



**RICEGROWERS' ASSOCIATION
OF AUSTRALIA INC**

**SUBMISSION TO THE PRODUCTIVITY
COMMISSION'S ISSUES PAPER
ON NATIONAL WATER REFORM**

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1. INTRODUCTION

The Ricegrowers' Association of Australia (RGA) welcomes the opportunity to participate in the Productivity Commission's Public Inquiry into National Water Reform. This submission is in response to the terms of reference included within the Issues Paper.

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 South 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. AUSTRALIA'S WATER POLICY REFORM TO DATE

The key benefits of water sector reform to date in the opinion of the RGA are as follows:

- Clear and secure property rights which provide entitlement holders with certainty to encourage long term investment.
- Improvements in water trade and the take-up of water markets.
- Improvement in the access to timely and accurate water market information.
- Significant uptake of irrigation efficient practices on farm and within irrigation delivery systems.

4.2. WATER RESOURCE MANAGEMENT

With reference to the key elements of the National Water Initiative, the preliminary framework, and the topics outlined in chapter 5 and 6 of the Issues Paper, the RGA provides the following responses and recommendations. The RGA'S responses and recommendations are focused on those areas identified by the RGA to be the priority areas for future water reform:

4.2.1. PROPERTY RIGHTS

The RGA believes that while significant improvement has been made to the clarity and security of property rights within the Murray Darling Basin, further reassurances are needed from the Basin governments to confirm that the water reform process will not result in unmitigated negative impacts to the reliability and accessibility of existing entitlements.

In particular, the RGA strongly encourages the respective governments and agencies to commit to no further changes to the Long-Term Average Annual Yield (LTAAY) for entitlements, unless requested to do so by a majority of water users within a specific valley.

Any negative change to the reliability and accessibility of entitlements, including the LTAAY, will result in a devaluation of the water entitlement. Noting the significant investment in water entitlements that has been made to date, in particular in irrigation communities, a devaluation of entitlements will result in wide-spread and significant economic implications for individuals and communities.

Recommendations:

- 1. Basin governments provide a public assurance that the water reform process will not result in unmitigated negative impacts to the reliability and accessibility of existing entitlements.**
- 2. The Basin governments and water management agencies commit to no further changes to the Long-Term Average Annual Yield (LTAAY) for entitlements (unless requested to do so by a majority of water users within a specific valley).**

4.2.2. WATER PLANNING

Water Sharing and Resource Plans

The management of the water resources in NSW is subject to the relevant Water Sharing Plans. The RGA is supportive of the Water Sharing Plan framework, especially considering this underpins the security/reliability and hence value of existing permanent entitlements.

Pursuant to the Murray Darling Basin Plan (the Basin Plan), Water Sharing Plans are due to be replaced by Water Resource Plans in 2019; however the NSW Irrigators' Council has been assured that the Water Resource Plans will retain the current Water Sharing Plan framework.

Any substantial changes to the provisions of the current Water Sharing Plans could significantly impact upon the value of water entitlements. As outlined above, a decrease in the value of entitlements would result in widespread economic detriment to irrigators' and communities. Hence it is critical that any substantial change to the current provisions of the Water Sharing Plan's be subject to adequate consultation with irrigators' and other interested parties.

The Water Sharing Plans (and the Water Resource Plans) are subject to ten yearly statutory reviews. While this length of time is appropriate in ensuring stability and certainty for stakeholders, and for reducing the burden that the review process places upon these stakeholders, this also means that there is a very limited opportunity for stakeholders to address any issues within the Plans.

Hence considering the significance of the Water Sharing/Resource Plans, and the length of time between reviews, it is critical that adequate time and resources are dedicated to developing/reviewing the Water Resource Plans at each review. For this reason the RGA would not support the streamlining of the review process as this would likely result in less engagement/consultation with stakeholders.

As the process for reviewing and developing the Water Resource Plans has just commenced, the RGA is not yet in a position to comment on whether or not the processes for reviewing these plans is sufficiently robust, transparent, open, and timely. However the RGA advises that this was not the case for the first statutory review of the NSW Water Sharing Plans, which was due to be undertaken in 2014, however was delayed for two years before the current plans were rolled over without consultation.

Nevertheless the RGA supports the responsibility for planning remaining with the State governments to the extent possible, and does not support the Murray Darling Basin Authority (MDBA) having jurisdiction over the Water Resource Plans.

Maximising extractive water use within the valley based limits

Noting the limitation of the Baseline Diversion Limits (BDL) and Sustainable Diversion Limits (SDL) on the amount of water that can be extracted in any particular valley, it is important that States have in place a water accounting system that aims to maximise extractive water use within the constraints these limits.

