



**RICEGROWERS' ASSOCIATION
OF AUSTRALIA INC**

INITIAL SUBMISSION TO THE PRODUCTIVITY COMMISSION

Murray-Darling Basin Plan: Five-year assessment

April 2018

Contents

1. INTRODUCTION	3
2. THE RICEGROWERS' ASSOCIATION OF AUSTRALIA	3
3. THE AUSTRALIAN RICE INDUSTRY	3
4. THE RGA'S POSITION	4
4.1. SUSTAINABLE DIVERSION LIMITS AND ADJUSTMENTS	4
4.1.1. Northern Basin Review	5
4.2. CONSTRAINTS MANAGEMENT	6
4.3. RECOVERY OF WATER FOR THE ENVIRONMENT	7
4.4. STRUCTURAL ADJUSTMENT ASSISTANCE	7
4.5. WATER RESOURCE PLANS – INCLUDING ACCREDITATION OF PLANS AND TRANSITIONING TO SDL ACCOUNTING AND COMPLIANCE	9
4.6. ENVIRONMENTAL WATER PLANNING AND MANAGEMENT	10
4.7. WATER QUALITY AND SALINITY MANAGEMENT	11
4.8. WATER TRADING RULES	11
4.9. CRITICAL HUMAN WATER NEEDS	12
4.10. COMPLIANCE - MDBA AND STATE COMPLIANCE AND ENFORCEMENT	12
4.11. MONITORING, EVALUATION AND REPORTING	12
4.12. BASIN INSTITUTIONAL AND GOVERNANCE ARRANGEMENTS	14
5. CONCLUSION	15
6. CONTACTS.....	15
ATTACHMENT A: RGA'S SUBMISSION TO THE HOUSE OF REPRESENTATIVES STANDING COMMITTEE FOR ENERGY AND THE ENVIRONMENT'S INQUIRY INTO THE MANAGEMENT AND USE OF COMMONWEALTH ENVIRONMENTAL WATER.	16
1. THE RGA'S POSITIONS	16
1.1. MAXIMISING THE USE OF ENVIRONMENTAL WATER FOR THE PROTECTION AND RESTORATION OF ENVIRONMENTAL ASSETS	16
1.2. CONSIDERING INNOVATIVE APPROACHES FOR THE USE OF ENVIRONMENTAL WATER	17
1.3. MONITORING AND EVALUATING OUTCOMES OF THE USE OF ENVIRONMENTAL WATER	18
1.4. OPTIONS FOR IMPROVING COMMUNITY ENGAGEMENT AND AWARENESS OF THE WAY IN WHICH ENVIRONMENTAL WATER IS MANAGED	18
1.5. OTHER MATTER OF RELEVANCE	19

1. INTRODUCTION

The Ricegrowers' Association of Australia (RGA) welcomes the opportunity to provide an initial submission to the Productivity Commission's Murray-Darling Basin Plan: Five-year Assessment. This submission is in response to the issues paper for this assessment.

2. THE RICEGROWERS' ASSOCIATION OF AUSTRALIA

The RGA is the collective voice of rice growers in Australia. The RGA represents the interests of around 1200 voluntary members. The main objective of the RGA is to provide members with strong and effective representation on issues affecting the viability of their businesses, their communities and their industry.

The RGA is made up of eight branches located across the Riverina rice growing regions of NSW and Victoria. Each branch annually elects representatives to form the RGA Central Executive. The Central Executive represents their respective branches in determining RGA policy and projects.

The RGA is a member of the National Farmers' Federation, National Irrigators' Council and NSW Irrigators' Council.

3. THE AUSTRALIAN RICE INDUSTRY

The Australian rice industry is located predominantly within the Riverina region of south-west NSW, with two small industries also situated in the Northern Rivers region of north NSW and in Northern Queensland.

The Australian rice industry is reliant upon irrigation, mainly sourced from the Murray and Murrumbidgee valleys. Provided water is available, the Australian rice industry is considered one of the world's most successful, delivering significant yields while leading the world in water use efficiency.



For the five year period to 2015/16, Australian rice yields averaged 10.2 tonnes per hectare, with an average yield of 11.0 tonnes per hectare recorded in 2015/16. According to the United Nations

Conference on Trade and Development (UNCTAD), Australia is classified as the most efficient producer of rice in the world. The Australian rice industry is also a world leader in water usage at 12 megalitres per hectare, with the world average being 15 – 20 megalitres per hectare, and with some countries using upward of 50 megalitres per hectare.

The regions rice growing success is mainly due to the temperate climate, the largely pest and disease free growing environment (requiring minimal chemical use), the heavy clay soils and the gravity fed irrigation systems which ensure efficient water delivery and use.

In a typical year the Australian rice industry produces around eight hundred thousand tonnes of paddy rice with a farm gate value of around \$350 million. About 80% of this product is exported. With value adding, the total industry worth is well over \$1 billion each year. It can be further argued that the full economic potential of the Australian rice industry has not yet been realised with rice being excluded from three recent free trade agreements: Japan, China and North Korea. These markets represent significant potential for the Australian rice.

