INLAND RIVERS NETWORK

PO Box 312, Darlinghurst NSW 1300
ph 0428 817 282
ABN 34 373 750 383

Murray-Darling Basin Authority
GPO Box 1801
Canberra City ACT 2601
submissions@mdba.gov.au

SUBMISSION
Proposed Recommendations for Basin Plan Amendments

Introduction:

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.

Member groups include the Australian Conservation Foundation; the Nature Conservation Council of NSW; the National Parks Association of NSW; Friends of the Earth; Central West Environment Council; the Coast and Wetlands Society and the Wilderness Society, Sydney.

The Darling River demonstrated extreme levels of stress with the world's largest blue-green algae bloom in 1991. The challenge of recovering the health and resilience of the Barwon-Darling still remains.

IRN considers the adoption of the Murray-Darling Basin Plan in 2012 to be an historic moment for improved water management in Australia. The Basin Plan in its current form is a finely balanced outcome for the economic, social and environmental future of the Murray-Darling river system and its dependent communities.

The Basin Plan outcome for the northern system, to restore 390 GL for the maintenance of environmental health, is a major compromise that does not meet a significant number of specific flow indicators, particularly for the Barwon-Darling.

The option to review this volume and improve the scientific understanding of the highly variable, and mostly unregulated, northern system has provided the opportunity to improve the environmental outcomes.

A substantial amount of public funding has been invested in the irrigation industry and dependent communities to improve water use efficiency and encourage economic diversification. The people of Australia expect a dividend on this investment through an improvement in river management and environmental health.

IRN does not support the recommendation to decrease surface water recovery by 70 GL. This reduction will cause a failure to meet the objectives of the Basin Plan Environmental Watering Strategy. IRN supports the 415 GL option to ensure that more water is available to meet essential flow targets.

We also do not support the proposed changes to sustainable diversion limits (SDLs) for groundwater sources or a number of the other 'minor' amendments.

Background:

International Treaty obligations and Objects of Water Act 2007

The *Water Act 2007* (Commonwealth) has key environmental objects that include:

- to give effect to relevant international agreements (to the extent to which those agreements are relevant to the use and management of the Basin water resources) and, in particular, to provide for special measures, in accordance with those agreements, to address the threats to the Basin water resources

- to protect, restore and provide for the ecological values and ecosystem services of the Murray-Darling Basin (taking into account, in particular, the impact that taking of water has on the watercourses, lakes, wetlands, ground water and water-dependent ecosystems that are part of the Basin water resources and on associated biodiversity)

Relevant international agreement means the following:
(a) the Ramsar Convention; Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar 1971
(b) the Biodiversity Convention; Convention on Biological Diversity, Rio de Janeiro 1992
(c) the Desertification Convention; United Nations Convention to Combat Desertification, Paris 1994
(d) the Bonn Convention; Convention on the Conservation of Migratory Species of Wild Animals, Bonn 1979
(e) CAMBA; Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment, Canberra 1986
(f) JAMBA; Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment, Tokyo 1981
(g) ROKAMBA; Agreement with the Government of the Republic of Korea on the Protection of Migratory Birds, Canberra 2006
(h) the Climate Change Convention; United Nations Framework Convention on Climate Change, New York 1992
(i)any other international convention to which Australia is a party and that is:
(i) relevant to the use and management of the Basin water resources; and
(ii) prescribed by the regulations for the purposes of this paragraph.

IRN considers that the proposed amendments to the Basin Plan will prevent these objectives and obligations being met and therefore may possibly be unlawful.

Basin Plan Environmental Watering Strategy

Key Objectives relevant to Northern Basin:

a) River flows and connectivity

Improved overall flow - 10% more into the Barwon–Darling
Improved connectivity with bank-full and/or low floodplain flows - by 10–20% and by 30–60% in the Condamine–Balonne

b) Vegetation

Maintain the current extent of river red gum, black box, coolibah forest and woodlands and existing large communities of lignum;

and non-woody communities near or in wetlands, streams and on low-lying floodplains.

