INLAND RIVERS NETWORK

Murray-Darling Basin Royal Commission
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Submission to Murray-Darling Basin Royal Commission

The Inland Rivers Network ("IRN") is a coalition of environment groups and individuals that has been advocating for healthy rivers, wetlands and groundwater in the Murray-Darling Basin since 1991.

We welcome the opportunity to submit the following information in regard to the issues of interest to the Commission:

a) Process to determine the "Environmentally Sustainable Level of Take" (ESLT)

IRN raised concerns about the key differences between the Guide to the Basin Plan (the Guide) released in 2010 and the Proposed Basin Plan released in August 2012.

We consider that the changes were driven more by political and industry interests than any independent analysis of the requirements to meet the Basin Plan objectives and outcomes.

The increasing emphasis on the socio-economic impacts on one sector of the economy, the irrigation industry, without a corresponding analysis of the commercial and recreational fishing industries, floodplain grazing, tourism, downstream towns, cultural impacts and other social implications of poor river health caused a bias in the development of the ESLT.

The Guide identified that a return of 7,600 GL to the environment was needed to bring water dependent ecosystems in the Basin back to a healthy and resilient condition for long-term sustainability. In December 2010, a large group of Australian scientists gave qualified support for the first version of the Basin Plan (attachment A).

IRN supported the compromise position that 4,000 GL be returned, taking into consideration the socio-economic needs of irrigation dependent communities. We fully supported a well-funded and appropriately targeted structural adjustment and regional development package to assist these communities to diversify.

The aim of the efficiency measures in the Sustainable Diversion Limit (SDL) adjustment mechanism was to provide for similar levels of production with less water, thus continuing to support established local economies.

IRN considers that the final ESLT of 10,873 GL based on a Basin-wide reduction of only 2,750 GL will not achieve the outcomes of the Plan and in particular the objectives:

- Giving effect to relevant international agreements;
- Optimising social, economic and environmental outcomes arising from the use of Basin water resources;
- Protecting and restoring water dependant eco-systems and eco-system functions;
- Ensuring that water dependant eco-systems are resilient to climate change and other risks and threats;
- Maintaining appropriate water quality including salinity levels

We are greatly concerned that the proposed amendments to the SDL for the Northern and Southern Basins will result in further erosion of the ESLT and subsequently in the failure of the Basin Plan to meet its objectives.

We are also concerned that there have been considerable changes made to the NSW baseline diversion models adopted for the 2012 Plan. These changes, with a disturbing lack of transparency, are now informing the development of the Water Resource Plans (WRPs) in NSW.

There is also the major issue in north western NSW of unmanaged growth in use that has arisen through the NSW Government's twenty year delay in implementing an effective metering program on most unregulated rivers or licensing the capture of overland flows (floodplain harvesting).

NSW may already be seriously exceeding the cap on development established in 1995.

IRN is concerned that a significant portion, if not all of the water recovered for the environment under the Water Sharing Plans, is being squandered by this unmanaged growth in use.

It is unclear that the auditing of WRPs will sufficiently capture this problem.

The proposed wind back in the ESLT will jeopardise the once-in-a lifetime opportunity to protect the health of the Lower Lakes and Murray Mouth and cause a failure of the Basin Plan.

This outcome will be a shocking waste of $13 billion of Australian taxpayers investment.

b) 36 Supply Measure Projects

One key risk for the SDL adjustment projects is that no business plans or environmental impact assessments have been developed to judge the level of cost, physical impediments or the environmental and cultural impact of on ground engineering works.

The Murray Darling Basin Authority (MDBA) acknowledges feedback that implementation of these projects is not without risk and appropriate risk management and adaptability will be required as part of project implementation.[1]

An earlier project, the Koondrook-Perricoota project, now implemented, is a salutary lesson on the ecological & cultural heritage damage that these types of engineering 'solutions' can cause and at the significant cost to the tax payer of approximately $80 million. This Living Murray project is inoperable and causing major environmental problems. The process of assessing the project was very poor and resulted in damaging outcomes.