The rice industry is a significant economic contributor to the Riverina region of NSW. Furthermore, it is argued that a multiplier should be applied to this contribution to account for the numerous times these profits change hands within the community. Needless to say, the towns of Griffith, Leeton, Coleambally, Finley, Jerilderie, Deniliquin, Wakool and Moulamein are highly dependent on rice production for their social and economic wellbeing.

Additionally, rice growers have individually invested over \$2.5 billion in land, water, plant and equipment and collectively invested around \$400 million in mill storage and infrastructure through SunRice.

While the NSW rice industry is very small by world standards, it remains a competitive supplier of premium rice products into world markets.

4. THE RGA'S POSITION

4.1. Sustainable Diversion Limits and Adjustments

a. risks that may prevent Basin States from successfully implementing SDL adjustment projects

The RGA feel that the key risks are as follows:

- Lack of sufficient resources (time, money and human resources) to develop and implement the Supply Measure projects.
 - The inability of the States to resolve some of the third party impacts resulting from the projects.
 - The inability to relax key constraints within the river systems.
 - The inability of States to modify the projects as new information arises. If the projects are not sufficiently flexible or adaptable then there is a risk that the projects will not be successful as they cannot be adapted to changes in context.
- 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**

The RGA believes that it is critical that a different definition of ‘neutral or improved socioeconomic outcomes’ be adopted. The RGA argues that the current definition does not recognise the intent of the legislation, i.e. to prevent further social and economic impacts to irrigation communities and industries in the Basin, as the current definition does not account for all socioeconomic impacts of water recovery – including those impacts felt by other water users.

Considering that the current legislation provides for the recovery of ‘up to’ 450 gigalitres, the RGA believes that adopting a more comprehensive definition of ‘neutral or improved socioeconomic outcomes’ will not impact upon the ability of the Commonwealth Government to recover up to 450 gigalitres through Efficiency Measures 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 RGA believes that there are three key options available to the government for recovering water for the environment that can contribute to Basin Plan outcomes while achieving neutral socioeconomic outcomes. These options focus on non-productive water sources and are as follows:

- Urban Water Use.
- River and storage operations – With on average of over 20,000 gigalitres of water flowing through the Murray Darling Basin each year, a 2% increase in the efficiency of river and storage operations will result in over 400 gigalitres of water being made available for the environment. It is suggested that Governments look for opportunities to improve the efficiency of water regulation. We note that these projects should be differentiated from Supply Measures, as their focus would not be on achieving improved environmental outcomes, but rather on reducing losses incurred through storage and regulation. The additional water that is therefore made available could be attributed to the environment.
- Complementary measures - These measures serve an important purpose of addressing the many and various environmental issues that ‘just adding water’ cannot resolve. For example, they are the only suitable method for addressing water quality in the unregulated system or cold-water pollution. A suitable MDBA model should be developed to measure the environmental outcomes equivalence achieved by Complementary Measures, hence allowing the implementation of these measures to contribute to the achievement of the Up-Water.

All the above measures result in a triple-bottom line outcome – more water for the environment and no further impacts for irrigators, industries and communities.

4.1.1. Northern Basin Review

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

While the RGA does not provide specific comment on the actions governments should now take to achieve SDLs in the Northern Basin, the RGA does support the recommendations of the Northern Basin Review to:

- Reduce the water recovery target by 70 gigalitres; and
- Implement the recommended toolkit measures.

If legislated, the toolkit measures in particular set an important precedent for the use of 'complementary measures' which will hopefully influence future thinking about how environmental outcomes can be further improved in the Southern Basin.

4.2. Constraints management

a. why progress to remove constraints has been slower than expected

It is suggested that one of the key reasons that progress has been slow to date is that the process has not been sufficiently resourced. There has not been adequate engagement with riparian landholders and other stakeholders to work through concerns and find solutions that are acceptable to all parties.

The slow progress may also be in part due to the fact that the government officials undertaking the consultation have not had the authority to determine, review and amend solutions proposed by stakeholders, and often the proposed solutions have been 'lost in the system'.

Furthermore, there has been a shift in responsibility for public engagement for constraints management midway through the project. Initially the public consultation was being undertaken by the MDBA, and prior to this program being concluded, the NSW DPI Water commenced a separate public consultation program. This change in responsibility also disrupted the progress of the matter.

Finally, it is argued that the authors of the Basin Plan substantially underestimated how complex the issue of constraints is and did not allow sufficient time and flexibility to address this issue.

b. the implications of this slow progress

The resolution of the constraints matter impacts upon the ability of the environmental watering agencies to achieve the Basin Plan's environmental objectives with the held environmental water. Hence, it is important to determine whether the matter of constraints can be resolved prior to the government commencing a program to recover an additional 450 gigalitres of water. In the event that the key constraints cannot be relaxed, then a review of the effectiveness of acquiring and using an additional 450 gigalitres of held environmental water should be undertaken.

