Details of advertisement

PUBLIC NOTIFICATION

Water Position Statement (WS-CP-204)

At the Ordinary Meeting of Council held Tuesday, 10 November 2020 it was resolved that the draft **Water Position Statement WS-CP-204** be placed on public exhibition for a minimum of 28 days. Council is required to notify the public and provide the opportunity for submissions regarding this document.

The draft **Water Position Statement WS-CP-204** may be viewed at the Council Chambers, 1 Benerembah Street Griffith, the Griffith City Library and on Council's website at griffith.nsw.gov.au/onexhibition

Anyone wishing to make comment on the draft **Water Position Statement WS-CP-204** can do so in writing addressed to the General Manager, Griffith City Council, PO Box 485, GRIFFITH NSW 2680 or visit Council's website to provide an online submission.

Submissions received will be included in a report to be presented to an Ordinary Meeting of Council. As such, copies of all submissions (including the writer's name and address) will form part of Council's Business Paper and be available to the public. Should you wish to have your contact details withheld it is recommended that you request this in your submission.

Comments or submissions will be received up to **4.00 pm, Monday, 14 December 2020.**

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Griffith City Council REPORT

CLAUSE **CL08**

TITLE **Water Position Statement (WS-CP-204)**

FROM **Brett Stonestreet, General Manager**

TRIM REF **20/102449**

SUMMARY

Council's Water Position Statement was first adopted in 1999 and since that time has been revised on several occasions with the most recent revision dated 26 August 2014.

The Position Statement has been redrafted and this report proposes that the revised document be placed on public exhibition seeking community and stakeholder input.

RECOMMENDATION

(a) That the Draft Water Position Statement (WS-CP-204) as attached to this report, subject to any amendments by Council, be placed on public exhibition for a period of 28 days inviting community and stakeholder submissions.

(b) That all submissions received be reported to Council for consideration with a view to adopting a final document.

(c) Should no submissions be received that Council adopt the Draft Water Position Statement (WS-CP-204) as referred to in (a) above.

REPORT

The current Water Position Statement (WS-CP-204) was adopted 26 August 2014. (Refer Attachment A). Ongoing reform of water related legislation and government policy particularly as a consequence of the roll out of the Murray Darling Basin Plan has prompted a comprehensive revision of Council's Water Position Statement.

Councillors have discussed this matter at several workshops and the attached Draft Water Position Statement (refer Attachment B), has been prepared as a consequence of input through this process.

Water policy is highly complex with a range of views being expressed by various stakeholders across the Murray Darling Basin based around the question of "balance" between economic, social and environmental outcomes. The spectrum of views in the community is also influenced depending on geographic location with the Basin.

Griffith City Council is a member of the Riverina and Murray Joint Organisation of Councils (RAMJO). In June 2020, RAMJO adopted a Water Position Paper which takes a whole of Basin, solutions approach to the subject of water security (refer Attachment C). Council's draft Water Position Statement endorses the RAMJO document and makes supplementary comments in respect to several recommendations in the RAMJO document.

OPTIONS

OPTION 1

As per the Recommendation.

OPTION 2

Council confirm the current Water Position Paper (WS-CP-204) as per Attachment A.

POLICY IMPLICATIONS

Refers Council Policy - Water Position Statement (WS-CP-204).

FINANCIAL IMPLICATIONS

Not Applicable

LEGAL/STATUTORY IMPLICATIONS

Federal and State based legislation governs the use of water resources in Australia.

ENVIRONMENTAL IMPLICATIONS

Water related legislation and policy framework has been significantly influenced by environmental implications. Economic and social impacts on communities in the Murray Darling Basin are considered by Council to be of equal importance to environmental considerations.

COMMUNITY IMPLICATIONS

Communities have been significantly impacted by water reform in Australia.

LINK TO STRATEGIC PLAN

This item links to Council's Strategic Plan item 2.1 Actively engage with State, Federal and non-government agencies in a local advocacy role.

CONSULTATION

Councillor Workshops

Senior Management Team

ATTACHMENTS

(a) Water Position Statement (WS-CP-204) as at 26 August 2014

(b) Draft Water Position Statement (WS-CP-204) 2020

(c) Riverina and Murray Joint Organisation of Councils - Water Position Paper 2020 (under separate cover)

Water – Position Statement
POLICY – WS-CP-204

Directorate	Utilities	
TRIM Ref	14/15176	
Status	Current	**Effective from:**
Adopted	26 August 2014	**Minute No:** 0267

Policy Objective

Irrigation water is the fundamental ingredient to the continuing success of the region. A guaranteed, predictable and affordable water supply is crucial to the viability of irrigation farming and the communities that have been founded on that activity.

The following represents the position of the Griffith City Council on various issues relating to water.

Policy Statement

1 The Murray-Darling Basin Ministerial Council's Cap on Diversions

A more workable and flexible system must be introduced to replace the cap, one that gives due recognition to the individual needs of local river systems, current use, economic impacts and variations between seasons. Practical scientific data is to be used in calculating the cap.

2 Water Access and Usage

(a) Access Rights be issued in perpetuity to land holders with compensation payable if the right is removed.

(b) Urban centres be guaranteed a secure high security water allocation.

(c) Permanent transfers outside of a valley not be permitted.

3 Water Pricing

(a) In determining pricing policies, all beneficiaries (including the public benefit) must be identified and bear an appropriate share of the costs.

(b) Water users should pay only for the transparent costs directly associated with water delivery.

(c) Customers should be able to negotiate the level of services they require, including non-service related costs such as environmental resource management.

(d) The fixed charge component of water pricing should be levied on a usage basis and not allocation.

(e) Levies for the implementation of land and water management plan programs should be incorporated as a component of water charges and levied equally on all water users in proportion to their actual usage.

(f) Efficiencies introduced within the DLWC are to be reflected in reductions in water costs to the users.

(g) There should be no cross subsidies between regions or to head office.

(h) The cost of environmental measures and other external costs must be transparently reported.

4 Environmental Flows

(a) Environmental flows be based on scientific research arising from comprehensive and accurate data developed by or in consultation with River Management Committees or appropriate valley management groups representing key stakeholders.

(b) In determining environmental flows in a river system, due consideration and recognition is to be given to the socio-economic impact of that determination.

(c) No additional flows are to be released for environmental purposes until such time as dams have reached a minimum of 40% of their capacity.

5 Water Management

(a) Water management must provide for complete regional autonomy, customer involvement and the removal of cross subsidies.

(b) Each river valley should have autonomous management and be controlled by a commercially focused Board of Directors.

6 Asset Management

The irrigation delivery and drainage infrastructure is an important national and community investment which must be protected and whose use must be optimised, with costs shared equitably amongst all stakeholders and beneficiaries.

Definitions

None

Exceptions

None

Legislation

None

Related Documents

None

Policy History

Revision Number	Date of Adoption/Amendment	Minute Number
1	08/06/99	346
2	13/07/99	407
3	14/01/03	25
4	11/05/10	0142
5	26/08/14	0267

DRAFT Water - Position Statement

WS-CP-204 (PUBLIC POLICY)

1 Policy History

Revision No.	Council Meeting Date	Minute No.	Adoption Date
1	08/06/99	346	
2	13/07/99	407	
3	14/01/03	25	
4	11/05/10	0142	
5	26/08/14	0267	

2 Policy Objective

Irrigation water is the fundamental ingredient to the continuing success of the region. A guaranteed, transparent and affordable water supply is crucial for the future of the community and viability of irrigation industries.

Council will responsibly and transparently utilise its available water resources to sustain the community, business operations and the local environment.

Council will actively work with local water infrastructure operators, irrigator and business representative groups to enhance the volume and maintain regional water security for the Murrumbidgee Irrigation Area (MIA).

Council will actively advocate to both State and Federal Governments for water policy development that is informed by the views of various regional interest groups in the irrigation and complimentary industries.

3 Policy Statement

Working with the Community

Council will host an annual regional water forum and invite relevant stakeholders including irrigation and community based organisations. The purpose of the forum will be to receive input from these stakeholders and inform Council's future planning and advocacy. Other forums may be arranged as required to assist and guide Council's response to various NSW and Federal Government reviews and inquiries into water availability and management relevant to the MIA.