The proposed 36 SDL adjustment supply measures carry a similar liability.

The assessment & consultation process run by the MDBA in regard to the SDL adjustment projects was very poor with major doubts raised about the suitability of the hydrological modelling and the uncertainty around the environmental equivalence assessment process.

A key issue with the modelling assumptions was that all pre-requisite policy measure (PPM) rules (ie protection of environmental water, reuse and piggy-backing on tributary inflows) were assumed to be in place. This is not the case and there are unclear policy positions, let alone commitment to implement, at the State Government level.

It is imperative for the PPM rules to be finalised before the supply measures can be accurately assessed.

IRN lodged a detailed submission to the various technical reports. The SDL adjustment reports were on exhibition for only one month (3 October to 3 November 2017). The proposed amendment from the MDBA went up to the Minister in under two weeks after the close of the public exhibition, on 15 November.

The MDBA published a summary of public feedback on 8 December, however, none of the issues raised in submissions were addressed.

Some of the IRN key objections to the proposed amendment include:

- The reduction of environmental water by 605 GL is outside the limits of change for the adjustment mechanism
- The lack of testing of this reduction against the Basin Plan objective to keep the Murray Mouth open for 9 out of 10 years

[1] Summary of Public Feedback p12

- The extent of the environmental trade-off through the supply or 'offset' projects was not clearly identified or rigorously assessed
- Equivalent or better environmental outcomes from supply projects have not been demonstrated
- Six locations across the Basin will breach the limits of change and have increased ecological risk under these projects
- There is a high level of uncertainty and limitation in the modelling and Ecological Elements method's scoring and the final modelling outcome was not available at the time of the consultation
- The independent review of the hydrological model and the Independent Expert Panel expressed a number of reservations about the modelling process

The expert panel report commissioned by the Victorian and NSW Government into the environmental equivalence or 'offsets' process advised in October 2017 that:

- 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.

An independent report published by the Wentworth Group of Scientists recommended that the 36 recommended SDL adjustment projects be measured across 12 key criteria, under requirements laid out in the Basin Plan in accordance with the 2007 Water Act.

They found that only one project met all the criteria.

IRN considers that the MDBA used a very complex and non-transparent process to arrive at the very convenient volume of water already acquired for environmental flows in the Southern Basin. The outcome of the SDL adjustment mechanism process was that no more water would be acquired from extractive users.

The serious doubts around the deliverability of equivalent environmental outcomes and the acknowledged environmental trade-offs in the process, let alone the ability to have the projects completed by 2024, is of major concern.

IRN strongly supports the disallowance of the proposed SDL adjustment amendment to the Basin Plan unless and until the projects are adjusted to meet the 12 criteria in a publicly available, transparent, and enforceable manner.

c) Recovery of 450GL for Enhanced Environmental Outcomes

IRN is concerned that there has been no commitment from the NSW and Victorian Governments to engage in the 'up water' element of the SDL adjustment mechanism.

While there was a concentrated effort on getting 'supply' measures on the table and up to Parliament, there has been no corresponding effort to identify 'efficiency' measures that would supply the agreed 450 GL of 'up water'.

This was an important element of the SDL adjustment compromise in the Basin Plan. The success of the delivery of the 450 GL is tied closely to the implementation of constraints measures. These have been very slow to be developed and have now been included in the supply measure package which appears to be counter intuitive.

There is currently no guarantee the 450 GL will be returned to river flows for the purpose of meeting Basin Plan targets, such as keeping the Murray Mouth open for 90% of the time.

ci) Flow back
A key problem with the efficiency measures component is that most of the easy measures have already been adopted. There is also the key problem of the measurement and accounting for loss of flow back into the system. Efficiency measures will capture current water leakage back into the system: this must be accounted for when calculating environmental gains from the measures.

$3.5 billion of taxpayer's money has been spent to date on subsidising irrigators to upgrade their infrastructure so that less water escapes back to the river after extraction. The nett effect of this process is that the irrigator has more water to use, and environment has lost out. The government has spent billions of dollars on these projects without knowing how much water was returning to the rivers in the first place. It is estimated by water experts that in the best case scenario the rivers have received zero extra water for the public's $3.5 billion investment, and in the worst case scenario, our rivers have lost up to 140 billion litres.