Maintain condition of lowland floodplain forests and woodlands of river red gum, black box and coolibah

c) Water birds

Maintain current species diversity of all current Basin waterbirds
Increased abundance: 20–25% increase in waterbirds by 2024

Improved breeding:
up to 50% more breeding events for colonial nesting waterbird species
a 30–40% increase in nests and broods for other waterbirds

d) Fish

Improved distribution of key short- and long-lived fish species
Improved breeding success for:

- short-lived species (every 1–2 years)
- long-lived species in at least 8/10 years at 80% of key sites

Improved populations of:

- short-lived species (numbers at pre-2007 levels)
- long-lived species (with a spread of age classes represented)
- Murray cod and golden perch (10–15% more mature fish at key sites)

Improved movement - more native fish using fish passages

The Northern Basin Review Report does not describe how these objectives will be met through the proposed increase in the SDL.

Key Issues in Submission:

This submission will be covering the following key issues:

1. Proposed Reduction in Environmental Water
2. Impact of reduction on key wetlands in the Northern Basin
3. Hydrological modelling
4. Cap Factors
5. Socio-economic impacts
6. Aboriginal Cultural Values
7. 415 GL option
8. Proposed changes to groundwater SDLs
9. Other proposed amendments

1. Proposed Reduction in Environmental Water

The MDBA acknowledges that the proposed reduction of environmental water allocation from 390 GL down to 320 GL will have reduced environmental outcomes.[1]

The proposed 'complementary' toolkit measures cannot be considered a substitute for water. There is no legal mechanism under the Basin Plan to enforce the adoption of these proposed measures. The NSW Government has publicly stated that two of the measures are unrealistic and unachievable, and that they will not implement either strategy: the protection of environmental water in the Barwon-Darling system; and the coordinated delivery of environmental water from multiple tributaries.[2]

[1] MDBA, *Northern Basin Review*, p 12
[2] NSW DPI Water, Nov 2016, *Northern Basin Review - NSW Synopsis*

IRN considers that the MDBA has abrogated its main task to identify SDLs that will meet the objects of the Basin Plan and the *Water Act 2007.*

The proposed loss of 70 GL of environmental water and 102 GL of shared environmental water will further impact on the deteriorating health of the Barwon-Darling system.

The proposed changes to the Basin Plan do not describe how the objectives of the Environmental Watering Strategy will be met in the Northern Basin with a reduction of 70GL environmental allocation.

The proposed toolkit measures cannot be guaranteed to meet any of the connectivity, vegetation and waterbird objectives. While solving the cold water pollution problem will assist fish breeding opportunities, the construction of more fish ladders still requires sufficient flow to make them useful.

The 320 GL option will result in 19 specific flow indicators being worse off than the current 390 GL.[3]

2. Impact of reduction on key wetlands in the Northern Basin

The significant wetland areas in the Northern Basin that are subject to international agreements include the Ramsar listed Narran Lakes, Gwydir Wetlands and Macquarie Marshes. These areas support numerous migratory bird species protected under various international agreements as listed in the *Water Act 2007.*

They are also identified as Important Bird Areas which are recognised as sites of global bird conservation importance. They support species listed on the International Union for Conservation of Nature Red List of globally threatened species and species listed as threatened under the Federal *Environment Protection and Biodiversity Conservation Act 1999.*

It is critical that these significant wetland systems are provided with adequate volumes of environmental water to enable them to continue to provide the vital habitat that supports threatened and migratory waterbirds.

IRN considers that the 320 GL option will not support the maintenance and improvement of these critical wetland areas. The proposal to reduce current water allocations recovered for environmental watering by a possible 28GL in the Macquarie and 21GL in the Gwydir cannot be supported and will possibly be illegal under the *Water Act 2007.*

2.1 Macquarie Marshes

IRN is opposed to the proposal to reduce current held environmental water in the Macquarie system by at least 12 GL with a possibility of this increasing to a loss of 28 GL or more. The proposal to decrease local environmental water allocations by 10 GL and shared environmental water by 2 GL is not supported. It is not clear in the Review document how the loss of a further 28 GL would impact on both the local and shared environmental outcomes.

IRN does not support the conclusion that '*local environmental needs in the Macquarie are met with this lower volume'*[4]

The Macquarie Marshes have reduced significantly since the advent of major flood irrigated cotton development in the catchment during the 1990's. A notification of change to ecological character was submitted to the Ramsar secretariat under Article 3.2 of the Ramsar Convention in 2009. Recovery of water for the Marshes is one of the key requirements for restoring ecological character.

[3] MDBA, *Environmental Outcomes of Northern Basin Review*, App D
[4] MDBA, *Northern Basin Review*, p18

The MDBA must take into account the past losses and poor condition of many areas of the Marshes that are critical to maintain. The on ground response to environmental water releases should be a key consideration when deciding on volumetric requirements.

