

AUSTRALIA

Bush Tender Programme

In Australia voluntary, market-based incentive programmes have become an increasingly important tool to achieve environmental objectives. Several state governments and the Commonwealth government now use a mix of incentive approaches to secure targeted management actions that retain and improve biodiversity conservation on private lands. A national web-based information resource has been created to support these initiatives (<http://www.marketbasedinstruments.gov.au/>). Starting in 2001, the State government of Victoria commenced a series of Bush Tender trials through which the government paid landowners to enter into three to six year contracts to adopt a range of vegetation management practices. Reverse auctions are used in specific regions to minimise the cost of conservation actions. As a consequence of the trial programme, under which about 125 contract bids were signed covering about 4800 hectares, the use of reverse auctions is receiving increasing attention as a promising method to obtain biodiversity conservation at least cost, and was subsequently expanded and scaled up to other programmes. In 2008 the EcoTender programme was released, an auction-based approach that expands BushTender to include multiple environmental outcomes and that includes a more detailed way to evaluate tenders (www.dse.vic.gov.au/EcoTender).

Discriminative-price reverse auctions, together with other mechanisms, are also used for disbursing funds of the Forest Conservation Fund, which was created in 2005 by the Commonwealth government to protect up to 45,600 hectares of old-growth and other high conservation value forests on private land in Tasmania. A total of four reverse auction rounds secured 88 contracts to protect 13,779 hectares of forest. Fixed price offers provided a further 26 contracts to protect 2,996 hectares and direct negotiations a further eight contracts and 5,657 hectares. The cost of designing and administering the market components of the Fund was 10.5 percent of the total programme budget. Using the metric, an additional 18.6 percent in conservation outcomes are achieved. The additional conservation gains are valued at approximately \$3.3 million, while the cost of achieving those benefits is only \$0.5 million. The ratio of benefits to costs from investing in the metric is 6.9.

In 2008, the Australian Government commenced a market-based Environmental Stewardship Programme as part of the national Caring for our Country environmental initiative of more than \$2 billion over five years (<http://www.nrm.gov.au/stewardship/index.html>). The Program's investment focus is Matters of National Environmental Significance identified under the *Environmental Protection & Biodiversity Conservation Act (1999)*, specifically nationally endangered ecological communities. The Programme continues the use of discriminative-price reverse auctions to protect high conservation value assets on private land, and it provides for 15 year funding contracts with private land managers to ensure long term protection and restoration of targeted endangered communities. The Programme initially targeted endangered box gum woodlands in south eastern Australia and by the end of 2009 has completed four auctions for a total of 161 contracts and over 17,000 hectares of woodland protected. The Programme used an ecological state-and-transition model to develop an investment management framework for achieving specific improvements in the condition and extent of endangered ecological communities.

In 2007, the New South Wales government commenced a Biodiversity Banking and Offsets Scheme (Biobanking) to help address the loss of threatened species and other biodiversity. The scheme only addresses biodiversity values, including threatened species listed under the New South Wales *Threatened Species Conservation Act 1995*. The aim of biobanking is to generate conservation gains while streamlining the biodiversity assessment process for developments. Under the scheme landowners manage their biobank site to either maintain or improve the site's

overall biodiversity values. Developers can offset the impacts of their development site – after they have minimised and mitigated the impacts on the site – by purchasing matching biodiversity credits from the biobank site owner (www.environment.nsw.gov.au/biobanking).

Impact on biodiversity

The programmes use quantitative indicators (quality-adjusted hectares of biodiversity restored or protected) in order to measure biodiversity impacts effectively. BushTender uses a habitat-hectares methodology to assess vegetation condition and EcoTender has introduced more details including potential improvements in salinity, biodiversity, carbon sequestration and water quality. The Forest Conservation Fund used a conservation value metric based on an assessment of the ecological significance of the forest proposed; the conservation management provided by the proposal; and the security of conservation outcomes as measured by covenant length to determine value-for-money. Overall, the careful assessment of area and quality of conservation implies that there are significantly positive impacts on biodiversity.

Replicability

Biodiversity stewardship payments seem to be suitable in situations where managing threats to biodiversity requires monitoring and management effort from private landholders and outcomes are difficult and/or costly to monitor. These include the restoration and management of habitat for threatened species and ecological communities, and specific issues, for example fire management.

The expanded use of reverse auctions suggests that the tool is replicable in a range of circumstances where there is a sufficient private market for competitive tenders to operate.

A mix of market based programmes is effective, as in the Forest Conservation Fund. A mix of innovative financing mechanisms is now becoming more common in Australia.

Lessons learnt

Market-based competitive auctions are popular with landholders: biodiversity conservation is translated from a complex and abstract idea to practical actions from which local results can be seen. All conservation market programmes have been oversubscribed. As voluntary payments maintain the autonomy of the landholder, they are perceived as being fair, which reduces enforcement costs.

There was strong community and landholder interest in better understanding how reverse auctions and other mechanisms operate, which has required effective communications, information management and capacity building efforts by governments to support emerging markets.

In general, the best strategy is to reveal all information to landholders. Experience has shown that there is a lot of economic surplus (or rent) and it is reasonable to share this between government and landholders. Payments need to be demonstrably above legal environmental obligations on private land managers.

Collusion has not been a problem – experience suggests it is almost impossible to collude because bids are formed on an action basis, but assessed competitively on value for money.

Results suggest that using auctions to reveal individual landholder opportunity costs improves the cost effectiveness of conservation expenditure up to seven fold over what a non-competitive grants based scheme would have cost.

While auctions have focussed on improving the cost efficiency of publicly funded conservation, most schemes have two weaknesses. First, most payment schemes are for short periods of time so long term gains to biodiversity remain uncertain (see Environmental Stewardship for a different approach). Second, most schemes do not sufficiently consider the spatial configuration of bids, so

ecosystem and landscape scale benefits, including through improved habitat connectivity, are missed.

Contract design is an important and relatively undeveloped area for managing sovereign risks for environmental investments. Contracts may be designed differently according to the environmental and economic context thus providing a more efficient incentive instrument.

Reliable scientific knowledge and tools for ecological valuation are critical for running effective biodiversity markets, as are robust monitoring and reporting systems. Use of fit-for-purpose conservation metrics has allowed government investors to assess and prioritise competing proposals using a simple cost-efficiency formula (\$/metric score). As biodiversity markets progress into more complex markets for 'bundles of ecosystem services' to deliver multiple policy objectives, there will be a need to develop appropriate metrics and mechanisms that provide for differentiated co-investments.

Sources: Binney and Zammit C (2010); Department of Sustainability and Environment (2008); Parkes D et al. (2003); Stoneham G et al. (2002); Zamitt (2010); Zammit C et al. (*in press*).

