

Working for Water

Addressing social and environmental problems with payments for ecosystem services in South Africa

In South Africa, Working for Water provides one of the longest-standing and most successful examples of payments for ecosystem services (PES). Initiated in 1995 just one year after the end of apartheid, the program organizes poor South Africans in local communities to eradicate invasive alien plants (IAPs) through the country's Department of Water Affairs and Forestry.

What's the Matter With IAPs?

IAPs waste about 7% of South Africa's water annually, impeding farming and irrigation, intensifying floods and fires, causing erosion, destroying rivers, increasing siltation of dams and estuaries, and promoting poor water quality which can lead to the extinction of native plant and animal species (Working for Water, 2007). According to a study conducted by the Council of Scientific and Industrial Research (CSIR), 10.1 million hectares (6.8%) of South Africa and Lesotho were invaded by alien plants in 1997, reducing mean annual water flow by 3,300 million m³ (Ibid). The implications of such reductions can be catastrophic for farmers whose 1.3 Mha of irrigated croplands produce 25% of the country's agricultural output (WRI, 2000-2001). IAPs also obstruct plantation operations and increase fire hazards for private landowners. In a water-scarce region like Sub-Saharan Africa, maximizing water flows is important not only for agriculturalists, but for governments and private citizens alike.



Photo: <http://www.dwaf.gov.za/wfw/Wetlands/>

How Do Working for Water's Payments for Ecosystem Services Work?

Working for Water currently runs over 300 projects in all 9 South African provinces. Through these projects, workers use a variety of techniques to clear invasive species, including mechanical and chemical methods, as well as biological and integrated control (Working for Water, 2007). The "service" being provided is increased water flow, which results from the reduction in IAPs. While a majority of the payments provided by Working for Water have been made by the government using poverty relief funds, private entities are becoming more frequent purchasers of this ecosystem service as well. For example, in Walker Bay, local landowners are paying for half the clearing, and all of the maintenance costs, while in the Eastern Cape farmers are paying 60% of the cost of removing IAPs (WRI, 2000-2001). The forestry industry has also committed to keeping riparian and non-afforested areas on their property free from invasive plants with the help of Working for Water, and has assisted with planning, mapping, vehicle donations, and training. Much of the private purchasing taking place has been spurred by recent legislation, which was designed to encourage water conservation and investment in payments for water services. For example, The National Water Act of 1998 limits individual private water rights and charges user fees, thus making water more valuable and encouraging PES to maximize existing water availability. In some cases legislation directly mandates removal of invasive species from private lands to promote improved water services and increased biodiversity of native species (Working for Water, 2007). By creating a strong supporting legal and administrative infrastructure, the Department of Water Affairs and Forestry has ensured Working for Water's longevity, demonstrating the importance of strong governance in achieving success in PES projects overall.

Results from Working for Water

In the past, losses from IAPs in the Western Cape alone amounted to almost \$100 million annually. Yet in the first few months after IAPs have been cleared by Working for Water, streamflow has been increased by between 8,000 and 34,000 liters/ha per day depending on the season, regardless of the location or species cleared (Ibid). The program generates approximately \$9 million annually in revenue, not accounting for the savings accrued by removing IAPs (Ibid).

What are the social benefits of Working for Water?

Since its inception, Working for Water has trained over 200,000 people, 52% of whom are underprivileged women, and the remaining majority of whom are youth, disabled individuals, and those living with HIV/AIDS. Workers are paid R22-55 per day, which is a competitive salary for similar jobs in the country (WRI, 2000-2001). Annually, the program provides jobs to approximately 18,000 previously unemployed individuals. In addition to employment, the government supports Working for Water by providing employees with education and training, health and reproductive care, rehabilitation for former convicted criminals, childcare services, HIV/AIDS awareness programs and counseling, and financial savings programs. Participants have also used the “waste” from extracted invasive alien plants to promote value added industries, such as the production of furniture, wooden toys, firewood and fuel chips. This is an important and unique aspect of Working for Water, and one that should be considered in the development of similar projects.

Why is Working for Water successful?

South Africa is in a unique position amongst sub-Saharan nations to undertake a program like Working for Water, given its relative wealth, political and social stability, and tradition of conservation. Perhaps the most interesting and important aspect of the program, however, is the use of legislation to force the hand of PES by requiring the removal of invasive species to improve water services. In addition, Working for Water cooperates with the South African Department of Water Affairs and Forestry, the Departments of Environmental Affairs and Tourism, Agriculture, Trade and Industry, as well as provincial departments of agriculture, conservation and environment, research foundations, and private companies. Likewise, these relationships have also been important in the success of the program. While Working for Water is potentially replicable in other countries, it should also be seen as the exception in PES projects, rather than the rule, particularly in the context of Sub-Saharan Africa. South Africa possesses the stability, political will,



legislative capacity, and secure governance structures necessary to make a massive undertaking like Working for Water a success, which is not the case in many of its neighboring countries. While this should caution others against expecting equivalent accomplishments in less stable and less wealthy nations, it also indicates that leaps in environmental and socio-economic development can be achieved when social, economic, and political security is established and encouraged. To the extent possible, future PES projects must both rely on, and reinforce, these important underlying tenets of sustainable development.

For Additional Information:

- Garson, Phillipa. “Turning the green alien tide” 25 July 2002. SouthAfrica Info. Available http://www.southafrica.info/ess_info/sa_glance/sustainable/workwater.htm
- Working for Water. Available at: <http://www.dwaf.gov.za/wfw/problem.asp>. Accessed April 14, 2007.
- World Resources Institute. “Freshwater Systems.” In World Resources 2000-2001: The Fraying
- Web of Life. United Nations Development Programme, World Bank, World Resources Institute. 2000.
- The Working for Water Website: <http://www.dwaf.gov.za/wfw>

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