The Australian Government has recently interfered in a UN report on this issue:

https://www.theguardian.com/australia-news/2018/apr/29/australia-gets-un-to-delete-criticism-of-murray-darling-basin-plan-from-report

cii) Private gains
Another problem is the appropriate use of public funding on private land. The alleged fraudulent use of public money invested in a so-called efficiency project at a Norman Farming property near Goondiwindi raises concerns about transparency and accountability with this type of investment of Basin Plan funds.

While the Ernst and Young report on efficiency measures demonstrated that it was feasible to find an additional 450 GL of environmental water with neutral or improved socio-economic outcomes, the political pressure against this approach is rendering it very difficult if not impossible to achieve.

Environmental water gains need to be audited and reported publicly. Transparency and accountability are key issues for the management of efficiency measure funding.

ciii) Cost efficiency
IRN strongly supports the disallowance of the proposed SDL adjustment amendment to the Basin Plan unless the 450 GL is assured in legislation as a component of the overall package. We consider that the purchase of licences is the most efficient method of achieving this outcome.

There are also opportunities of retrieving some of this volume with no impacts on current licence holders through the management of floodplain harvesting extraction in northern NSW. This issue is outlined later in the submission.

d) Water recovery to date

The uncertainty around the SDL adjustment being achieved and meeting the objectives of the Basin Plan is a key issue. There is no guarantee that the supply measure projects will be completed by 2024 or have demonstrated the success of an environmental equivalent outcomes to actual flows in the system.

The lack of support from vested interests for efficiency measures puts the desired outcome of achieving an equivalent outcome of 3200 GL completely at risk.

The likely outcome with the SDL adjustment, as it currently stands, is that only 2100 GL will be returned to the river system. This is so far below the desired targets that it will render the Basin Plan a useless exercise and irresponsible waste of public money.

The success of the Basin Plan has been seriously hindered by the cap of 1500 GL on the purchase of water licences. Buyback is the most economically efficient means of achieving the SDL and thus return of water for restoring the health of the river and wetland system.

Meanwhile, there have been a number of economically inefficient purchases made for political purposes, lacking in transparency and accountability, and resulting in no measurable environmental gain. The purchase of the Tandou licences in the Lower Darling is a case in point.

Targeted purchase of licences that will return water to the environment at an efficient cost, with accompanying structural adjustment or regional development packages, is the most efficient way of meeting the Basin Plan SDL by 2024.

The process for distributing regional funding has been a scattergun approach that does not necessarily match up with the extent of any socio-economic impacts in particular towns and regions.

A planned approach for targeted buyback with associated structural adjustment implemented in a highly transparent and accountable process is the fairest, most cost efficient method of achieving Basin Plan outcomes. This would require an amendment to reverse the 1500 GL cap.

IRN strongly supports the disallowance of the proposed SDL adjustment amendment to the Basin Plan unless the 1500 GL cap is removed from legislation.

e) Northern Basin Review

IRN has major concerns around the process used to review the Northern Basin SDL.

The proposed amendment to reduce 70 GL from the Northern Basin environmental flows was not based on modelling released in the original options paper. The socio-

economic modelling did not analyse communities on the Darling River below Burke and the engagement with Aboriginal communities was highly criticised.

The Northern Basin Advisory Committee did not support the final outcome and the majority of community submissions lodged in the consultation process supported more water to be returned for river health, not less.

The 'toolkit measures' proposed as a replacement for flows are unenforceable, while measures such as the protection of environmental flows should be implemented regardless of changes to the Basin Plan

There is a great deal of concern in the community that the MDBA engaged more regularly with the irrigation industry than with other stakeholder groups and the broader community.

ei) Impacts on Macquarie and Gwydir Rivers
The amendment included a reduction in environmental water licences currently held by the Commonwealth Environmental Water Holder (CEWH) in both the Macquarie and Gwydir River systems. These catchments contain Ramsar listed wetlands that support a wide diversity of water birds in the Northern Basin and have suffered major degradation over time. These rivers also provide connectivity flows to the Barwon Darling and on to the Lower Murray.

