



EDOs of Australia

Submission to the Murray-Darling Basin Royal Commission

30 April 2018

EDOs of Australia (formerly the Australian Network of Environmental Defender's Offices) consists of eight independently constituted and managed community legal centres located across the States and Territories.

Each EDO is dedicated to protecting the environment in the public interest. EDOs:

- provide legal representation and advice,
- take an active role in environmental law reform and policy formulation, and
- offer a significant education program designed to facilitate public participation in environmental decision making.

Submitted to:

Murray Darling Basin Royal Commission
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Introduction

EDOs of Australia (**EDOA**) welcomes the opportunity to assist the Murray-Darling Basin Royal Commission (**Royal Commission**).

EDOA is a network of community legal centres specialising in public interest environmental law. EDO offices are located in the Basin states of South Australia, Queensland, New South Wales, and the Australian Capital Territory. These offices service clients who live across the Basin, including farmers and community groups. We have many years' experience engaging with water law and policy processes at both State/Territory and Commonwealth levels. We also have extensive experience advising a broad range of clients on the *Water Act 2007* (Cth) (**Act**), Basin Plan, State/Territory water laws and related policies. Our work involves advice on specific matters as well as broader legal analysis of systemic issues. It often draws on advice from scientific experts, as well as land holders with considerable experience managing their properties in a variable climate.

Based on this experience, we have significant concerns regarding management of water resources in the Murray-Darling Basin. These concerns have been detailed in a number of submissions to State/Territory and Commonwealth governments, the most relevant of which are listed in **Annex A** to this letter. We do not repeat all of the issues raised in those submissions here. Rather, we refer the Royal Commission to those submissions and highlight a number of key issues in relation to the Royal Commission's Terms of Reference below.

1. Whether the Water Resource Plans defined by the Act and Basin Plan (which are to include the long-term average sustainable diversion limits for each Basin water resource) will be delivered in full and in a form compliant and consistent with the Basin Plan by 30 June 2019.

Recent independent and Murray Darling Basin Authority (**MDBA**) investigations into water management in NSW in particular, have identified serious mismanagement, particularly in relation to metering and measurement of water, compliance and enforcement, and protection of environmental water. These investigations have reinforced EDOA's ongoing concerns that the Water Resource Plans will not be delivered in full and in a form compliant and consistent with the Basin Plan by 30 June 2019 and that the MDBA is inadequately resourced to properly assess all Water Resource Plans against the requirements of the Act and the Basin Plan by mid-2019.

For example, EDO NSW submissions to the Issues Papers on Surface Water, Water Resource Plans for the Gwydir, Barwon-Darling and Namoi catchments, outlined concerns with the Plans including that the Plans are inappropriately focussed on achieving '*the minimum requirements of the Commonwealth Water Act 2007 and Basin Plan*' rather than on fulsome implementation of the Act and Basin Plan. Such an approach creates a risk that the intent of the Act and Basin Plan will not be met, impacting on effective water management, the environment, and the communities that depend on the Murray-Darling Basin. Aboriginal clients in particular have

expressed concern regarding the lack of consultation and consideration of Aboriginal water requirements, which risks undermining cultural flows and activities.

2. If any Water Resource Plans are unlikely to be delivered in full and in a form compliant and consistent with the Basin Plan, the reasons for this.

In performing their duties and exercising their powers under the Basin Plan, the Minister and the MDBA are legally required to act on the basis of best available scientific knowledge. However there is evidence that flawed assumptions are being used in the hydrological modelling that informs the development of Water Resource Plans. Further, there has not been sufficient corrections or acknowledgement where those assumptions are demonstrably incorrect. For example, in relation to the Northern Basin Review, modelling assumed (amongst other things):

- users are complying with water laws in the Northern Basin;
- the Commonwealth's environmental water could be simultaneously released from storage dams on the tributaries that flow into the Barwon-Darling River to produce one, large flow through the Darling; and
- most of the Commonwealth's environmental water would actually make it through the Barwon-Darling River.

The implications arising from any use of these flawed assumptions are discussed further below. More generally, there is a significant risk that Water Resource Plans that are not developed on the basis of the best available science and in an environment where there is a strong monitoring and compliance regime, will fail to deliver the necessary environmental, social and economic outcomes.