Environmental water allocations are critical for maintaining core areas of the Marsh between large flood events so that resilience is maintained during drier periods. The volume of currently held environmental water combined with state held water and planned environmental water is barely adequate to provide important flows to support native fish breeding, improve condition of the environmental assets in the Effluent Creek system, support major colonial waterbird breeding events and maintain important habitat areas such as River Red Gum forests.

IRN notes that the flow indicators used in the Northern Basin Review *Environmental Outcomes Report* are based on previous information, with no new information developed as part of the science component of the Review.

IRN also notes with concern that there are no specific flow indicators for native fish.[5]

The Macquarie Marshes Ramsar listing includes Criterion 8: Food source, nursery or migration path for fish

The Macquarie River catchment supports a number of threatened fish species including Silver perch *Bidyanus bidyanus* (vulnerable on IUCN Red List), Murray Cod *Maccullochella peelii* (vulnerable under Federal Environment Law (EPBC Act), freshwater catfish *Tandanus tandanus* (endangered population in Murray-Darling Basin NSW Fisheries Act).

The lower Macquarie catchment, including the Marshes, is located in the area covered by the endangered ecological community listed under the NSW *Fisheries Management Act 1994* as the 'aquatic ecological community in the natural drainage system of the lowland catchment of the Darling River'. This community covers all native fish and aquatic invertebrates and the natural rivers, creeks, lagoons, billabongs, wetlands, lakes, tributaries, anabranches and effluents in which they live.

It is of great concern that only four flow indicators are considered in the Macquarie system while many of the other Northern Basin catchments have a greater number of targets.

The lack of a specific flow indicator for native fish in the Macquarie has implications for the recovery of threatened species in this catchment. It has been noted that connectivity between the Macquarie and the Barwon-Darling catchments facilitates the movement of fish to and from important breeding and habitat areas.

The loss of environmental water allocation, as proposed, will cause a failure to meet the objectives of the Basin Plan Environmental Watering Strategy.

The risk assessment developed by NSW Department of Primary Industries (Water)[6] to assist in the Water Resource Plan process has identified high risks from insufficient water for the environment and to water quality in the Macquarie catchment.

IRN strongly objects to using changes to Macquarie cap factors to justify reducing critical environmental water allocations. See below for more comment on cap factors.

IRN does not support the position that there is a 'high likelihood'[7] that environmental outcomes will be

[5] MDBA, *Environmental Outcomes of Northern Basin Review*, pp 59-60
[6] NSW DPI Water, Dec 2016, *Risk Assessment for the Macquarie-Castlereagh Water Resource Plan Area*, Executive Summary
[7] MDBA, *Environmental Outcomes of Northern Basin Review*, p 61

achieved by the proposed 320 GL option that includes a reduction of current environmental allocation.

IRN supports that at least an additional 5 GL be recovered in the Macquarie for environmental outcomes, as considered in the Northern Basin Review.[8]

2.2 Gwydir Wetlands

IRN is opposed to the proposal to reduce current held environmental water in the Gwydir system by at least 6 GL with a possibility of this increasing to a loss of 21 GL or more. The proposal to decrease shared environmental water by 14 GL is not supported. It is not clear in the Review document how the loss of a further 21 GL would impact on both the local and shared environmental outcomes.

IRN does not support the conclusion that '*The environmental outcomes in the Gwydir under the proposed recovery target are similar to those likely under the current Basin Plan.'*[9]

The Environmental Outcomes Report indicates that a range of scenarios were considered for the Gwydir including a loss of 1 GL from environmental water to a gain of 11 GL including shared environmental water.[10] The proposed changes to water sharing arrangements in the Gwydir are well outside these scenarios.

The Gwydir Wetlands provide significant habitat for water dependent native vegetation and wildlife. An Article 3.2 notification to the Ramsar Secretariat was prepared in 2003 following the clearing of native vegetation on Ramsar listed land.

Along with three other criteria for Ramsar listing the Gwydir Wetlands meets Criterion 3: Populations of plants and/or animals important for maintaining biodiversity of a particular bioregion

One of the principle threats to the wetlands include changes to the hydrological regime of the Gwydir system resulting from irrigated agriculture. River regulation and over allocation of water in the Gwydir River system has had a detrimental impact on the size and functionality of the Gwydir Wetlands.

