

BUSHBUCK RIDGE PROJECT, South Africa: Working for Wetlands



Lake Fundudzi, another Working for Wetlands project site in South Africa, is an important source of fish for the local communities.

A dry country with exceptionally rich biodiversity, South Africa has particular reason to value the water-related services that wetlands provide. The National Spatial Biodiversity Assessment 2004 found that 44 per cent of freshwater ecosystems associated with the main rivers in South Africa are critically endangered, compared with only 5 per cent of terrestrial ecosystems. The South African Government reports that, by 2025, the nation will be one of 14 African countries subject to water scarcity (less than 1000 m³ per person per year). As of 2004, 12 per cent of South Africans still lacked access to adequate water supplies and 35 per cent lacked access to adequate sanitation services, despite a remarkable extension of water services to poor communities since the end of apartheid.

Restoring, conserving and empowering

The 'Working for Wetlands' Programme undertakes wetlands restoration across South Africa. Its guiding principle is to restore degraded wetlands to enhance water supplies and conserve biodiversity for the benefit of society. Also, by employing the most disadvantaged to undertake this task (from six to twenty-four months), the pay, skills and experience obtained

provide participants with the opportunity to escape poverty. Hence, the Programme selects its employees from among the long term unemployed; prioritising employment of single parents, youth (20 per cent target; 18 per cent in FY05), women (60 per cent; 54 per cent) and people with disabilities (2 per cent; 4 per cent)²⁵. Prior to the Programme's establishment in July 2000, there was no nation-wide government effort to restore wetlands, and employment relief programmes did not exist.

The project sites are all in areas identified by the South African Government as 'poverty nodes'. The Programme selects wetlands for conservation that are a priority for conservation and water supplies, and where on-ground works can enhance the health of the wetlands. The projects have focused on construction of structures to halt erosion and restore the hydrology of wetlands sites, as many wetlands are degraded by erosion gullies. Works commonly include blocking drains originally dug to dry out the wetlands, removal of invasive alien plants (thirsty species such as exotic eucalypts and wattles can reduce water supplies) and propagation and planting of indigenous species. At specific sites, other interventions have included the construction of a boardwalk for visitor access and breaching a road embankment to restore water flows.

'Working for Wetlands' is partnering with private sector companies in the mining and forestry industry to expand both the funding base and program outreach. In 2006, the mining industry contributed around R7 million (~US\$ 1 million) towards projects that impact on their operations. Farmers and forestry companies contribute a further 3-5 per cent of program costs for wetlands restoration involving their lands, and are committed to ongoing management responsibilities.



Tracking performance

In the 5 years to 2005, the Working for Wetlands Programme rehabilitated 175 wetlands nation-wide and employed 8,000 disadvantaged South Africans at a cost of R195 million (USD\$ 28 million). In 2007, the Programme completed 12,905 m³ of gabion (rock basket) structures, 6,591 m³ of concrete structures, 16,599 m³ of earthen structures, and 43,206 m³ of earthworks; it re-vegetated 183,048 m², cleared 1,052 ha of invasive plants, and propagated 112,711 indigenous plants. It has raised public awareness of wetland conservation, helped maintain cultural values, and enhanced local water supplies.

An independent study in 2005 (Note a) revealed that the beneficiaries' livelihoods were most likely to have stayed unchanged without the programme's intervention. Prior to its implementation, people were without stable sources of income and depended mainly on state grants, especially child-support grants. Programme participants have benefited from life-skills education, through basic adult education courses on first aid, HIV/AIDS, financial management and technical skills such as construction techniques.

Pilot Malele and team hard at work, constructing gabions at Bushbuck Ridge

Furthermore, large multiplier effects are experienced in most project sites, as the projects empower local communities and strengthens the relationship between communities, their leaders and public authorities. Other benefits include poverty reduction through job creation, skill development and enhanced self esteem; restoration of environmental health and of fish resources and maintenance of domestic water quality, as in Lake Fundudzi and surrounding wetlands; enhanced livestock production through more reliable water supply and grazing on wetland vegetation; improved food production from more reliable irrigation; potential for the community to generate incomes from sale of crafts based on weaving using wetland plant fibres; increased use of traditional roof thatching using wetland plants; and potential for lake-based tourism.