3. Whether the Basin Plan in its current form, its implementation, and any proposed amendments to the Plan, are likely to achieve the objects and purposes of the Act and Plan as variously outlined in ss.3, 20, 23 and 28 of the Act, and the 'enhanced environmental outcomes' and additional 450 GL provided for in s. 86AA(2) and (3) of the Act, respectively.

Publicly available evidence indicates that a minimum of approximately 4,000GL of water must be returned to the environment in order to satisfy the requirement in the Act to reinstate an 'environmentally sustainable level of take'. EDOA has previously expressed concern that, in light of insufficient allocation of environmental water and increasing limitations placed on the implementation of a number of the key features of the Act, the objective to protect, restore and provide for the ecological values and ecosystem services of the Murray-Darling Basin (specifically accounting for the wetland biodiversity and the affect that water extraction will have on it), may not be achieved. We maintain that concern and refer the Royal Commission to our 2014 submission on the statutory review of the Act.

A number of current practices continue the trend of limiting effective Basin Plan implementation. For example:

- there is no legal requirement for the Commonwealth, when purchasing water, to purchase any particular class of licence in any particular catchment or to ensure that these purchases represent value for money. As a result, the Government has made a number of ‘strategic purchases’ of low reliability entitlements for well above market rate;
- there has been insufficient action to remove constraints on environmental water in certain areas to allow for sufficient volumes of environmental water to be delivered to key locations;
- the increased focus on recovering water through on-farm efficiency works is likely misguided with the best available evidence suggesting that in practice on-farm irrigation upgrades are likely to increase (rather than reduce) consumptive use primarily due to reduced return flows and increased production. We discuss this further below; and
- it has been suggested that so-called ‘complementary measures’, which consist of certain natural resource management actions, can act as a substitute for water. While complementary waterway management is necessary (to manage pests, for example), all such measures should be used in addition to – not as a substitute for – the water that is needed to sustain the Murray-Darling.

4. Whether the underlying assumptions in the original modelling used to develop the objects and purposes of the Act and the Basin Plan have been sufficiently adjusted for the impact of improved technologies.

In response to this Term of Reference we highlight two areas where changing technology has the potential to negatively influence environmental and social outcomes from the Basin Plan.

In our EDOA submission to the Productivity Commission in October 2017, we raised serious concerns about the lack of transparency surrounding on-farm irrigation efficiency programs - as well as inadequate auditing and monitoring of individual projects funded through these programs. The general intent of on-farm irrigation efficiency programs, where the State/Territory subsidises a landholder or irrigation district to upgrade their infrastructure to make it more efficient, thereby saving water that can be returned to the environment is supported (in Queensland, for example, it is generally 50 percent of projected savings). Unfortunately, there is little publicly available information to help the community determine whether contractual obligations are being met or water is actually being saved. Evidence increasingly suggests that in many instances more water is not being returned to the system. This evidence includes a published Food and Agriculture Organization of the United Nations report that included a review of Australian on-farm efficiency measures. Following a disagreement with the Commonwealth Government over the conclusions, the report was amended to remove reference to Australian programs.¹

¹ Perry (2017) *Does Improved Irrigation Technology Save Water? A Review Of The Evidence: Discussion paper on irrigation and sustainable water resources management in the Near East and North Africa* Food and Agriculture Organization, Cairo. The original report, available [here](#) concluded that “evidence suggests that

Our previous recommendations in relation to these programs (included in the documents listed in Annex A) focus on increased transparency, auditing and monitoring to restore the public's confidence in these programs, and help to protect the reputations of grant recipients who are meeting their contractual obligations.