Furthermore, the ambiguity regarding the resolutions of constraints has meant that impacted communities and stakeholders have faced an extended period of uncertainty which has likely been detrimental to communities and individual businesses.

c. what can be done to ensure that constraints are removed in a more timely manner while managing impacts on third parties

It is important that the process for developing constraints measures is prioritised, adequately resourced and flexible enough to address the concerns of stakeholders. There must also be sufficient coordination between the various government departments and levels of government (State and Commonwealth).

d. strategies that are, or could be, put in place to increase the extent to which Basin Plan objectives are met when constraints cannot be removed.

In the event that some or all of the constraints cannot be relaxed or removed, it will be critical that the respective Government revise the Basin Plan's environmental objectives and relevant models to account for this. There should also be a revision of the Sustainable Diversion Limits to account for the fact that the full environmental water portfolio will not be able to be used as was first intended.

4.3. Recovery of water for the environment

- 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**

Subject to the outcome of the government's decision on the SDL Adjustment Mechanism Disallowance Motion, the water recovery target for both the NSW Murray and Murrumbidgee valleys has now been achieved.

However these valleys are also subject to the threat of future water recovery via efficiency measures as part of the 450 gigalitre component of the SDL adjustment mechanism. The RGA argues that the key objective that needs to be priorities in recovering 'up to' an additional 450 gigalitres is ensuring there are no social and economic impacts for communities. This objective should be prioritised ahead of the need for a cost-effective resolution. The ability to achieve the Basin Plan's environmental objectives will be subject to the success of the constraints strategies in particular.

- 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**

In the event that the Disallowance Motion for the SDL Adjustment Mechanism is successful, then there will be a substantial amount of water that will need to be recovered within the Southern Basin. In this scenario, it would be highly unlikely that the Federal Government would be in a position to recover an additional 605 gigalitres of water within a 12 month period. However we hope this is not the case.

- 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.**

The RGA seeks that there be no further (non-strategic) buy-backs. Buy-backs have created significant social and economic impacts for irrigation industries and communities and should always be a last resort.

A key deficiency of the on-farm irrigation efficiency programs was that it did not factor in the impact of increasing energy use on-farm, in particular when pressurised irrigation systems were installed. The RGA is aware of projects where pressurised irrigation systems were installed through OFIEP however have since been removed due to the increasing cost of energy.

For a more detailed analysis of the operation of the on-farm irrigation efficiency programs, the RGA refers the Productivity Commission to the RGA's submission to the Standing Committee on Agriculture and Water Resources - Inquiry into Water Use Efficiency in Australian Agriculture (March 2017) found here: <http://www.rga.org.au/f.ashx/RGA-Submission-to-the-inquiry-into-water-use-efficiency-in-Australian-agriculture-310317.pdf>.

4.4. Structural adjustment assistance

- a. **what specific assistance has been provided to help communities adjust to the Basin Plan**

The RGA is aware of the \$73 million Murray-Darling Basin Regional Economic Diversification Program, however believes there is very limited knowledge of this funding program within the RGA membership and communities of the NSW Murray and Murrumbidgee valleys. This lack of awareness has most likely contributed to a lack of take up of the program across these regions.

b. the extent to which this assistance has supported particular industries or regions

The RGA believes that this funding has not achieved its objective of facilitating structural adjustment to achieve 'productive and resilient water-dependent industries, and communities with confidence in their long-term future'. As outlined in the issues paper, the purpose of the funding was to assist communities to adjust their local economies to a more water-constrained environment through diversifying the economic base for the affected communities.

The RGA's position that this Program has not achieved its objective is supported by the Murray Darling Basin Authority's recently completed social and economic analysis for both the Northern and Southern Basins. The SEIFA score contained within the community profile reports demonstrate that communities like Wakool, Finley and Hay have very little resilience and therefore are likely to be significantly disadvantaged when they enter into the next drought or another challenging circumstance. Furthermore at a recent 'Farmer Exchange' event at Deniliquin, the RGA surveyed the 72 attendees (predominately aged between 18 and 45) and approximately half the room indicated that they believe that there was NOT a positive future in irrigated agriculture in the NSW Murray Valley.

The key reasons the RGA believes that this Program has not achieved its objective is as follows:

- The amount of funding is too small when compared to the significant gap that has been created in the irrigation economy due to the removal of the productive capacity of 2100 gegalitres of water entitlement.
- Some of the worst impacted communities, such as Wakool, received very little direct and indirect funding from this Program, while other communities in the Basin that do not have any irrigation industry benefited from this funding.
- The funding is focused on the development of new industry and business, however the RGA understands that studies have demonstrated that the most successful structural adjustment programs are focused on improving current industries and businesses rather than creating new industries and businesses.

As outlined above, the Program was not well promoted and consequently participation was limited.

c. 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

The RGA does not have any evidence in response to this information request.

d. whether future structural adjustment assistance is warranted, and if so, what lessons can be learnt from past programs

The RGA believes that further assistance is required to help communities and industries adjust to the impacts of the Basin Plan. If a future program were to be designed the RGA would provide the following suggestions:

- The Program should review the socioeconomic analysis undertaken by the Murray Darling Basin Authority and be much more targeted focusing on the worst impacted communities and industries.
- The Program should be designed in consultation with communities and industries and should be well promoted and transparent.

