



Submission to the Productivity Commission on:

*Five-year Review into the Murray Darling Basin
Plan*

By:

Gwydir Valley Irrigators Association Inc

May 2018



making every drop count

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I Summary and Purpose

The Gwydir Valley Irrigators Association has provided this submission to the Productivity Commission (the Commission) for consideration as part of their statutory five-year review into the Murray Darling Basin Plan.

We have structured this submission around the request for information contained within the Productivity Commissions' Issues Paper released in March 2018 rather than the terms of reference.

The GVIA and our members, are members of the NSW Irrigators Council and National Irrigators Council and endorse the submissions made by those organisations.

2 Introduction

The Gwydir Valley Irrigators Association (GVIA) as the representative body for irrigation entitlement holders in the Gwydir Valley and welcome the opportunity to provide our feedback to the Productivity Commission (the Commission) on the implementation of the Basin Plan in our region.

Environmental water management is not new in the Gwydir Valley, we have had environmental water in one form or another since the construction of Copeton Dam in the late 1970's¹. However, the sudden growth in the environmental portfolio from 2008 onwards with the purchase of licences by the NSW and Commonwealth Governments, significantly altered behavioural assumptions and influenced how the system operates, what environmental and economic outcomes could be achieved and how the community benefits from the sharing of water resources. The reform was difficult as the community was forced to adjust to a region with less water, but implementation was recognised to be much harder, as Government's entered the market with a no regrets with no policy and we are now, there is a Plan² that needs to be delivered upon.

There is much to learn as from regions like the Gwydir that have been implementing the Basin Plan before it became legislation in 2012³ and with good success⁴. However, we are concerned that there are too many policy unknowns with Basin Plan implementation, with only just over 12-months before Water Resource Plans are required to be executed. The timeframe and tasks are ambitious for NSW and the MDBA to meet.

However, despite there being many challenges for everyone who manage, use, monitor or assess water-use in the Basin, we must continue to work collaboratively and engage genuinely to achieve real outcomes. Communities like Moree cannot afford for the Basin Plan to fail as more water from production will be a tipping-point for the region.

The process moving forward will need leadership from all levels of government and must recognise that compromise will be needed and that there are limitations to what we can achieve and these need to be acknowledged or addressed.

As part of this submission we have provided examples of any outcomes and achievement to-date, lessons learnt and a range of areas that need to be addressed by governments to help manage expectations of what can be achieved through the Basin Plan but also how we can enhance outcomes for our communities.

We have focused our submission on the issues paper rather than the terms of reference.

We welcome the opportunity to provide further input if required.

¹ Refer to the section About the GVIA or visit our website for more information www.gvia.org.au/the-gwydir-valley/the-gwydir-valley.

² The Murray Darling Basin Plan.

³ The year when the Murray Darling Basin Plan (CTH) 2012 become legislation.

⁴<http://www.environment.nsw.gov.au/topics/water/water-for-the-environment/gwydir/annual-environmental-water-priorities>

3 About the GVIA

3.1 Our region

The Gwydir Valley Irrigators Association (GVIA) represents more than 450 water entitlement holders in the Gwydir Valley, centred around the town of Moree in North-West New South Wales. Our mission is to build a secure future for its members, the environment and the Gwydir Valley community through irrigated agriculture.

The Moree Plains Shire region alone is highly dependent on agriculture and irrigated agriculture for economic activity contributing over 72% of the value of gross domestic product (cotton is around 60%), employing 20-30% of the population and accounting for almost 90% of exports from the Shire⁵.

The 2011 agricultural census estimates that the total value of agricultural commodities for the Moree Plains Shire region was \$911,951,079 up from \$527,744,851 in the 2005-06 census. This is an estimated 7.83% of NSW's total agricultural production from a 1,040,021Ha principally used for agricultural crops⁶.

The Gwydir is characterised as having low water reliability with most water held as general security water with a reliability of 36% (that means irrigators could expect in the long-term just over a third of their entitlement can be accessed). Supplementary water entitlement is somewhat more reliable with 55% but accounts for less than a quarter of the total volume. Groundwater reliability is considered 100% but there is less than 30,000ML available.

The total volume of water available to be accessed by irrigators has been reduced significantly over time due to reforms as outlined below in Table 1: Summary of Water Reform. Entitlements owned for environmental purposes totals more than 186,000ML, which includes an Environmental Contingency Allowance of 45,000ML. The NSW and Commonwealth environmental water managers are now responsible for 28.5% of high security entitlement, 29% of general security entitlement and 13% of supplementary entitlement for environmental use. Despite environmental water being held in the Gwydir prior to the first water Sharing Plan. Environmental water is primarily used to contribute waterbird and fish breeding events and to maintain the condition and extent of the internationally recognised Gwydir Wetlands but as the portfolio has grown, so has the application and use of environmental water.

