;

- Support the development of comprehensive plan for career paths and related qualifications to contextualize training needs for Water Management Agencies in South Africa. This will be done through the Skills audit;
- Further involvement of Flemish and other international and other experts in the quality assessment of FETWater products will be sought, in order to ensure that these products will be peer reviewed by the Flemish counterparts or other relevant experts;
- A special publication series will be established to ensure proper dissemination of the FETWater products. It will be sought to link this series to the IHP publication series; and
- The FETWater website (www.fetwater.co.za) will be improved to reflect all the products developed by FETWater to ensure its availability.

2.0 THE WRC'S STRENGTHS AND CORE COMPETENCIES

The WRC is a premier water research funding organization in South Africa. The organization has been funding and managing water related research for more than 40 years. It is the only organization that provides funds and support water research across all institutions (universities, colleges, science councils, consulting companies, and other research institutions) in the country and this allows easy access to the best expertise in the country and beyond. The WRC projects and many other activities do not only promote and support innovation in science and water sector, but also support capacity building of human and institutions. The WRC has over the years supported students and staff capacity development through its projects and this commitment has been clearly enhanced in the current 5-year strategy (the Knowledge Tree) of the WRC. Another aspect that makes the WRC to stand tall among many organizations is its comprehensive R&D portfolio that covers all aspects in water and its management. The WRC is experienced in implementing government programmes or initiatives, For instance, the WRC has implemented FETWater Phase II and was DWAF's partner in the implementation of FETWater Phase 1. The WRC has just finalized the implementation of R11 Million project on Present Ecological Status on behalf of DWA, as an implementation agent. Regarding the tools and procedures in project management, the WRC is one of the best project orientated organizations that successfully start and complete its project within reasonable time frames.

3.0 OTHER INSTITUTIONS INVOLVED IN WATER MANAGEMENT AND INNOVATION DEVELOPMENT

The WRC acknowledges the existence of training and capacity building programmes available in other institutions such as universities, water boards, WISA and science councils. However, the ability of the WRC to access and involve different institutions and experts across geographical boundaries or areas always put the WRC above many if not all institutions with regard to knowledge generation and transfer and capacity building of people and organizations. The experience of the WRC in supporting students (about 500 students per year) and junior staff training through research projects will benefit the implementation of FETwater Phase III. The WRC excels in bringing together expertise and institutions together for a common cause, and the same will be done by the WRC to train and build capacity of individuals and institutions in the Water Sector.

While universities and science councils carry out or support capacity building in the water sector, the gap that remains unfilled relates to the ability to train people in all areas of water management, which the WRC excels in doing because of project funding and management model that encourages all water related research and development studies. The WRC focuses its R&D and capacity building across all aspects of the water cycle and also support water related socio-economic studies. This broad spectrum of research and development that WRC supports may not be covered by most of the institutions in South Africa and Africa. The WRC will create value by developing synergies between affected institutions (government and private) in the water sector. It is important that there are synergies between FETWater and other capacity building initiatives such as UNESCO Chairs and Category 2 water centers to be hosted in South Africa, skills development driven from Water Sector Leadership group, Department of Science and Technology initiatives (e.g. ACCESS – Applied Centre for Climate and Earth System Science).

4.0 SPECIFIC ROLES OF THE WRC AS AN IMPLEMENTING AGENT

- The WRC will implement the work plan(s) and related activities of the FETWater Programme Phase III, as directed and approved by the governing body that DWS chairs;
- The WRC will work with the networks leadership to develop work plans for each financial year.
- The WRC will issue and manage contracts signed between the WRC and Service providers.

- The WRC will manage FETWater funds using its tools and procedures and will comply with all the financial prescripts and conditions governing the business of the WRC.
- The WRC will submit an annual business plan to the designated FETWater governance structure and DWS for approval before starting with any work or activity. The business plan shall stipulate all activities and associated budget for a specific financial year.
- The WRC will communicate and liaise with service providers and other FETWater stakeholders on behalf of DWS.
- The WRC will claim payments for activities in accordance to the agreement between DWS and the WRC.
- The WRC will pay the Fetwater service providers (in ZAR) on behalf of DWS.
- Managing FETWater website development;
- Managing Alumni database and tracer studies;
- Organizing FETWater workshops and annual meetings ;
- Publish all relevant documents as prescribed by DWS;
- Carry out any other roles stipulated in the agreement between DWS and the WRC or agreed upon in writing by the two parties;
- FETWater management and administration.