Council will request an annual meeting with (MI). Attendees will include Councillors, MI Board Directors and relevant senior staff of both organisations. The purpose of the meeting will be to discuss current and planned projects of the respective organisations. The meeting will also inform Council's strategic planning and infrastructure investment priorities.

Griffith City Council is a primary water supply operator and holder of water licence for Griffith and surrounding Towns and Villages. Council is also a member of the Riverina and Murray Joint Organisation of Councils (RAMJO).

In June 2020, RAMJO adopted a Water Position Paper which takes a whole of Basin, solutions approach to the subject of water security. (Refer Attachment A).

Griffith City Council endorses the RAMJO Water Position Paper and the key recommendations contained therein. Each of the recommendations are reproduced in this Griffith City Council Water Position Paper and Council makes supplementary comments in respect to several of those recommendations.

1. Water Market

RAMJO recommends a comprehensive review of the water market, which could include (but not be limited to): ownership, water security, capturing true costs of water transfers, telemetric reporting, and floodplain harvesting. Regulatory reform across multiple areas is necessary to ensure a nation-wide plan goes hand in hand with an efficient water market.

Griffith City Council Supplementary Statement:

During August 2019 the Government directed the Australian Competition and Consumer Commission (ACCC) to conduct an inquiry into markets for tradeable water rights in the Murray-Darling Basin. The interim report of the ACCC was released for public comment on 30 June 2020. The final report is to be submitted to Government by 30 November 2020.

Griffith City Council supports the continuation of water trading, including the maximisation of economic performance of irrigated agriculture, relying on fair and efficient water markets, underpinned by an environmentally healthy river system. Water trading, however, is not performing to these standards and reform is required. The market is complex and governance failure has created distrust amongst water users.

Reform of the governance framework under which water trading operates is required to address:

- Potential conflicts of interest involving water brokers and water-exchange brokers.
- Manipulation of the market by entities which exploit very limited regulation.
- Lack of transparency of the water market which benefits better resourced and professional traders.
- Regulatory reform to allow water trading between water consumers only.

- Improve communication of water allocation policies, river operations policy and real time data to irrigators.
- Rationalise/consolidate the number of government and regulatory bodies which oversee water policy. Remove duplication or overlapping in decision making.
- The topic of water "carry-over" has been a divisive issue amongst some irrigators. Greater transparency of how carry-over operates is required.

Griffith City Council participates in the temporary trade/sale of water. Council will only trade with water users. Water will only be traded to water users located within the Murrumbidgee Valley.

2. Impact of Water Prices on Agricultural Diversity

2a. RAMJO recommends that no one industry should be specifically protected. However, resources should be made available to develop an integrated and coordinated Agricultural Plan for the Murray Darling Basin (incorporating Valley Irrigation Plans) with a view to encouraging innovation, adaptation and an appropriate balance between permanent plantings and annual crops. The outcome of the plan should be to optimise productive yields, water use and economic return to communities and the nation. (Recommendation 8 expands further on innovation).

2b. RAMJO recommends supporting all agricultural and horticultural industries as diversification of domestically grown produce is important for the sovereignty of our nation. We recommend that by placing equal importance on resources for our region's ability to provide sustenance for an increasing population, and implementing protections against potential pest and disease that could decimate one or more of our industry sectors, we will be able to continue to play our part in Australia's food security.

2c. RAMJO recommends government develops criteria and mechanisms to enable flexible short-term emergency water management provisions where critical situations (e.g. drought, disease, pandemic) could result in major job losses, industry viability or national food security issues. (Recommendation 6 expands further on drought).

Griffith City Council Supplementary Statement:

The right of the individual irrigator to grow whatever crop they chose should be retained.

Griffith City Council will convene an annual water forum and invite relevant stakeholders including irrigation and community based organisations to discuss NSW and Federal Government water policy and monitor irrigation industry developments and constraints. The forum will inform Council's future planning and advocacy priorities.

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3. Environmental Flows

3a. RAMJO recommends that the suite of measures including stakeholder communication, spill event efficiencies, dilution flow reviews, loss reduction mechanisms, and optimising the delivery of water requirements be pursued to increase the current availability of water, and recognise unrealised gains as it relates to water availability.

3b. RAMJO further recommends that the recommendations related to improving reporting and communications by all regulatory bodies including Murray Darling Basin Authority, Commonwealth Environmental Water Holder, Department of Agriculture and Water Resources and Basin States from the 2019 'Basin Plan Monitoring, Evaluation and Reporting Capability Assessment' should be implemented.

Griffith City Council Supplementary Statement:

Griffith City Council supports additional public investment into existing water distribution infrastructure to reduce transmission losses thus increasing water available for environmental flows.

Griffith City Council supports both private and public investment in on farm programs that create better water efficiencies.

Compulsory "water buy backs" from the irrigation sector by the Commonwealth Environmental Water Holder has caused significant strain on business enterprises and the broader community. Griffith City Council does not support any form of compulsory acquisition of water entitlement from within the region.

Lake Wyangan at Griffith is an important cultural site for to the Wiradjuri people, the traditional owners of the land. Griffith City Council is working closely with the Griffith Local Aboriginal Land Council to have "cultural water" inflows secured for the Lake. Ideally the provision for "cultural water" should come from existing environmental acquisitions.

Council is also partnering with MI to improve water circulation at the Lake. These inflows together with Council investment at the site will assist in addressing significant environmental challenges such as blue green algae blooms and salinity.

Water policy and its management is very complex. The lack of transparency and clarity of information from regulatory authorities has continued to create distrust amongst irrigators and has had deleterious impacts on the regional business environment. A refocus on clear, consistent and regular communications will assist in restoring community confidence.

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4. Infrastructure – Now and Into the Future

RAMJO recommends the Federal Government undertakes to create a Sovereign Wealth Fund, complemented with a long-term plan incorporating a national approach to water infrastructure investment and with a view to sustaining our nation across all environmental, social and economic sectors now and for decades to come.

Note - This could be done in part via a review of unspent funding already allocated for delivering requirements of The Plan and an assessment of future investment requirements into the Murray Darling Basin infrastructure to better 'drought proof' and 'future proof' our Nation.

Griffith City Council Supplementary Statement:

Investment in new water storage and distribution infrastructure is urgently required to secure the future of communities and regional irrigation district's primary production.

Griffith City Council supports the work being undertaken by its Build More Dams Committee and the development of a Sovereign Wealth Fund to further investigate and fund the following projects:

- Burrinjuck Dam – Raise wall height to increase storage capacity.
- "Coffey" Scheme – Proposed by Engineer David Coffey to divert flows from the upper reaches of the Clarence River into the Murray Darling Basin.
- Bradfield Scheme – Diversion of flows in western Queensland and improving flows into the Murray Darling Basin.
- Continue research, development and implementation of cloud seeding projects to increase snow falls to capture more water in storage infrastructure.

5. Conveyance Water and Losses

RAMJO recommends a critical review of the accountability of conveyance losses including capturing true costs of buyer and seller trades, and intra/inter valley delivery costs, and below Barmah Choke infrastructure impacts. Evaporation mitigation and seepage reduction initiatives should be explored.

Griffith City Council Supplementary Statement:

Griffith City Council supports additional public investment in the MIA water transmission channel infrastructure to reduce seepage losses.

6. Drought

RAMJO recommends that the federal government, in collaboration with the states, leads the development of a comprehensive National Adverse Events Management Plan (incorporating a Drought Management Plan for the Murray Darling Basin) to plan for, mitigate and manage impacts to the food bowl. This should include forecast risks such as a changing climate, reduced flows and unanticipated events that impact food security and local employment.

Agreed actions in the plan should be resourced through a permanent fund (Sovereign Wealth Fund) and should facilitate relief and foster agricultural innovation.

Griffith City Council Supplementary Statement:

Griffith City Council supports increased investment in weather monitoring services by the Bureau of Meteorology (BOM) in the region to support better informed decision making by the regional irrigation industry.

7. Climate Change

RAMJO recommends that the federal government leads an evaluation of the impact of climate change on Basin inflows and losses to determine the feasibility of infrastructure and other interventions to stabilise and, if possible, enhance inflows and storage capacity into the Basin in the face of predicted future water scarcity.

Griffith City Council Supplementary Statement:

The possibility of a future with less water is noted. All steps possible to maintain water security and availability to regional industries and communities is supported.

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8. Agricultural Adaptation – Investment and Research

8a. RAMJO recommends that a Sovereign Wealth Fund be created to provide a permanent source of funding for drought relief, infrastructure development, system maintenance and adaptation.

