



RICEGROWERS' ASSOCIATION  
OF AUSTRALIA INC

**SUBMISSION TO THE HOUSE OF  
REPRESENTATIVES STANDING  
COMMITTEE ON THE ENVIRONMENT  
AND ENERGY**

**INQUIRY INTO THE MANAGEMENT AND USE  
OF COMMONWEALTH ENVIRONMENTAL  
WATER**

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## 1. INTRODUCTION

The Ricegrowers' Association of Australia (RGA) welcomes the opportunity to participate in the House Of Representatives Standing Committee on the Environment and Energy's inquiry into the management and use of commonwealth environmental water. This submission is in response to the terms of reference for this inquiry.

## 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. 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 Yanco 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.

## **4.2. 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.

### **4.3. 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.

#### **4.4. 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.

#### **4.5. 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 gigalitres 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 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).

## 5. 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.

## 6. CONCLUSION

The purpose of the RGA's submission is to outline to the House of Representatives Standing Committee on the Environment and Energy the key areas of reform that the RGA believes should be a priority for the benefit of future environmental watering activities.

The RGA encourages the Committee to focus its efforts on identifying strategic areas where future reforms are both desirable and possible, and to provide practical recommendation to the broader government, related department and respective environmental agencies, to direct the future of environmental watering activities nationally.

The RGA requests the Committee to carefully consider the RGA's 12 recommendations and thanks the Committee for the opportunity to participate in this inquiry.

## 7. CONTACTS

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