



**DesignerCarrots**

MARKET-BASED INSTRUMENTS FOR NRM CHANGE

# Using existing markets for NRM outcomes

Markets can help deliver natural resource management outcomes. Harnessing market forces does not necessarily require the creation of new markets; it may be possible to use existing markets to deliver environmental and natural resource management outcomes.

## Making better use of existing markets

Increasingly, market-based instruments (MBIs) are being used to create new markets for natural resource management (NRM) where no market currently exists. MBIs are used to deliver environmental outcomes more efficiently and effectively than traditional regulatory mechanisms. In some cases, however, existing markets can be used to deliver environmental and NRM benefits.

There are three main approaches to using existing markets: leveraged private investment, revolving conservation funds and using existing water markets. Each approach has its own characteristics, strengths and limitations.

### Leveraged private investment

Leveraged private investment encourages 'public' and 'private' markets to work in tandem. Public, or government, NRM investors are 'in the market' for environmental and other public benefit outcomes. Private financiers and private equity are 'in the market' to invest in profitable enterprises. Leveraging takes an explicit cash co-investment approach and targets near-commercial projects with sustainability benefits, rather than targeting primarily public-good environmental outcomes.

A fundamental reason for government intervention in environmental management and NRM is that many existing land-use practices, while profitable, can also cause or contribute to the degradation of the natural resource base and biodiversity values.

Some productive land uses, and land and water management practices, can also deliver significant environmental benefits. For example, planting woody perennial vegetation such as timber species, sandalwood, oil mallee or broombrush for commercial purposes may also deliver improved salinity outcomes, carbon sequestration, or wildlife corridors and habitat.

However, in many instances these types of projects face two hurdles:

- their commercial returns may be marginally lower than other investment opportunities with similar risks and therefore, the project will not attract investment, or
- they may not offer enough environmental benefit to justify 100% public investment.



In some cases, existing markets for land and water resources can be used to deliver better environmental outcomes.



**Australian Government**

This program is funded by the Australian, State and Territory governments through the National Action Plan for Salinity and Water Quality.

Leveraged private investment projects are co-funded by the private and public sectors, with the public sector covering the shortfall in any commercial returns in order to attract private-sector investment. This approach relies on access to a pool of public funds and a thorough assessment of the environmental and commercial benefits, and the risks of competing proposals. Proposals are selected for 'gap' funding based on their combined commercial and environmental attributes.

There are few examples of this approach being used in Australia, with the exception of the Greening Australia–CSIRO Land Innovation Fund trial. However, leveraged private investment may have future potential for regional NRM groups to invest with the private sector in commercial projects that also provide environmental outcomes.

### Revolving conservation funds

The existing property market does not differentiate between land with a high conservation value and land with little or no conservation value. In fact, often, properties with higher environmental values (e.g. grazing properties with denser vegetation coverage) have a lower market value as production may be constrained.

Revolving funds operate in a defined market niche—private properties with high nature conservation values owned by a section of the community with the passion and the funds to purchase land and commit to preserving its environmental values. The revolving fund process:

- identifies and purchases properties with high conservation values
- registers a legally enforceable permanent conservation covenant on the title of the property
- sells the covenanted properties to conservation-minded buyers, and
- provides assistance to new owners with access to expert advice, support and (in some cases) incentives.

On completion of this cycle, the proceeds of the sale are returned to the fund so that the cycle can be repeated.

A number of revolving conservation funds have been established. For example, the Victorian Trust for Nature has successfully mobilised a growing market for conservation properties. The trust has a reserve of money that is used, and re-used, to build up a portfolio of private conservation assets.

In some instances, properties purchased and protected by the trust have been resold at a premium<sup>1</sup>. Bigger trusts can respond quickly as properties come onto the market. The Victorian Trust for Nature also acts as property-broker, finding prospective purchasers for protected properties.

Some organisations, such as the national Bush Heritage Trust, administer philanthropic funds to purchase and manage private lands, but they do not operate as revolving funds.

