



Submission to:

*Senate Standing Committee on Rural and Regional
Affairs and Transport References*

*Inquiry into the integrity of the water market in the
Murray Darling Basin*

By:

Gwydir Valley Irrigators Association

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1. Purpose of this Submission

This document has been developed by the Gwydir Valley Irrigators Association (GVIA) on behalf of its members as a formal submission for consideration by Senate Standing Committee on Rural and Regional Affairs and Transport's inquiry into the integrity of the water market in the Murray Darling Basin.

This document represents the concerns, views and experiences of the GVIA members. However, each member reserves the right to express their own opinion and is entitled to make their own submission.

2. Recommendations

The following is a summary of the recommendations within this submission, we recommend:

1. All levels of government work collaboratively with stakeholders, inclusive of water users, community interest groups and environmental managers to identify opportunities to continue to improve upon the understanding of and implementation of a nationally consistent water management framework, as a proactive measure to ensure there is greater confidence in its effectiveness at protecting the rights of users to access water now and into the future.
2. Annual reporting of valley-wide compliance against long-term extraction limits, including transparent and publicly available accounting of water availability and usage of water used for irrigation based food and fibre production, industrial or commercial purposes and environmental water managers maximising environmental transparent outcomes is more readily available.
3. Environmental water managers should continue to engage with local communities and water users to better identify opportunities to collaboratively achieve flow outcomes within the current water management framework.
4. Opportunities to enhance water reliability and use in the Gwydir Valley are continued to be investigated, recognising the value that improved productivity will have on the economy but acknowledging that long-term diversions must be managed within limits outlined within the Basin Plan.
5. That the committee support the MDBA conclusions that some valleys are over recovered and that the trade of excess water should be encouraged to provide positive win-win opportunities for communities, industry and the environment.
6. Governments recognise that environmental outcomes from the delivery of environmental water will continue to be undermined until there is appropriate investment in complementary (or non-flow) measures like cold water pollution, invasive species e.g. carp, fish passage and habitat and riparian land management and that funding mechanisms exist which will limit the government's fiscal responsibility to achieve these outcomes.

3. Introduction

The Gwydir Valley Irrigators Association (GVIA) welcomes the opportunity to provide this submission to Senate Standing Committee on Rural and Regional Affairs and Transport's inquiry into the integrity of the water market in the Murray Darling Basin, as a means to communicate facts to the committee and the broader community regarding the water market but also the water management framework more broadly.

The majority of media reporting that triggered national interest in the management of water resources in NSW and particularly the Barwon-Darling, has failed to acknowledge and recognise Australia's leadership in water management policies has delivered better social, environmental and economic outcomes globally.

Nor has it recognised the more than 20-years of national water reform with the Basin Plan, only the most recent step. Reform has resulted in a trajectory that has left the irrigation industry and their communities with less water, while increasing water availability for environmental outcomes. Irrigators in our region have been at the forefront of this reform and we are fatigued.

Agricultural production is the main driver of our regional economy and is a significant contributor to the economy of the NSW as well, producing nearly 8 percent of the state's gross domestic product. Irrigated agriculture employs between 20-30 percent of the population and generates 72 percent of the value of gross domestic product from 10 percent of the land. Irrigated agriculture will be essential, if Australia is to actively contribute to the growing demand for food and fibre in Asia as well as meeting our own demands.

As an economy heavily reliant on agriculture, the community in the Gwydir Valley is also susceptible to changes in water availability. We locally recognise this variability and have adapted our businesses. However, when government policy alters water availability, the subsequent impacts are often sudden and felt by the whole community.

For example, the impact of environmental water purchases in the Murray Darling Basin cannot be more evident than in the Gwydir Valley. Gwydir irrigators have over-time provided 28.5 percent of high security entitlement, 29 percent of general security entitlement and 13 percent of supplementary entitlement for environmental use following a series of reforms but largely through buy-backs. This is in addition to rules that restrict long-term access of river and aquifers, ensuring that the majority of water is for environmental objectives rather than economic.

The Gwydir Valley now has a reduced maximum production capability resulting from a shift from irrigated to dry land agriculture, at reduced yield return. The regional impact is a reduction of 25-35 percent in area. Coupled with this is the significant social and economic decline in Moree and Collarenebri as detailed in the 2016 Northern

Basin Review¹, where the region has lost nearly 200 jobs directly due to water recovery alone which is in addition to, a declining regional population due to changes in labour requirements from agricultural and government employment^{2,3}. These changes have altered the social structure of our region and placed pressure on local business to adapt, expand or close as well as services like schools that have reduced student numbers and teachers.