8b. RAMJO in addition recommends that changes in both the superannuation and financial sectors are made to encourage investment into the Australian agricultural sector to ensure its future success and ability to remain globally competitive.

8c. RAMJO recommends that, with support from the Federal Minister, an interested NSW Government Organisation be nominated by the NSW Minister for Agriculture to partner with RAMJO and a regionally based NSW University within our region to collaborate on an application for a major Australian Research Council 'Centre of Excellence' grant.

8d) RAMJO in addition recommends, as part of this collaboration, that Innovation Hubs be introduced into our region as a cooperative model of research, innovation, and investment for the future sustainability of Australian agriculture.

Griffith City Council Supplementary Statement:

Griffith City Council supports Deakin University as the ideal candidate as a University partner to establish an Australian Research Council 'Centre of Excellence' and Innovation Hub. Deakin already has a presence in Griffith with the establishment of a Centre for Regional and Rural Futures (Irrigation Laboratory Group).

MI is based in Hanwood (Griffith) adjacent to the Deakin University facility. MI has considerable expertise in terms of management of irrigation water. There are synergies between these two organisations in terms of the future of irrigation.

Griffith City Council will work collaboratively with any cooperative model that focuses on research, development and extension of irrigation expertise to support a sustainable future for our community.

4 Definitions

None

5 Exceptions

None

DRAFT

6 Legislation

Various Commonwealth and State Legislation.

7 Related Documents

Riverina and Murray Joint Organisation of Councils – Water Position Paper 2020

8 Directorate

Utilities

DRAFT

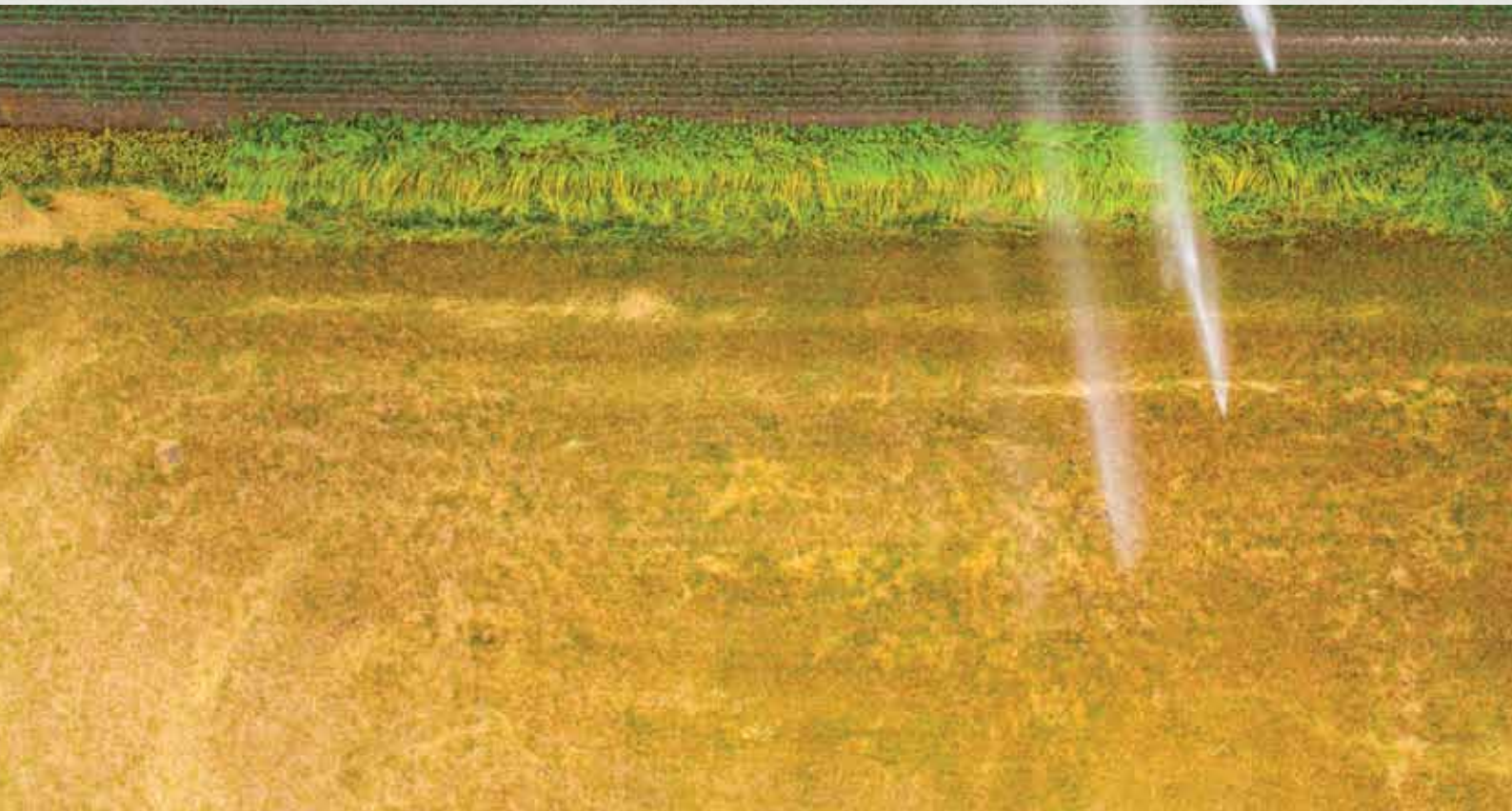


RAMJO
Water Position Paper

June 2020

Riverina and Murray Joint Organisation
Water Security Sub-Committee

RAMJO
Riverina & Murray Joint Organisation



RAMJO Board of Mayors at 1 June 2020



Cr. Kevin Mack
Albury City



Cr. Matthew Hannan
Berrigan Shire Council



Cr. Darryl Jardine
Carrathool Shire Council



Cr. Norm Brennan
Edward River Council



Cr. Patrick Bourke
Federation Council



Cr. John Dal Broi
Griffith City





Cr. Bill Sheaffe
Hay Shire Council



Cr. Paul Maytom
Leeton Shire Council



Cr. Chris Bilkey
Murray River Council



Cr. Ruth McRae
Murrumbidgee Council



Cr. Neville Kschenka
Narrandera Shire Council

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Foreword by the RAMJO Water Security Sub-Committee Chair

Regional leaders from the Murray and southern Riverina have observed the rapidly evolving debate over water in the Murray Darling Basin, and the confusion and frustration which comes with it. The RAMJO Water Security Sub-Committee, made up of Mayors, General Managers and expert Council staff from RAMJO, has worked together over the last twelve months to develop a series of solutions for our communities. In doing so, the Committee has attempted to take a whole-of-basin approach, rather than a parochial regional approach.

We acknowledge that the range of solutions presented in this paper will not completely solve the water issues which are impacting in serious and permanent ways. We do, however, anticipate that a suite of solutions such as these could quickly ease some of the crippling situations in our communities and others, and importantly could lay a foundation for a future built on innovation and adaptation. Both the short-term and longer-term options require the meaningful sustained support of federal and state governments.

I want to thank the Water Security Sub-Committee for their perseverance in bringing forward their communities' concerns and cooperating to conceive solutions for the greater good of the river system and the people who rely on it. They, together with the RAMJO Board, have recognised that as single voices, it's hard to be heard. Collectively we represent a large area of NSW, and a significant food producing area, feeding Australia as well as exporting for over 100 years.

I also thank the reader for taking the time to listen to our concerns and consider our solutions. We welcome feedback, comments and input into working together towards a sustainable series of solutions and changes to the water environment to enable all communities in the Basin to continue thriving for generations to come.



Mayor Chris Bilkey (Murray River Council)
Chair, RAMJO Water Security Sub-Committee

Communications and Engagement:

The Riverina and Murray Joint Organisation's intention of producing a Water Position Paper is to highlight our regions leaders current and future concerns about water security within our eleven member Councils communities and industries. This document is publically available on our website and initial enquires should be directed to Chair of the RAMJO Water Security Sub-Committee via contact details listed below.

www.ramjo.nsw.gov.au
Riverina and Murray Joint Organisation
P.O. Box 3572, Albury. NSW 2640
admin@ramjo.nsw.gov.au





Executive Summary

The Riverina and Murray Joint Organisation (RAMJO) is a cooperative of Councils, working together to address the big issues facing our communities.

