

# Submission to the Productivity Commission Study into Market Mechanisms for Recovering Water in the Murray-Darling Basin

18 September 2009

This paper and its appendices articulate ACFs support for the most efficient and effective ways to recover water for the environment and optimise outcomes for all water users in the MDB using existing funding allocations and modified policy tools and policy mixes.

## Key Recommendations

The Murray-Darling Basin (MDB) is large and diverse and although the key problem of water overextraction is common to most parts of the Basin the best way to recover water for the environment, and optimise outcomes for all water users, differs from region to region. There is no one size fits all solution and so a portfolio or optimised mix of water recovery mechanisms – including market based instruments (MBIs) and often non-market based instruments too – is required, tailored to the specific circumstances of each region to acquire a portfolio of water products of the required characteristics that meets the needs of the environment in that area.

There are a range of different market-based instruments and also a range of different administrative mechanisms that can be used in relation to each MBI, each of which may have different advantages and disadvantages for different stakeholders and for the market itself. These influence their utility and choice in differing circumstances, but regardless of which mix of MBIs and administrative methods are adopted, it is crucial to expand and accelerate the reallocation of water to the environment so that the scale and pace of water reform can meet the challenge of ongoing ecological decline and the future challenge that climate change will bring to bear on the environment.

Whilst ACF supports the ongoing water buyback there are clear advantages to expanding the range of MBIs used and combining MBIs with other policy tools.

In particular, integrating the targeted purchase of water entitlements with investment in infrastructure improvement and structural adjustment at a district scale, where an understanding of the optimal, future land and water use in the light of existing and anticipated natural resource management conditions and challenges, can be used to funnel investment from different public and private programs into on the ground, district level reform.

Such a targeted land and water reform package should be examined by the Productivity Commission as it has considerable potential to reverse the declining condition of rivers and wetlands, improve the profitability of agriculture and boost the confidence of rural communities of the Murray-Darling Basin. ACF proposes a geographically targeted, land and water reform package under the *Water for the Future* program that would accelerate and integrate investment of the \$3.1 billion *Restoring the Balance* water buyback money with the \$5.8 billion *Sustainable Rural Water Use and Infrastructure* efficiency and structural adjustment funds and maximise the synergies possible in doing so.

Further land and water purchases as per Toorale Station should be incorporated into the mix, where optimal future land use is determined by many factors but is likely to involve the separation of most or all of the water which should be returned to the environment and sale of the land back into some form of appropriate production, perhaps with a covenant on the Title to secure particular management priorities.

Purchasing annual allocations of water should be incorporated into the mix when there is a high risk that refugia, threatened species, threatened ecological communities or other high conservation value assets may be irreversibly damaged or lost. ACF supports focussing expenditure on acquiring water entitlements that will generate long-term benefits but this should not prevent the purchase of real water in the short-term if the alternative is permanent loss of parts of the system.

Water recovery, including water buyback, should continue for as long as it takes to address overallocation and overuse and hence it should continue up to and beyond the implementation of the Basin Plan and new water sharing plans (WSPs) if necessary, to refine the portfolio of water entitlements needed to meet the needs of the environment.

Also, the Sustainable Diversion Limit components of the Basin Plan will likely bring substantial reductions to the amount of water that irrigation interests can extract from the rivers of the MDB. Stakeholders should make the most of the transitional opportunity offered by *Restoring The Balance* and other programs to ease the transition to a new extraction cap and ensure that much of the necessary change has already taken place before it has to.

For this reason as well as the need to recover water quickly for the environment to mitigate the level of ecological decline, all caps, embargoes and other volumetric restraints to the purchase of water for the environment should be abolished.

Overextraction is the main driver of ecological decline in the MDB and without adequate water recovery most other NRM investments will be rendered redundant. As the issue of flows are dealt with, however, it will become increasingly important to begin to address other threats to the Basin such as livestock control, weeds and feral animals. Whilst an assessment of other NRM needs in the MDB and how best to meet them is beyond the scope of this paper, the sooner governments and other NRM organisations begin to work on this issue, the easier it will be to dovetail environmental flow provision and complementary management into catchment management plans.

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## **Market Mechanisms for Recovering Water in the Murray-Darling Basin**

ACF welcomes the opportunity to comment on the role and choice of market based instruments (MBIs) in addressing overallocation and overextraction of water in the MDB and providing held environmental flows of the required characteristics that meet the needs of ecological assets and system wide ecological processes. Our comments in response to specific questions posed by the Productivity Commission are as follows under the section headings set out by the Productivity Commission for ease of reference.