Throughout this process, the water market has benefited participants; either the seller looking to be fiscally remunerated for their asset, or the buyer looking to turn that asset into a commodity by irrigating food and fibre or achievement of environmental outcomes. Governments used the water market to recover water for environmental purposes at the cost of communities. In doing so, they were fully aware of the rules and conditions by which they were entering into and therefore, should look back to the market to address issues around achievability of future environmental outcomes.

The GVIA are committed to implementing the Basin Plan however, we aim to implement the Plan with the interests of our members and the future of our local communities recognised. Regional communities like Moree, Collarenebri and Mungindi in our valley, cannot afford the Basin Plan not to achieve real environmental outcomes. This is why we have provided a number of recommendations that we are passionate about government's pursuing in the interests of improving the environmental, economic and social well-being of irrigation dependant rural communities.

We have as part of this submission provided six recommendations for consideration by the committee.

We thank the committee for taking interest in the operation of the water market and water management in NSW and welcome you to visit our region to see first-hand our highly innovative irrigation industry.

¹ <https://www.mdba.gov.au/publications/mdba-reports/northern-basin-review-technical-overview-socio-economic-analysis>

² See community profile for Collarenebri at <https://www.mdba.gov.au/sites/default/files/pubs/630%20-%20NBR%20Community%20profile%20-%20Collarenebri.pdf>

³ See community profile for Moree at https://www.mdba.gov.au/sites/default/files/pubs/630%20-%20NBR%20Community%20profile%20-%20Moree%20HR_0.pdf

4. About the Association

4.1. Our region

The Gwydir Valley Irrigators Association (GVIA) represents more than 250 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 Shire⁴.

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 crops⁵.

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.

⁴ Cotton Catchment Communities CRC Communities and People Series 2009

⁵ 2010 2011 Agricultural Census Report – agdata cubes, 71210D0005-201011 Agricultural Commodities, Australia

As a result, only approximately 19% of the total river flows are available for diversion for productive use⁶. This equates irrigators holding 575,000ML from regulated entitlement (high security, general security and supplementary water) and 28,000ML available from groundwater aquifers.

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	General
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	General
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	General
		3,141ML Supplementary	
	NSW Government infrastructure works	1,249ML High Security	
2016	Commonwealth buy-back program.	88,133ML General Security	General
		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)	General
		23,592 ML Supplementary	ML

⁶ Based on IQQM long-term modelling and the volume of water purchased for the environment

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 regions⁷.

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 region².

4.2. 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 community⁸.

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 2015-16 the levy was paid and supported by more than 86% 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

⁷ Social and Economic Analysis of the Moree Community, 2009. Cotton Catchment Communities CRC

⁸ For more information, see our corporate video on <https://vimeo.com/177148006>

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.

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

4.3. Association Contacts

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Chairman: Joe Robinson

Executive Officer: Zara Lowien

5. Terms of Reference

The Committee will inquire into and report the integrity of the water market in the Murray-Darling Basin, with particular reference to:

- a) The allegations of theft and corruption in the management of water resources in the Murray-Darling Basin;
- b) The investigation and public disclosure by authorities, including the New South Wales Government and the Murray-Darling Basin Authority, of reported breaches within the Murray-Darling Basin, including the Barwon-Darling Water Sharing Plan;
- c) The actions of member states in responding to allegations of corruption and the potential undermining of the Murray-Darling Basin Plan;
- d) The use of Commonwealth-owned environmental water for irrigation purposes, and the impact on Basin communities and the environment;

- e) The operation, expenditure and oversight of the Water for the Environment Special Account; and
- f) any other related matters.

The following sections are intended to address the specific terms of references listed above, although we are not making direct comment on reference e).

5.1. Allegations of theft and corruption in management of water resources

Australia leads the way in water management globally and as such is acknowledge as having achieved best practice outcomes. Irrigators and their communities have for the last two decades, undertaken significant reforms to ensure our precious water resources are managed sustainably. Many communities are fatigued by the consistent requirement to defend the foundation of their economies and social fabric. The key dates and initiatives of the reform process are presented below in Figure 1: Timeline of water reform.