A second development of note is the proposal in NSW to bring floodplain harvesting within the licensing framework. While EDOA generally supports this proposal, significant concerns remain in relation to implementing such an approach in the absence of any clear, defensible and publicly available evidence regarding:

- the current volume of water being diverted (or lost, as the case may be), particularly in the Northern Basin;
- how much of this water is being diverted (or lost) as a consequence of unlawfully constructed structures;
- the environmental and downstream impacts of licensing the removal of a particular volume of water in each affected catchment, and how environmental flows will be protected; and
- the relationship between the sustainable diversion limits (**SDLs**) set under the Basin Plan and the volume of water that will be licenced under the Floodplain Harvesting Policy. Relevantly, the Basin Plan assumed that only 210GL was being diverted or lost as a consequence of floodplain harvesting in the northern Basin. However, the consultation paper indicates that 600.5GL would be eligible for entitlements in the Gwydir catchment alone.

While we support technological innovations to improve water efficiency, we have found no evidence that monitoring or auditing is being undertaken to ensure that:

- irrigation upgrades are actually resulting in additional environmental flows and reduced consumption;
- the money provided to the irrigator is being used to construct the works stipulated in the contract; and
- the irrigation upgrades being undertaken are cost effective (or that the costing is indeed accurate).

As noted in our previous recommendations, such assurance measures are vital.

5. If the Basin Plan is unlikely to achieve any of the objects and purposes of the Act and Basin Plan and/or the 'enhanced environmental outcomes' and the additional 450 GL referred to above, what amendments should be made to the Basin Plan or Act to achieve those objects and purposes, the 'enhanced environmental outcomes' and the additional 450 GL?

The 450GL of additional 'environmental water' provided for under the Act, which is supposed to improve the health of the Ramsar listed Coorong, Lower Lakes and

subsidy programmes to "save" water seem to have been ineffective, poorly conceived and un-prioritized". The final report is available [here](#).

Murray Mouth wetlands, is currently tied to 'water savings' from on-farm irrigation efficiency projects. It is therefore crucial that these programs function effectively. EDOA and EDO offices have made extensive recommendations for law reform in relation these programs, the Act and the Basin Plan. We particularly refer the Royal Commission to our submissions on the NSW Water Reform Action Plan and to the Productivity Commission.

Consistent across all law reform recommendations is a need to improve transparency in decision making and availability of data to the community. Transparency is a cornerstone of good governance. It encourages compliance and builds community confidence in the rigour and efficacy of water management systems. EDOs and our clients have seen a significant reluctance by multiple government agencies to release information on water management sought under freedom of information applications, even where there is a strong argument in favour of public disclosure. Our analysis and experience acting for clients reveals significant barriers to accessing water-related information. For example, in Queensland deficiencies in the provision of data include:

- the absence of a publicly accessible (and free) water allocation register;
- the absence of a publicly available (and free) register of all approved works (pumps, storages, levees and so on); and
- the absence of universally mandatory metering laws (or appropriate measurement methods for overland flow). This 'data gap' constitutes a significant barrier to sustainable water management and sound governance. It also raises serious questions about compliance.

6. Any legislative or other impediments to achieving any of the objects and purposes of the Act and Basin Plan and/or the 'enhanced environmental outcomes' and additional 450 GL referred to above, and any recommendations for legislative or other change if needed.

Each of the submissions listed in Annex A provides recommendations on strengthening the Act and the Basin Plan.

7. The likely impact of alleged illegal take or other forms of non-compliance on achieving any of the objects and purposes of the Act and Basin Plan, and the 'enhanced environmental outcomes' and the additional 450 GL, referred to above.

As the Royal Commission is aware, the Murray-Darling Basin is Australia's largest, most iconic river system. It covers over one million square kilometres, includes 16 internationally-listed wetlands and is home to some 50 Aboriginal Nations. It also provides drinking water for millions of people and produces around one third of Australia's food supply. With this in mind, EDOA has consistently argued that the law must ensure that the Murray-Darling Basin is managed sustainably and that water laws applying in each Basin jurisdiction are fit for purpose and are upheld by all

water users. We all need water to survive – and a healthy river equals healthy ecosystems, communities and farms.

Lack of compliance and enforcement undermines community confidence in water regulation and has a negative impact on the environment and other users. It also puts at risk the effectiveness of the underlying implementation mechanisms. For example, the success of water markets depends on the assumptions underpinning those markets being correct. Failure to uphold any of these assumptions – including accurate measurement of water availability and use, compliance with licensing conditions and adherence to trading rules – distorts the market. Given that management of the Basin Plan is largely driven by water markets, this is a significant issue that requires detailed analysis and decisive action by the relevant agencies to ensure an appropriate and sustainable level of extraction, and equity amongst users.