### **What are the objectives of the Restoring the Balance program?**

*Is the focus on acquiring entitlements the best way of achieving the environment's needs?*  
Economic analyses done in relation to the MDB consistently conclude that a key way of recovering water for the environment, efficiently and effectively is to buy it<sup>1,2,3</sup> and ACF accordingly supports the ongoing purchase of water entitlements as a key means to recover environmental flow. The current approach to acquiring entitlements should be augmented by additional measures as set out below.

*Is a 'no-regrets' presumption a reasonable basis for purchasing entitlements, and at what point does this cease to be the case?*

Purchased water must generate a portfolio of entitlements with the characteristics necessary to meet ecological needs in terms of location, reliability, capacity to be delivered to the right place at the right time etc. Until the 'environmental watering

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<sup>1</sup> ABARE (2007). Purchasing water in the Murray-Darling Basin:

<http://www.environment.gov.au/water/publications/mdb/pubs/2007-08-review-a.pdf> Viewed 14.09.09.

<sup>2</sup> Collins and Scoccimaro (2006). Natural resource buybacks and their use to secure environmental flows. Land and Water Australia, Canberra, August.

<sup>3</sup> Productivity Commission (2006). <http://www.pc.gov.au/projects/study/waterstudy/docs/finalreport> Viewed 14.09.09.

plan' component of the Basin Plan is implemented a no-regrets policy is acceptable and the actual strategy<sup>4</sup> currently used by DEWHA in deciding which sell offers to accept is supported. We understand that ninety per cent of water entitlements purchased during 2008-09 were from high priority catchments (M. Harwood, pers comms) and that in the absence of climate change adjustment modelling a risk based approach was taken to ensure that the entitlements are likely to remain valuable to the environment even if eroded by the impacts of climate change (C. Mues, pers comms).

Obviously once the 'environmental watering plan' component of the Basin Plan is available water should be targeted and acquired by MBIs and other appropriate means to make up the portfolio of water products with the characteristics needed to meet the needs of particular areas.

Buying water entitlements is good for the environment as the purchaser can pursue entitlements of the characteristics needed to make up the required portfolio and is also good for irrigators who can choose whether they wish to participate in the market or not and if they do choose to participate they can use the money from selling water to retire debts, invest in improved water infrastructure on-farm, change to another form of production more suited to local conditions or leave the land if that is what they wish to do.

*What are the arguments for continuing the buyback after the new Basin Plan is implemented in 2011, and associated state water sharing plans start to be implemented in 2014?*

Ongoing, specifically targeted buy-backs of water entitlements will continue to provide water for the environment and ease the transition to new caps for other water users under new water sharing plans and should continue in line with the new Basin Plan. As knowledge of the needs of ecological assets continues to grow the environmental water manager should be able to finesse the portfolio of water entitlements which may involve ongoing buying and selling entitlements or allocations. Given the clear signal between human induced climate change and reduced inflows<sup>5</sup> the currently disproportionate risk borne by the environment from long-term reductions in inflows should be mitigated by ongoing water purchase. Where there remains a substantial gap between current water extraction levels and the sustainable diversion limit, irrigators may benefit from ongoing buyback as opposed to reduced reliability.

*What implications do environmental demands across the Basin have on the targeting of purchases and the mechanisms and instruments that should ideally be used?*

Whilst we support the current approach to water buybacks the outcomes for the environment and for other water users would be improved if it was augmented with other approaches to water acquisition and land and water reform.

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<sup>4</sup> DEWHA: <http://www.environment.gov.au/water/policy-programs/entitlement-purchasing/strategic-approach.html> Viewed 12.09.09.

<sup>5</sup> Steffan, W. <http://www.climatechange.gov.au/science/index.html>

Firstly, the combination of severe environmental degradation, ongoing drought and low allocations mean that without watering in the short term, many important ecological assets may not survive long enough to benefit from the entitlements currently being purchased. Where there is a high risk of this happening we urge DEWHA and environmental managers to purchase water allocations to ensure that important areas like refugia can be maintained pending improved conditions, greater allocations under environmental water entitlements and implementation of the Basin Plan. We understand that any allocations purchased will only provide water in the short term and reduce the amount of money that may be available for purchasing entitlements which provide a long term solution and hence only advocate this as an emergency approach if the alternative is irreversible loss.