- The program should focus on adjustment for existing irrigated industry, as well as adjustment for irrigation communities. Stimulating irrigated production in an irrigation based economy will have positive impacts for other local businesses and services. Two suggested ways of achieving this are as follows:
 - Through ensuring the water market is open and transparent (via a national water trading platform) and irrigators have the opportunity to learn the skills and information they require to participate in the water market.
 - Through increasing investment in irrigated agricultural research, development and extension programs that are focused on reducing water use per unit of production. Such investment should focus on annual plantings rather than permanent plantings due to their ability to deal with annual variation in weather within the Murray Darling Basin.
 - Through facilitating events and opportunities for farmers to interact and share information and knowledge about improving irrigated production. The RGA suggests that peer to peer learning is one of the greatest ways to stimulate innovation and improved practices in an agricultural context.

4.5. Water resource plans – Including accreditation of plans and transitioning to SDL accounting and compliance

a. the main risks to remaining WRPs being finalised and accredited by mid-2019

The RGA believes that the currently proposed time frame for reviewing, finalising and accrediting the Murray/Lower Darling and Murrumbidgee Water Resource Plans does not allow sufficient opportunity to improve the provisions of these Plans, or to consider the implications of changes required to meet accreditation requirements.

Considering there has not been a review of the provisions of these Plans since they commenced in 2004, and that there is unlikely to be a further review for another ten years after the Plans commence, it is critical that water users are provided the opportunity to determine whether or not the provisions are functioning as intended or otherwise if there are opportunities for improvement.

For both the NSW Murray and Murrumbidgee valleys, there are currently significant cap credits, which would indicate that the provisions of the water sharing plan are potentially limiting extraction more than was intended. The Water Sharing Plans should seek to maximise total annual extraction within the limitation of the diversion limit. Increased transparency regarding total extractions compared with the BDL/SDL may incentivise States to ensure that extractive water use is maximised.

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

The RGA believes that further information is required regarding the accreditation process and requirements. This would assist the Water Resource Plan Stakeholder Advisory Panels in their decision making.

The RGA suggests that this process can be further streamlined via means of an ongoing accreditation process. For example, if the MDBA were in a position to provide advice throughout the Water Resource Plan development process about whether the proposed provisions meet the accreditation requirements, and when these decisions are finalised tick off on the accreditation of these provisions, then this would assist the final accreditation process.

There is also currently uncertainty regarding what happens if the final version of the Water Resource Plan put forward by the Stakeholder Advisory Panel does not meet the requirements for accreditation. Does this then trigger another process of review, or does the MDBA simply then dictate the provisions?

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

For the NSW Murray and Murrumbidgee valleys, the Stakeholder Advisory Panels have been told that they are not in a position to consider changes to the use of Planned Environmental Water (to better align with the use of Held Environmental Water) as the NSW Government does not have a suitable model available. Having this modelling capacity would greatly assist with the process.

Furthermore the models used for both the NSW Murray and Murrumbidgee valleys are based on 1999/2000 levels of water take. There has been significant change in the patterns of use for water take in these valleys over the last 18 years. The RGA suggests that updated models would significantly assist with decision making for these two valleys.

d. how effective Basin States have been in consulting with all relevant stakeholders

With respect to NSW, while they have identified and engaged an appropriate range of stakeholders, the quantity of consultation has been lacking. More time is needed with the Stakeholder Advisory Panels to work through the complexities of the Plans and stakeholder positions and identify appropriate resolutions.

e. the main risks to planning assumption work being finalised on time.

The main risks to the planning assumption work in NSW being finalised on time are as follows:

- Lack of resourcing of the project at a Department level. The lack of resourcing (time and HR) will potentially also contribute to a lack of understanding of the complexities of the issues and range of stakeholder views.
- Lack of consultation with Stakeholders – in NSW there has been very little consultation regarding the planning assumptions.

4.6. Environmental water planning and management

- 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.**

The RGA refers the Productivity Commission to its' recent submission to the House of Representatives Standing Committee for Energy and the Environment's inquiry into the management and use of Commonwealth Environmental Water (Attachment A).

4.7. Water quality and salinity management

- a. **any inconsistencies between the various national water quality guidelines and the water quality management plan requirements in WRPs and whether these inconsistencies are being resolved and managed**
- b. **the adequacy of the actions of water managers to achieve the water quality objectives of the Basin Plan.**

The RGA refers the Productivity Commission to its' recent submission to the House of Representatives Standing Committee for Energy and the Environment's inquiry into the management and use of Commonwealth Environmental Water (Attachment A).