No scientific justification was given for this proposed hand back of environmental water licenses. The argument was put up by the Northern Irrigator Alliance based on 'cap factors' that are yet to be defined. This issue is outstanding and has not yet been resolved.

IRN strongly objects to the proposed reduction of held environmental water in both the Gwydir and Macquarie river systems.

eii) Opportunities
IRN fully supported the disallowance of the Northern Basin amendment because it was a very poor outcome towards the achievement of Basin Plan objectives.

We continue to maintain that the 390 GL SDL is already a compromised outcome for environmental improvement in the Northern Basin and should not be reduced.

The additional 70 GL could be found from currently unlicensed floodplain harvesting extraction across the Border Rivers, Gwydir, Namoi, Macquarie and Barwon-Darling River systems with no socio-economic impact on existing licence holders.

The return of small, medium and large flood flows to these northern inland river systems is an essential environmental outcome.

eiii) Growth in use
The growth in use of water in the Northern Basin since the implementation of water sharing arrangements from 2004 and the adoption of the Basin Plan in 2012 needs to be urgently addressed.

Any gains through purchased environmental water may have been seriously compromised by growth in unlicenced floodplain harvesting and lack of metering in unregulated river systems in northern inland NSW.

Floodplain Harvesting

Under the National Water Initiative 2004, NSW has been required to account for and licence the extraction of water taken by floodplain harvesting works.

This water is currently still freely accessed in NSW with no monitoring or metering, no environmental assessment and no licencing. There has been no attempt to date to include this water take in WRPs or develop rules for water sharing.

Floodplain harvesting is a major form of water take in the Northern Basin across five key river systems in NSW that report to the Darling River.

When the Basin Plan was made in 2012 an estimate of 210 GL was included for all floodplain harvesting across the entire Northern Basin.

The MDBA Compliance Review published in November 2017 identified that there was high uncertainty about the accuracy of that estimate. Take by floodplain harvesting is not yet fully incorporated in annual accounting for water take in the Basin.

A consultation paper on floodplain harvesting released by the NSW Govt in March this year identified that 614 GL was eligible for licencing in the Gwydir River catchment alone, with 211 GL assessed in the Border Rivers. The volume of this form of take in the Namoi, Macquarie and Barwon-Darling is still being assessed.

The NSW Floodplain Harvesting Policy finalised in 2013 allows for 500% carryover. This is far greater than any other form of water take in NSW.

In 2014, the NSW *Water Management Act 2000* was amended to give compensable rights to supplementary water licences and to floodplain harvesting licences that are yet to be granted.

How these very large volumes of water extraction will meet SDLs once committed through compensable licences is a major concern.

The impacts on downstream water users, key environmental assets, the health of the Darling River system and connectivity to the lower Murray and Coorong are major issues that need to be addressed before any new licences are even considered.

f) Views of Indigenous People

IRN supports the aspirations of the Murray-Lower Darling River Indigenous Nations and the Northern Basin Aboriginal Nations.

The consultation with Indigenous People throughout the development of the Basin Plan and Water Resource Plans has been tokenistic and needs to be reviewed.

There is a requirement under the Basin Plan to consider cultural flows. This has not occurred. This has been a major failing of the process

g) Illegal Take

IRN launched a civil case in the NSW Land and Environment Court in November 2017 against irrigators on the Barwon Darling because the NSW Government had made no move towards legal action despite allegations made on the ABC Four Corners program in July 2017.

The NSW Government has since lodged criminal proceedings against two separate occurrences in March 2018.

The lack of metering across the unregulated river systems in north-west NSW make it very difficult to monitor and measure water take under the rules of current Water Sharing Plans.

h) Irrigated Crops

IRN has consistently maintained that flood irrigation of cotton and rice under Australian climatic conditions is an unsustainable use of a scarce natural resource.