An integrated land and water reform package which would help reverse the decline in the condition of rivers and wetlands, improve the profitability of agriculture, generate improved outcomes for all water users and boost the confidence of rural communities of the Murray-Darling Basin. ACF proposes a geographically targeted land and water reform package under the *Water for the Future* program that would accelerate and importantly would *integrate* investment of the \$3.1 billion *Restoring the Balance* water buyback money with the \$5.8 billion *Sustainable Rural Water Use and Infrastructure* efficiency and structural adjustment funds. We refer you to Appendix 1, 'Land and Water Reform in the Murray-Darling Basin'<sup>6</sup> which outlines how this would operate and the multiple benefits that would accrue to all stakeholders. This approach has gained support from a wide range of stakeholder and is viewed by many as an important strategic gap in water reallocation and Basin re-plumbing.

Also, there are a wide range of MBIs that may be used to acquire water for the environment and as well as a range of administrative processes that may be used to implement them. Each has different advantages and disadvantages for different stakeholders. Questions of this nature formed the basis of a multi-stakeholder workshop convened by ACF in 2006, the analyses of which are set out in Appendix 2 'Market Mechanisms and Water Recovery for the Environment'<sup>7</sup>.

The precedent set by the Commonwealth and NSW governments in purchasing land and water jointly in the Toorale Station example was a good one and should be followed up. Clearly no two properties are the same and the fate of the land component would differ depending on the property. It is likely that most properties could be sold back into production rather than become part of the national estate, perhaps with covenants attached to the title of the property to ensure good, ongoing land and water management. Please refer to the attached ACF / Inland Rivers Network paper 'Opportunities to purchase water and properties' in the MDB<sup>8</sup> attached as Appendix 3 for suggestions of some other properties in the MDB that

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<sup>6</sup> ACF 2008: [http://www.acfonline.org.au/uploads/res/Targeted\\_land\\_water\\_reform\\_paper\\_16-10-08.pdf](http://www.acfonline.org.au/uploads/res/Targeted_land_water_reform_paper_16-10-08.pdf)

<sup>7</sup> ACF 2006: [http://www.acfonline.org.au/uploads/res/res\\_market.pdf](http://www.acfonline.org.au/uploads/res/res_market.pdf) Viewed 14.09.09.

<sup>8</sup> ACF / IRN 2008: <http://www.irnsw.org.au/pdf/PurchasingWaterAndPropertiesDarlingBasin.pdf> Viewed 14.09.09.

would constitute strategic purchases in terms of their ability to return substantial amounts of water to the environment, location etc.

The different conditions that prevail across the MDB, different environmental needs, levels of extraction and degree of reallocation required mean that the full range of MBIs should be considered and an appropriate portfolio of water recovery methods employed. In summary, there is no one-size fits all solution to water reallocation in the MDB and district level solutions should be tailored accordingly.

*How should environmental water be allocated across competing projects and sites?*

Prioritisation of environmental water, at a conceptual level at least, has a high degree of expert consensus: protect refugia; target especially vulnerable species and threatened ecological communities; build on previous investment etc. ACF would refer the Productivity Commission to a recent discussion paper by DEWHA 'A framework for determining Commonwealth environmental watering actions'<sup>9</sup> and ACF comments on the paper attached as Appendix 4. The allocation of environmental water across competing sites is complex but the key problem at the moment is lack of environmental water, not lack of knowledge about how to use it. The integrity of the 'environmental asset register' and 'environmental watering plan', both currently high profile issues for the MDB Authority and beyond the scope of this Productivity Commission study will be key to securing the success of the Water for the Future program.

*Should the buybacks be designed so as to reduce structural adjustment costs or should adjustment be addressed separately? If the former, are there particular buyback mechanisms that should be used to do this? If the latter, what approach should be used?*

We would draw the Productivity Commission's attention to our aforementioned 'Targeted Land and Water Reform' paper<sup>10</sup>, Appendix 1, which describes how structural adjustment / infrastructure investment should be integrated with entitlement buyback at a district level so as to optimise outcomes for all stakeholders.

Funds committed to buying back water should not be used as a substitute for appropriate structural adjustment funding from the states and commonwealth.

## **The market for water**

*How much influence would the choice of market mechanism used to purchase entitlements for environmental purposes have on the market for water?*

We refer the Productivity Commission to ACFs findings in the attached Appendix 2, 'Market mechanisms and water recovery for the environment'<sup>11</sup>.

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<sup>9</sup> DEWHA 2009: <http://www.environment.gov.au/water/policy-programs/cewh/pubs/cehw-framework-discussion-paper.pdf> Viewed 14.09.09.

<sup>10</sup> ACF 2008: [http://www.acfonline.org.au/uploads/res/Targeted\\_land\\_water\\_reform\\_paper\\_16-10-08.pdf](http://www.acfonline.org.au/uploads/res/Targeted_land_water_reform_paper_16-10-08.pdf) Viewed 13.09.09.