As a result, only approximately 19% of the total river flows are available for diversion for productive use⁷. This equates irrigators holding 575,000ML from regulated entitlement (high security, general security and supplementary water) and 28,000ML available from groundwater aquifers.

⁵ Cotton Catchment Communities CRC Communities and People Series 2009

⁶ 2010 2011 Agricultural Census Report – agdata cubes, 71210D0005-201011 Agricultural Commodities, Australia

⁷ Based on IQQM long-term modelling and the volume of water purchased for the environment

Table 1: Summary of Water Reform

Year	Program	Volume of entitlement
1970	Creation of replenishment flow	5,000ML
1995	Murray-Darling Basin 1993/94 Interim Cap established to limit future growth in access	
1996	Voluntarily reduced their general security reliability by 5%, by establishing the original Gwydir Valley Environmental Contingency Allowance (ECA) of general security equivalent water.	25,000ML General Security
2004	Gwydir Regulated River Water Sharing Plan further reduced reliability by 4%, primarily through increasing the ECA and enhancing its use and storage provision. Rules created for the WSP also reduced access, particularly to supplementary flow previously known as high flow.	20,000ML General Security
2006	Lower Gwydir Groundwater Source Water Sharing Plan reduced groundwater entitlements from 68,000 megalitres to 28,700 megalitres.	39,300ML Groundwater
2008 +	NSW State Government has purchased general security entitlement as well as supplementary for wetlands recovery programme.	17,092ML General Security 3,141ML Supplementary
	NSW Government infrastructure works	1,249ML High Security
	Commonwealth buy-back program.	88,133ML General Security 20,451ML Supplementary
2016	Commonwealth infrastructure programs.	4,508ML High Security 1,392ML General Security
TOTALS		5,757 High Security 156,617ML General Security (including ECA) 23,592 ML Supplementary

The main broad acre irrigated crop is cotton with irrigated wheat, barley and Lucerne also occurring depending on commodity prices. The total broad acre irrigated area is approximately 90,000 ha (although recent analysis indicate that maximum planting area is now 70,000ha) but is rarely cropped in one year. In 2010-11 census data indicated the total production value of irrigated cotton was \$623M and is estimated to be worth three times that

to the local community using the Cotton Catchment Communities Research Corporation economic multiplier for cotton regions⁸.

Currently there are also pecans, walnuts, oranges and olives being grown within the region covering approximately 1,500 hectares and generating an estimated \$31M with considerable benefits to the local community as a high intensity, permanent crop. There is significant potential for expansion into horticulture and improvement in water utilisation but the area of expansion is limited by the availability of high security water.

Changes in water availability either through climate or government policy has a direct impact on the productivity of the region as well as on the local economy. Analysis by the Murray Darling Basin Authority highlighted this relationship during the northern review and revealed that for both Moree and Collarenebri social and economic indicators declined through 2001 to 2011 including education, economic resources and disadvantage, resulting in an estimated 200 jobs lost due to the implementation of the Basin Plan in the region⁹.
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3.2 What we do

The GVIA's mission is to build a secure future for our members, the environment and the broader Gwydir Valley community through irrigated agriculture, we can do this together by making every drop count in the river or the aquifer, on-farm, for the environment, or for our community⁹.

GVIA members hold entitlements within the Gwydir regulated and un-regulated surface water areas, in addition to groundwater resources. All of which are managed through water sharing plans, which have been progressively developed since early 2000.

The GVIA organisation is voluntary, funded by a nominal levy, cents/megalitre on regulated, unregulated and groundwater irrigation entitlement. In 2016-17 the levy was paid and supported by more than 84% of the eligible entitlement (excludes entitlement held by the NSW and Commonwealth governments).

Much of the activity of the association revolves around negotiating with government at a Federal, State and Local level to ensure the rights of irrigators are maintained and respected. While the core activities of the Association are funded entirely through the voluntary levy, the Association does also undertake programs to maintain and improve the sustainability of members on-farm activities and from time to time, undertakes special projects, which can be funded by government or research corporations.

The Association is managed by a committee of a minimum 11 irrigators and employs a full-time executive officer and a part-time administrative assistant, as well as hosting a Project Officer funded through the Cotton Research and Development Corporation, the Gwydir Valley Cotton Growers Association and the GVIA.

⁸ Social and Economic Analysis of the Moree Community, 2009. Cotton Catchment Communities CRC

⁹ For more information, see our corporate video on <https://vimeo.com/177148006>

The GVIA and its members, are members of both the National Irrigators Council and the NSW Irrigators Council.