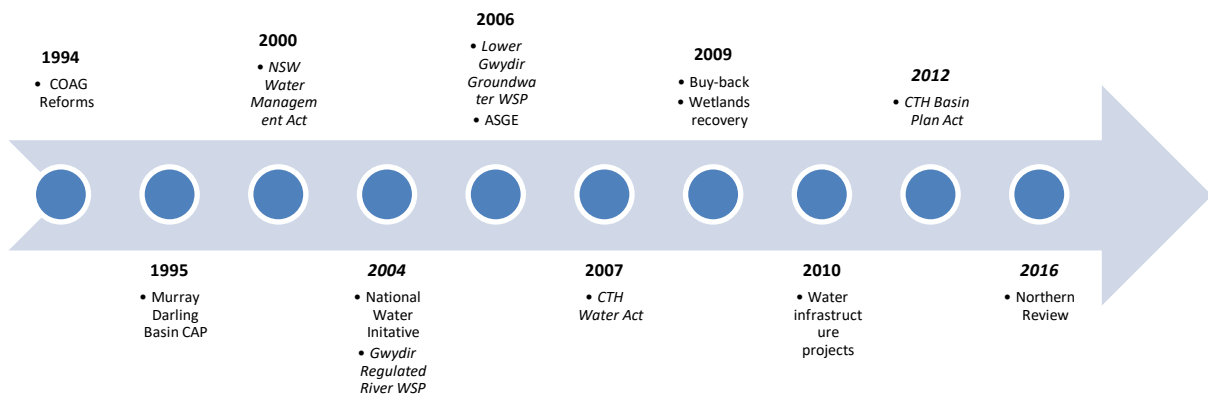


Figure 1: Timeline of water reform.

Irrigators in our region have been at the forefront of this national reform agenda with the Basin Plan, the most recent step, in a trajectory that has left the irrigation industry and their communities with less water, while increasing water availability for environmental outcomes.

These reforms have resulted in NSW leading Australia in water management, often to the detriment of NSW irrigators, who were operating in improved management frameworks before other water users both within and outside of NSW. Irrigators in our region have had their water take significantly reduced progressively since the

implementation of Cap in 1994⁹ and have most of our water take measured by the most accurate technology commercially available for our water take installations.

Water management functions in NSW are largely paid for by NSW water users through Water Administration Ministerial Corporation charges. Hence, irrigators see the water management and compliance framework as a self-insurance system for security of the whole-industry. We support an effective, transparent and functioning system, the future of the industry relies on it.

Whilst water users have contributed to these functions, successive Departments responsible for such programs have under-spent on areas such as compliance and enforcement work¹⁰ which may have led to a reduction in effectiveness in some areas. The interim report by Mr. Ken Matthews AO in his *Independent Investigation into NSW water management and compliance* (The Matthews Inquiry) recommendations have highlighted some short-comings but it is our experience, locally that these issues identified are not widespread. For example, in the regulated system regular reporting of compliance performance, water take measurement and account limits is regularly provided.

The Matthew Inquiry Interim Report was snap-shot in time and was not reflective of the current arrangements for water management in NSW. The current NSW water access licensing framework, measurement of water take and water take compliance system, remains well above international best practice. The majority of water is measured to the highest standard commercially available within the rivers and aquifers, but also on-farm. For example, the Keytah System Comparison trial¹¹ in our region, showcases the high level of measurement that irrigators undertake to ensure they are making the best use of every megalitre of water.

Water users anticipate contributing \$21,491 million for compliance from water licence holders for the 2016-2021 price determination period. We therefore, expect the compliance system to be stringent and operating effectively. This includes a proactive compliance approach, that provides for safeguards that function effectively and are well accepted and supported by industry, and that meet public expectations.

The GVIA recommends stronger recognition of the standard of the NSW water management system, as a strong framework to protect the rights of those that rely on

⁹ More information on the water reform outcomes is available in 4.1 Our region.

¹⁰ IPART NSW allowed \$29,488 million for compliance activities from water licence holders between 2012 and 2016 plus the Commonwealth Government funded \$16,736 million, whereas NSW DPI reported \$19,875 million expenditure, a difference of 33% without including the Commonwealth project funds.

¹¹ View our summary video on <https://vimeo.com/174306570>

it, including water users, rural communities and the environment. As a whole-of-industry representative and therefore we do not have a tolerance for illegal take, any form of water theft is at the expense of another user and is unacceptable.

However, as an organisation involved in water take policy we were acutely aware of the miss-information about the status of water take alleged, which requires careful consideration by government prior to further investigation. For example:

- The Claim *“just two big players own 70 per cent of the water in this river”*¹² ignores fundamental components of the NSW Government’s *Water Sharing Plan for the Barwon-Darling Unregulated and Alluvial Water Sources 2012*¹³ including that it allocates 94% of all flows in the river to the environment via the maintenance of minimum flow rules via water take thresholds and that of the remaining 6% of available diversions, another 1% is owned by Environmental Water Holder’s¹⁴.
- Claims that during *“2015 in the midst of a drought the river disappeared for eight months. Huge amounts of water were pumped out upstream”*¹⁵ ignores data provided by the real-time monitoring network, which indicates that throughout 2015, the river had an average height at Wilcannia of 1.2metres, a consistent 2 metres at Louth and that 4 metres of water was held at the Bourke weir. This claim fails to recognise that Barwon irrigators pumped less than 9% of the long-term average extraction limit for their region¹⁶ and irrigators further upstream had flow restrictions in-place until June 2015 resulting in only previously held storage water being available for irrigation that season. Or that NSW DPI water analysis and reporting in July 2015 that *“intermittent rainfall has provided almost continuous flows along the Barwon-Darling resulting in 60,000 megalitres into the lakes”*¹⁷.
- The claim that the Barwon Darling Water Sharing Plan *“transferring wealth from one part of the community to another part, and that’s not acceptable at any level”*¹⁸ ignores the foundational principles of the national reform agenda,

