

EXPERT PANEL REPORT INTO BASIN PLAN OFFSETS MECHANISM

Victorian Government overview – October 2017

Introduction

The Sustainable Diversion Limit (SDL) is the maximum amount of water that can be taken for use by irrigators, farmers and towns. The SDL adjustment mechanism (also known as the offsets mechanism) allows for the Basin Plan's recovery target of 2,750 GL to be offset by up to 650 GL through projects that deliver equivalent environmental outcomes with less water.

The offsets mechanism is complex, and uses a mixture of hydrological modelling and environmental scores to calculate the volume of offsets from the package of projects nominated by States.

In early 2017, the Victorian and NSW governments commissioned an Expert Panel to review the offsets mechanism and better understand how it works. Victoria and NSW were seeking to improve transparency around the assumptions that sit at its heart, and wanted to ensure they took account of all requirements under the Basin Plan so that a triple bottom line outcome can be achieved.

The Expert Panel's report was completed in April 2017. At that time, Basin governments were working towards settling the package of works and measures that would be assessed under the offsets mechanism. Governments were also working with the Murray-Darling Basin Authority (MDBA) to settle decisions underpinning MDBA's modelling.

The report identifies areas where, in the view of the Expert Panel, better scientific information is needed to manage ecological risks, and highlights the need for ongoing development of scientific knowledge to deliver the Basin Plan.

The report was used by the NSW and Victorian governments to give them greater confidence that modelled environmental outcomes can be achieved in the real world, to inform interjurisdictional negotiations.

In June 2017, the Murray-Darling Basin Ministerial Council signed off on the package of environmental works and measures to be assessed under the offsets mechanism.

In its recently released Draft Determination Report, the MDBA has advised that the package of environmental works and measures will deliver 605 GL of offsets. Public submissions on the Draft Determination Report will close on 3 November 2017. The MDBA will then make a final determination to the Commonwealth Minister by 15 December 2017.

The Panel's terms of reference

The Panel's terms of reference noted that both the Victorian and NSW Governments are committed to managing the Basin sustainably and balancing the water requirements of industry, communities and the environment, in accordance with the triple bottom line objectives of the Commonwealth's *Water Act 2007*.

The Panel was asked to review and provide advice on the assumptions, interpretation and application of the offsets mechanism.

This work was intended to directly contribute to assisting the MDBA and Basin jurisdictions as they continue to work together within the parameters of the Basin Plan, timeframes and expectations of governments for robust science to inform Basin Plan implementation.

The Panel was asked to:

1. Report to the NSW and Victorian Ministers on options to achieve the maximum offsets, bringing together scientific rigour with practical knowledge of the Basin;
2. Provide advice on actual environmental risk, in particular looking at the materiality of thresholds for the limit of change; and
3. Assess the validity of the assumptions, interpretation and application of the SDL adjustment mechanism, established under the Basin Plan.

The findings were used to inform decision-making about remaining Basin Plan implementation activities, associated with the offsets mechanism, in a way that optimises economic, social and environmental outcomes, and is consistent with the Commonwealth's *Water Act 2007*.

Key findings and actions

The Panel made a number of findings, with key findings summarised below – many of which have since been addressed through ongoing discussion between states and the MDBA.

The Panel also raised some issues that warrant further examination, and Victoria will continue to do this in consultation with the MDBA and other Basin states.

The report has helped ensure that the decisions about offsets are based on the best available information, including expert advice as well as the modelling undertaken by Murray-Darling Basin Authority (MDBA).

Projects that will help maximise offsets

The package of projects uses engineering works such as regulators, pipes and pumps to deliver water to wetlands and floodplains and use water more efficiently.

The package of projects will achieve important environmental objectives as well as delivering offsets.

Maximising the offsets is important both in 2017 – so that further water recovery is not triggered – and in 2024, when the Basin Plan provides for the possibility of a 'reconciliation'.

The Victorian Government does not support more buybacks of water from Victorian irrigators.

Victoria is focused on delivering the projects in the offsets package and managing the associated risks between now and 2024.

The Panel found that three projects in particular would help the package achieve greater offsets:

- Reconfiguration of the Menindee Lakes to save water currently lost to factors such as evaporation;
- 'Enhanced Environmental Water Delivery' (also known as Hydro-cues), which is a change to environmental watering demands that also can leverage proposals to lift flow constraints; and
- 'Improved Regulation of the River Murray' which captures recent observed improvements in reducing river operational losses.