3.3 Contacts

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4 Request for information by the Commission

4.1 Sustainable Diversion Limit adjustment mechanism

The Commission is seeking information on:

- a. *risks that may prevent Basin States from successfully implementing SDL adjustment projects*
- b. *the extent to which adopting a different definition of 'neutral or improved socioeconomic outcomes' for efficiency measures to what is in the Basin Plan would affect the likelihood of projects being delivered on time and on budget*
- c. *whether there are other novel approaches to recovering water for the environment, such as purchase of entitlement options, that may contribute to Basin Plan outcomes while achieving neutral socioeconomic outcomes.*

The process to 'bridge the gap' between current baseline diversion limits (BDL) and sustainable diversion limits (SDL) have to date largely focused on the acquisition of quantifiable volumes of water of a reliable and permanent nature. While this provides a highly secure portfolio for the Commonwealth Environmental Holder (CEWH), it is not the only approach to meet specific environmental outcomes.

The Gwydir Valley had most of water recovered through buy-backs and the socio-economic impacts were substantial¹⁰ as whole-farms sold their licences and irrigated hectares for the

¹⁰ Refer to the Murray Darling Basin Authorities Socio Economic condition reports: https://www.mdba.gov.au/sites/default/files/pubs/630%20-%20NBR%20Community%20profile%20-%20Collarenebri_0.pdf, [!\[\]\(6869e19961160c2bbc3ec62976f03549_img.jpg\) 7](https://www.mdba.gov.au/sites/default/files/pubs/630%20-</p></div><div data-bbox=)

valley declined by between 25-30%. In communities like Moree, Collarenebri and Mungindi that are agriculturally dependent and rely on irrigation to provide a baseline of economic growth through poor seasons, as well as peak production when water availability is high there are direct and indirect impacts to removing water from production. For this reason, there is no water recovery process that removes water from the productive pool that can have a neutral socioeconomic impact. Only projects outside this defined area (improving efficiencies for town water supply, industrial or stock and domestic uses) could be considered as neutral but they would still require assessment.

However, the water market can provide several products which would allow environmental water managers to meet environmental outcomes without needing the expenses of purchasing entitlements or funding the associated long-term costs. This could involve:

- Temporary allocation purchases;
- Temporary purchase of individual extraction rights;
- Conditional lease arrangements; or
- Storage leases.

These options could provide the CEWH the added flexibility they need to specifically target an environmental outcome on an event or seasonal basis.

4.2 Northern basin Review

The Commission is seeking information on actions governments should now take to achieve SDLs in the Northern Basin.

The GVIA believe that river health is more than flow; its people, the environment and industries and that the information gathered for the Northern Review provided the MDBA and Government's, a unique opportunity to enable a true triple bottom line decision and initiate a fundamental shift in the debate towards environmental outcomes. The proposed amendments provided Governments the opportunity to amend past decisions and provide our community (and others in the Northern Basin) a pathway to a better future, with a strong a vibrant industry and a healthy working river.

We welcomed the approach by the MDBA to invest in non-flow, complementary measures. Environmental outcomes must be prioritised, and investment targeted, to maximise environmental benefit from the water already recovered. We believe that there is strong community support for such investment, which has the potential to be transformative for generations to come.

We are of the understanding that there is practical, scientific, social and economic evidence to support a lower level of water recovery across the whole Northern Basin but importantly,

[%20NBR%20Community%20profile%20-%20Moree%20HR_0_0.pdf](https://www.mdba.gov.au/sites/default/files/pubs/630-%20NBR%20Community%20profile%20-%20Moree%20HR_0_0.pdf)
https://www.mdba.gov.au/sites/default/files/pubs/630-%20NBR%20Community%20profile%20-%20Mungindi_0_0.pdf

also a downward revision in the Gwydir Valley's in-valley requirements¹¹. We have never supported the in-valley water requirements in our valley and believe that there is more environmental water in our region than what can be efficiently and effectively delivered. Government's must recognise this over-recovery and use this opportunity to provide genuine economic growth in our region that was devastated by past water recovery strategies.

Hence, we would firstly advocate for the maintenance of at least the 70 gigalitre reduction in the Northern Basin and do not consider their any strategies required in our region to further bridge the gap.

Rather Governments should recognise the Gwydir is over-recovered for environmental water entitlements and that, this is prior to any amendments to the in-valley recovery volume or a correction to the conversation factors to calculate long-term diversion limit equivalents. In doing so, Governments can amend past decisions and provide our community (and others in the Northern Basin) a pathway to a better future, with a strong a vibrant industry and a healthy working river.

We recommend governments work proactively with those regions who are over-recovered and determine mechanisms to return water into production in a way that limits third-party impacts and maximise the opportunity to offset the poor policies of the past.