4.8. Water trading rules

- a. **whether the Basin Plan trading rules advance the water trading objectives and outcomes stated in chapter 5 of the Plan**
- b. **whether changes to state trading rules made to date as part of implementation of the Basin Plan adequately recognise and protect the environment and third party interests**
- c. **whether implementation of the Basin Plan has improved access to market information and what further actions Basin States, irrigation infrastructure operators or the MDBA might need to take**
- d. **whether processes for reviewing Basin State trading rules — including the roles of the MDBA and the water trade working group — are sufficiently transparent, evidence-based and consultative.**

While there is an abundance of water market information available to water users, significant improvements are required to the government administration of water trading. This is particularly relevant in NSW and for trades occurring across State borders.

A key objective for government should be to establish a trade system that allows for real time processing of water trades and aims to minimise transaction costs for participants. Considering the water trade system is not closely regulated despite the significant value of many transactions, investment in such a system would also help to minimise some of the risks associated with trade.

To this end, the RGA is seeking that government investigate opportunities for developing a national water trade platform. The RGA understands that this was an initial objective of the National Water Reform process, and that at this time money was set aside for the development of the platform, however this project was never completed.

Altogether a more efficient and comprehensive trading system will better enable water to move to where it is needed, providing for greater productivity and will allow water users to more quickly respond to changing climatic conditions and other circumstances.

4.9. Critical human water needs

- a. risks to meeting critical human water needs (CHWN) under the Basin Plan, how the Plan addresses these risks, and what, if any, further measures are required**
- b. any concerns about provisions in WRPs relating to CHWN under extreme conditions.**

The RGA believes that the current provisions of the Water Sharing Plans and the proposed amendments to the Water Resource Plans should assist to manage Critical Human Water Needs under extreme conditions.

The RGA notes that permanent plantings are not Critical Human Water Needs and should not be provided special treatment during dry scenarios – in particular if the owner has chosen to develop a plantation reliant on General Security entitlement. The risk in this scenario lies with the owner who has made the investment decision – not with the balance of water users.

4.10. Compliance - MDBA and State compliance and enforcement

- 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.**

The RGA strongly opposes the illegal take of water – and is supportive of the introduction of metering and compliance arrangements for all irrigation water users in the Basin.

The RGA notes that the NSW Murray and Murrumbidgee valley have world leading systems for metering and compliance – and many of these systems have been upgraded over the past two decades with the assistance of government programs.

The introduction of new statutory provisions to address metering and compliance issues in other parts of the Basin should not impact upon the significant investment already made by irrigators in the Murray and Murrumbidgee valleys in installing state of the art metering and compliance technologies. These provisions should also not result in unreasonable compliance charges for valleys that have already been proven to be highly compliant.

4.11. Monitoring, evaluation and reporting

- 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 general information required to provide confidence to communities and others that the Plan is being implemented well and is achieving its objectives**
- d. **the usefulness of the MDBA's Framework for Evaluating Progress and its recent application in evaluating the Basin Plan**
- e. **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)**

The RGA is of the view that there is room for improvement in regards to the delineation of responsibilities for monitoring, evaluating and reporting. There are a number of agencies engaged in this space and the delegation of roles and responsibilities between these organisations is not clear.

This can make it difficult for local communities to understand and/or engage with the agencies regarding the implementation of the Basin Plan. For example it is important that the communities directly and indirectly impacted by environmental flows know who to contact regarding environmental watering activities.

Furthermore, we have seen on a number of occasions different agencies conducting very similar monitoring and evaluation activities and reporting very different and at times conflicting outcomes. This can be highly confusing and frustrating for Basin stakeholders who have invested much time and energy into the progress of the Basin Plan, or who believe that their communities have otherwise been impacted to enable the Basin Plan to achieve particular outcomes. For example, following the 2016 floods a bird survey was commissioned by a federal government agency that reported that the floods had had very little impact on the Basin's water bird populations. At about the same time the NSW government commissioned a very similar study that reported that there had been a significant increase in the Basin's water bird populations.

Another example refers to the reporting of the impacts of the on-farm irrigation efficiency program (OFIEP). The Department of Agriculture and Water Resources commissioned a private agency to review the impacts of this program on communities. The private agency undertook a review of the impacts of the OFIEP within the Murrumbidgee Irrigation Area (MIA) and used these results to report that the impact had been positive across the Southern Basin and more significantly that these positive impacts had offset the negative impacts resulting from buy-backs.

However, the MIA has many characteristics not apparent in other regions of the Basin that meant that this data should not have been extrapolated for the whole Southern Basin. In particular, the MIA was better able to manage the impacts because:

- The MIA is home to one of the fastest growing regional centres in NSW that was able to absorb much of the resulting OFIEP expenditure i.e. contractors were engaged from within the MIA not from outside the MIA;
- The MIA is home to a large number of and very diverse range of non-irrigation dependent industries – such as chicken meat, wine making and manufacturing; and
- There was a much greater portion of water recovered within the MIA from efficiency programs rather than buy-backs when compared to other southern basin regions;
- The MIA has a much greater volume of high security entitlement then other comparable irrigation regions.

However when these concerns were raised with the private agency they were not addressed as there was insufficient time. This report has now been used as evidence for other reports.