¹² Quote by Linton Besser during 4orner’s report *“Pumped: Who’s benefitting from the billions spent on the Murray-Darling?”*

¹³ <https://www.legislation.nsw.gov.au/#/view/regulation/2012/488> - (Section 17 (1) (b) (i))

¹⁴ 32.6GL has been purchased by the Commonwealth and NSW Governments

¹⁵ Quote by Rob McBride during 4orner’s report *“Pumped: Who’s benefitting from the billions spent on the Murray-Darling?”*

¹⁶ That is 9% of their share of the 5% of total flows.

¹⁷ http://www.water.nsw.gov.au/__data/assets/pdf_file/0008/571580/Menindee-Broken-Hill-Communique-17-Community-information-Update-July-2015-final.pdf

¹⁸ Quote by Mal Peters during 4orner’s report *“Pumped: Who’s benefitting from the billions spent on the Murray-Darling?”*

initiated in the 1995 COAG reforms adopted by NSW in the Water Management Act (2000) and agreed to by all states and territories in the National Water Initiative (NWI)¹⁹ 2004 and a gross misunderstanding of the water market. The NWI encouraged the establishment of a water market to allow water to move to its highest value use, reports by Aither²⁰ and the Productivity Commission²¹ have clearly outlined the benefits. Essentially the water market has allowed for an open and transparent way for individuals to optimise water assets (allocations) and make decisions on whether to either convert these into agricultural products themselves or sell to someone who will. Not to mention, the benefits of the water market establishing a mechanism to provide a direct commercial transaction for both permanent and temporary trades with a market driven value resulting in financial remuneration for the seller.

These examples alone, present a much different perspective than that provided by the original program and indeed the media coverage thereafter. The facts support the emission of this evidence readily available publicly through various sources such as:

- NSW Government's real-time monitoring network;
- Mandatory reporting on the NSW water register;
- Legislation; and
- Publicly available Department reports.

The extensive research undertaken by the investigative journalists and lawyers involved did not include or reveal these facts, raises serious questions around the legitimacy of other claims within the report and those being targeted by this inquiry. With investigations continuing through NSW Independent Commission Against Corruption and we look forward to a resolution on many of the remaining outstanding claims by that authority.

We therefore, recommend that all levels of government's work collaboratively with stakeholders that includes a range of water users, community interest groups and environmental managers to identify opportunities to continue to improve upon the understanding of and implementation of a nationally consistent water management framework, as a proactive measure to ensure there is greater confidence in its effectiveness at protecting the rights of users to access water now and into the future.

¹⁹ <http://www.pc.gov.au/inquiries/current/water-reform/national-water-initiative-agreement-2004.pdf>

²⁰ *Water Markets in NSW*, Aither, 2016.

http://www.water.nsw.gov.au/_data/assets/pdf_file/0010/709912/Water-markets-in-nsw-aither-report-for-dpi-water.pdf

²¹ *Draft Report into the National Water Reform*, Productivity Commission, 2017.

<https://www.pc.gov.au/inquiries/current/water-reform/draft>

Recommendation:

- 1. All levels of government's work collaboratively with stakeholders inclusive of water users, community interest groups and environmental managers to identify opportunities to continue to improve upon the understanding of and implementation of a nationally consistent water management framework, as the water management framework as a proactive measure to ensure there is greater confidence in its effectiveness at protecting the rights of users to access water now and into the future.**

5.2. Investigation and public disclosure of breaches within the Murray-Darling Basin including the Barwon-Darling Water Sharing Plan

The *NSW Water Management Act (2000)* provided the legislative mechanism to establish Water sharing plans in NSW. Water sharing plans provide the framework by which all water users; irrigators, industrial users, towns, stock and domestic users and environmental managers, can access their water right by outlining the hierarchical conditions and rules associated with their licences. They established perpetual access licences, equitable conditions and increased opportunity to trade water through the separation of land and water rights, encouraged by the National Water Initiative on water reform.

Hence, the NSW water sharing plans nor the bipartisan Basin Plan, are about ensuring access every year for all water rights but rather standardising conditions by which water may be made available. One benefit of the planning process is that estimates of availability via long-term averages, developed using historical climate and flow regimes, usage behaviours and access arrangements can be calculated.