RAMJO supports the value, commitment and vision that can only be delivered via a nation-wide approach to the coordinated management of our natural lifeline, the Murray Darling Basin. RAMJO agrees that the Commonwealth Government's Water Act 2007 and the Murray Darling Basin Plan (The Plan) is a mechanism for providing a coordinated approach to water use across the Murray Darling Basin's four states and the ACT. A national approach to managing Australia's water resource, by setting water use at an environmentally sustainable level, is supported by RAMJO.

RAMJO believes while The Plan is a step in the right direction, the water space is an extraordinarily complex one and there are many factors which need to be reviewed and better understood. Any policy, plan or project requires an ability to review and determine whether it is delivering on its intended outcomes, and whether there are any unintended impacts or external influences which may require an adaptation to the implementation of The Plan.

We have come together to share common concerns of our communities, **but more importantly to offer solutions to address these matters**. RAMJO's point of difference is that many of our townships, schools, manufacturers and businesses rely either directly on irrigated agricultural outputs, or indirectly on the industries which support them.

This position paper will provide a strategic overview of the issues RAMJO believes are hampering the delivery of an optimal water regime, and suggest directions in which enhancements might be made to enable a more effective delivery of water resources. In doing so, we recognise that some corrective issues are easier to address than others, and that some lie outside the scope of a single government entity.

Issues addressed herein include:

1. Water Market
2. Impact of Water Prices on Agricultural Diversity and Security
3. Environmental Flows
4. Infrastructure – Now and for the Future
5. Conveyance Water and Losses
6. Drought
7. Climate Change
8. Agricultural Adaptation – Investment and Research

Our wish is to contribute to a solution that balances environmental, social and agricultural needs that will sustain future generations for decades to come.

We seek a sustainable, apolitical, ethical, evidence based suite of solutions to ensure the optimal use of water across the Murray Darling Basin.



Key Recommendations

RAMJO Recommendation 1 – Water Market

RAMJO recommends a comprehensive review of the water market, which could include (but not be limited to): ownership, water security, capturing true costs of water transfers, telemetric reporting, and floodplain harvesting. Regulatory reform across multiple areas is necessary to ensure a nation-wide plan goes hand in hand with an efficient water market.

RAMJO Recommendation 2 – Impact of Water Prices on Agricultural Diversity and Security

2a) RAMJO recommends that no one industry should be specifically protected. However, resources should be made available to develop an integrated and coordinated Agricultural Plan for the Murray Darling Basin (incorporating Valley Irrigation Plans) with a view to encouraging innovation, adaptation and an appropriate balance between permanent plantings and annual crops. The outcome of the plan should be to optimise productive yields, water use and economic return to communities and the nation. (Recommendation 8 expands further on innovation).

2b) RAMJO recommends supporting all agricultural and horticultural industries as diversification of domestically grown produce is important for the sovereignty of our nation. We recommend that by placing equal importance on resources for our region's ability to provide sustenance for an increasing population, and implementing protections against potential pest and disease that could decimate one or more of our industry sectors, we will be able to continue to play our part in Australia's food security.

2c) RAMJO recommends government develops criteria and mechanisms to enable flexible short-term emergency water management provisions where critical situations (e.g. drought, disease, pandemic) could result in major job losses, industry viability or national food security issues. (Recommendation 6 expands further on drought).

RAMJO Recommendation 3 – Environmental Flows

3a) RAMJO recommends that the suite of measures including stakeholder communication, spill event efficiencies, dilution flow reviews, loss reduction mechanisms, and optimising the delivery of water requirements be pursued to increase the current availability of water, and recognise unrealised gains as it relates to water availability.

3b) RAMJO further recommends that the recommendations related to improving reporting and communications by all regulatory bodies including Murray Darling Basin Authority, Commonwealth Environmental Water Holder, Department of Agriculture and Water Resources and Basin States from the 2019 'Basin Plan Monitoring, Evaluation and Reporting Capability Assessment' should be implemented.

RAMJO Recommendation 4 – Infrastructure – Now and the Future

RAMJO recommends the federal government undertakes to create a Sovereign Wealth Fund, complemented with a long-term plan incorporating a national approach to water infrastructure investment and with a view to sustaining our nation across all environmental, social and economic sectors now and for decades to come.

Note - This could be done in part via a review of unspent funding already allocated for delivering requirements of The Plan, and an assessment of future investment requirements into the Murray Darling Basin infrastructure to better 'drought proof' and 'future proof' our nation.





RAMJO Recommendation 5 – Conveyance Water and Losses

RAMJO recommends a critical review of the accountability of conveyance losses including capturing true costs of buyer and seller trades, and intra/inter valley delivery costs, and below Barmah Choke infrastructure impacts. Evaporation mitigation and seepage reduction initiatives should be explored.

RAMJO Recommendation 6 – Drought

RAMJO recommends that the federal government, in collaboration with the states, leads the development of a comprehensive National Adverse Events Management Plan (incorporating a Drought Management Plan for the Murray Darling Basin) to plan for, mitigate and manage impacts to the food bowl. This should include forecast risks such as a changing climate, reduced flows and unanticipated events that impact food security and local employment. Agreed actions in the plan should be resourced through a permanent fund (Sovereign Wealth Fund) and should facilitate relief and foster agricultural innovation.

RAMJO Recommendation 7 – Climate Change

RAMJO recommends that the federal government leads an evaluation of the impact of climate change on Basin inflows and losses to determine the feasibility of infrastructure and other interventions to stabilise and, if possible, enhance inflows and storage capacity into the Basin in the face of predicted future water scarcity.

RAMJO Recommendation 8 – Agricultural Adaptation – Investment and Research

8a) RAMJO recommends that a Sovereign Wealth Fund be created to provide a permanent source of funding for drought relief, infrastructure development, system maintenance and adaptation.

8b) RAMJO in addition recommends that changes in both the superannuation and financial sectors are made to encourage investment into the Australian agricultural sector to ensure its future success and ability to remain globally competitive.

8c) RAMJO recommends that, with support from the Federal Minister, an interested NSW Government Organisation be nominated by the NSW Minister for Agriculture to partner with RAMJO and a regionally based NSW University within our region to collaborate on an application for a major Australian Research Council 'Centre of Excellence' grant.

8d) RAMJO in addition recommends, as part of this collaboration, that Innovation Hubs be introduced into our region as a cooperative model of research, innovation and investment for the future sustainability of Australian agriculture.







About RAMJO

'We accept that things can't go back to the way they were. However, we will continue to advocate on fundamental issues in order to create a viable future for water security in RAMJO communities and in the Basin generally'.

RAMJO Water Security Sub-Committee

For many years, the management of water has been a matter of major concern in the communities we represent. Councils often find themselves at the frontline of community frustrations, industry pursuits and State and Federal regulatory environments.

RAMJO covers over 80,000 square kilometres of land and 150,000[1] people, and together we represent a large portion of the Basin's communities.



Map of the RAMJO Region

150,780
Population
Median age 44 years

82,868
square kilometres

28,777
people aged 0 - 14 years

Steady Growth
in population, jobs and Gross Regional Product

2
regional centres and over 40 townships

29,422
people aged over 65 years

1 (Id.Community Demographic Resources, 2020)