The Panel noted that the Menindee and Hydro-cues projects were much less well developed at that time (early 2017) than other proposed supply measures. In October 2017, details of these two projects are still being finalised between all jurisdictions.

The Panel found that because these two high-offset and complex projects were less well developed than others, they therefore presented uncertainties and risks that could result in them failing to achieve the expected level of supply contribution. The Panel's findings helped to identify knowledge gaps in these projects in particular which has since driven the ongoing cooperation between states who have a stake in Menindee to finalise the proposals.

While 'Improved Regulation of the River Murray' is notified as a supply measure, and offers potential to increase the offsets buffer, there was no agreement by all jurisdictions for the project to be modelled as part of the SDL adjustment determination in September 2017.

'Limits of change' flow rate indicators

The way the offsets mechanism works is set out in Schedule 6 of the Basin Plan. It includes indicators (particularly flow rate indicators) known as 'limits of change' that are intended to ensure the offsets do not compromise environmental outcomes (schedule 6.07). These limits of change are tools for flagging ecological risks.

The Panel found that the modelling of offsets could benefit from applying expert scientific knowledge in cases where the limits of change are under stress, to assess potential risks to ecological outcomes and how these might be most effectively managed. This is also provided for in the Basin Plan (schedule 6.07(iv)). The Panel found that it would better reflect ecological responses if such cases were treated as warnings of potential impact rather than automatically limiting the modelling.

In the lead-up to finalising its draft determination advice, the MDBA engaged an independent expert review panel to consider any potential breaches to the limits of change. MDBA's panel consisted of highly experienced ecologists and river operators.

In its recently published Draft Determination Report, the MDBA described the work of its panel. It reported that it had considered its panel's recommendations, and found that its panel used a strong evidence base to provide confidence that environmental outcomes can be achieved despite stress on limits of change.

Higher weighting for environmentally significant sites

The Basin Plan specifies that environmentally significant sites, like Ramsar wetlands, should be given a higher weight than other sites, in the offsets mechanism (Schedule 8). Some of these sites are relatively small but they are a key reason for the Basin Plan.

The Panel found that despite this requirement in the Basin Plan, the offsets mechanism instead uses weighting by area. In part, this has been because of data availability and differences in views about how to apply ecological weightings between different sites when the mechanism was developed.

The Panel found that while this could restrict offsets, the limits of change appeared to be restricting offsets before environmental significance becomes a restricting factor.

The Basin Plan benchmark model

The benchmark model was used in 2012 to decide on the 2,750 GL water recovery target for the Basin Plan. The benchmark model is prescribed in detail in the Basin Plan.

The panel report identified the importance of finalising the Basin Plan benchmark model, against which all offsets projects are assessed. This issue has since been addressed.

Better science and adaptive management

Other important findings of the Panel include:

- The offsets method is complex and not very transparent, as it is not easy to understand and requires a high level of expertise to apply.
- Historically, there has been too much focus on the prescriptive details of the offsets method, potentially at the expense of Basin Plan environmental outcomes.
- While the Basin Plan seeks to establish an adaptive management framework to optimise Basin water resource outcomes, significant work is required to achieve that objective as the package of measures is implemented through to 2024.

The Panel also recommended that a coordinated approach to system performance management should be established. This should focus on achieving quantifiable Basin Plan ecological objectives using adaptive management and ongoing development of scientific knowledge.

Panel members:

Dr Don Blackmore AM (Chair) – 40 years of experience in water and natural resources management including a 15 year role as the Chief Executive of the Murray Darling Basin Commission until his retirement in 2004.

Brett Tucker – broad range of experience in water resource management and agriculture in a career spanning 25 years. He established Blackwatch Consulting, specialising in the provision of strategy, governance and operations advice to Government agencies.

Chris Arnott – has worked across the Murray Darling Basin since 1994 and led the development of the first national snapshot of environmental water in the Australian Environmental Water Management Report 2010. He is also the co-founder of Aither, specialising in establishing, implementing and evaluating effective public policy performance frameworks.

Professor Peter Davies AM – aquatic environmental scientist with 35 years' experience in aquatic environmental issues nationwide and internationally. He is also director of Freshwater Systems, an independent aquatic environmental consultancy.