The RGA therefore questions the usefulness of this information for decision making and evaluating the impact of the Basin Plan. To improve on monitoring, evaluation and reporting, the RGA suggests the following:

- A greater level of coordination between the many and various moving parts of the Basin Plan. There is a significant number of agencies at both a Commonwealth and State level involved in implementing the Basin Plan. The information they are each collecting is potentially useful to other agencies and arguably, money is being wasted on duplication of work or otherwise on making uninformed decisions when the information is available but not shared.
 - A greater level of engagement with communities in undertaking monitoring, evaluation and reporting for the Basin Plan. This should be a key performance indicator for studies.
 - A greater level of flexibility built into the Basin Plan to allow sufficient time for collecting quality information.
- f. whether processes are in place to monitor key risks to the continued availability of Basin water resources**

The RGA believes that there is room for improvement in this space. Considering the main driver of water supply is rainfall and climate, and while it is not possible to influence the climate, better long-range weather forecast systems will assist irrigators and other water users to adjust their farming practices and environmental watering plans to accommodate the weather. To this end, the RGA encourages government to invest in research, development and technologies that increase the accuracy of long-range weather forecasts.

4.12. Basin institutional and governance arrangements

- a. whether current institutional and governance arrangements provide for sufficient oversight of the plan and support engagement with the community**
- b. whether there are risks to the achievement of the objectives of the Plan that arise from the current institutional and governance arrangements**
- c. what improvements can be made to ensure that institutional and governance arrangements are fit for the next phase of implementing the Plan.**

The RGA believes that the apparent lack of a clear delegation of responsibility for implementation of the Plan between the Commonwealth and State government and between the various government agencies involved in regulated water delivery, environmental water delivery and monitoring, reporting and compliance has been detrimental to the governance and community engagement relevant to the Plan.

This has meant that it is often difficult for stakeholders to raise matters with the relevant agency, and issues and concerns are prone to ‘becoming lost in the system’.

The RGA also suggests that the lack of clear delegation of responsibility, and in instances, the lack of coordination between different levels of government and agencies does also create a risk that some of the objectives of the Plan may not be achieved. The Constraints Measures is a good example of this. Initially the Federal Government via the MDBA commenced the public consultation program to devise the Constraints Measures, then mid-way through this process the NSW DPI Water commenced a new public consultation program with little regard to the work undertaken by the MDBA. Now this program has been postponed as the NSW Government have not received any

further funding from the Federal government to continue the project. However, the development of Constraints Measures is critical to other components of the SDL Adjustment Mechanism which are currently being progressed. Potentially these other components of the SDL Adjustment Mechanism will be impacted if the Constraints Measures are not delivered in the format as what intended.

Furthermore, for a very long period of time irrigation communities and other stakeholders have been seeking that government agencies work with them in partnership in implementing the Basin Plan. The RGA argues that through working with stakeholders at a catchment level, and incorporating the local knowledge and expertise available, significant improvements can be made to the Basin Plan outcomes achieved. Building local ownership into the process will also enable local stakeholders to better understand, engage with and support the reform process.

While over the past year or so there have been some efforts made by the relevant government authorities to engage with rural communities, there is still significant improvement to be made in this space. Hence it is recommended that an objective be built into the Basin Plan implementation process requiring government agencies to include irrigation community participation within the process.

5. CONCLUSION

The RGA thanks the Productivity Commission for the opportunity to provide an initial response to this Assessment and looks forward to providing further input following the release of the Draft Report in August 2018.

6. CONTACTS

For further information please contact:

Jeremy Morton

President

Telephone: 0429 873 230

Email: jinark@bigpond.com

Rachel Kelly

Policy Manager

Telephone: 0437 767 289

Email: rkelly@rga.org.au

7. ATTACHMENT A: RGA's submission to the House of Representatives Standing Committee for Energy and the Environment's inquiry into the management and use of Commonwealth Environmental Water.

1. THE RGA'S POSITIONS

1.1. Maximising the use of environmental water for the protection and restoration of environmental assets

The RGA believes that this is one area that has significantly lacked attention, however provides significant opportunities for water users.

The RGA believes that the key focuses for environmental water reform going forward should be to analyse how the planned and held environmental water can be used more efficiently and effectively, and to investigate and implement all reasonable and cost-effective options for improving efficiency and effectiveness prior to 'recovering' further productive entitlement. To assist this process, a review of current institutional and regulatory arrangements should be conducted to ensure these are appropriate for enabling efficient environmental water use.

The Supply Measures included within the Basin Plan seek to achieve this purpose, however due to the formulation of the Basin Plan modelling, the Supply Measures can only focus on environmental works and measures and rule changes that aim to achieve improved environmental outcomes through changing water flows. Furthermore, the amount of supply measures that can be achieved has been limited by both timelines and the volume of water that can be accounted for.