We note that 9 specific flow indicators have been considered in the Gwydir. Only 5 of the flow indicators can be met by any of the considered scenarios, including the current 390 GL in the Basin Plan.

The proposed increased loss of environmental water in the Gwydir has not been clearly assessed and there is no evidence provided to justify this decision. The Northern Basin Review had the opportunity to further improve environmental outcomes in the Gwydir.

Instead there is an admission that base flows are not likely to be adequately protected and this may result in a lack of native fish population resilience and possible reductions in population sizes and local extinctions.[11]

The proposed loss of environmental water in the Gwydir will not meet the objectives of the Environmental Watering Strategy, the Basin Plan or the *Water Act 2007*.

IRN supports that at least an additional 11 GL be recovered in the Gwydir for environmental outcomes, as considered in the Northern Basin Review.

[8] Ibid p 59
[9] MDBA, *Northern Basin Review*, p 24
[10] MDBA, *Environmental Outcomes of Northern Basin Review*, p 54
[11] MDBA, *Northern Basin Review*, p 24

2.3 Narran Lakes

Narran Lake Nature Reserve was listed as a Ramsar wetland site in 1999 because it is a particularly good representative example of a natural or near-natural wetland that is characteristic of the Murray-Darling Basin. It contains a considerable diversity of habitats, including some of the largest expanses of lignum (*Muehlenbeckia cunninghamii*) in NSW. It supports wetland dependent threatened species and supports water bird species at a critical stage of their life cycle. Narran Lakes are an important drought refuge for many species.

The Ramsar site is representative of the entire Narran Lakes system which supports significant colonial nesting bird breeding events.

The current Basin Plan settings do not achieve specific flow indicators for the Narran Lakes. IRN considered the Northern Basin Review as an opportunity to improve environmental outcomes.

The proposal to reduce the shared environmental allocation by 42 GL is not only a missed opportunity but an additional impost on environmental outcomes for the Condamine-Balonne system.

The threat to regular flows that support large scale waterbird breeding and population in the Narran Lakes is significant. Also the loss of opportunity for riparian and inner floodplain connectivity and the provision of refugia for fish during drought, as well as breeding flows and repopulation events is a significant environmental shortfall in this catchment.

The objectives of the Environmental Watering Strategy will fail in the Condamine-Balonne system.

The Northern Basin Environmental Outcomes Report identifies that scenarios from 65 GL to 150 GL return to the environment were considered. The science review indicates that the 415 GL scenario has the best outcome for the Narran Lakes and Lower Balonne floodplain environmental assets.

IRN considers it critical to at least maintain the current Basin Plan recovery of 390 GL. However, an increase to 415 GL will achieve better environmental outcomes and help to improve the resilience of water dependent wildlife and vegetation.

2.4 Barwon-Darling

The Darling River catchment has been listed as an endangered ecological community listed under the NSW *Fisheries Management Act 1994.* The aquatic ecological community in the natural drainage system of the lowland catchment of the Darling River covers all native fish and aquatic invertebrates and the natural rivers, creeks, lagoons, billabongs, wetlands, lakes, tributaries, anabranches and effluents in which they live.

This area includes significant wetlands and floodplain environments. Many of the specific flow indicators are not met under the current Basin Plan recovery of 390 GL.

It is evident that the 415 GL scenario has the greatest capacity to mitigate environmental risk in the Barwon-Darling system.

The proposed loss of 102 GL of shared reduction from the tributaries that supply the flow to the Barwon-Darling is a significant change to the current Basin Plan settings. There appears to be no clear scientific analysis of the environmental impacts of this change. This loss of additional flow will cause further degradation of environmental health and cause a failure to meet the objectives of the Environmental Watering Strategy, the Basin Plan and the *Water Act 2007*.

The *Plain English summary – proposed Basin Plan amendments* [12] states that: 'The Basin Plan divides this reduction amount into a volume to meet local environmental needs and a volume that contributes to a shared reduction amount to meet the environmental needs of the Barwon–Darling River. The local reduction amount is (in most cases) the minimum reduction required within each SDL resource unit to satisfy local environmental needs. The SDL resource units of tributaries to the Barwon–Darling contribute to the shared reduction amount.'