We focus on one example of alleged unlawful water take in the Barwon-Darling to illustrate this issue. The Barwon-Darling river system flows from the western side of the NSW-Queensland border to south-western NSW. It flows into Menindee Lakes, and is vital for town water supply, livestock grazing, and irrigated agriculture. It also provides environmental water to nationally and internationally protected matters, including numerous wetlands that support migratory and threatened species. From January to June 2015, it was necessary to impose an embargo on licence holders limiting the amount of water that could be pumped from the Barwon-Darling and its tributaries because there was very little water flowing down the Barwon-Darling and into the Menindee Lakes. With such a limited flow, the Lakes were virtually empty posing a significant threat to Broken Hill's town water supply, local farmers and businesses, and the environment.

Records that EDO NSW obtained, on behalf of the Australian Conservation Foundation (**ACF**), for the 2014-15 financial year, although not necessarily relating to the embargo period, indicated that a large scale irrigator may have taken approximately five times more water than what was permitted under a particular licence over the course of that year. The alleged unlawful pumping of this much water from the system, especially if it coincided with the period when flows were critically low and when Broken Hill's town water supply was under threat, may have had serious impacts on the environment, and on the ability of other farmers to access water for stock and domestic use. EDO NSW is currently representing the Inland Rivers Network (**IRN**) in civil proceedings in which IRN alleges that the holders of the two licences that are the subject of the proceedings extracted water in contravention of some of the conditions of the licences and the provisions of the *Water Management Act 2000* (NSW).

Our solicitors have been contacted by a number of people alleging unlawful extractions and works in other catchments and Basin States. Our solicitors have also received reports regarding possible misconduct and corruption within government agencies. The credibility of our national water reform agenda and the future of our most important river system depends on nothing less than complete transparency and accountability.

8. In relation to any found instances of illegal take or work, whether appropriate enforcement proceedings have been taken in respect of such matters and if not, why.

The allegations in the IRN proceedings referred to in response to Term of Reference 7, are based on usage data obtained by EDO NSW, on behalf of ACF, from WaterNSW, together with analysis of relevant rules and publicly available information on river heights. Prior to the commencement of the IRN proceedings in November 2017, EDO NSW wrote to WaterNSW on two occasions asking if the regulator could provide evidence that the alleged usage discrepancies had been authorised under lawfully issued permits. No adequate response was forthcoming.

Despite being made aware of these allegations by EDO NSW on two occasions (in April and August 2017), having had access to the data since at least July 2016, and having indicated that it was undertaking its own investigation, at the time EDO NSW commenced civil proceedings on behalf of IRN, WaterNSW had not provided any indication that it would take compliance action against the licence holders. Only since the IRN proceedings were filed has WaterNSW initiated legal action against the respondents in the proceedings, but the scope of that action remains unclear.

EDOA is concerned that effective compliance and enforcement remains a significant issue in many catchments. Specific issues reported to EDOs include:

- absent or ineffective metering;
- tampering with meters;
- failure to keep logbooks where required by law;
- failure on the part of responsible agencies to properly investigate serious allegations of non-compliance;
- insufficient number of compliance officers;
- insufficient monitoring (for example in relation to incidental take associated with mining operations); and
- unlawful trading activity.

The allegations in the IRN proceedings concerning the Barwon-Darling are a high-profile example of a more systemic problem with the oversight of water laws in the Murray-Darling Basin. We encourage the Royal Commission to consider the recent independent reviews into water management in NSW, commonly known as the Matthews' reviews.

9. Whether, in any event, the enforcement and compliance powers under the Act are adequate to prevent and address non-compliance with the Act and the Basin Plan, and any recommendations for legislative or other change if needed.

EDOA does not believe that the current enforcement and compliance activities under the Act are adequate to prevent and address non-compliance with the Act and the Basin Plan. For our recommendations in relation to compliance issues in particular,

see our September 2017 submission to the Inquiry into the Integrity of the water market in the Murray-Darling Basin.

