

The vast majority of environmental problems stem from human actions. Perceptions that Earth and all the life contained within it exist for human comfort alone contribute to the over-exploitation of natural resources. For more than five decades psychologists and socio-psychologists have investigated the human-environment interaction, i.e. relationships between behaviour and various variables, such as demographics, personal values, and how these link with awareness, intentions and attitudes.

Although there are interrelated links between awareness, knowledge, attitude and behaviour, none of these studies have been able to identify the 'magic' link to changing people's behaviour towards the environment. However, it could be reasoned that if people do not see or are unaware of the state of their environment, they will neither be able to observe any changes of degradation, nor foster the desire to take action.

In 2007, an evidence-based study was conducted in the Buffalo, and Hartenbos and Klein Brak River catchments to measure the impact of State-of-River (SoR) reporting on people's awareness and attitudes towards river conservation. (State-of-River reports are graphical, reader-friendly publications produced as part of the government's National River Health programme, which investigates the environmental health of rivers according to a set of environmental indices).

The main driver of this study was the need to know whether SoR reporting added any value towards awareness and knowledge creation among South African society. Unfortunately, this could not be determined as the SoR reports were not being disseminated widely enough. Nevertheless, valuable information regarding people's attitudes and general awareness of water issues were obtained from this study.

SAMPLING AND DATA COLLECTION

A rigorous sampling method ensured the participation of learners and

Spreading the conservation message – ARE WE DOING IT RIGHT?



Respondents filling in questionnaires under a fig tree during the regular community member meeting.

Wilma Strydom

With water becoming an ever scarcer resource it is becoming increasingly important to spread the message of conservation to all communities. Wilma Strydom of CSIR Natural Resources and the Environment takes a critical look at the way in which information is being disseminated and recommends a new way forward.

parents from different cultures and socio-economic backgrounds. A total of 1 144 parents responded by filling in the questionnaires about river conservation which was available in the three main languages spoken in the study areas (Afrikaans, English and isiXhosa).

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Data generated from this study indicated that there was large (82%) consensus among respondents that there existed a need for more information on river systems. Thus, although unanswered, the question stays relevant whether SoR reports would contribute towards this need.

Language representation in the sample group was fairly equal with 29%, 41% and 30% of the responses in English, isiXhosa and Afrikaans, respectively. All age groups were well represented, but the majority of respondents (almost 38%) were aged between 31 and 40. Female respondents dominated (64%), over males (21%), while 15% of the respondents did not indicate their gender. All education levels were fairly well represented.

MAIN RESULTS

From the Buffalo catchment about 30% and from the Hartenbos and Klein Brak catchment 22% of the respondents indicated that they use water very sparingly. While respondents with access to municipal tap water in their homes were more prone to wasting water, this group showed better attitudes and more awareness towards river conservation issues than those which did not have access to municipal tap water.

The study further indicated that respondents from urban areas scored higher in their attitudes towards river conservation than those from rural areas. Urban residents were also more aware of water issues than their rural counterparts. Both the attitude and awareness scores in this study did not correlate with water use behaviour: rural respondents used water more sparingly. Attitude and awareness improved slightly with increased education levels. Respondents that indicated that they would pay more for their water rather than changing their water use behaviour showed the lowest score for attitude towards river conservation.

Given that education has an effect on awareness, attitudes and behaviour, albeit indirectly through people's belief systems, and is negative in some instances, the current formal education system (the syllabus as well as the way in which knowledge is gained) as well as the implication for the conservation of natural resources cannot be ignored and should be investigated further.

KNOWLEDGE DISSEMINATION WITH THE END-USER IN MIND

Distribution of the SoR reports and posters in the two studied catchments was mainly through launch events and did not necessarily reach all the stakeholder groups concerned. One could therefore argue that adequate information dissemination strategies and policies in the organisations and departments responsible for the dissemination were either not in place or were not adhered to. Such an institutional malfunctioning has detrimental effects on both the science-society and the science-policy interfaces.

Organisations and departments should realise and give effect to the fact that the end user is the one for which the communication was intended and subsequently developed for. The value in showcasing communication materials at conferences and seminars is limited to



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An interpreter lends a helping hand during the survey.

showing the possibilities and to encourage others to start or continue similar work. If the communication does not eventually reach the target audience, bragging about achievements of part of the communication chain will not help to achieve the desired changes in attitudes and behaviours of society, and the necessary conservation goals will not be reached.

Recommended areas for future research include: addressing language diversity, socio-economic circumstances, cultural differences as drivers of human attitude and behaviour. Childhood experiences and the formal education system (schools) as a vehicle for environmental education should not be neglected.


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Difficulties relating to culture when using children as a means to educate their parents, as well as the lack of understanding of adverse impacts on rivers and the general water use culture should be investigated within the South African context.

The River Health Programme should give more attention to the actual dissemination of information to ensure that the information reaches the intended target audiences. It is recommended that dissemination strategies are formulated, implemented and adapted to suit the special needs of the diverse target groups. Such strategies and the execution thereof should be evaluated

and adjusted where necessary; and the impact on awareness, attitude and behaviour changes assessed. It is equally important to apply the learning and knowledge gained from this study in future investigations.

Creating awareness of river conservation issues to change people's attitudes and behaviour in such a way as to ensure adequate protection of South Africa's natural water resources is a challenging aspect to ensure river conservation and protection for future generations. Whether this can be achieved if all efforts are concentrated on adults (e.g. resource managers and decision makers) is debatable and intervention is most probably needed at a very early age and throughout children's formative years.

South Africa's natural water resources are facing detrimental consequences under the current status quo. It is the responsibility of every citizen to ensure that these resources are used in a responsible and sustainable manner, and every citizen should carry that responsibility to his/her workplace, whether it is in the agriculture, mining, industrial or policy-making arena. 

THE NEED FOR SCIENTIFIC SUPPORT

For the past two decades there has been growing emphasis on the need for scientifically credible environmental information to support decision-making and to inform the public. In South Africa, the National State of Environment and several sectoral reports, including the State-of-Rivers (SoR) reports, have been made freely available and accessible to a wider audience, ranging from politicians and resource managers to riparian communities and the general public. The SoR report is presented in a user-friendly and easy-to-understand format and compliments the technical reporting on river ecosystems. Although the style and content of SoR reports were tested before, the success of dissemination and impact of SoR reporting on people's attitudes were not previously measured.



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Parents gathered at the school where teachers and children could assist when the reading got tough.