4.3 Water recovery process

The Commission is seeking information on:

- a. *the extent to which the Australian Government's strategy to recover water in areas where gaps remain will be cost effective, align with the Basin Plan's environmental objectives, and be transparent*
- b. *risks to achieving water recovery targets by 1 July 2019 and, where not already addressed under current arrangements, how any shortfalls may be resolved*
- c. *examples of water recovery (both infrastructure projects and purchases) that have been either well implemented or had major deficiencies, including risks to securing contracted but not yet delivered water from water-saving infrastructure projects.*

As briefly outlined above, the Gwydir Valley had most of its water recovered through buy-backs after 2008 following the then government's 'no regrets' policy. These purchases, predominately in 2008-09 occurred well before the Guide to the Basin Plan (in 2010) or the finalisation of the Basin Plan (in 2012) and totalled 88,133ML of General Security and 20,451ML of Supplementary entitlement (as outlined in Table 1: Summary of Water Reform). This was added to through NSW Government purchases totalling 17,092ML General Security and 3,141ML Supplementary entitlement (Table 1: Summary of Water Reform).

Only 5% of the total water recovery for the environment was through infrastructure projects, these included:

¹¹ Refer to the GVIA's Submission to the MDBA on the Northern Amendments 2017 https://www.gvia.org.au/media/website_pages/water-policy/inquiries-and-submissions/archived-submissions/GVIA_Sumbission-to-MDBA-on-Northern-Review_17.02.24.pdf

- Basin Pipes projects in the Gingham and Lower Gwydir, and Mallowa areas.
- On-Farm Infrastructure program pilot projects.

Which were only available after buy-back opportunity had ceased in 2010-11, when the region was increasingly becoming aware that it may be over-recovered. The on-farm infrastructure program was only available to Gwydir irrigators during the 2010 pilot.

Meaning there was little opportunity to provide choice to 'willing sellers' on their recovery program. A genuine recovery approach by government that provides options is recommended and non-strategic buy-backs that do not address either a targeted environmental outcome or a specified type of water entitlement, are not supported.

Infrastructure projects that provide no risk to other entitlement holders are considered preferential projects, but they must be well planned and fully executed. The GVIA is concerned that the roll-out of the later Basin Pipes projects in our region, did not include remediation of stream and off-channel works due to lack of funds. As a result, future environmental outcomes maybe reduced with water not reaching targeted outcomes, not to mention the creation of third-party impacts off stream. We recommend that this is rectified either through Commonwealth Environmental Water Office funding or other government funding sources.

4.4 Structural adjustment

The Commission is seeking information on:

- what specific assistance has been provided to help communities adjust to the Basin Plan*
- the extent to which this assistance has supported particular industries or regions*
- evidence that this assistance has facilitated adjustment that would not have otherwise occurred and has contributed to meeting the intended outcome of the Basin Plan, including more resilient industries and communities with confidence in their long-term future*
- whether future structural adjustment assistance is warranted, and if so, what lessons can be learnt from past programs.*

The GVIA considered that the funding provided through the Murray Darling Basin Economic Diversification Fund has been ineffective. While the GVIA does not discredit the value of projects being funded, towns like Armidale, Coonamble or Orange all in NSW¹², for example would not be considered significantly impacted by the Basin Plan yet received funding under the program as they are located 'in the Basin'.

Not to mention that the value of traditional support packages appears to be diminishing as the regulatory requirements of accepting that support somewhat out-way the financial benefit.

We therefore support investment into genuinely impacted communities but ask governments to consider the approach in which support is provided. For example, fast-tracking of

¹² Full list of energise enterprise funding available at http://www.industry.nsw.gov.au/data/assets/pdf_file/0011/88445/successful-R1-and-R2-EEF-projects.pdf

programs like the national broadband network or addressing mobile blackspots, coupled with funding for business re-locations, expansions or new business enterprises could provide longer lasting benefits than investment opportunities to- date. No to mention using the opportunity that over-recovery of environmental water may provide to help stimulate long-term economic growth for future generations.

4.5 Water resource planning

The Commission is seeking information on:

- a. the main risks to remaining WRPs being finalised and accredited by mid-2019*
- b. how, and to what extent, recent measures to make the WRP accreditation process more efficient and streamlined have sped up the preparation of WRPs and whether there are opportunities to further streamline the accreditation process for WRPs*
- c. other ways WRPs or associated planning processes (e.g. consultation, modelling inputs) could be changed to better meet the objectives of the Basin Plan*
- d. how effective Basin States have been in consulting with all relevant stakeholders*
- e. the main risks to planning assumption work being finalised on time.*

Despite the Gwydir Surface Water plan being the pilot NSW Water Resource Plan, the process of accrediting WRP remains unclear to the GVIA. Not to mention that major policy foundations that are required in detail within the WRP have not been decided or communicated to stakeholders either. Together with no clear decision on changes to Water Sharing Plans, the GVIA is concerned at required work program of the NSW Government and the Murray Darling Basin Authority to finalise WRPs prior to 1 July 2019.