Technology is available to grow crops using subsurface and drip irrigation methods. A concerted effort by industry to move to this form of irrigation will improve economic outcomes overtime while lowering water demand.

The more efficient use of water will help to drought proof existing irrigation industries and increase the viability of dependent communities.

i) Darling River and Menindee Lakes

The ecological health of the Darling River system has been compromised throughout the development of the Basin Plan and through changes made to the Barwon-Darling Unregulated Water Sharing Plan that was gazetted immediately prior to the adoption of the Basin Plan in 2012.

The Basin Plan failed to meet any of the flow targets needed to achieve the site specific indicators in the Barwon-Darling water source.

The Northern Basin proposal to remove a further 70 GL of flow into the Barwon-Darling will further erode any environmental outcomes for this river system.

The Water Sharing Plan allowed for low flows to be extracted.

The outcome of all this poor planning has been a highly degraded river system with no natural flows below Burke.

The socio-economic and health impacts on downstream communities and industries was not analysed in the economic study undertaken for the Northern Basin Review.

The Menindee Lakes supply project that appeared towards the end of the SDL adjustment process is aimed to recover 100 GL for the extractive industries.

There is no adequate assessment of the equivalent environmental outcomes for this project.

This project and the Basin Plan ignores the fact that the aquatic ecological community in the natural drainage system of the lowland catchment of the Darling River has been listed as an endangered ecological community.

This listing includes all native fish and aquatic invertebrates within all natural creeks, rivers, streams and associated lagoons, billabongs, lakes, flow diversions to anabranches, the anabranches, and the floodplains of the Darling River within the State of New South Wales, and including Menindee Lakes and the Barwon River.

The Menindee Lakes have been identified as the key breeding place for Golden Perch in the Murray-Darling system. Scientific research has shown that 60% - 80% of naturally bred Golden Perch are recruited in the productive ephemeral nursery habitats in the Menindee Lakes. Dispersal flows into the Lower Darling and the Murray are critical and can be provided through environmental releases.

The recovery of this important endangered ecological community will not be achieved through the draining of the Menindee Lakes or the current volume of water planned to be recovered for flows through the Barwon-Darling.

It is imperative that the Barwon-Darling WRP protects low flows and has strong rules to protect held environmental water flows through the system.

j) Deadline for Water Resource Plans

The current NSW Government engagement with the MDBA and Basin Plan has been disappointingly unsupportive from the start. The first action was to cut $20 m from MDBA funding in 2012 and thereby causing the demise of the Murray-Darling Native Fish Strategy.

There has been a very slow, stop – start process in the development of WRPs, the bulk of which are in NSW. Political interference has hindered a clear and measured approach to the planning requirements under the Basin Plan over the past 5 years.

The key emphasis in all policy development regarding Basin Plan implementation in NSW has focussed on third party impacts, over and above all other considerations.

The various inquiries since the 2017 Four Corners program exposing institutional corruption. The findings of the Matthews Report in particular identified major failings in water management in NSW.

There is now a very rushed and inadequate process of finalising water sharing plans as part of the WRP process. While Stakeholder Advisory Panels have been established in some catchments since 2015, many of the decisions are being made at a state level through Government Agencies.

The MDBA, in its first Water Resource Plan quarterly report, released in January 2018, expressed concern that not all NSW plans would meet the mid-2019 deadline, and that the current proposed content of Victorian WRPs would not meet Basin Plan requirements.

The delivery of the Basin Plan 'on time and in full', as has been continuously promised by Federal Water Ministers, is under threat if WRPs are not ready to be implemented by 1 July 2019. This would be a failure of delivery of the Plan.

IRN has no confidence in the MDBA's proposed accreditation process for WRPs and believes this needs to be very closely reviewed. While NSW has agreed to the policy of no net reduction in planned environmental water in WRPs, the growth in use since 2004 needs to be dealt with, and most specifically before any floodplain harvesting licences are granted.

The recent set of NSW Water Reform Action Plan (WRAP) discussion papers provides no certainty that held and planned environmental water will be protected by clear and enforceable legal rules in WRPs or that 100% of all water take will be subject to metering.