Civil proceedings launched by EDO NSW on behalf of IRN exemplify the value of 'open standing' for the community (as well as the regulator) to bring enforcement proceedings where a breach of the law is alleged.

The adequacy of enforcement powers is closely connected to how well they are resourced. We remain concerned that inadequate investment in monitoring, enforcement and compliance in relation to Australia's water laws reflects inadequate investment in environmental and natural resource management more generally.

10. Whether monitoring, metering and access to relevant information (such as usage data) is adequate to achieve the objects and purposes of the Act and Basin Plan and the 'enhanced environmental outcomes' and additional 450 GL referred to above.

In our view, monitoring, metering and access to relevant information (such as usage data) is not adequate to achieve the objects and purposes of the Act and Basin Plan, the 'enhanced environmental outcomes', and additional 450 GL referred to above. Issues include inaccurate metering, failure to meter, failure to keep logbooks, inaccurate self-reporting, and allegations of water theft. Failure to comprehensively investigate and address these problems undermines water markets, which in turn jeopardises the success of the Basin Plan, including the environmental outcomes sought. EDOA and individual EDO offices have made a number of submissions on ways to strengthen requirements for monitoring, metering and access to relevant information.

11. Whether water that is purchased by the Commonwealth for the purposes of achieving the objects and purposes of the Act and Basin Plan and/or the 'enhanced environmental outcomes' and the additional 450 GL referred to above will be adequately protected from take for irrigation under water resource plans, and any recommendations for legislative or other change if needed.

EDOA remains concerned that the benefits of water recovery undertaken to date have been undermined by insufficient protection of environmental flows. For example, it has been brought to our attention that water held by the Commonwealth Environmental Water Holder (**CEWH**) and released for the environment has – in certain instances been extracted for commercial use.

Event-by-event management is at times required to generate actual environmental outcomes (for example bird and fish breeding events) and to protect water quality. This means that rules must be in place to prevent environmental water from being pumped as it flows through the system. This is particularly important as the CEWH's water has been purchased with public money to fulfil the obligations outlined in the Act (which include Australia's obligations under a number of environmental treaties,

including the Ramsar Convention and the Convention on Biological Diversity). Current threats include:

- lack of protection - water sharing plans generally do not include rules to protect environmental water as it flows through the system. Indeed, environmental flows may trigger 'commence-to-pump' rules, thereby resulting in legal extraction of this water;
- security level of entitlements purchased by the Commonwealth - a significant percentage of the Commonwealth's portfolio of entitlements is low reliability water, which effectively means it will not be delivered during drier periods (for example when storages have insufficient volumes to service lower reliability users);
- on-farm efficiency upgrades and return flows - with a legislated 1,500 GL per year cap on the outright purchase of entitlements, the emphasis is now on recovering water through on-farm efficiency works. We have previously outlined our concerns in this regard;
- growth in on-farm storages - we understand that there has been significant growth in on-farm storages in certain catchments, notably the Barwon-Darling. Relevantly, the *Water Sharing Plan for the Barwon-Darling Unregulated and Alluvial Water Sources 2012* does not include provisions restricting growth in storages. This, together with the absence of daily extraction limits for individual licences, means that licence holders can pump and store large volumes of water, including low flow or 'A Class' water. We further note that formal audits have not been undertaken by the appropriate State/Territory or Commonwealth agencies to first, obtain accurate, up-to-date data regarding this growth; and second, to use this data to inform the setting rules to protect environmental water (and to ensure cap compliance); and
- planned environmental water - while the Basin Plan states that there must be 'no net reduction' to the level of protection provided to planned environmental water under Water Resource Plans, documents obtained from the MDBA under the *Freedom of Information Act 1982* (Cth) indicate that this water may be vulnerable to rule changes. As most environmental water is planned, it is imperative that effective safeguards are in place to guarantee its protection, including independent scrutiny of compliance with cl. 10.28.

12. Whether the Basin Plan in its current form, its implementation, and any proposed amendments to the Plan, are adequate to achieve the objects and purposes of the Act and Basin Plan, the 'enhanced environmental outcomes' and the additional 450 GL referred to above, taking into account likely, future climate change.