All water within the Gwydir Valley is management through the implementation of a water sharing plan, with the first plan legislated in 2004²². With all water managed through water sharing plans the total volume of water available for diversion by water users annually and over the long-term has been established in our region. As outlined in 4.1 Our region, the Gwydir Valley is considered a low water reliability catchment compared with others in NSW with long-term diversions for irrigation less than 19% of the average annual Gwydir River flows and a long-term reliability of 36% for general security users. Because of this reliability, the region has a large proportion of water use for cotton²³, which allows irrigators to produce a high value crop per megalitre of

²² *Water Sharing Plan for the Gwydir Regulated River Water Source (2004)* was recently replaced in 2016.

²³ This is often estimated at 90%

water but importantly, adjust their production areas to the available water on annual basis.

The NSW Water Administration Ministerial Corporation on behalf of the NSW Government, is responsible for monitoring extractions against both the individual licence conditions but also the valley-wide limits outlined within water sharing plans. Individual compliance concerns are not a matter for the MDBA and are the regulatory responsibility of the NSW Water Administration Ministerial Corporation body. As a whole-of-industry representative body, the GVIA also do not involve themselves in individual cases of non-compliance and are therefore not aware of any alleged or actual breaches of an individual nature.

The NSW Government are required to report on valley-wide extractions to the Murray Darling Basin Authority annually. Growth in use provisions exist in all water sharing plans in the Gwydir Valley, to return valley-wide extraction back within long-term limits if a significant breach is determined and reported. To our knowledge, no such provisions have warranted usage and therefore, no significant breaches are believed to occurred.

We strongly support the annual and public reporting of valley-wide compliance. We recommend improving the transparency in accounting of water availability and usage between water different water users in this reporting process, so that water used by irrigators for food and fibre production, industry for commercial purposes and water used by environmental water managers for environmental outcomes, can be clearly identified and costs and benefits for each category established by governments.

Recommendation:

- 2. Annual reporting of valley-wide compliance against long-term extraction limits, including transparent and publicly available accounting of water availability and usage between water used for irrigation based food and fibre production, industrial or commercial purposes and environmental water managers maximising environmental transparent outcomes is more readily available.**

5.3. The actions of member states in responding to allegations and corruption and the potential undermining of the Basin Plan

The NSW Government have committed to implementing the Basin Plan. However, the NSW Government have a right to undertake analysis of the risks to the economy, communities and industries of NSW both now and into the future and work within their realm of responsibility to ensure a sustainable state. Any Basin governments not doing so, would be doing their constituents a dis-service.

Furthermore, there are also many additional inquiries either directly implemented by NSW or the Commonwealth government, which will investigate the legitimacy of allegations and report on any inefficiencies in the water management and compliance system. We look forward to the findings of the reviews and inquiries to provide additional facts regarding the status of water management in NSW.

The GVIA are also committed to implementing the Basin Plan. We do however, aim to implement the Plan with the interests of our members and the future of our local communities recognised. This means that we are compelled to provide feedback on policy settings and implementation; either their impacts, constraints or the opportunity for mutually beneficial outcomes.

Regional communities like Moree, Collarenebri and Mungindi in our valley cannot afford for the Basin Plan to fail. The impact of the reforms to date, are such that further water recovery will devastate the social wellbeing and economic foundations of our region²⁴. We therefore as an organisation, cannot afford the Basin Plan not to achieve real environmental outcomes and is why we have provided a number of recommendations that we are passionate about in the following Section on other matters for consideration including 5.5.1 Opportunities to Improve the Economic and Social Wellbeing of Rural Communities and 5.5.2 Investment in Complementary Measures.

Allegations otherwise are ill-informed and suggest a lack of understanding of the legislative and regulatory requirements of Basin states including the *Water Act 2007 (Cth)* and the *Murray-Darling Basin Plan 2012 (Cth)* have been signed into law and the Basin Plan is currently being implemented and will take effect from 2019.

5.4. The use of Commonwealth-owned environmental water for irrigation purposes and the impact on Basin communities and the environment

The *NSW Water Management Act (2000)* provided the legislative mechanism to establish Water sharing plans in NSW. Water sharing plans provide the framework by which all water users; irrigators, industrial users, towns, stock and domestic users and environmental managers, can access their water right by outlining the hierarchical conditions and rules associated with their licences. They established perpetual access licences, equitable conditions and increased opportunity to trade water through the separation of land and water rights, encouraged by the National Water Initiative on water reform.

WSPs are therefore designed to share water between users and maintain access for each separate water source within their long-term limits, facilitate trade and maintain

²⁴ As per our factsheet, Key facts on irrigation and the community

socio-economic and environmental outcomes. Hence the foundations of the water management system rely on protecting the rights of all users, with the need to ensure that there are no real or perceived negative third-party impacts that cannot be negotiated or compensated.