<sup>11</sup> ACF 2006: [http://www.acfonline.org.au/uploads/res/res\\_market.pdf](http://www.acfonline.org.au/uploads/res/res_market.pdf) Viewed 14.09.09.

## What market mechanisms should be considered?

*What are the advantages and disadvantages and disadvantages of the different market mechanisms that could be used to obtain water for the environment? In particular, how do they compare in terms of compliance and transaction costs and the ability to meet the differing watering needs of environmental assets?*

Once again, we draw the Productivity Commission's attention to Appendix 2 'Market Mechanisms and Water Recovery for the Environment'<sup>12</sup>. An optimised mix of water recovery mechanisms should be put together driven by the particular circumstances and needs of ecological assets. A short term, emergency requirement for water may best be met by purchasing a seasonal allocation for example if insufficient water is available from held entitlements and 'options' type products<sup>13</sup> such as the Murrumbidgee RiverReach proposed product appended to this submission as Appendix 5, may provide large volumes of water in wet years. The contrast between the northern and southern basins, especially in terms of the degree of regulation, is important in this regard as is the extent to which infrastructure retirement, reconfiguration and investment may be required, in relation to which we refer the Productivity Commission again to our attached Appendix 1, 'Land and Water Reform in the MDB'.

*Are there other market mechanisms, not listed above, that the Commission should be considering?*

ACF urges the Commission to consider the integration of market mechanisms and the \$3.1 billion *Restoring the balance* program with the \$5.8 billion *Sustainable Rural Water Use and Infrastructure* efficiency and structural adjustment program as per Appendix 1.

The productivity commission should assess the proposals developed by Professor Mike Young. In particular his suggestion that:

The real challenge is to find a way to solve the over-allocation problem quickly. One option is to continue to buy water but at a dramatically accelerated rate. This is likely to be administratively very difficult.

Another option is to issue the environment a proportional share of each entitlement type. This approach would solve the over-allocation problem in one single step. Ministers would simply issue a suite of entitlements to the environment. Overnight, the environment would become a shareholder whose status would be equivalent to all other users.

Given past policy commitments, principles of fairness and justice would suggest the need for a compensating payment to all users well in advance of the environmental share being issued. Once made, irrigators would then be well resourced and free to compete and innovate in water and land markets that are about the future of their industry rather than about the cost of past mistakes.

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<sup>12</sup> ACF 2006: [http://www.acfonline.org.au/uploads/res/res\\_market.pdf](http://www.acfonline.org.au/uploads/res/res_market.pdf) Viewed 14.09.09.

<sup>13</sup> Heaney & Beare (2005). Water Resource Management: using water options to meet environmental demands. ABARE Conference paper presented at Outlook 2005, March Canberra.

If the above option seems unacceptable, then an alternative approach is to run a reverse tender and buy all the water needed for the environment in one hit. Reverse tender share buybacks are often used by companies to buyback shares. A range of offer prices are set and participants are invited to indicate how many shares they would sell at that price. A clearing price is determined and all who offered to sell at less than that price are paid the clearing price. Usually, the clearing price is well above market value<sup>14</sup>.

*How could the tender process be improved?*

ACF has not been directly involved in the process but we are concerned to hear about long delays in processing and recently the large number of tenders that have recently been rejected, in some cases allegedly after verbal agreement that a sale would proceed, on the grounds of lack of money. Regardless of which mechanisms are used to reallocate water to the environment, the program should be accelerated to maximise the amount of water available to the environment in the short as well as the medium and long term and to close the gap between the current and anticipated new caps under the Basin Plan and therefore ease the transition for irrigators. Impediments to accelerated roll-out of the *Restoring the Balance* program, including state based caps and embargoes should be removed immediately as discussed later.

### **Do we need a portfolio of mechanisms and water products?**

*What mix of market mechanisms and water products should the Australian Government be using to achieve its environmental objectives?*

The particular circumstances that prevail in the MDB at a district level, both in terms of ecological need and water extraction arrangements, are quite diverse and a portfolio of water recovery mechanisms, tailored to the particular district should be developed to generate the portfolio of water products, tailored to meet the ecological needs of the area. Once again, we draw the Productivity Commission's attention to Appendix 2 'Market Mechanisms and Water Recovery for the Environment'<sup>15</sup>. An optimised mix of water recovery mechanisms should be drawn together driven by the particular circumstances and needs of ecological assets. A short term, emergency requirement for water may best be met by purchasing a seasonal allocation for example if insufficient water is available from held entitlements and 'options' type products<sup>16</sup> such as the Murrumbidgee RiverReach proposed products may provide large volumes of water in wet years. The contrast between the northern and southern basins, especially in terms of the degree of regulation, is important in this regard as is the degree to which infrastructure retirement, reconfiguration and investment may be required, in relation to which we refer the Productivity Commission again to our attached Appendix 1, 'Land and Water Reform in the MDB'.