EDO is concerned that water allocations do not take into account likely, future climate change. This poses a significant risk to both the environment and users as water becomes scarcer in certain catchments across the country. While data from the millennium drought was included in modelling to determine SDLs under the

Basin Plan, the Plan's failure to include likely, future climate change is problematic for two, core reasons.

First, as SDLs are managed as long-term annual averages, planned environmental water will bear the overall burden of absorbing the impacts of climate change. This is particularly unsustainable as it will undermine the resilience of the river system upon which all users depend. Second, basing SDLs on outdated data means that investors are unable to properly assess the value of their assets and the medium to long-term risks to their water portfolio, which gives rise to uncertainty. Accordingly, any review of SDLs must consider future, likely climate change

As a significant proportion of the entitlements recovered by the Commonwealth are what may be broadly classified as low to medium security entitlements, they are particularly vulnerable to climate change as they do not guarantee reliability of supply during drier years. In practical terms, this means that the water held on these licences will be unavailable for the environment as water availability decreases in certain parts of the Basin.

In the specific example of the Gwydir Water Resource Plan Surface Water, EDO NSW identified that proposals to deal with climate change were lacking detail and proposed to be managed by adjusting water allocations on a needs basis.

In light of the concerns summarised above, EDOA is concerned that failure to adequately deal with the issue of climate change is likely to give rise to breaches under one or more of the environmental treaties to which Australia is signatory, and by way of extension, the Water Act.

Annex A

- *Submission to the Murray Darling Basin Plan: Five Year Assessment* - EDOs of Australia, April 2018 – [Download PDF](#)
- *Submission to the inquiry in to the management and use of environmental water* – EDOs of Australia, April 2018 – awaiting parliamentary permission to publish – will be available at www.edo.org.au/submissions
- *Submission on the NSW Water Reform Action Plan* – EDO NSW, April 2018 – [Download PDF](#)
- *Submission to the Inquiry into water use by the extractive industry* - EDOs of Australia, December 2017 - [Download PDF](#)
- *Proposed adjustment to Sustainable Diversion Limit (SDL) Adjustment Mechanism* – EDOs of Australia, November 2017 – [Download PDF](#)
- *Submission responding to the Productivity Commission’s Draft Report into National Water Reform* - EDOs of Australia, November 2017 - [Download PDF](#)
- *Submission to the Inquiry into the Integrity of the Water Market in the Murray-Darling Basin* - EDOs of Australia, October 2017 - [Download PDF](#)
- *Inquiry into National Water Reform* – EDOs of Australia, May 2017 - [Download PDF](#)
- *Surface Water Status and Issues Paper for the Barwon-Darling Surface Water* – EDO NSW submission, March 2017 – [Download PDF](#)
- *Surface Water Status and Issues Paper for the Namoi Water Resource Plan Surface Water* – EDO NSW, March 2017 – [Download PDF](#)
- *Murray Darling Northern Basin Review* – EDOs of Australia, February 2017 - [Download PDF](#)
- *Gwydir Water Resource Plan Surface Water Issues Paper* – EDO NSW, December 2016 - [Download PDF](#)
- *Submission to Senate Inquiry into the Water Amendment (Review Implementation and Other Measures) Bill 2015* - EDOs of Australia, February 2016 - [Download PDF](#)
- *Submission on the Commonwealth On-Farm Further Irrigation Efficiency Program (COFFIE Program)* - EDO NSW, December 2015 - [Download PDF](#)
- *Submission to the Select Committee on the Murray-Darling Basin Plan* - EDOs of Australia, September 2015 - [Download PDF](#)
- *Submission on Water Amendment Bill 2015 (Cth)* - EDOs of Australia, July 2015 - [Download PDF](#)
- *Submission to the Murray-Darling Basin Authority regarding the Draft Basin-wide Environmental Watering Strategy* - EDOs of Australia, September 2014 [Download PDF](#)
- *Submission to statutory review of the Water Act 2007 (Cth)* - EDOs of Australia, July 2014 - [Download PDF](#)