The NSW and Commonwealth governments entered into the water market, to recover water for the environmental purposes knowing the rules and rights that they would need to operate within. All water users were given the assurance that the entitlement of the government owned environmental water would retain the same characteristics as the original entitlements, with an aim of protecting the inherent characteristics of the water that was purchased. Requesting alternative rules for a sub-set of entitlement holders, raises serious concerns regarding the potential for negative third-party impacts.

In northern NSW where water sources are not-connected, the delivery of excess flows across a water source boundary does not allow for the source or owner of that water entitlement, to be recognised downstream. Therefore, delivery of water across a water source boundary occurs at the risk of the owner that the flow maybe accessed under the licence conditions of the downstream water source. The water management framework clearly identifies that users are legally entitled to access water when the conditions outlining their specific access arrangements are met. Operating outside these specific access arrangements is illegal water take but operating within them is not, regardless of the source of the flow being accessed.

For many reasons, it is important to understand this context when considering the allegations around the use of environmental water for production, these being:

- NSW and Commonwealth owned environmental water are water entitlements, just like all other water entitlement holders with the same rights and characteristics and there are limitations to delivering water across un-connected water sources.
- The NSW water management framework i.e. the water market, already provides scope for commercial transactions for achieving flow outcomes between un-connected water sources but there needs to be an appetite from environmental water managers to pursue them.
- No held environmental water has ever been specifically released for outcomes in the Barwon-Darling, except those entitlements recovered from within that Valley.
- Flows within the Barwon-Darling during 2015 were not held environmental water flows, they were a combination of natural river flows and upstream flow contributions.

Were therefore recommend that environmental water managed should more proactively engage with local water users and communities to better identify flow

outcomes and then develop collaborate arrangement to achieve these outcomes within the current water management framework.

Recommendation:

- 3. Environmental water managers should continue to engage with local communities and water users to better identify opportunities to collaboratively achieve flow outcomes within the current water management framework.**

5.5. Other matters

5.5.1. Opportunities to Improve the Economic and Social Wellbeing of Rural Communities

The Gwydir Valley as explained above in 4.1 Our region, currently has less water available for production than historically and the majority of water that is available, is considered to have a low level of water reliability. Because of this reliability, the region has a large proportion of water use for cotton²⁵, which allows irrigators to produce a high value crop per megalitre of water but importantly, adjust their production areas to the available water on annual basis. This results in variable production outcomes as demonstrated by the cotton production and water use information presented below in Figure 2.

The variability of production flows through to the regional economy and businesses must be structured to meet increased demands during highs and maintain services throughout the lower periods.

Therefore, by improving the reliability of supply or the volume of water available for irrigation, there will be significant economic benefit to our regional economy through increased and more stable production. Previous studies have highlighted that for agricultural production like irrigated cotton, the farm-gate value is known to have at least a 2²⁶ to 3⁷ times multiplier to calculate the flow-on benefits to the local economy.