However, the Northern Basin Review Report states that the MDBA has decided that local recovery of 32 GL will meet most of the environmental needs in the Barwon-Darling.[13] This appears to be contradictory information and emphasises IRN concerns with the major reduction in shared tributary contributions.

The loss of 102 GL of shared reduction to meet the environmental needs of the Barwon-Darling River is a significant change to the current basin Plan settings that has not been adequately assessed or justified.

2.5 Menindee Lakes

The Menindee Lakes are incredibly rich and diverse ecosystems that sustain the wildlife and people of far western New South Wales. Indigenous peoples have been sustained and nurtured by the river and lakes for thousands of years.

In their natural state Menindee Lakes were overflow lakes from the Darling River, filling during high river flows and gradually emptying, acting as flood mitigators and filling frequently enough to preserve a rim of river red gums. The lakes were modified by the construction of levees and a system of regulators that allow water stored in the larger lakes to be released in controlled flow events.

The complex rules managing water release from Menindee Lakes and the high evaporation rates have caused considerable difficulty in maintaining connectivity between the Northern and Southern Basins. This impacts on water availability to significant wetlands in South Australia and river flow through the Murray to the ocean.

IRN does not support the MDBA conclusion that the loss of 70 GL of environmental flow from the Northern Basin including a decrease of 102 GL of shared reduction will not significantly impact on inflows to Menindee Lakes and availability of environmental flows to South Australia.

IRN maintains that the proposed loss of environmental water from the current Basin Plan arrangements will keep Menindee Lakes under local NSW control more often, unless the Inter-Government Agreement arrangements are changed.

IRN cannot support the modelling outcomes that a loss of 70 GL from the Barwon-Darling tributary catchment will result in only a 10 – 15 GL reduction to average flows to Menindee Lakes and only a 5 – 10 GL reduction to South Australia.

The use of average flows is itself a major weakness in the water planning and management practices in this highly variable Northern Basin system.

It would be more transparent, and wiser, to establish minimum flow and maximum flow volumes so that the impact of prolonged drought and high flood levels could be better understood under the proposed lower environmental flow allocation.

[12] MDBA, Nov 2016, *Plain English summary – proposed Basin Plan amendments*, P6
[13] MDBA, *Northern Basin Review*, p 28

3. Hydrological modelling

IRN is concerned that the hydrological modelling report that details the modelling scenarios used to inform the Northern Basin Review decision-making was not released until after the commencement of the public exhibition of the review outcomes.

We note that no specific modelling was undertaken for the 320 GL plus toolkit option. Rather that most of the aspects of the 320 GL option were extrapolated from existing scenarios.[14]

We also note that the MDBA has not used the same assumptions for all of the nine modelled scenarios. This is a major flaw in the methodology, used to inform decision-making, that undermines the scientific robustness of the Northern Basin Review.

It is very difficult to compare outcomes of each of the scenarios because of inconsistency in assumptions. The extrapolation of results from these scenarios to reach an outcome for the 320GL option is therefore scientifically flawed.

This is a failure to meet the legal requirement to develop the Basin Plan on the basis of best scientific knowledge.[15]

IRN does not support the modelling results of the impact of less environmental water reporting to Menindee Lakes.

We are deeply concerned that the models used for the Northern Basin Review had input from irrigators and business owners[16] without equal access to other stakeholder groups such as floodplain graziers and conservationists in the Northern Basin.

4. Cap Factors

IRN has major concerns that the MDBA is considering changing the cap factors or planning assumptions relating to yield of some entitlements from the v2.05 cap factor used to establish the current environmental water recovery in the Basin Plan.

There are many serious problems relating to the interpretation of the terminology 'cap factor'. There appears to be no consistency in the use and calculation of these planning assumptions and no transparency around how they are determined.

It is possible that different cap factors have been used to estimate the volume of water recovered through infrastructure projects. IRN would appreciate further information on this matter. The inconsistency in approach to determining cap factors appears to be maximising extraction volumes and minimising recovered environmental water.

IRN notes that a new committee has been established to consider the problems associated with cap factors. However, the membership consists entirely of people with a close association with extractive industries.

Establishing a different set of cap factors for the northern and southern basins will increase the inconsistency of approach and undermine the credibility of the Basin Plan.