In addition it is important that the governments seek to integrate catchment management and other complementary resource management activities with current environmental water activities to achieve environmental improvements across the board. In addition to Supply Measures, it has been proposed that non-flow based environmental works and measures and rule changes should be considered within or alongside the Basin Plan framework. These projects are commonly referred to as 'Complementary Measures' and are a reflection of the principles of integrated catchment management. Examples include controls for pest species, erosion and nutrient run-off occurring within the riverine environment, mitigation of cold water pollution and re-stocking of native fish species.

Unfortunately at this stage these projects have not been included within the water reform process. It is understood that the main reason for this is the MDBA's hydrological model cannot currently account for the positive outcomes resulting from these projects. For this reason we encourage all Basin governments to work together to ensure a suitable model is developed.

This is particularly important as many of the locations that have been identified to have low water quality are located outside of the regulated systems and hence their water quality issues cannot be addressed through flow based options. However these sites continue to contribute to poor water quality downstream. For example, of the 26 sites on the Murrumbidgee Surface Water Resource Plan Area monitored for water quality, only 4 sites currently have poor water quality:

- Yanco Creek at Yanko Bridge (score 54),
- Billabong Creek at Jerilderie (score 35),

- Billabong Creek at Walbundrie (score 41); and
- Muttama Creek at Coolac (Score 44).

Two of these four sites exist within the unregulated system and hence cannot be targeted by either planned or held environmental water.

Furthermore, the irrigation industry has been extremely proactive in ensuring its irrigation infrastructure operators and individual irrigators manage their water in the most efficient manner possible. Unfortunately the same standards of efficiency have not been upheld by environmental water users. It is critical that environmental outcomes be achieved in the most efficient manner possible. The RGA therefore strongly encourages the government to ensure water use efficiency standards are applied to all water users including environmental water users.

1.2. Considering innovative approaches for the use of environmental water

The RGA strongly encourages Basin government to continuously consider innovative and adaptive uses of environmental water. The RGA believes that there are fantastic opportunities for water users to manage their resources in ways that results in mutual benefit for multiple users. To this end the RGA has pursued the concept of 'co-management' of water, focusing on how rice growers and other irrigation water users and the environment can manage their water parcels collaboratively.

Co-management provides decision makers with the opportunity to take a triple bottom line approach to implementing the Basin Plan, as projects provide for both positive environmental outcomes and positive social and economic outcomes for irrigators and communities.

Currently the RGA has identified five opportunities for co-management, however further options may be identified:

- Managing water deliveries in a way that improves environmental outcomes – i.e. releasing an environmental flush at the same time as a large irrigation order to achieve a greater flow and/or forfeiting all or part of a winter supplementary flow to the environment (when irrigation infrastructure is shut down) in exchange for early spring environmental water for irrigators (when irrigators are watering summer crops) – these opportunities will most likely be explored as part of the development of the Water Resource Plans.
- using irrigation infrastructure to efficiently deliver water to key environmental sites;
- using environmental water for watering natural wetlands located on private property. We note that this is already happening to a degree however even greater outcomes could be achieved by isolating wetlands that are currently connected to major water ways that receive too frequent and or extended inundation due to higher river flows. Private landholders could provide alternate habitat by enhancing-modifying existing wetlands where targeted, efficient and timely environmental water would be delivered using irrigation infrastructure ;
- using environmental water for watering man-made wetlands located on private property which provide environmental benefits (see case study below); and
- recognising current environmental benefit achieved on private property.

Using environmental water for co-management purposes may also provide a method for managing in-river constraints to the delivery of environmental water.

A suitable MDBA model is required to measure the environmental outcomes achieved by complementary measures/co-management.

Case Study: Bitterns in Rice

The Bitterns in Rice program, administered by the RGA in a partnership with a number of other government and private organisations, demonstrates how irrigation infrastructure can provide valuable environmental outcomes. The Bitterns in Rice program highlights how the Riverina rice crops support the largest known population of the nationally threatened Australasian Bittern.

There is a known conflict between the pursuit for irrigation efficiency in rice production and the provision of habitat for the Bitterns. The adoption of the new efficient irrigation rice growing technologies and practices often significantly reduces the capacity of the Riverina rice fields to provide the surrogate wetlands necessary to assist the recovery of this critically endangered waterbird. This is because the objective of many of these technologies/practices is to reduce the period of flooding within the rice fields. However this also results in a reduction to the period of time for the natural development of prey (bittern food) in the rice crop and a reduction to the period of time these birds have to nest and have the offspring fully fledge.

As demonstrated in the Central Valley of California, rice farming irrigation infrastructure (layouts) can be used to create surrogate wetland habitats from rice fields. These are ponded by the efficient supply of environmental water through irrigation infrastructure at controlled depths and for targeted timeframes. This practice is providing habitat for hundreds of thousands of waterbirds, comprising over 230 water bird species including migratory waders.

Australian rice growers want to support the recovery of the Australasian Bittern, however as water is their most significant input cost, they will need to receive support to provide the ponding period required for successful Bittern breeding.

Further government investigation and investment into research and on farm infrastructure will enable rice farmers to efficiently deliver environmental water to natural and constructed wetlands to create habitat for a range of targeted species.