²⁵ This is often estimated at 90%

²⁶ ABS agricultural economic multiplier is 2.178

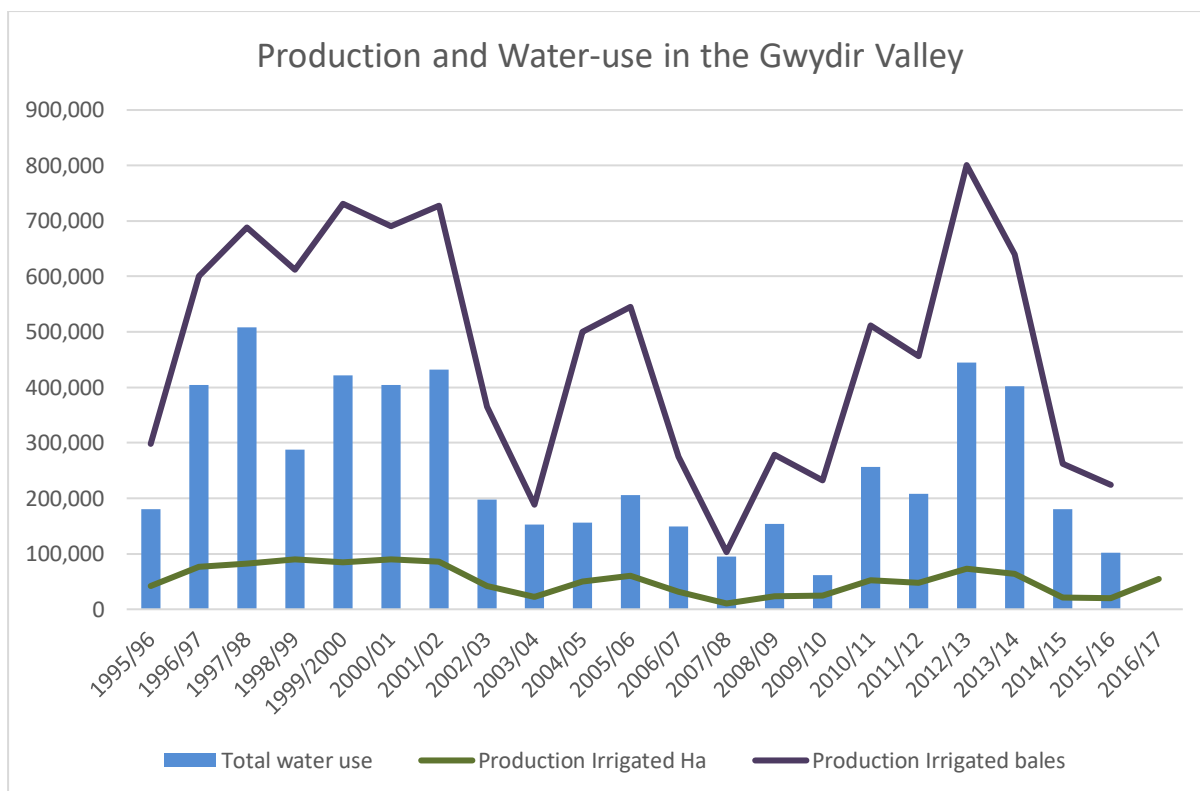


Figure 2: Cotton Production and Water-use in the Gwydir Valley

Any strategies and actions that can be implemented to improve productivity would also be consistent with the Department of Primary Industries Strategic Plan 2015-2019²⁷ which aims to achieve the following:

“... three key strategic outcomes:

- *Innovation that improves resilience and boosts productivity,*
- *Sustainable use of, and access to, natural resources, and*
- *Mitigating and managing risks to community and industry confidence.*²⁸

As measured through “increased value of our primary industries within NSW by 30%”²⁹.

Any improvements in reliability of any water source may result in a change to long-term diversions, which are not allowed under current water planning frameworks; either the current state-based water sharing plans or the future water resource plans being developed to meet the Basin Plan. Therefore, any potential augmentation of existing supply arrangements or new supply options must be assessed against the

²⁷ <http://www.dpi.nsw.gov.au/about-us/publications/nsw-dpi-strategic-plan-2015-2019>

²⁸ NSW Department of Primary Industries Strategic Plan 2015-2019 - page 4, DPI Outcomes

²⁹ NSW Department of Primary Industries Strategic Plan 2015-2019 -- Page 4, Measures

potential risks to long-term diversions and any impacts mitigated or negotiated. Which, in our opinion, does not preclude such developments but will add additional complexity around negotiating outcomes and any cost benefit analysis. The highly valuable private on-farm investment must be considered when assessing the cost benefit of any opportunity to enhancing public headwater storages.

The GVIA therefore acknowledges the current limitations around water planning arrangements but would support the NSW Government continuing to pursue opportunities to enhance water reliability in our region as consistent within the NSW State Infrastructure Strategy³⁰ which states:

“Government will examine the options proposed by Infrastructure NSW...:

- 1. Gwydir River Valley – a re-regulating dam at Gravesend or a new dam on the Horton River.”*

Recommendation:

- 4. Opportunities to enhance water reliability and use in the Gwydir Valley are continued to be investigated, recognising the value that improved productivity will have on the NSW economy but acknowledging that long-term diversions must be managed within limits outlined within the Basin Plan.**

Furthermore, as irrigation is an essential contributor to the economy of our region as outlined in 4.1 Our region but can be summarised as follows;

- Cropping accounts for 54% of the land-use, 10% of this is irrigated and in 2011 produced around 72% of the value of gross domestic product (cotton is around 60%).
- Total Agricultural production in the shire in 2011 was nearly 8% of the state’s gross domestic product estimated at \$911 million.
- Using an economic multiplier for the community from the ABS (2.178) this equals \$2 billion to the region.
- Total Irrigated production is estimated at \$656 million, which generated an estimated \$1.44 billion using the Cotton Catchment Communities economic multiplier for the community of 3⁴.

The community and social impacts of over recovery of water from the Gwydir Valley under the Basin Plan have been significant in the region not to mention the process of water recovery under the Basin Plan was implemented poorly with devastating outcomes for regional communities reliant on irrigated agriculture.

In Moree, there was an 8% decrease in water availability which equates to around 5% reduction on area. This had the following impact on employment;

³⁰ <https://www.nsw.gov.au/improving-nsw/projects-and-initiatives/state-infrastructure-strategy/#water>

- Modelled change in Full Time Equivalents (FTE) is around 15% (850 FTE)
- 2.4% (47 FTE) impact on jobs in agricultural sector to 1.5% (27FTE) in non-ag.
- Total impact of Basin Plan a 1.4% (75 FTE) without taking into consideration Collarenebri, a town whose major service centre is Moree.
- Total agriculture and agriculture supply sector fell by 22% (520 FTE) with non-ag private sector also declining by 21% (460 FTE) between 2001 – 2011.