Water sharing plans provide water users and their communities certainty around access arrangement at least into the next 10-year period, not knowing whether plans will be compliant moving forward undermines the core objective of the both the WSP and the Basin Plan itself.

A concerted effort by all will be required to meet this ambitious timeframe for all NSW WRP and many policy decisions will have to rapidly occur and genuinely communicated and consulted with stakeholders.

Changes to water users access arrangements and conditions, outside of the WSP review and WRP development process are not supported by the GVIA. We are concerned that the NSW Government's simultaneous process of amending the Water Management Act may result in unmitigated third-party impacts and an erosion of water rights that have not been properly been assessed nor consulted through the established stakeholder process and may not be consistent with Basin Plan principles or the National Water Initiative.

Furthermore, the GVIA is also concerned that the WRP development process and the requirement to 'effectively demonstrate' no net improvement from baseline Basin Plan conditions, will limit the opportunity to improve the effectiveness of rules within WSPs and leave water users locked into plans for 20-years. The Basin Plan was established with adaptive principles, where the best available science could be utilised, yet the process for regulating WRP have provided prescriptive guidelines that do not effectively allow for change.

For example, stakeholders like ourselves tabled on multiple occasions issues where rules needed to be amended throughout the WSP review and WRP development processes. To-date, only rules that are administrative or are not contentious between different water users, like allowing environmental water managers to have input into the delivery of the non-accessed (environmental) share of supplementary flow events, will be likely to progressed. All other rules are being 'recorded' for future reviews as the process of collecting data to demonstrate a change is too difficult in the timeframes required.

This is unacceptable for water users who have been patiently working with government to review and adapt their WSP with genuine intent to ensure it is effective at sharing water between different water users.

4.6 Environmental water planning and management

The Commission is seeking information on:

- a. *how environmental water planning under the Environmental Management Framework is, or is not, facilitating achievement of the Basin Plan's environmental objectives within legislated timeframes, and what improvements should be made.*
- b. *how effective and efficient the delivery of environmental water is — including through coordination among owners of held environmental water, managers of planned environmental water and other stakeholders — and how any barriers could be reduced*
- c. *whether Australian and State Government objectives for the delivery of environmental water align, any examples of where this has not been the case, and how differences are resolved through the Environmental Management Framework*
- d. *the extent to which the Prerequisite Policy Measures (PPMs) assumed to exist under the Basin Plan will be in place by the target date of 30 June 2019, so that the Plan's environmental objectives can be achieved under the SDLs agreed by governments, and how any identified concerns should be addressed*
- e. *any opportunities to better integrate environmental water planning and management with natural resource management programs and complementary works to facilitate achievement of the Basin Plan's environmental objectives.*

4.6.1 Management and planning

In our region, local implementation of the Basin Plan is an extension of those processes in place for the local water sharing plan and have continued to mature over-time as relationships, the science and local knowledge builds. We welcome the approach to recognise and respect local planning processes and input.

However, the Basin Plan has resulted in additional layers of bureaucracy within water management as in Figure 1, which looks at the implementation of the Basin Plan in regard to environmental water planning. There are now four-levels of involvement across different temporal and timescales, yet duplication particularly at a five-year and annual priority is evident. With a trend toward user-pays system, we are increasingly concerned with not only the additional regulation and excessive planning cycles but also the costs associated with water management and clarity around roles and responsibilities under the Basin Plan.