IRN is particularly concerned that the proposed changes to cap factors in the Macquarie and Gwydir

[14] MBDA, *Hydrologic Modelling for the Northern Basin Review*, p3
[15] Water Act, s. 21(4)(b).
[16] MDBA, *Northern Basin Review*, p 46

catchments will lead to a reduction of currently held environmental water allocations. Planning assumptions and calculation of yield of water entitlements has no relationship to the condition and environmental watering needs of the Ramsar listed Macquarie Marshes and Gwydir Wetlands.

Evidence in documents obtained under the *Freedom of Information Act 1982* (FOI) that Macquarie River Food and Fibre have attempted to influence the MDBA on the issue of cap factors in the Macquarie. This has occurred with no consideration of the consequences. The demonstration that this influence has been successful is deeply concerning.

IRN strongly opposes this proposed claw back of environmental water based on inconsistent, unscientific and non-transparent planning assumptions.

5. Socio-economic impacts

IRN is very disturbed by the highly biased consultation and socio-economic analysis conducted by the MDBA in the Northern Basin Review.

We are concerned that documents obtained under the *Freedom of Information Act 1982* suggest that socio-economic analysis may have been unduly influenced by certain irrigator groups.

The entire focus on the irrigation industry and dependent communities, at the expense of all other industries and communities relying on healthy rivers and environments, is an abrogation of the MDBA responsibility to provide an unbiased approach to Basin planning processes.

The socio-economic report has not included adequate data about the economic inputs of the tourism industry and recreational fishing, the loss to floodplain grazing income, or the costs to health, social wellbeing and infrastructure when river levels are low and water quality is poor.

The costs to Local Government filtering blue-green algae to protect town drinking water supplies has not been factored into any economic analysis of the benefits of more environmental water, particularly in the Darling River.

The lack of analysis of the impact of river management on the township of Wilcannia is a blatant abuse of responsibility. The lack of consideration of and poor consultation with Aboriginal communities in the Northern Basin is a major failure of the MDBA to carry out its obligations.

The socio-economic analysis did not factor in the grants to the NSW and Queensland Governments to assist regional diversification. The public funding of $32.5m to NSW and $15m to Queensland is a significant subsidy that requires open and transparent reporting on the investment and economic outcomes.

The socio-economic analysis conducted for the Northern Basin Review did not include this information.

Infrastructure investment projects in the Northern Basin have provided significant private benefits to the irrigation industry and dependent communities. This element of public funding, as part of the Basin Plan public investment, has not been adequately reported.

For example, in the Macquarie River system, $115m was invested in the improvement of the Trangie-Nevertire irrigation scheme. This resulted in the return of 29.839 GL to environmental holdings at the cost of $3, 854 per ML. The irrigation industry can now access general security water at a much lower allocation than prior to the efficiency measures. This has provided a significant private economic benefit funded by Australian taxpayers.

The public investment in the Basin Plan is the largest structural adjustment package for natural resource management ever funded in Australia. The irrigation industry and dependent communities have not embraced the changes or acknowledged the significant support provided.

IRN considers there is still a lot of room for improved irrigation efficiencies away from flood irrigation methods. The industry is capable of growing the same or more volume of irrigated produce with less water, if more efficient technology, such as subsurface irrigation, were used.

It is time for the driest inhabited continent on earth to move away from ancient irrigation methods into 21st C technology. IRN had hopes that the Basin Plan would encourage this important shift.

The bias in the socio-economic reporting process has undermined the credibility of the MDBA and demonstrated that one industry has captured the process, at the expense of all other industries in the Northern Basin and the wider community that is funding the process.

The wider community supported the Basin Plan investment with the understanding that major improvements to river and wetland health would be gained.

The outcome of the Northern Basin Review and the MDBA recommendation to reduce the return of water to the environment by 70 GL is a major breach of faith.

6. Aboriginal Cultural Values

The Northern Basin Review failed to undertake a rigorous assessment of the impacts of reduced recovery on Aboriginal cultural values, practices and communities.

The MDBA has failed to demonstrate how the findings of the Socio-Cultural survey conducted in three Northern Basin towns have been considered in the Review assessment and final recommendations.

The survey demonstrated strong links between adequate environmental flow and Aboriginal community health and wellbeing.

It has been recognised that quantifying the volume, flow and timing of water required to meet cultural outcomes is fundamental if Indigenous peoples' needs for water is to be met.[17]

The current recovery target of 390 GL is insufficient to protect and sustain cultural values in river and wetland systems of the Northern Basin. Further loss of environmental water will critically compromise Traditional Owner's ability to maintain cultural practices and transfer traditional ecological knowledge.