5.0 OPERATIONAL PLAN

Phase III of FETWater intends to address the identified capacity building needs and requirements to ensure relevance, viability and sustainability. In addressing the capacity building needs and requirements, the networks to be established for Phase III will be informed by or focus on the themes or priorities (*water resources infrastructure, monitoring and assessment, water resources planning, regulation, water use and services, and institutions and governance*) set out during the 7th annual general meeting of FETWater. After the signing of the agreement between the WRC and DWS, the FETWater Phase III programme will kick-start by establishing the following:

- Contract signing;
- Transfer of funds to the WRC by DWS;

- Reconstituting the Steering Committee (SC) by DWS (programme partners to be involved);
- Approval of the Business and Work Plan(s);
- Formation and approval of the Networks by the SC;
- Confirming needs of the Water Sector and DWS (available needs analysis study reports to be used);
- Appointment of Coordinator by the Implementing Agent (IA) to run the daily affairs of FETWater;
- Approval of Networks' work plans prepared according to identified needs and priorities;
- Appointment of service providers by the WRC.

The above preparatory activities or tasks will need about three (3) months to complete. However, short-term arrangements can be considered to continue with some of the activities.

6.0 FETWATER NETWORKS

Based on the outcome of the 7th FETWater conference or workshop, the following Networks and associated budget are proposed for 2014/15 financial year:

6.1 *Water Infrastructure*

Coordinator: Mr Nick Tandi (Interim)

Assistant Coordinator: TBA

DWS champion: Mr Leonardo Manus

WRC Representative: Dr Nonhlanhla Kalebaila

Other network core members:

Budget allocation: R 441 000.00

6.2 *Water Monitoring and Assessment*

Coordinator: Dr Brian Delcarme (CPUT)

Assistant Coordinator: TBA

DWS champion: TBA

WRC Representative: Dr Jennifer Molwantwa

Other network core members:

Budget allocation: R 441 000.00

6.3 *Water Planning & Implementation*

Coordinator: Ms Sabine Stuart-Hill (UKZN)

Assistant Coordinator: TBA

DWS champion: Mr L Mabuda

WRC Representative: Mr Wandile Nomquphu

Other members:

Budget allocation: R 441 000.00

6.4 *Water Regulation Requirements*

Coordinator: Mr Ashwin Seetal (Royal HaskoningDHV)

Assistant Coordinator: TBA

DWS champion: Ms N Ncapayi

WRC Representative: TBA

Other members:

Budget allocation: R 441 000.00

6.5 *Water Use, Services and Sanitation*

Coordinator: Ms Yvette Geyer (Water Concepts)

Assistant Coordinator: TBA

DWS champion: Mr C Mazubane

WRC Representative: Dr Sylvester Mpandeli

Other members:

Budget allocation: R 441 000.00

6.6 Institutional Management and Governance

Coordinator: Dr Lewis Jonker (UWC)

Assistant Coordinator: TBA

DWS champion: Ms Thoko Sigwaza

WRC Representative:

Other members:

Budget allocation: R 441 000.00

7.0 FINANCIAL PLAN

The FETWater programme financials based on DWS estimates are given in **Table 1**. The financial resources allocated for each FETWater activity is presented in **Table 2**. The allocation is based on DWS's estimates as presented in **Table 1**. Based on currently disbursed funds to the implementing agent, **Table 3** shows the financial resources allocated for each FETWater activity for the financial year 2014/2015. All the funds for the FETWater programme are deposited in a special account in the WRC. In this regard, the WRC has allocated KSA 10 to FETWater Phase III. To support the programme, the WRC tools and processes will be used in the disbursement of funds and management of the FETWater projects. All the financial expenditures, income records (including receipts and invoices) and related records will be kept in the electronic system of the WRC, known as the Financial Management System (FMS).

Table 1 FETWater Phase III budget estimates

Activity	2014/15	2015/16	2016/17	2017/18	TOTAL
Networks	\$700,000	\$700,000	\$700,000	\$700,000	\$2,800,000
Sub Total: Funds for networks	\$700,000	\$700,000	\$700,000	\$700,000	\$2,800,000
FETWater website development	\$20,000	\$20,000	\$20,000	\$20,000	\$80,000
Alumni database and tracer studies	\$70,000	\$20,000	\$20,000	\$20,000	\$130,000
Publication series	\$30,000	\$50,000	\$50,000	\$150,000	\$180,000
FETWater workshops and annual meetings	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
FETWater management and administration	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
Sub Total: Funds for other activities	\$320,000	\$290,000	\$290,000	\$390,000	\$1,290,000
UNESCO in kind contribution	\$35,000	\$35,000	\$35,000	\$35,000	\$140,00
TOTAL	\$1,055,000	\$1,025,000	\$1,025,000	\$1,125,000	\$4,230 000
UNESCO in kind contribution	\$35,000	\$35,000	\$35,000	\$35,000	\$140,00
FUST fund contribution	\$250,000	\$250,000	\$300,000	\$300,000	\$1,100,000
South African contribution	\$770,000	\$740,000	\$690,000	\$790 000	\$2,990,000