In Collarenebri, there was a 66% decrease in water availability which equates to 83% reduction in area for irrigation. This has had the following impact on employment;

- 21% (54 FTE) change in jobs because of the Basin Plan (28% (47 FTE) reduction in farm related jobs and 21% (7 FTE) other private jobs).
- Relates to half of the total job losses which are agriculture and supply sector have 42% (81 FTE) with non-agriculture private sector also declining by 68% (50 FTE) between 2001-2011.

The GVIA recommend that any over recovered water is returned to production in valleys, such as the Gwydir and that the investment is value-added by coupling it with other stimulus opportunities. The return of over recovered water, coupled with smarter investment should aim to offset the economic losses of the past and provide a unique opportunity to strengthen the economic base of the community, build community resilience and reinvigorate the economy of the region. Returning water into production by itself will have benefits by increasing the productive capacity of the irrigated industry, which would have demonstrated benefits for the agricultural and supply sectors, as well as for the non-agricultural sector but will only lead to a partial reversal in the job losses. But if aligned other investment opportunities like new-business stimulus packages, decentralisation initiatives, further investment in transport routes and improved technology access the possibilities to harness this unique opportunity further beyond the farm-gate and for future generations are significant.

Recommendation

- 5. That the committee support the MDBA conclusions that some valleys are over recovered and that the trade of excess water should be encouraged to provide positive win-win opportunities for communities, industry and the environment.**

5.5.2. *Investment in Complementary Measures*

Furthermore, the proposed amendments to the Basin Plan announced by the MDBA in November 2016 have also paved the way for government to achieve real environmental outcomes, if complementary measures are addressed. The effectiveness of environmental watering will continue to be undermined without an investment in these measures.

The Basin Plan's original focus on only flow was flawed and a one-side attempt at addressing the basin-wide objectives to improve environmental outcomes like those for native fish which are to improve distribution, populations and movement³¹. This flawed approach is highlighted by the ineffective use of environmental water for native fish recruitment in the Gwydir Valley. Despite attempts by the Commonwealth Environmental Water Holder to meet fish recruitment triggers by mimicking flow-hydrographs, there has been to-date limited evidence of fish response to these actions using nearly 40,000ML since 2013.

That is why the GVIA invested on behalf of the community in our 'Cold Fish'³² campaign, not because cold water pollution is the only issue undermining native fish populations in our region but one that significantly influences recruitment potential. Our 'Cold Fish' campaign, aimed to bring heat to the issue of cold water pollution and received over 18,000 views and excellent engagement and conversation regarding the issue. Awareness was a key goal of the campaign which we believed we achieved.

Water is an extremely value resource for everyone and we should not allow environmental water to be wasted (as evidenced in the Gwydir) to achieve outcomes that we know can't be achieved. We must address the limitations to environmental water management like cold water pollution, invasive species like carp, poor fish passage and habitat and riparian land management. Issues that through a modest investment, compared to the \$380M³³ in water recovery in our region, can be mitigated or eliminated.

Recommendation:

- 6. Governments recognise that environmental outcomes from the delivery of environmental water will continue to be undermined until there is appropriate investment in complementary (or non-flow) measures like cold water pollution, invasive species e.g. carp, fish passage and habitat and riparian land management and that funding mechanisms exist which will limit the government's fiscal responsibility to achieve these outcomes.**

6. Conclusion

The Gwydir Valley Irrigators Association (GVIA) welcomes the opportunity to provide this submission to Senate Standing Committee on Rural and Regional Affairs and Transport's inquiry into the integrity of the water market in the Murray Darling Basin, as a means to communicate facts to the committee and the broader community

³¹ Basin Wide Environmental Watering Strategy by MDBA (2014)

³² www.facebook.com/GwydirValley/videos/ or <https://vimeo.com/186216049>

³³ Current estimated value of environmental water portfolio.

regarding the integrity of the water market in the Murray Darling Basin but also the water management framework more broadly.

The GVIA are committed to implementing the Basin Plan however, we aim to implement the Plan with the interests of our members and the future of our local communities recognised. Regional communities like Moree, Collarenebri and Mungindi in our valley, cannot afford the Basin Plan not to achieve real environmental outcomes. This is why we believe there remains opportunity to enhance the operation and implementation of the Basin Plan and water management that improves the environmental, economic and social well-being of irrigation dependant rural communities.

We have as part of this submission provided six recommendations for consideration by the committee.

We thank the committee for taking interest in the operation of the water market and water management in NSW and welcome you to visit our region to see first-hand our highly innovative irrigation industry.

Submission ends.