About RAMJO

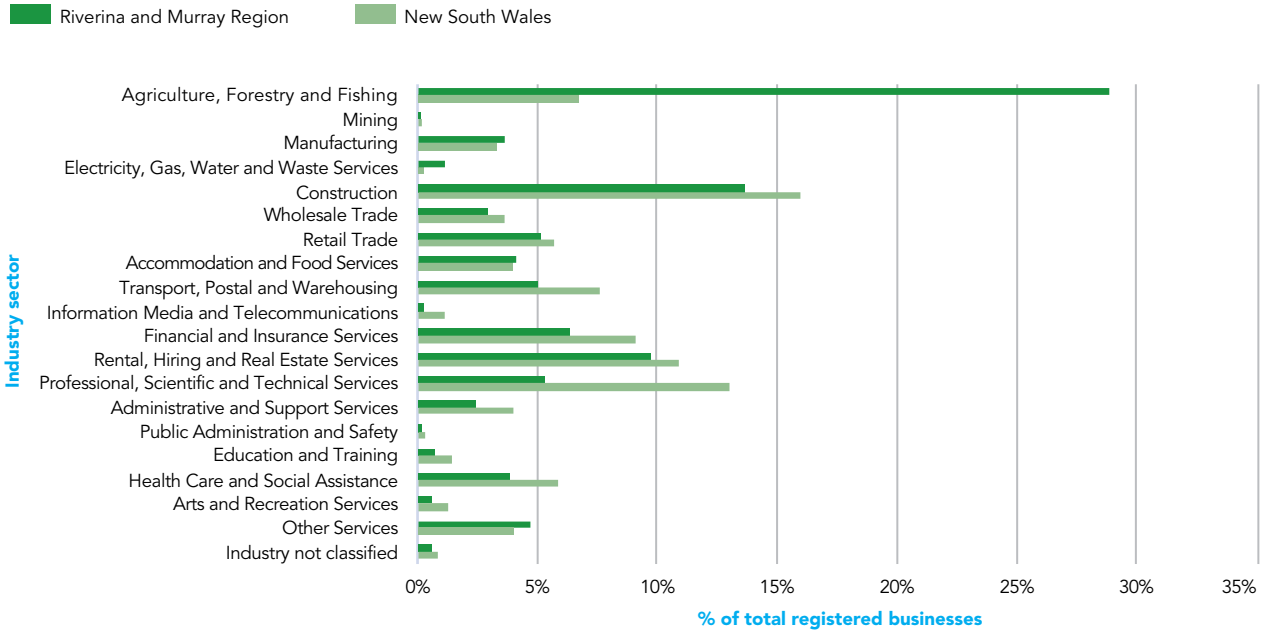
The Riverina and Murray Joint Organisation is a cooperation of eleven (11) Member Councils in southern NSW and operates under the NSW *Local Government Act 1993*. Member Councils include Albury City, Berrigan Shire, Carrathool Shire, Edward River, Federation, Griffith City, Hay Shire, Leeton Shire, Murray River, Murrumbidgee and Narrandera Shire.

The southern part of the region extends along the Murray River, from Albury City Council at the eastern end across to the Councils bordering on the far west, including Murray River and Edward River. The northern part of our region extends generally from Griffith City Council across to the regional Shires of Carrathool and Hay in the west.

RAMJO has a mix of large regional centres, medium sized irrigation based towns and industries in urban shires, through to a number of predominantly dryland farming shire areas, large in size but with a low population base.

The major regional population centres of RAMJO are Albury City (~ 55,000) and Griffith City (~ 28,000). There are many and varied small, medium and large-scale business across the region, with many stemming from an agricultural base. The region is home to several university campuses and educational facilities, transportation hubs and manufacturing businesses whilst maintaining a vital and important role as a food and fibre resource zone for Australian consumption and international exports.

Registered businesses by industry 2018



Source: Australian Bureau of Statistics / Id.Community Demographic Resources, 2020

Almost 30% of total registered businesses in RAMJO relate to agricultural pursuits.[2] Agriculture in the region varies, however a strong reliance on the irrigation infrastructure is evident. In 2018, the NSW Department of Primary Industries identified within the Riverina Murray Agricultural Profile that common agricultural industries include *'beef grazing, citrus and temperate fruit (apples, pears, cherries), through broad-acre cropping (cereal, oilseed and pulses), beef and sheep grazing, intensive poultry and pigs, irrigation cropping (cotton, rice, maize), to rangeland grazing in the west.'* Specifically noted is that *'Irrigated agriculture (cotton, rice, horticulture – citrus, grape, nuts and dairy) is a key feature of the region.'*[3]

2 (Id.Community Demographic Resources, 2020)
3 (Department of Primary Industries, 2018, p. 7)



As recently as 2019, the NSW Government acknowledged the importance of planning for our region (and immediately adjacent regions) with the release of the Planning for Agriculture in the Riverina Murray. The draft strategy notes the region's agricultural industry also *'supports an extensive value chain including major livestock centres, food processing transport, logistics and inter-modal transport hubs, cotton gins, canneries, packing and associated processing.'*[4]

According to the Commonwealth of Australia 2015, *'In 2012–13 irrigated agriculture accounted for 28 per cent of Gross Value of Agricultural Production (GVAP) but used less than one per cent of agricultural land.*[5] *(Note: 'GVAP - Gross value of agricultural production is the value at the point of sale i.e. where it passes out of the agriculture sector of the economy).'*[6]

Furthermore, a quarter of irrigated agricultural produce grown in New South Wales is located within the RAMJO region.[7] GVIAP (Gross Value of Irrigated Agricultural Production) refers to the *'gross value of agricultural commodities that are produced with the assistance of irrigation. The gross value of commodities produced is the value placed on recorded production at the wholesale prices realised in the marketplace.'* Notably, there was 20% increase in GVIAP to $8.6 billion for the Murray Darling Basin in 2017-18. Of significance is the cotton industry in the northern part of our region, where ABS calculated the GVIAP of cotton in 2017-18 to be $2.3 billion, up 52% on the previous year.[8]

Long-term inflow reduction and a distorted water market has severely impacted our region together with the commencement of the recovery of water for environmental purposes in 2008. In particular, the Murray Darling Basin Authority's (MDBA) Community Profiles as part of the Basin Plan Evaluation undertaken in 2017 states that 'While the effects of Basin Plan water recovery at the Basin or regional scale appear modest, feedback from stakeholders and community members suggests that the Basin scale analysis fails to detect the sometimes significant impacts which are being felt by smaller, irrigation dependent communities.'[9]

This is further supported by detailed statistics for our smaller irrigation dependent communities. For example, the townships of Finley, Berrigan, Deniliquin and Wakool have had a significant decrease in agricultural related employment of between 40-75% since 2001,[10] and Wakool has seen a decline in almost half of its community members.

While this decline can be attributed to a range of factors broader than water recovery and pricing, we recognise that the future success of these communities will require sustained cooperation of all three levels of government.

'While there is no irrigated production or water recovery from within the township of Deniliquin, there will be flow on effects to the township from the water recovery in the surrounding irrigation districts.'[11]

Murray Darling Basin Authority, 2018

These effects are being felt with further recent job losses in the areas of dairy and rice, with the sole exporter of Australian rice based in the Deniliquin and Leeton communities losing 230 jobs out of a total of 600 in the last 18 months.[12]

Additionally, RAMJO believes the current water market distorts the drivers for investment into agricultural pursuits preventing variety and encouraging mass permanent plantations. RAMJO is concerned that any reduction of diversification in domestically grown produce is a risk for the sovereignty of our nation. By placing importance on our region's ability to provide sustenance for an increasing population, and implementing protections against potential pest and disease that could decimate one or more of our industry sectors, we will be able to continue to play our part in Australia's food security.

RAMJO holds a unique position, in that the majority of Member Council communities have economies which are based on irrigated agriculture, or the secondary and tertiary businesses which support these industries.

Working together our Joint Organisation comprises the majority of irrigated agriculture in NSW, this means we are best placed to advise on current and future impacts on irrigated agricultural industries and our communities.

In particular, **our local government community leaders strongly believe** that an integrated long-term strategy across all areas of water (social, environmental, economic) is required to ensure our communities may grow and prosper.

4 (NSW Planning and Environment, 2019, p. 6)
5 (Commonwealth of Australia, 2015, p. 52)
6 (NSW Planning and Environment, 2019, p. ii)
7 (Australian Bureau of Statistics, 2019)
8 (Australian Bureau of Statistics, 2019)
9 (Murray Darling Basin Authority, 2018a)
10 (Murray Darling Basin Authority, 2018a)
11 (Murray Darling Basin Authority, 2018a)
12 (Grain Central, 2019)



In 2016, the Riverina Murray Region produced around

41%

of the State's

fruit and nuts,

a total value of

$342 million

The region produces over

23% of NSW poultry

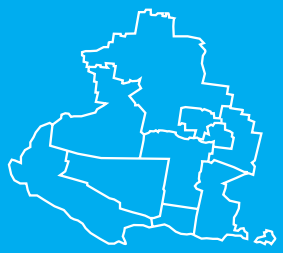
for slaughter.

The region produced around $420 million of vegetables in 2015-16 up from $134 million in 2010-11.