Table 2 Budgetary allocation based on DWS estimates – 2014/15 – 2017/18

FETWATER ACTIVITY	2014/15	2015/16	2016/17	Total
Networks	R 3 087 000.00	R 3 737 500.00	R 3 924 975.00	R 10 749 475.00
Website development	R 140 000.00	R 115 000.00	R 111 000.00	R 366 000.00
Alumni database	R 140 000.00	R 120 000.00	R 120 000.00	R 380 000.00
Publications series	R 350 000.00	R 300 000.00	R 325 000.00	R 975 000.00
Workshops and Meetings	R 700 000.00	R 500 000.00	R 500 000.00	R 1 700 000.00
Management and Administration	R 700 000.00	R 600 000.00	R 660 000.00	R 1 960 000.00
TOTAL	R 5 117 000.00	R 5 372 500.00	R 5 640 975.00	R 16 130 475.00
IA Fees (7.5% of Total value)	R 383 775.00	R 402 937.50	R 423 073.13	R 1 209 785.63
GRANT TOTAL	R 5 500 775.00	R 5 775 437.50	R 6 064 048.13	R 17 340 260.63

Table 3 Budgetary allocation based on committed funds – 2014/15

FETWATER ACTIVITY	2014/15
Water Resources Infrastructure Network Activities	R 441 000.00
Monitoring and Assessment Network Activities	R 441 000.00
Water Resources Planning Network Activities	R 441 000.00
Regulations Requirements Network Activities	R 441 000.00
Water Use and Services Network Activities	R 441 000.00
Institutional Mgt. & Water Gov. Network Activities	R 441 000.00
Qualification Development & Facilitation	R 441 000.00
Website development & management	R 140 000.00
Alumni database development, mgt. & Marketing	R 140 000.00
Publications series	R 350 000.00
Workshops and Meetings	R 700 000.00
Management and Administration	R 700 000.00
TOTAL	R 5 117 000.00
IA Fees (7.5% of Total value)	R 383 775.00
GRANT TOTAL	R 5 500 775.00

Table 4 Budgetary allocation based on committed funds – 2015/16

FETWATER ACTIVITY	2015/16
Water Resources Infrastructure Network Activities	R 533 928.57
Monitoring and Assessment Network Activities	R 533 928.57
Water Resources Planning Network Activities	R 533 928.57
Regulations Requirements Network Activities	R 533 928.57
Water Use and Services Network Activities	R 533 928.57
Institutional Mgt. & Water Gov. Network Activities	R 533 928.57
Qualification Development & Facilitation	R 533 928.57
Website development & management	R 115 000.00
Alumni database development, mgt. & Marketing	R 120 000.00
Publications series	R 300 000.00
Workshops and Meetings	R 500 000.00
Management and Administration	R 600 000.00
TOTAL	R 5 372 500.00
IA Fees (7.5% of Total value)	R 402 937.50
GRANT TOTAL	R 5 775 437.50

Table 5 Budgetary allocation based on committed funds – 2016/17

FETWATER ACTIVITY	2016/17
Water Resources Infrastructure Network Activities	R 560 710.71
Monitoring and Assessment Network Activities	R 560 710.71
Water Resources Planning Network Activities	R 560 710.71
Regulations Requirements Network Activities	R 560 710.71
Water Use and Services Network Activities	R 560 710.71
Institutional Mgt. & Water Gov. Network Activities	R 560 710.71
Qualification Development & Facilitation	R 560 710.71
Website development & management	R 111 000.00
Alumni database development, mgt. & Marketing	R 120 000.00
Publications series	R 325 000.00
Workshops and Meetings	R 500 000.00
Management and Administration	R 660 000.00
TOTAL	R 5 640 975.00
IA Fees (7.5% of Total value)	R 423 073.13
GRANT TOTAL	R 6 064 048.13