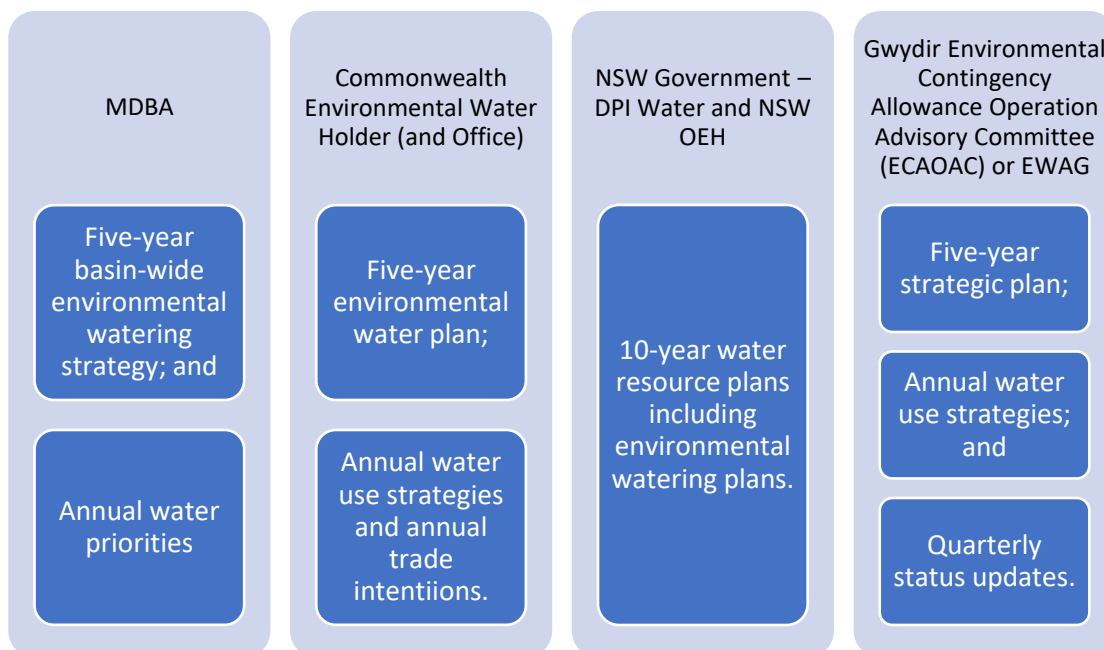


Figure 1: Government Agencies involved in environmental water planning under the Basin Plan.

From our experience, we question the continued role of the MDBA in Basin Plan implementation and recommend that a review of roles and responsibilities is considered by all governments to reduce the burden on communities and genuinely engage in local management. We remain unconvinced that the MDBA should be involved in Basin-wide environmental water planning at a five-year or annual interval when the CEWH and Basin states are responsible for implementation over a 10-year period.

However, with an expansion of targeted outcomes outside catchment boundaries as with environmental flow deliveries from the Gwydir into the Barwon Darling River currently underway¹³, it is apparent there is a need for another platform to engage stakeholders and seek advice outside the valley specific processes.

We support the establishment of a northern flow reference committee, including irrigators, river operators, indigenous representatives and environmental water managers across NSW and Queensland to provide advice to environmental water managers on potential watering opportunities. The group would also be a formal communication pathway for updating stakeholders on actions and outcomes of environmental watering events across the northern basin.

4.6.2 Outcomes

Environmental water managers have adapted over-time to a growing portfolio and responsibility to achieve environmental outcomes. Whilst it is acknowledged that environmental outcomes may take several decades to be clear¹⁴, environmental watering in

¹³ Connecting Northern Rivers <https://www.environment.gov.au/water/cewo/media-release/connecting-northern-rivers>

¹⁴ See <http://theconversation.com/it-will-take-decades-but-the-murray-darling-basin-plan-is-delivering-environmental-improvements-93568>

the Gwydir for example, has also resulted in direct environmental outcomes in this short-term as well. These being:

- Restoration of vegetation in Gwydir wetlands and Mallowa watercourse;
- Supported successful bird-breeding in 2011-12¹⁵; and
- Drought refuge in the Gwydir River, Mehi and Carole creeks July 2017.

Outcomes measured through regular monitoring through state and Federal intervention monitoring of vegetation extent and condition as well as bird, fish and frog populations with changes reported over-time.

However, not all watering actions can be directly attributed to a measurable improvement in environmental outcomes. For example, the GVIA has been concerned with the continued use of environmental water for the re-creation of fish recruitment flows in the Gwydir Valley with nearly 40,000ML used over several seasons. We wrote to the Commonwealth Environmental Water Holder requesting a meeting to discuss the use of water for fish outcomes as used in September 2016 and in previous seasons, raising concerns around “little direct benefit” and that any “indirect benefits...[are] marginal and highly inefficient”.

Whilst we met with representatives of the CEWO and discussed our concerns, water actions in 2017-18 water year have either occurred or are planned for early season stimulus and recruitment flows for fish¹⁶ despite known constraints to delivering outcomes, like the impact of cold water pollution downstream of Copeton Dam and a lack of monitoring data indicating any direct outcome.

As water is precious to everyone, we need to ensure its being used as effectively as possible. Hence, we need to consider how long we trial watering actions before recognising they may not be effective at meeting their targeted outcome and identify why they might not be working and address those constraints.

4.6.3 *Limitations to environmental outcomes*

The GVIA believe there are a myriad of constraints which limit the effectiveness of the use of environmental water. These must be considered and addressed if we are to get the most from the environmental water portfolios and even achieve more with less.