This represents around 26% of the State value of vegetable production, primarily from potatoes, melons and pumpkins

Over 82,000Km² of land area

The Agriculture, Forestry and Fishing industry had the largest number of total registered businesses in Riverina and Murray Region, comprising 28.9% of all total registered businesses, compared to 6.8% in New South Wales.



150,000 people

across the RAMJO region

Sheep production for meat and wool is spread across the region, and in 2016, contributed 26% to the State value of sheep meat production and 6% to the State value of wool production.

The Riverina and Murray Joint Organisation's

Gross Regional Product is estimated at $8.39 billion,

which represents 1.4% of the state's GSP (Gross State Product).

Pig production is focused in the Federation, Narrandera, Edward River and Murray River LGAs and in 2016 contributed

$150 million or 71%

of the State's value of

pig production.

Information from resources referenced within this document including RAMJO Community Profile ID.

The Riverina and Murray Joint Organisation's Statement of Strategic Regional Priorities can be found at www.ramjo.nsw.gov.au





Issues and Recommendations

1. Water Market

Description of Issue

The creation of an open water market is one of the foundations on which 'Chapter 12 – Water trading Rules' of The Plan is predicated, on the principle that water finds its way to the highest value use.[13] This principle has been common to the preceding Australian water reform steps including the Council of Australian Governments (COAG) Water Reform Framework (1994)[14], the National Water Initiative and Blueprint (2004),[15] and now the Commonwealth Water Act (2007)[16] and The Plan.

In practice, the commoditisation of water through "unbundling" from land use has led to unforeseen problematic outcomes, including corporate entities whose ownership of water is directed solely at profit-making through speculative trades. Of note, the media reported in February 2020 that *'A Canadian Government-owned pension fund could become one of the largest private owners of water entitlements in the Murray-Darling Basin from today, owning roughly 2 per cent of all its available water rights.'* [17]

The former Federal Water Minister, The Hon David Littleproud, raised this issue in May 2019 stating *'Fourteen per cent of those trades every year are from corporates and individuals who don't own land, so we've got to understand, is the market fit for future? Has it evolved into something that isn't equitable? Where is the market power? [And] Is it disproportionate?'*[18]

In addition, the trading of water along the river systems, particularly in the Goulburn, Murray and Murrumbidgee valleys, has produced enormous demands on delivery mechanisms for that water, placing constraint areas such as the Barmah Choke under unsustainable pressure. In June 2019, the Murray Darling Basin Authority acknowledged to ABC's Landline that the bank erosion (from too much water) needs to be considered to protect the upstream river environment of the Murray and the Goulburn rivers.[19]

RAMJO believes that the intention of the water market, and the ability for primary producers to on-sell their water allocation, was a move in the right direction for those in the agricultural industry to create flexibility and opportunities for supplementary farm income. However, these unintended consequences have distorted the market and have decreased the accessibility of water for producers and threatened their livelihood.[20] The Water Market Outlook released in August 2019 when water prices in most Murray Darling Basin (MDB) southern regions were *'trading in excess of $600 per ML'* states that the *'high water allocation prices are likely to continue.'* [21]

With this in mind, RAMJO strongly supports the current ACCC 'Murray-Darling Basin water markets inquiry'[22] into the operation of the water market and anticipates fair and reasonable recommendations. (Note: RAMJO's submission to this inquiry was made in December 2019).

13 (Commonwealth of Australia, 2012a)
14 (Environment Australia, Marine and Water Division, 1994)
15 (Department of Agriculture, Water and The Environment, 2004)
16 (Commonwealth of Australia, 2007)
17 (Jasper, 2020)
18 (Sullivan, 2019a)
19 (Jasper, 2019)
20 (Sullivan, 2019b)
21 (Department of Agriculture - Australian Government, 2019, p. 4)
22 (ACCC - Australian Competition and Consumer Commission, 2019)



RAMJO Recommendation 1 – Water Market

RAMJO recommends a comprehensive review of the water market, which could include (but not be limited to): ownership, water security, capturing true costs of water transfers, telemetric reporting, and floodplain harvesting. Regulatory reform across multiple areas is necessary to ensure a nation-wide plan goes hand in hand with an efficient water market.

DISCUSSION AND REVIEW

The RAMJO Water Sub-Committee has considered the following concepts and options which might address key elements of the **Water Market** that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

1. Water Market Options

1.1 **a) Ownership:** Evaluate possible mechanisms whereby water ownership is limited to those that have a valid use for such water, other than the realisation of profit through its purchase and sale. For example, water should only be able to be sold to and purchased by primary producers, industry or towns. This could be tracked and monitored via an ABN, licence linked to a physical water supply work, licence condition to hold allocation or some other identifying registration or number.

b) Ownership: Alternatively, water holders who are not attached to land or primary production could have a levy placed on the deliverable and infrastructure charges to generate revenue from temporary trade of that investment.

c) Ownership: That water licences currently owned by non-primary producers should be slowly recovered year-on-year, to prevent a collapse in water prices, which would negatively impact career farmers.

1.2 **Opt-In Scheme:** Evaluate a voluntary opt-in scheme for the transfer of general security entitlement water to a higher security water product at an appropriate ratio (particularly relevant for NSW).

1.3 **Capture True Costs of Water Transfers:** Implement the principle of 'user-pays' as per Part 2(d) of the Water Act 2007 to incentivise efficient water transfers (noting that every transaction has a conveyance cost that shouldn't necessarily be socialised). Implement a requirement whereby downstream transfers of water incur a cost to the buyer equivalent to the cost of transmission losses. (For example, a system not dissimilar to metropolitan transportation ticket zoning could be considered to determine cost of transmission losses).

1.4 **Inter-Valley Transfers:** Identify a percentage limit or absolute volume limit on inter-valley transfers to stabilise opportunistic trading, and a premium on those transfers once the limit is exceeded.

1.5 **Telemetric Reporting:** Accelerate the completion of telemetric monitoring of all extractors across the Basin including ground water.

1.6 **Consistency:** Introduce a mechanism for basin wide consistency on the regulatory environment for state water sharing plans and a potential three-year timeline for interstate consistency on carry-over water.

1.7 **Floodplain Harvesting:** Removal of unlicensed floodplain harvesting infrastructure and groundwater extraction across the northern Basin.





2. Impact of Water Prices on Agricultural Diversity and Security

Description of Issue

Permanent plantings, especially of nuts, have proliferated in the Murray and Murrumbidgee valleys in recent years. The viability of these plantings is based on the value of their product per megalitre of water consumed, which is significantly higher than traditional crops such as rice, and much higher than pasture-dependent agriculture such as dairying. The capacity of these permanent plantings to pay peak prices such as those seen towards the end of 2019 of $800 to $1,000 per megalitre for NSW Southern Basin allocation water has had an undoubted impact on the price of water. In current drought conditions that places the price of water beyond the reach of those growing annual crops.[23]

That said, these permanent plantings are not the only, or indeed the major, driver of current water costs. As in all free markets, it is an issue of supply and demand. No doubt these buyers are adding to the demand side of the equation, but the lack of supply is the major driver of price. The water is simply not available.

Permanent plantings have been a feature of the valleys listed above since the early 1900s. The Sunraysia region, in particular, has been a major long-term consumer of water for this purpose. Throughout that time, annual cropping and pasture production have been viable, albeit constrained by drought conditions when they occur.

When water does become more readily available, resumption of annual cropping will occur. It will be subject to the same price pressures that have always applied, including the price of water. There is concern the presence of these additional plantings will contribute somewhat to a higher price for that water.

In 2019, independent water policy advisors Aither stated '*It will be harder for non-permanent irrigation industries to access affordable water*' and that *'the recovery of additional environmental water from the consumptive pool would further reduce supply for all water users in the southern Murray-Darling Basin. This will both exacerbate the likelihood of permanent horticulture water demand exceeding available supply and also reduce the volume of water available for all irrigation industries in all future years.'*[24]

Further exacerbating this scenario is the recent investment in permanent nut plantings, which return a higher profit per hectare yield, which could make it unviable for other agricultural industries to compete for water. *'The boom in permanent plantation nut crops is driving water demand so high in the southern Murray Darling Basin that the price of water may become unaffordable for rice, dairy or even cotton irrigators.'*[25]

The Australian agricultural irrigated sector in the Murray Darling Basin is at risk of restricting industry diversity and compromising Australia's domestic food security based on water price alone.

