Working for Water Programme in South Africa

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Short title: Working for Water Programme in South Africa

Key Message: Pioneering environmental conservation initiative in South Africa successfully combines ecological concerns and social development benefit.

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What is the problem?

South Africa is richly endowed with biodiversity. However, as poverty and the demand for urban and agricultural land increases, habitat and consequently biodiversity are increasingly under threat. South Africa is a chronically water stressed country with between 500 m^3 and 1000 m^3 of water available per person per year. Surface water is heavily committed for use, water is imported from neighboring countries and groundwater sources are limited. As a result, water availability is predicted to be the greatest and most urgent development constraint facing South Africa (Turpie et al. 2008).

The introduction of hundreds of species of non-native trees to South Africa has led to conversion of species-rich vegetation to single-species stands of trees. This poses a direct threat not only to biological diversity but to water security, the ecological functioning of natural systems and the productive use of land. It intensifies the impact of fires and floods and increases soil erosion. It is estimated that invasive alien plants have reduced South Africa's mean annual runoff by approximately 7%. The need for water is further highlighted by the fact that water scarcity in developing countries is closely linked to the prevalence of poverty, hunger, and disease (Adato et al. 2005, DWAF 2009, Marais et al. 2008 and van Wilgen et al. 1998).

What approach was taken?

A response to these problems came in the form of the *Working for Water* programme *(WfW)*, initiated and funded primarily as a poverty relief public works programme. It was conceived in 1995 and developed with a dual function of controlling invasive alien species of plants and also providing social upliftment. This duality is reflected in its goal to sustainably control invasive alien species by 2020 “in order to contribute to economic empowerment, social equity and ecological integrity.” The PES-like[1] approach of *WfW* was conceptualized as a mechanism to improve the efficiency of natural resource

[1] This emerging Payment for Ecosystem Services (PES) system differs from others in that the service providers are previously unemployed individuals that tender for contracts to restore public or private lands, rather than the landowners themselves (Turpie et al. 2008).

management. It has an annual budget of over R400 million[2] and is the largest single natural resource based poverty relief and public works expenditure in South Africa. It receives its funding from the government's annual allocation of funds for poverty relief (Magadlela et al. 2004, Turpie et al. 2008).

What input was required and what ecosystem services were considered?

In most PES systems, the sellers are landowners (state, private, small-scale or communal). However, in the case of *WfW*, sellers are mobile service providers in the form of small-scale contractors who perform restoration work on land under any type of ownership. The seller selection criterion is that the contractor staff must have been previously unemployed. These contractors, rather than the landowners, bid for contracts to restore public or private land. Contracts specify how invasive alien plants in a defined area are to be treated. Mechanical methods (felling, removing or burning invading alien plants), chemical methods (using environmentally safe herbicides), biological control (using species-specific insects and diseases from the alien plant's country of origin) or integrated control methods (a combination of these three approaches) are used to prevent the enormous impacts of invasive plants. Water supply, carbon sequestration and fire protection/reduction in fire intensity are the ecological services considered for *WfW* projects (Turpie et al. 2008, WfW 2005).

Under the umbrella of a poverty-reduction programme, *WfW* took deliberate steps to address the urgent need for the reduction of poverty and unemployment, and social transformation in South Africa. The development of entrepreneurial skills, provision of training, addressing gender imbalances and the re-integration of ex-offenders were some of the steps taken by *WfW* to address issues of economic empowerment and social equity. The development of entrepreneurial skills includes the previously mentioned contractor scheme, which enables people living within an area identified for clearance of invasive alien plants to apply for contract work, and develop business skills. Training focused on three main areas: training in work-related activities (the development of skills in machine and herbicide use, and worker safety issues), training in health (with a focus on HIV/AIDS) and contractor development. In terms of addressing gender imbalances, the programme ensured that at least 60% of wages would be earned by women. It also gives employment to ex-offenders to address the inability of the prison system to re-socialize former inmates (Magadlela et al. 2004).

What was the policy uptake, and what were the conditions for this effort to actually influence public management?

Poverty alleviation is one the programme's primary objectives. There are over 300 *WfW* projects running in South Africa. They have created thousands of jobs, have a strong emphasis on gender equity and provide benefits such as skills training and health and HIV/AIDS awareness programmes. It is estimated that 24,000 previously unemployed people, 52% of whom are women, were employed in 2000. *WfW* has also managed to generate further income through the development of value-adding industries, such as furniture, fuelwood, and charcoal that use alien vegetation (Turpie et al. 2008).

The success of *WfW* is widely acknowledged, and, given the extent of alien plant invasions in South Africa, its services are in demand throughout most of the country. Thus the programme managers have had to prioritize potential projects by means of Cost-Benefit Analysis (CBA). Both environmental and social benefits are considered fully in the project appraisal process (*WfW* 2005).

[2] Approximately equivalent to USD $ 53.532 million, 2008 rates.

The *WfW* programme has focused primarily on projects that improve water delivery and not on ecological restoration per se. This inherent shortcoming has spawned two new programmes. The first, Working for Wetlands and Working for Woodlands, engages in habitat restoration. Working on Fire promotes the responsible and safe use of fire as an environmental management intervention (Turpie et al. 2008).

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