### Using existing water markets

Recent years have seen the rapid development of a 'cap-and-trade approach' to rural water resources. A cap-and-trade approach sets a limit on the use of a natural resource by dividing up the resource so each user has a defined limit they can use; this is called a 'permit' or 'right'. Using a cap-and-trade approach to rural water use recognises that resources are scarce and riverine ecosystems require protection, and limits the use of water to within ecologically sustainable limits.

The leverage fund concept seeks to marry public funds with private investors to secure new land-use ventures that deliver lasting environmental benefits.



The use of revolving funds to purchase, protect and re-sell land with high environmental values is now well established in Australia.



<sup>1</sup>It is uncertain whether this is because the rehabilitated and protected properties are attracting a premium from a niche sector of the property market, or whether the properties have simply increased in value along with general market movements.

For water users, cap-and-trade approaches have a number of benefits, including:

- users can buy or sell water to meet their production needs through temporary trade
- permanent trades allow users to expand or contract their water-consuming businesses, and
- capping gives greater protection to the current reliability of all water entitlements.

Water markets were mainly developed to benefit irrigation farmers. The potential to use existing markets to trade environmental water has only recently been explored. Few environmental water managers have been in a position to participate in water markets and test the potential to generate environmental benefits. To date, very little tradeable water entitlement has been acquired for environmental purposes—most environmental water is either ‘rules-based’, such as the first post-winter stream flows in Queensland, or is the water left over after the allocation of water resources to users.

However, as a reform commitment under the National Water Initiative, there is a growing trend to formalise the roles of ‘environmental water managers’. A number of ‘environmental water management’ organisations have now been established, most of which are regional or catchment management organisations. In addition to managing the release and distribution of environmental water, these organisations are increasingly being assigned responsibilities to participate in water markets to derive additional benefits from available environmental water entitlements<sup>2</sup>.

### Permanent water markets

The first area of potential for using existing water markets is the acquisition of new environmental water. Options include:

- purchasing from the existing pool of consumptive water entitlements to hold and use for environmental purposes
- purchasing water efficiency savings, including capital works to reduce evaporative losses from naturally ephemeral lakes and wetlands, or to reduce leakage from channel systems or improve on-farm irrigation systems<sup>3</sup>, and
- purchasing ‘options’ on irrigation water to be exercised only under negotiated water supply conditions.

### Temporary water markets

Environmental managers may be able to buy and sell environmental water entitlements on temporary water markets to optimise environmental benefits. Environmental water entitlements could be sold in years when they are not required for environmental purposes. These sales can fund environmental works or purchase water in future years to deliver greater environmental benefits.

### Quasi-market arrangements

Environmental water managers can negotiate greater flexibility for using their water entitlements to further optimise environmental outcomes. For example, in some regulated river systems, rules-based water can be ‘loaned’ to consumptive water users when it is not required, to pay back in subsequent years.

It may be possible to negotiate ‘carry-over’ arrangements with water storage operators so environmental water can be banked to deliver bigger environmental outcomes.



In some Australian river systems, managers of environmental water can own and trade water entitlements for environmental outcomes. Participation in water markets can deliver benefits for both environmental and consumptive water users.

<sup>2</sup> Rules-based environmental water, or residual water, is available for environmental uses after consumptive water needs have been met and cannot be traded.

<sup>3</sup> These savings are likely to be more expensive than the market value of the water entitlement.

## Opportunities for regional NRM groups

There are opportunities for regional NRM groups to use existing markets for land and water resources to enhance NRM outcomes. Further opportunities may also exist in emerging carbon markets.

Using existing markets may be best delivered in conjunction with partner organisations operating at a state or national scale. For example, existing conservation revolving funds and regional NRM groups may benefit from improved coordination and exchange of information.

The potential to participate in water markets for environmental outcomes will depend on the policy and statutory arrangements in each jurisdiction.



Pick and plant one of our **Designer Carrots** ideas today, and you could reap the rewards tomorrow.



[info@marketbasedinstruments.gov.au](mailto:info@marketbasedinstruments.gov.au)  
[www.marketbasedinstruments.gov.au](http://www.marketbasedinstruments.gov.au)



**DesignerCarrots**  
MARKET-BASED INSTRUMENTS FOR NRM CHANGE