### **Upgrading infrastructure**

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<sup>14</sup> Young, M. 2009 [www.myoung.net.au/water/](http://www.myoung.net.au/water/)

<sup>15</sup> ACF 2006: [http://www.acfonline.org.au/uploads/res/res\\_market.pdf](http://www.acfonline.org.au/uploads/res/res_market.pdf) Viewed 14.09.09.

<sup>16</sup> Heaney & Beare (2005). Water Resource Management: using water options to meet environmental demands. ABARE Conference paper presented at Outlook 2005, March Canberra.



*Should water purchasing and infrastructure upgrades be coordinated and, if so, how? How well has the irrigator-led group proposal component of Restoring the Balance addressed the possibilities for taking group action that coordinates infrastructure upgrades and water sales? How could it be improved?*

We refer the Productivity Commission again to Appendix 1 'Land and Water Reform in the MDB', which was well received by a wide range of stakeholders, where we detail a process for categorising areas at a district level into those that should be prioritised for water buybacks and structural adjustment, those that should be prioritised for infrastructure upgrades and for accessing other public and private investment streams as well as the two key Commonwealth 'Water for the Future' programs to optimise the outcomes for all water users. The approach detailed in our paper is broader, more inclusive and an improvement on the irrigator led proposals because it fully integrates present and future land and water capability and use with all the key drivers for change and full range of funding mechanisms that will support change.

In some cases it will be necessary to construct infrastructure to support the delivery of environmental water to floodplains and wetlands that have been alienated from the river through previous irrigation. The funds to complete this work should be drawn from the *Rural Water Use and Infrastructure* component of the Water for the Future.

### **Impediments to the use of particular market mechanisms**

*General comment on this section.*

Caps on trade or embargos on selling water to particular purchasers or particular sectors are a restraint to trade and impediment to solving the overextraction problem, restoring our rivers, wetlands and associated wildlife habitat to health and putting the MDBs irrigation industries onto a sustainable footing. These caps and embargoes should be abolished immediately, regardless of which state they occur in. A study conducted by Hyder Consulting for DEWHA in 2008<sup>17</sup> showed that in the 2007-08 water year, application of the four per cent cap in Victoria resulted in eight per cent of trades or efforts to uncouple water from land being refused because they triggered the cap resulting in significant economic losses, including \$19 million to irrigators, \$8 million to the state an estimated 40 full-time equivalent jobs associated with the trades in Victoria. Efforts by the Commonwealth to purchase water had been hampered by the cap along with effort by water traders seeking to purchase entitlements for irrigators.

A report conducted by Frontier Economics for the ACCC<sup>18</sup> also concludes that both the four per cent and ten per cent Victorian caps had prevented trades from being completed and that the NSW embargo on trade of entitlements to the environment

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<sup>17</sup> Hyder Consulting for DEWHA. 2008. Review of interim threshold limit on permanent water trade. August.

<sup>18</sup> Frontier Economics for ACCC. 2009. Volumetric restrictions on water entitlements trade. August.

had prevented water entitlement trades from being completed too. The report concludes that restrictions on water entitlement trade reduces economic efficiency, that related costs are both short and long term and that the caps will have an increasing impact on the ability to achieve the outcomes required by the *Water Act 2007* and its component parts as well as unfairly disadvantaging some entitlement holders at the advantage of others who have managed to sell entitlements before the cap was reached or embargo put in place.

## **The authors**

The Australian Conservation Foundation (ACF) is committed to inspiring people to achieve a healthy environment for all Australians. For more than 40 years it has been a strong voice for the environment, promoting solutions through research, consultation, education and partnerships. It works with the community, business and government to protect, restore and sustain our environment.

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## **List of Appendices**

Appendix 1, ACF (2008). 'Land and Water Reform in the Murray-Darling Basin'.

Appendix 2. ACF (2006). 'Market Mechanisms and Water Recovery for the Environment'.

Appendix 3 ACF & IRN. (2008). 'Opportunities to purchase water and properties' in the MDB'.

Appendix 4 ACF (2009). Comments on framework for determining Commonwealth watering actions.

Appendix 5. MIL (2008). The Benefits of RiverReach.