While recommendation 7 of the Northern Basin Review has been welcomed by the Aboriginal community there are still concerns that measures are unclear, contingent and insufficient to address the serious concerns of Aboriginal Nations across the Basin. The measures do not appear to contain new or innovative opportunities that address the detailed issues raised by the Northern Basin Aboriginal Nations and Traditional Owners.

7. 415 GL option

IRN strongly recommends that the Basin Plan is amended to allow the 415 GL environmental water option to be adopted for the Northern Basin.

It is evident that development of extractive industries and river regulation has dramatically changed the variability of the Northern river systems, particularly the Darling River.[18]

[17] Australian Government, 2016, Engaging Indigenous People in Water Planning and Management

The change to volume of peak overbank flows, duration of low and no flow events, loss of variability and containment of more flows to in-channel has had significant impacts on the health of the river system. This has had significant socio-economic impacts on many industry and community sectors.

The 415 GL scenario demonstrates the best outcome for returning the river system closer to the pre-development condition.[19]

This scenario is the best for achieving more flow targets in the Barwon-Darling system and the Condmine-Balonne. It will also improve environmental outcomes in the other northern tributaries.

The 415 GL scenario will provide better flows into Menindee Lakes and therefore, more water availability for the important wetland systems in South Australia with more flow to the Murray Mouth.

This scenario will better meet the objectives of the Environmental Watering Strategy, the Basin Plan and the *Water Act 2007*.

8. Proposed changes to groundwater SDLs

IRN does not support the proposed increase in SDLs for groundwater systems in the Basin. There is no clear justification provided for an increase in extraction of these water sources.

The issue of connectivity, especially the Eastern Porous Rock groundwater system, with the Great Artesian Basin has not been adequately identified or assessed.

There are major concerns about the water quality of these aquifers and an increase in surface salinity management caused by greater interception.

The MDBA has not conducted a transparent consultation process on the methodology or justification for this change to the Basin Plan.

IRN does not support this recommended amendment.

9. Other proposed amendments

We do not support the proposed amendment to clauses 10.20(1)(a) and (b), both of which weaken the protection offered to aquifers and connected groundwater-surface water systems under accredited Water Resource Plans.

We also oppose the proposed deletion of clause 12.17. This deletion removes the possibility of imposing a volumetric limit on trade for a purpose specified in clause 12.18. As noted in this latter clause, the imposition of a volumetric limit on trade may be necessary to protect, *inter alia*, hydrologic connectivity or the needs of the environment.

Water markets can only work if restrictions can be applied where necessary to prevent perverse outcomes on the environment and other users.

IRN does not consider that adequate justification has been made to support these amendments.

---

[18] MDBA, *Northern Basin Review*, Table 5 p 44
[19] MDBA, *Northern Basin Review*, Table 6 p 44

Conclusion

IRN is deeply concerned that the MDBA recommendations, as exhibited for comment, are based on a value judgement of the Board members.[20] The lack of environmental expertise of the current MDBA Board is evident with one member having a background in environment and the other five having agricultural and irrigation industry backgrounds.

IRN notes that the December 2016 MDBA Board meeting had a presentation given by Professor Stuart Bunn, Chair of the Advisory Committee on Social Economic and Environmental Sciences (ACSEES).

Professor Bunn reported that ACSEES had expressed the strong view that the MDBA should continue to prosecute the original case for water reform which had led to the formation of the Basin Plan. Members suggested the MDBA remind stakeholders that the Basin Plan is a long-term reform to transition communities, industries and the environment to a more secure and sustainable future, by better protecting catchment functions and by building the resilience of key natural assets.[21]

IRN strongly concurs with this approach and considers the recommendation to decrease the volume of environmental water recovery in the Northern Basin by 70 GL directly contradicts this position.

Catchment functions and resilience of key natural assets have been demonstrated to be better achieved by returning 415 GL to environmental flows in the Northern Basin.

The economic issues raised by the irrigation industry and dependent communities have been vastly inflated and politicised. It is disappointing that the MDBA has demonstrated a clear bias to these political positions and have not, in fact, continued to 'prosecute the original case for water reform.'

Yours faithfully

B. Smiles

Bev Smiles
President

Thursday 23 February 2017

[20] Ibid p46
[21] MDBA, Dec 2016, Minutes of Board Meeting