The RGA is unaware of whether or not these accounting systems include such an objective. Further transparency regarding total extractions and the comparison between these extractions and the BDL/SDL may incentivise States to ensure that extractive water use is maximised.

Increasing the timeliness of water availability announcements

In addition, the RGA continues to seek more timely information regarding water allocation announcements. We note that for NSW these announcements are made two times per month. While we understand the complexities of making these announcement due to the various

information that must be sourced from different agencies including the Bureau of Meteorology and the MDBA, we also feel that the collection of this information could be streamlined through the adoption of new technologies. Hence the RGA believes there is an opportunity to increase the timeliness of allocation announcements and to potentially implement real-time (or daily) allocation updates.

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 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.

Efficiency in river operation

The RGA understands that both Water NSW and the MDBA river operations team are subject to legislative obligations to operate the rivers in the most efficient manner possible.

However the RGA encourages the Government and responsible agencies to constantly seek out cost-effective opportunities to increase the efficiency of the operation of the storages and delivery systems, while ensuring minimal third party impacts.

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 gigalitres of water flows throughout the Murray-Darling Basin system annually, a 2% increase in the efficiency of river operation (i.e. by reducing seepage and evaporation) will achieve at the very least an additional 400 gigalitres of high reliability water resource for water users. For the rice industry, an additional 400 gigalitres 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).

Recommendations:

- 3. The NSW government dedicate adequate time and resources to developing/reviewing the Water Resource Plans, to ensure all issues are addressed. This includes ensuring the process for developing the plans is sufficiently robust, transparent, open, and timely.**
- 4. The NSW government implement a water accounting system that aims to maximise extractive water use within the BDL/SDL for each valley.**
- 5. The NSW government provide more transparency regarding total annual extractions compared with the BDL/SDL for each valley, to allow for public scrutiny as to whether or not extractive water use is maximised.**
- 6. The NSW government investigate opportunities to increase the timeliness of allocation announcements.**
- 7. The Basin governments invest in research, development and technologies to increase the accuracy of long range weather forecasting.**
- 8. Encourage the Basin Government and responsible agencies to constantly seek out cost-effective and reasonable opportunities to increase the efficiency of the operation of the storages and river systems, while ensuring minimal third party impacts.**

4.2.3. WATER TRADING

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.

An objective of the water reform process 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.

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

Recommendation:

- 9. Basin governments investigate opportunities to establish a trade system that allows for real time processing of water trades, and that aims to minimise transaction costs and trade risks for participants.**

4.2.4. ENVIRONMENTAL MANAGEMENT

Ensuring there are appropriate institutional and regulatory arrangements for efficient environmental water use

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

In particular the RGA believes that one of the first focuses for water reform should have been to analyse how the planned and held environmental water could be used more efficiently and effectively, and all reasonable and cost-effective options for improving efficiency and effectiveness should have been exhausted prior to 'recovering' further entitlement from extractive 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, while 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.

Integrating catchment management and other complementary resource management activities

Complementary Measures

In addition to Supply Measures, it has been proposed that non-flow based environmental works and measures and rule changes should be considered within 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.

Co-management

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 '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;
- 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.

What is the role for governments in promoting trade in environmental water?

The RGA strongly 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.

What is the role for governments in acquiring environmental water at least cost to the community?

Governments are fully responsible for the negative social and/or economic costs of water recovery.

However, and despite the federal government having all but completed the Basin Plan water recovery program (and previous water recovery programs), there is still no clear understanding of the total cost of water recovery for irrigators, communities and industries.

Nevertheless, what is clear is that implementation of the Basin Plan and previous environmental water recovery programs have seen a significant reduction to the quantity of productive water supplied to the irrigation districts. This recovery has reduced the productive capacity of these districts and hence the profitability of the local communities, regardless of the form the recovery has taken. Considering a number of rural communities are solely dependent on irrigated agriculture, substantial reductions in local production has large detrimental impacts, including a reduction to the ability to support critical services such as emergency services, healthcare and education.

Furthermore and despite being charged with the responsibility for monitoring the social and economic impacts of the implementation of the Basin Plan, the MDBA has only now commenced this task for the Southern Basin.

This means that at current there is neither a set benchmark by which the social and economic impacts for the Southern Basin can be measured, nor a social and economic impacts study completed to date. Consequently it could be argued that despite being responsible for the social and/or economic costs of water recovery, the governments have been negligent in not putting in

place a suitable methodology for measuring these impacts or a suitable strategy for addressing these impacts (despite the continuous requests for same from irrigators and their communities).