RAMJO Water Security Sub-Committee

The Climate Council 2015 report on Australia's food security states *'Water scarcity, heat stress and increased climatic variability in our most productive agricultural regions, such as the Murray Darling Basin, are key risks for our food security, economy, and dependent industries and communities.'*[26]

Traditionally, most of the water that is used for annual cropping within RAMJO's 82,000km^2 footprint is sourced from above the Barmah Choke, via the MIL (Murray Irrigation Limited) or the Murray system, whereas the vast bulk of permanent plantings have been irrigated from below the Choke. Strain on the Choke to deliver on current demands is likely to hamper the further development of permanent plantings, unless a solution to the Choke issue is found and pursued. If future expansion of the permanent plantings can be achieved above the Choke, the pressure on the Choke could be stabilised and ultimately reduced.

23 (Jasper, 2019a)
24 (Aither, 2019)
25 (Foley, 2019)
26 (Climate Council, 2015)





RAMJO would also like to acknowledge that our Member Councils want to work strategically and collaboratively with stakeholders towards the vision of Australia's agricultural industry reaching the $100 billion farm gate output target outlined in the National Farmers Federation (NFF) 2030 Roadmap.[27] Key points addressed that align with RAMJO's Regional Strategic Priorities include increasing irrigated agriculture water use efficiency, increase workforce capacity and improving the psychological wellbeing of farmers and our entire communities. With sustainability in mind, RAMJO welcomes the outcome of the current governmental inquiry 'Making agriculture a $100 billion industry' launched in September 2019.



Mulwala Canal, December 2019.



Case Study: Innovation in the Rice Industry

Most of Australia's rice is grown within the footprint of the Riverina and Murray Joint Organisation. As an annual crop, rice is only grown when there is enough water available to be allocated from the Murrumbidgee River and Murray River systems in accordance to the Murray Darling Basin Plan. According to the Department of Agriculture, Water and the Environment, the Australian rice industry leads the world in water use efficiency. "From paddock to plate, Australian grown rice uses 50% less water than the global average. Water use per hectare continues to decline because of the industry's commitment to developing high yielding rice varieties that use less water, and the use of world's best management practices."

For more information about the rice industry, innovation and projects currently underway visit:

Rice Growers Association
https://www.rga.org.au

Department of Agriculture, Water and the Environment
https://www.agriculture.gov.au/ag-farm-food/crops/rice

27 (National Farmers Federation (NFF), 2019)





RAMJO Recommendation 2 – Impact of Water Prices on Agricultural Diversity and Security

2a) RAMJO recommends that no one industry should be specifically protected. However, resources should be made available to develop an integrated and coordinated Agricultural Plan for the Murray Darling Basin (incorporating Valley Irrigation Plans) with a view to encouraging innovation, adaptation and an appropriate balance between permanent plantings and annual crops. The outcome of the plan should be to optimise productive yields, water use and economic return to communities and the nation. (Recommendation 8 expands further on innovation).

2b) RAMJO recommends supporting all agricultural and horticultural industries as diversification of domestically grown produce is important for the sovereignty of our nation. We recommend that by placing equal importance on resources for our regions ability to provide sustenance for an increasing population, and implementing protections against potential pest and disease that could decimate one or more of our industry sectors, we will be able to continue to play our part in Australia's food security.

2c) RAMJO recommends government develop criteria and mechanisms to enable flexible short-term emergency water management provisions where critical situations (e.g. drought, disease, pandemic) could result in major job losses, industry viability or national food security issues. (Recommendation 6 expands further on drought).

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of the **Impact of Water Prices on Agricultural Diversity and Security** that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

2. Impact of Water Prices on Agricultural Diversity and Security Options

2.1 **Farmers Right to Farm:** maintain the freedom for each farmer to grow the produce they choose, with no preference or protection given to any industry.

2.2 **Incentivise:** That options be explored to incentivise any future permanent plantings being based above the Barmah Choke, rather than below it, to reduce pressure on the Choke.

2.3 **Innovation:** That resources be made available to encourage innovation and adaptation to reduce farmers' dependence on annual irrigated crops (see Section 8).

2.4 **Strategy:** That the Commonwealth Government considers an 'Agricultural Plan for the Murray Darling Basin (incorporating Valley Irrigation Plans)' complementing The Plan around water value, cost seepage and evaporation and treating water as a national resource, which must be managed as efficiently as possible.

2.5 **Protect National Food Security:** Realise the real threat of some domestic food industries becoming unviable in the face of low water security, a corruptible water trading market and lack of long-term policy support of our agricultural sectors.

2.6 **Emergency Water Management:** Government should develop criteria and mechanisms to enable flexible short-term emergency water management provisions where critical situations (e.g. drought, disease, pandemic) could result in major job losses, industry viability or national food security issues.



3. Environmental Flows

Description of Issue

RAMJO has identified a number of issues that are impacting the environment and our communities. Options for how these may be addressed are wide ranging and require thorough investigation.

Flows: RAMJO agrees with the prioritisation within The Plan for the environmental health of the Basin rivers. Nonetheless, the delivery of water for the environment has been marked by inefficiencies and inadvertent damage to the environment due to poor timing of flows. RAMJO believes that the environmental flows should mimic natural environmental conditions. For example, when the region is in a period of severe drought less environmental water should be allocated rather than a target volume.

Barmah Choke: The ongoing damage being incurred at the Barmah Choke is an example of inadvertent damage to infrastructure due to poor timing of flows. The Choke's current capacity of 7000ML/day[28] has been steadily diminished (historically 10,400ML/day[29]) by high sustained flows, causing erosion and bank slumping. The reduction in the Choke has resulted in overbank flows and unseasonal flooding events that incur greater conveyance losses and push volumes of water through other waterways or overland. This has ultimately have given rise to irreversible environmental degradation nearby.

The Barmah Forest (approx. 28,000ha) is one of 66 Australian 'Wetlands of International Importance' recognised under the 1982 Ramsar Convention.[30] Whilst the significance and preservation of the site and its flora and fauna is important to acknowledge on an international stage, it is the Yorta Yorta Nation Aboriginal Corporation (YYNAC), the Yorta Yorta Peoples and indeed all First Nations peoples with connection to culture across the Murray and Goulburn river regions that must also be considered in improving the current mismanagement of the Barmah Choke. Acknowledged in the YYNAC 2018-19 Annual Report are the concerns of Elders that poor timing of flooding leading to the degradation and loss of grasses for the innate cultural practice of weaving.[31]

The damage to this area and impact on our communities appears to be in conflict with the Basin Plan's Principle 7 - Working effectively with local communities (Section 8.39) – where *'Environmental watering should be undertaken having regard to the views of: a) local communities, including bodies established by a Basin State that express community views in relation to environmental watering; and b) persons materially affected by the management of environmental water.'*[32]

Downstream Volume Commitments: The capacity of the Darling catchment to deliver any environmental flows has been decimated by the drought. Even so, over-extraction in the northern reaches of the Darling and Barwon through poor metering, illegal extraction and flood plain harvesting has significantly exacerbated this problem. In addition to these issues, mismanagement and delays of the Menindee Lakes water releases which resulted in the 2017 fish kills is an example that highlights poor decisions which further exacerbate the problems faced in the Murray Darling Basin.[33]

Where the majority of upstream water flows come from either the Darling and/or the Murray systems, it seems unreasonable for one system to meet the downstream demands when the majority of the MDB is suffering with drought. RAMJO believes that the fixed downstream minimum commitment of 1850GL be maintained, however in years of significant drought declaration (such as currently being seen in NSW), each river system should be allocated a percentage to deliver. This would ensure that should drought affect the upper Basin, the southern Basin is not put under pressure to solely meet the downstream demands, and vice versa.

Salinity: Water Quality Australia defines secondary salinity as *'additional salt transported to the soil surface or waterways, increased due to altered land use such as vegetation clearance, poor land management, irrigation and industrial practices.'*[34] This issue has been a focus of managing the environmental health of the Murray Darling Basin since the commencement of the Salinity and Drainage Strategy of 1988-2000.[35] Since that time, many regional and on-farm mitigation efforts and interventions relating to irrigation-induced salinity have been successful in managing salt levels. This includes the use of more efficient farming, irrigation and drainage techniques, and redesigning the timing, volumes and locations of irrigation.[36]

28 (Murray Darling Basin Authority, 2019a)
29 (Natural Resources Commission, 2009)
30 (Ramsar, 2008)
31 (Yorta Yorta Nation Aboriginal Corporation, 2019)
32 (Commonwealth of Australia, 2012a, p. 78)
33 (Foley, 2019a)
34 (Water Quality Australia, Australian Government Initiative, 2020)
35 (Murray Darling Basin Authority, 2015, p. iii)
36 (Murray Darling Basin Authority, 2019)





Additionally, the salt interception schemes (SIS), such as the one at Buronga, have been successful in managing the year-on-year variability in salinity which is an inevitable characteristic of a dynamic river system and an ever changing climate.