Photo: WWF-Canon



Photo: WWF-Canon



Photo: WWF-Canon

The rehabilitation of the wetlands has restored the condition of these wetlands providing more water for food garden cultivation, increasing community food security.

Safeguarding food production through water and sediment regulation

The Bushbuck Ridge project of the Working for Wetlands programme has employed 41 people per year over the last 6 years, and cost R6 million (US\$860,000). The project, started in April 2000, aims to rehabilitate three wetlands in the water-stressed Sand River catchment area. A primary reason for intervention in this area plagued by unemployment and poverty is to safeguard food gardens in the wetlands being threatened by erosion gradually destroying the wetlands. Recent rehabilitation work included deactivating gully head erosion and stabilising gully channel erosion in the wetland; blocking drains to raise the water table and restore the hydrological regime; and creating awareness of wetlands and their importance amongst the local community. Also included is the maintenance work required for previously constructed erosion control gabion structures that have been damaged, as well as ensuring there is no damage on previously eroded parts of the wetland that have been re-sloped and re-vegetated by Working for Wetlands.

A cost-benefit analysis (Note b) of the Bushbuck Ridge project was being conducted at the time of writing to evaluate provisioning

services across the 3.5 ha Manalana wetland in the Bushbuck Ridge area under two scenarios: with and without rehabilitation intervention. The Manalana wetland was under severe threat from actively advancing erosion gullies that would have continued throughout the wetland and degraded the entire area were it not for the rehabilitation intervention that successfully halted the advance. The Manalana wetland was kept intact and the provisioning services (including crop and reed production, water for domestic purposes and livestock, and grazing) were maintained by safeguarding two key regulatory functions: water regulation and sediment control. The preliminary analysis indicates that over a 50-year period, the rehabilitation will cost approximately R1 million (US\$140,850). The provisioning benefits attributed to the rehabilitation, supplied over this period to 34 local households, amount to an estimated R2 million (US\$280,000).



Photo: WWF-Canon

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Strengths, obstacles and next steps

The Working for Wetlands Programme protects wetlands and creates local employment, offering opportunities to those who would otherwise be working informally and living in poverty. During the period of employment, significant improvements were reported in nutrition and education among the households of those employed. The project will also have a sustained environmental impact.

Since 2001 the wetland conservation work has evolved to include enhancement of traditional cultural and livelihood activities, such as basket production from wetland plant fibres and growing wetland tolerant crops, particularly indigenous tubers, to improve food security. This has enhanced the income of local people and secured participatory, sustainable management of communally-owned wetlands.

Following its investment in 2000, and responding to the success of the initial stages of the Working for Wetlands Programme, the national government substantially increased investment in 2004. The programme has encouraged both government and industry to invest more heavily in conservation of wetlands to benefit both people and nature. The South African government has already replicated the Working for Wetlands model in other programmes created for eradication of invasive alien plants, community-based natural resource management, combating desertification, tourism infrastructure development, and the sustainable use of agricultural natural resources.

To replicate the Working for Wetlands approach in another area or country, a commitment to a multi-stakeholder approach linking economic, social and environmental organisations is needed. Development cooperation agencies can play a key role in funding pilot programmes in new countries. Inventories of wetlands and technical knowledge of restoration and management techniques need to be built. Early attention to the social needs of participants can improve the socio-economic benefits.

*Wetlands Project
Fishing at Lake
Fundudzi*

Note:

- a. Nkoko and Macun of consultants CASE undertook an independent qualitative socio-economic research based on 13 focus groups from 3 of the 39 Working for Wetlands Projects in February 2005
- b. A cost-benefit analysis is being conducted by AWARD (Association for Water and Rural Development), the University of Kea Zulu Natal, and the London School of Economics



Photo: WWF-Canon / Mondri