The RGA is however thankful for NSW Minister for Rural Water Niall Blair's commitment to no further productive water recovery in NSW, and to undertaking a socio-economic impact study for the Southern Basin in conjunction with the Victorian government.

The RGA hence strongly encourages all Basin governments to seek out opportunities to assist irrigators, industries and communities to mitigate the social and economic costs of the water reform process and to structurally adjust to the consequences of Basin Plan implementation. These programs should be designed in consultation with the local communities.

Environmental management and community engagement

Please refer to paragraph 4.2.6 below.

In addition, the RGA is of the view that there is room for improvement in regards to the management of environmental water. 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 program, and the monitoring and evaluation. For example it is important that the communities directly and indirectly impacted by environmental flows are both informed and engaged with regarding the environmental watering activities, however it is unclear who is responsible for this task.

Recommendations:

- 10. Water use efficiency standards are applied to all water users including the environmental water users.**
- 11. A suitable model be urgently developed to measure the environmental outcomes (environmental equivalence) achieved by complementary measures/co-management.**
- 12. Basin government continuously consider innovative and adaptive uses of environmental water, including co-management.**
- 13. Environmental water management agencies are provided further flexibility in the trade of environmental water. The profits of trade should be directed towards the ongoing costs of managing the environmental water parcels, including any capital investments made for environmental purposes.**
- 14. The RGA seeks further transparency regarding the delegation of roles and responsibilities between the various government agencies engaged in the management of environmental water.**

4.2.5. KNOWLEDGE AND CAPACITY BUILDING

While there has been significant focus on building knowledge and capacity in respect of environmental outcomes, unfortunately investment in knowledge and capacity building has been significantly lacking for rural irrigation communities. These communities have suffered significant social and economic impacts as a consequence of water reform. In addition, many irrigators have had to significantly transform their businesses to adjust to the need for more efficient irrigation practices, and to adapt to the impacts of the water market.

In particular, investment needs to focus on how to assist these communities and industries to structurally adjust to the local loss of productivity as a consequence of the removal of water entitlements, and to the resulting changes occurring at an individual business level.

Recommendations:

- 15. Basin governments should seek out opportunities to assist irrigators, industries and communities to mitigate the social and economic costs of the water reform process and to structurally adjust to the consequences of the Basin Plan implementation. These programs should be designed in consultation with the local communities and should be targeted at both the individual business level and the community level.**

4.2.6.COMMUNITY PARTNERSHIPS AND ADJUSTMENT

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.

The RGA argues that through working 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 some small 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 an objective be built into the water reform process requiring government agencies to include irrigation community participation within the process.

Recommendation:

- 16. The RGA recommends that an objective be built into the water reform process requiring government agencies to include irrigation community (and other stakeholder) participation within the process.**

4.2.7.RURAL WATER SERVICES

With respect to the delivery of rural water services, the RGA supports the submissions provided by Murray Irrigation, Murrumbidgee Irrigation and Coleambally Irrigation, who are responsible for the delivery of water to a majority of rice growers.

In addition, the RGA is frustrated by the lack of transparency in the determination of the Murray Darling Basin Authority charges, despite these charges being significant for rice growers, accounting for 69% and 22% respectively of water charges for the Murray and Murrumbidgee Valleys. We note that this lack of transparency is a direct contradiction to the oversight that is now required of the irrigation infrastructure operators, despite there being the same level of risk that the operator will take advantage of its monopoly position.

Regular transparent reviews of the structure and costs of the river operations and asset management functions of the MDBA are required (separate to the policy and regulatory functions). These reviews should be done in close consultation with water users.

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

Recommendation:

- 17. Regular transparent reviews be undertaken of the structure and costs of the river operations and asset management functions of the MDBA. These reviews should be done in close consultation with water users, and should include further transparency about the operational and capital expenditure required to deliver environmental water.**

5. CONCLUSION

As outlined above, the purpose of the RGA's submission is to outline to the Productivity Commission the key areas of water reform that the RGA believes should be made a priority in the future implementation of the National Water Initiative.

The RGA encourages the Productivity Commission to focus its efforts on identifying strategic areas where future reforms are both desirable and possible, and to provide practical recommendation to the respective governments to direct the future of water reform nationally.

The RGA requests the Productivity Commission to carefully consider the RGA's 17 recommendations outlined above.

The RGA thanks the Productivity Commission for the opportunity to participate in this inquiry.

6. CONTACTS

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