There are several limitations to the effectiveness of environmental use for the Gwydir wetlands, these being:

- land management of wetland areas;
- management of adjacent lands;
- delivery constraints due to limited channel capacity;
- instream and riparian pest management; and
- weed control.

¹⁵ See http://archive.ils.nsw.gov.au/data/assets/pdf_file/0003/495714/archive-waterbirds-return-as-the-gwydir-floods.pdf

¹⁶ <http://www.environment.gov.au/water/cewo/catchment/gwydir/water-use>

Environmental water deliveries outside of the Gwydir wetlands, as with the instream deliveries for fish in the Carole and Mehi River have had limited responses. The monitoring and evaluation report by the Commonwealth Environmental Water Holder in 2014 -15¹⁷ outlined that the targeting of hydrographs is having little response for fish populations in the valley. The lack of response is in response to a number of limiting factors like:

- poor fish passage;
- in-stream habitat;
- riparian land management; and
- cold water pollution.

The GVIA believe that through targeting some of the known non-flow factors or complementary measures in this region, environmental water managers will be more likely to achieve environmental outcomes. This will efficiently use environmental water in the best interests of communities and the broader public.

Furthermore, the GVIA would be interested in understanding the Government's responsibility to investigate, consult and address delivery constraints within the Gwydir region as proposed under the Gwydir Constraints project contained within the unsuccessful Northern Basin Amendment.

The disallowance of the Northern Basin Amendment has resulted in a loss of willingness for governments to address these concerns, as they focus back on water recovery targets and not environmental outcomes and have lost the proposed source of government funding.

However, there is opportunity for the Commonwealth Environmental Water Office to utilise funds from the recent temporary trades of environmental water in the Gwydir Valley for example¹⁸, to start to address these concerns. The legislative change to the Water Act 2007 (Cth) has been a critical step in which the Commonwealth Environmental Water Holder can now invest in projects to help achieve better environmental outcomes, outside of funding requirements of government.

4.6.4 *Pre-requisite Planning Measures*

The GVIA is unclear of the status of Pre-requisite Planning Measures (PPM) being required in the Gwydir Valley as our understanding is that only regions where SDL Adjustment Mechanisms project existed would the PPMs apply. However, the NSW Government has since pursued 'shepherding' of environmental water through their Water Reform Action Plan consultation paper on 'Better Management of Environmental Water'. We recommend reviewing our submission to the NSW Government's WRAP²¹ for more information the barriers to effectively implementing enduring strategies to better management environmental

¹⁷Commonwealth Environmental Water Office, Long Term Intervention Monitoring Project GWYDIR RIVER SYSTEM SELECTED AREA, 2014-15 Evaluation Report, 9 November 2015 <https://www.environment.gov.au/system/files/resources/84ae3a3e-7bf5-414a-a928-07d87308206e/files/gwydir-ltim-report.pdf>

¹⁸ Sale of Gwydir water provides win-win <https://www.environment.gov.au/water/cewo/media-release/sale-gwydir-water-allocation-provides-win-win>

water and the opportunity available to enable water users respect each other's right to access water.

4.7 Compliance

The Commission is seeking information on:

- a. risks to the MDBA's ability to monitor and enforce compliance with the Basin Plan and WRPs from July 2019, and what, if any changes should be made to address these risks*
- b. the extent to which non-compliance with the Basin Plan will be addressed by recent changes to compliance and enforcement announced by governments*
- c. any further changes that should be introduced to increase water take compliance across the Basin.*

There are two levels of compliance; the valley level and at an individual level. The Basin Plan focuses on the valley level with states having a responsibility at both a valley and individual level. It is not clear how Sustainable Diversion Limit (Basin Plan) and Plan Limit (WSP) compliance will be assessed by the relevant authorities and actions required to measure, monitor and address non-compliance.

The future Basin Plan compliance framework needs to be better communicated with stakeholders, as we have significant concerns about the possible future impacts that the compliance 'reset' will have post-2019. For example, the Gwydir Valley with some other northern valleys breached the Murray Darling Basin Ministerial Cap (the Cap) compliance in the early years due to the lack of historical context around access and water availability was initially high due to the season resulting in a breach, which was rectified in the following years due to seasonal conditions. The Gwydir will finish the Cap compliance framework with significant credits, as access over the accounting period, has been well below allowable limits. Hence, we are concerned that a repeat of the Cap process will occur again, and we may breach the new compliance framework as it cannot consider cap credits and water users will have access restricted unnecessarily due to the new process. Transitional arrangements need to be established that recognise the antecedent conditions and the accumulation of cap credits in the initial years of SDL compliance.