If the NSW and Victorian Governments choose to walk away from the Basin Plan, the MDBA can take over the development of WRPs.

A clear process of community consultation needs to be developed if this occurs. The roles and responsibilities of the MDBA need to be strengthened and the skills of the MDBA board need to include more expertise in river ecology.

k) Environmental and Ecological Health of the Murray-Darling Basin

The water recovery to date and delivery of held environmental water to key environmental assets has helped to maintain a core base of ecological resilience in some parts of the Basin.

However, one of the key purposes of the Plan was to improve environmental and ecological health. This has still not been demonstrated particularly in the case of the Coorong, Lower Lakes and Murray Mouth.

The $8 billion of public funds currently invested in the Basin Plan has not slowed down the death of the Coorong or the ongoing demise of the Darling River system.

Plans of Management for NSW national park estate properties within the Murray Darling Basin, Yanga, on the Murrumbidgee River, and Toorale (Warrego confluence with the Darling) are currently being finalised. Plans for both of these properties highlight the importance of sufficient and timely water flows to maintain the health of their extensive wetland and riverine areas.

CONCLUSION

IRN has previously welcomed moves to reform water management across the Murray Darling Basin through development of a robust, enforceable and equitable Plan.

However the alleged corrupt management of Basin Plan funds through non-transparent buyback deals, investment in possibly fraudulent efficiency measures and the proposal for very risky SDL supply measures gives no public confidence in the institutional arrangements associated with the implementation of the Plan.

We trust that the Royal Commission will address the key concerns outlined in this submission.

For more information about this submission please contact:

Anne Reeves
Secretary

Scientists offer qualified support for the Murray-Darling Basin Plan

The *Guide to* the Basin Plan, released by the Murray-Darling Basin Authority in October 2010, has attracted criticism, mainly for its social and economic implications.

As environmental scientists, we are concerned that discussions so far have been dominated by concern about negative, short-term impacts. There has been little consideration of the long-term benefits of a healthy river system.

The costs of 'doing nothing' would be unacceptable to everyone. Instead, the Basin Plan will offer a historic, nation-building opportunity to correct past mistakes and plan for the future. It would enable us to maintain a healthy economy while protecting our natural heritage. It is about securing long-term prosperity.

In this statement, we highlight some key points of scientific consensus:

- The proposals to reduce annual extractions by 3000-4000 GL are a minimal requirement for ecosystem health. They would bring significant benefits, but ecosystem recovery would increase in proportion to the quantity of water available to the environment, and the proposals fall well short of the 7600 GL target that has been nominated for long-term sustainability. The Guide does not clearly describe outcomes from these flow scenarios; this should be addressed, with assistance from the wider science community.
- The central issue is the combined long-term welfare of the environment and the human communities that it supports. The costs and benefits of re-adjustment would be shared among all Australians. Benefits include improved 'goods and services', such as more reliable water supplies, better quality water for irrigation, flooding for grazing, improved fishing and new opportunities for tourism.
- The scientific evidence for the poor ecological condition of rivers and wetlands in the Basin is unequivocal. Regulation and extractions have changed patterns of flow, affected ecological processes, threatened native fauna and flora and favoured alien species. Increased tree dieback, salinization, acid sulfate soils and recurrent algal blooms are further evidence of degradation. In hydrological terms, median flows to the sea now are reduced by 71 percent of natural flows, and by as much as 89-96 percent in dry periods. Daily flows out to sea are zero for 40 percent of the time, compared to one per cent under natural conditions.
- *Wetlands of International Importance* (Ramsar wetlands) throughout the Basin are deteriorating. Australia is having difficulty complying with its own legislation, and with its obligations under the international Ramsar Convention.
- The Guide makes insufficient allowances for the likely impacts of climate change. It acknowledges that the Basin may be 10 percent drier than now under a median 2030 scenario, yet allows for only a 3 percent reduction in the current extraction limit. A realistic allowance is needed, with explicit advice about the requirements for water-sharing plans.

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1st December 2010