1.3. Monitoring and evaluating outcomes of the use of environmental water

The RGA is of the view that there is room for improvement in regards to the monitoring and public reporting of the outcomes achieved from environmental watering activities.

There are a number of agencies engaged in this space and the delegation of roles and responsibilities between these organisations is not clear. This can make it difficult for local communities to understand and/or engage with the agencies regarding environmental watering programs, and their monitoring and evaluation. It is important that the communities directly and indirectly impacted by environmental flows are both informed and engaged with regarding the environmental watering activities.

Furthermore there have been a number of occasions in the past where different agencies (both public and private) have reported very different outcomes from similar water activities. This can be very confusing for the general public, and very frustrating for those in irrigation communities whose lives have been impacted upon by water reform.

1.4. Options for improving community engagement and awareness of the way in which environmental water is managed

For a very long period of time irrigation communities and other stakeholders have been seeking that government entities work with them in partnership in implementing water reform and achieving environmental watering outcomes.

The RGA argues that through working more closely with stakeholders at a catchment level, and incorporating the local knowledge and expertise available into the water reform process, significant improvements can be made to the outcomes achieved. Building local ownership into the process will enable local stakeholders to better understand, engage with and support the reform process.

While over the past year or so there have been efforts made by the relevant government authorities to engage with rural communities, there is still significant improvement to be made in this space.

It is recommended that the environmental water agencies ensure that a key objective of their environmental water activities be to include irrigation community participation within the process.

1.5. Other matter of relevance

Environmental water trading

The RGA believes that the environmental water management agencies should be provided further flexibility in regards to the trade of environmental water, and that the profits of these trades should be directed towards the ongoing costs of managing the environmental water parcels, including any capital investments made for environmental purposes.

However, it is also critical that the involvement of environmental water agencies in the market does not have a material impact on the ability of other water users to trade water. In particular the environmental water agencies need to ensure that their trading activities do not result in a close of trade where trade restrictions are prevalent – such as the inter-valley trade restrictions.

Costs of environmental water delivery

To ensure irrigators only pay their fair share of costs, and given the “environment” is now the biggest water customer, more transparency is needed regarding the operational and capital expenditure required to deliver environmental water.

Better climate forecasting technologies

Considering the main driver of water supply is rainfall and climate, and while it is not possible to influence the climate, better long-range weather forecast systems will assist both environmental agencies, irrigators and other water users to adjust their environmental watering plans and farming practices to accommodate the weather. To this end the RGA encourages government to invest in research, development and technologies that increase the accuracy of long range weather forecasts.

Efficiency in river operation

Through improving the efficiency of water storage and supply, we can increase the total supply of water available to all water users. Noting that on average over 20,000 gegalitres of water flows throughout the Murray-Darling Basin system annually, a 2% increase in the efficiency of river operation (i.e. by reducing unintended wetland inundation, seepage and evaporation) will achieve at the very least an additional 400 gegalitres of high reliability water resource for water users. For the rice industry, an additional 400 gegalitres of water supply is equivalent to an additional 400,000 tonnes of rice per annum or \$120 million of farm-gate value (based on a value of \$300 per tonne).

2. RGA's Recommendations

Further to the above, the RGA provides the following recommendations to the House of Representatives Standing Committee on the Environment and Energy:

1. The key focuses for environmental water reform going forward should be to analyse how the planned and held environmental water can be used more efficiently and effectively, and to investigate and implement all reasonable and cost-effective options for improving efficiency and effectiveness prior to 'recovering' further productive entitlement.
2. The Federal Government should seek to integrate catchment management and other complementary resource management activities with current environmental water activities to achieve environmental improvements across the board.
3. A suitable MDBA model should be developed to measure the environmental outcomes achieved through the use of complementary measures and the co-management of environmental water.
4. The Federal Government should seek to apply water use efficiency standards to all water users including environmental water users.
5. The Federal Government should continuously consider innovative and adaptive uses of environmental water including the concept of 'co-management' as explained above.
6. The Federal Government should seek further clarity regarding the roles and responsibilities of the various government agencies involved in environmental watering activities, including monitoring, evaluation and public reporting.
7. The Federal Government should facilitate the environmental water agencies to continue to identify opportunities to work in partnership with irrigation communities and other stakeholders when undertaking environmental watering activities.
8. The Federal Government should ensure that the environmental water agencies are provided further flexibility to trade environmental water, and that the profits of these trades are directed towards the ongoing costs of managing the environmental water parcels, including any capital investments made for environmental purposes.
9. The Federal Government should ensure that the involvement of environmental water agencies in the water market does not have a material impact on the ability of other water users to trade water.
10. The Federal Government should seek further transparency regarding the operational and capital expenditure required to deliver environmental water.
11. The Federal Government should seek to facilitate better long-range weather forecast systems to assist in the management of all water resources.
12. The Federal Government should seek opportunities to improve the efficiency of water storage and supply in order to increase the total supply of water available to all water users.