The GVIA are also concerned about how Basin states will monitor, identify and manage growth in environmental use under the SDL and Plan Limit approach, when environmental behaviours are largely unknown. If irrigators and environmental water users, are to respect each other's right to use water then there must be strategies by which their behaviours cannot impact others in the system.

The GVIA supports in principle the concept of basin-wide consistency of compliance, at a valley and on an individual level provided there isn't duplication between the role of Basin states and the Commonwealth government and that there are no additional cost burdens.

Objective and factual discussion on the state of water measurement, metering and water take compliance is welcomed by the GVIA.

The GVIA believe that all water take must be measured with the majority of take metered through highly accurate devices¹⁹. All measurement must be auditable, verifiable and within accuracy requirements, but that accuracy and measurement methodology may vary depending on the establishment of state-wide thresholds and or the category of water take.

The Gwydir Valley is a diverse region of regulated, groundwater and unregulated water take, and the standard of measurement is high, with active irrigators adopting the most accurate technology commercially available²⁰. Irrigators adopt high accuracy technology at their own cost, due to the high value of their asset and because it meets their requirements to know exactly how much water they have at any point in time. Irrigators in our region, couldn't be the industry leaders in water-use efficiency, if they didn't have this standard of information. We recommend review of our submission to the NSW Government's Water Reform Action Plan for more information²¹.

4.8 Monitoring and evaluation

The Commission is seeking information on:

- a. *how well current arrangements for monitoring, evaluation and reporting support the delivery of the objectives of the Basin Plan; and how they could be improved to increase the likelihood of the objectives being met*
- b. *whether there is a clear delineation of responsibilities for monitoring, evaluating and reporting on the Basin Plan, and, if not, how it could be improved*
- c. *the usefulness of the MDBA's Framework for Evaluating Progress and its recent application in evaluating the Basin Plan*
- d. *how data and information obtained through monitoring, evaluation and reporting could be made more useful for decision making and evaluation of the Basin Plan (including how to make this data and information more outcomes-focused)*
- e. *the general information required to provide confidence to communities and others that the Plan is being implemented well and is achieving its objectives*
- f. *whether processes are in place to monitor key risks to the continued availability of Basin water resources.*

4.8.1 Monitoring

The delineation of roles and responsibility around the monitoring of the Basin Plan (and outcomes of environmental water use) is unclear to the GVIA. Although, Water Resource Plans may provide further insights into this from 2019.

Monitoring should also be in place to determine the driver of change either; WSP, planned or held environmental water to help assess the benefit from the additional water recovery

¹⁹ Independently verified of within +/-5% in the field.

²⁰ The GVIA surveyed members regarding their meter fleet in early 2018 with 92% of respondents using a meter to measure their water take with 77% of all water take measured via a current model electromagnetic meter.

²¹ <https://www.gvia.org.au/water-policy/inquiries-and-submissions/>

above the baseline conditions (the WSP). Currently most monitoring is not-specific unless it is undertaken on an event basis, which is not always the case.

Its essential that any monitoring information is provided in a timely manner to allow for the incorporation of lessons learnt and new information. The GVIA has raised concerns with the timeliness of long-term environmental monitoring by the Commonwealth Environmental Water Office, particularly when monitoring reports are made available post planning for the upcoming water year and are used retrospectively for the following year. For example, the monitoring report for the 2015-16 water year²² was provided in late November 2016, which appears timely following the completion of the water year in June. But basin-wide and local planning process are required completed prior to June, meaning this information is not formally used to inform water actions until the following year and verbal updates are instead used throughout the planning process. Furthermore, the monitoring report for the 2016-17 is still not available on line whereas the NSW Government provided their report in April 2018²³. If environmental water managers are to adapt and learn in a dynamic manner, this information must be more readily available.

4.8.2 Risk

The Water Resource Plans include the requirement for governments to undertake a risk assessment of resources. The draft WRP for the Gwydir Surface Water resource clearly outlines this approach and possible mitigation strategies within the appropriate planning document (WSP or Long-term Environmental Watering Plan). We therefore believe that risk is being addressed at a valley and basin-scale through the WRP process.

Ends.

²² Commonwealth Environmental Water Office, Long Term Intervention Monitoring Project GWYDIR RIVER SYSTEM SELECTED AREA, 2015-16 Evaluation Report, 25 November 2016 <https://www.environment.gov.au/system/files/resources/e5625358-0002-4d94-a9f9-a13c28a21bc5/files/gwydir-ltim-report-2015-16.pdf>

²³ Use of environmental water in NSW, Outcomes 2016-17 <http://www.environment.nsw.gov.au/research-and-publications/publications-search/use-of-water-for-the-environment-in-nsw-outcomes-2016-17>