The Basin Salinity Management Strategy 2030[37] (commenced in 2000 with a review in 2015) identifies the following practices to manage salinity levels in the Murray Darling Basin:

- flushing out salt with adequate water flows
- modifying land management practices
- acquiring water entitlements with the objective of returning more water to the environment.

'The results of managing salinity appear to be returning very low salt levels, therefore an opportunity may exist to review the strategy and the dilution flows in conjunction with downstream volume commitments. Given the variable nature of the river system, some flexibility relating to the use of these volumes must be considered.' RAMJO Water Security Sub-Committee

Storage: The storage of environmental water in dams generally does not damage the interests of irrigators. When spill events occur, and environmental needs have been met, consideration should be given to reducing environmental allocations immediately following the spill to permit more space for irrigators to secure water for the following years.

Reporting and Communication: The management of environmental water allocation is undeniably complex. Most observers don't understand it, and it remains a substantial challenge for those tasked with its delivery. The broader acceptance of the value of the environmental flows would be enhanced if there were an increase of layman reporting of its results, and the extent to which it is delivering on intended targets.

There is a widespread view within RAMJO communities that the bulk of the environmental flows are directed at maintaining the Lower Lakes and the Murray mouth in South Australia. Even if this is not true, improved communication regularity, simplicity and accessibility regarding Basin plan outcomes would alleviate some of these concerns. Furthermore, recommendations related to improving reporting and communications by all regulatory bodies including MDBA, CEWH, Department of Agriculture and Water Resources and Basin States from the 2019 'Basin Plan Monitoring, Evaluation and Reporting Capability Assessment' should be implemented.[38]

Environmental Water Buybacks: RAMJO believes the further buyback of water for environmental use is incompatible with agricultural practices, and that the more efficient use of the available environmental pool will lead to improved outcomes. Furthermore, a review of combining multiple allocations of water into one to deliver all intended outcomes should be considered (salinity, environmental and downstream).

RAMJO is of the opinion that better water management processes could be adopted by consulting with First Nations historical knowledge and practices of the river systems. Professor Sue Jackson of the MDBA's Advisory Committee on Social, Economic and Environmental Sciences (ACSEES) suggests that 'Management of environmental water in partnership with other parties presents Aboriginal people with an opportunity to access water and restore environments, as well as reaffirm and rebuild socio-ecological relationships and water-dependent livelihoods.'[39] At a local level, the 2018 Yanco Billabong Colombo Integrated Hydrological Flow Plan and subsequent engagement with communities presents as an example of the local water management collaboration required in our region.[40]



Mulwala Canal, December 2019. Photo commissioned by Berrigan Shire Council

37 (Murray Darling Basin Authority, 2015)

38 (Alluvium, 2019, pp. 3-5)

39 (Jackson & Nias, 2019)

40 (Yanco Creek and Tributaries Advisory Council, 2018)





RAMJO Recommendation 3 – Environmental Flows

3a) RAMJO recommends that the suite of measures including stakeholder communication, spill event efficiencies, dilution flow reviews, loss reduction mechanisms, and optimising the delivery of water requirements be pursued to increase the current availability of water, and recognise unrealised gains as it relates to water availability.

3b) RAMJO further recommends that the recommendations related to improving reporting and communications by all regulatory bodies including Murray Darling Basin Authority, Commonwealth Environmental Water Holder, Department of Agriculture and Water Resources and Basin States from the 2019 'Basin Plan Monitoring, Evaluation and Reporting Capability Assessment' should be implemented.

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of **Environmental Flows** that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

3. Environmental Flows Options

3.1 **MDB Stakeholder Communication:** That MDBA, Commonwealth Environmental Water Holder and State Government Departments provide a suite of transparency measures to demonstrate the effectiveness of its environmental water allocations and timing of flows across the Basin.

3.2 **Spill Event:** Deduct a percentage of spill event flows from the environmental entitlement holding.

3.3 **Dilution Flows:** Undertake a trial of reduced or eliminated dilution flows to evaluate the effect of such reductions on salt levels. In addition, that salinity management dilution flows be reviewed, with a view to allow for flexibility during low salinity years.

3.4 **Loss Reduction:** That allocation of funds (other than buying water) into reducing evaporative, seepage and overbank losses would be a more efficient and collaborative mechanism for delivering downstream requirements (see Section 6).

3.5 **Evaluation:** That consideration be given to a truly credible and independent evaluation of the most efficient way to deliver the environmental and downstream needs, given the massive evaporative losses incurred with that current system and the impacts of drought in NSW. This could include optimising the current irrigation infrastructure and systems which are already in place, such as piping and channels, or allocating a percentage to both the Darling and the Murray to deliver, allowing for flexibility in times of low inflows (such as drought).

3.6 **Integrated Water Approach:** Consider where opportunities could exist to deliver multiple outcomes from one allocation of water (i.e. dilution water also fulfilling the need of downstream entitlements or environmental flows).

3.7 **Investment:** That consideration be given to an appropriate level of investment to maximise the delivery of water, including environmental water, around constraints, and without further degradation of natural waterways through erosion. For example, greater efficiencies could be achieved through the use of other rivers (e.g. the Wakool and Edward) and through the existing irrigation networks such as Murray Irrigation Limited (MIL).

3.8 **Sustainable Diversion Limits:** That the recovery of the remaining 58GL of Sustainable Diversion Limits be put on hold until such time as all findings from relevant water-related enquiries and investigations are handed down.



4. Infrastructure – Now and for the Future

Description of Issue

Major opportunities exist within the Basin to enhance The Plan's viability through properly planned infrastructure investment and development. The focus of this paper so far has been on the inability to meet current water requirements, however serious consideration is essential to address future needs of our nation.

The establishment 100 years ago of the extensive irrigation systems that have nurtured our Basin's productivity was a truly nation-building enterprise. In the hundred years since, the productivity and water efficiency of the Basin's agriculture has been able to keep pace with our needs. We have reached a point now where the impacts of the growing population and the constraints of drought and climate change demand a new investment to sustain that agricultural base.

RAMJO supports the recommendation by the Australian Government's own Infrastructure Australia Audit on future demand, specifically the need for long term planning to address intricate issues as below:

- the implications of demographic change for Australian society generally and government finances;
- the scope and direction of technological change;
- changes in the global economy;
- the future of work, e.g. where people work, incomes, and part-time work; and
- the prospect of climate change, and uncertainty as to how the international community will respond.[41]

The unhealthy state of the Darling is an example and is primarily a result of drought, climatic changes and poor water management. However, infrastructure initiatives involving dam development in its northern tributaries, and, longer term, realistic consideration of river redirection could make its flows longer lasting and more frequent. Similarly, the winding back of flood plain harvesting would further enhance flows, particularly if supported by downstream dam infrastructure.

It's important to note that every bit of water that the Darling does not deliver for the environment and for South Australia's requirements needs to be supplied through the Murray and its other tributaries. Therefore, while it is recognised that significant investment into dams and the water infrastructure in the southern MDB has already been undertaken, the upper catchments which feed into the Darling would benefit from greater investment into water management systems, including dams. While this would not necessarily directly benefit the RAMJO communities, it would reduce the pressure placed on the southern Basin to meet downstream requirements where the Darling has been unable to due to drought.

Although welcomed investment into our region's transportation infrastructure, the Australian Government's 2019 'Building Our Future - Delivering the Right Infrastructure for a Growing Nation'[42] $100B budget over ten years compares poorly to the $1.5B commitment via the National Water Grid Authority[43] for significant water infrastructure investment. One might reasonably ask if the future security of Australia's major food producing Basin is not worth substantially more federal government attention and subsequent capital investment.

41 (Australian Government, 2015, p. 13)

42 (Infrastructure Australia, 2019)

43 (National Water Grid Authority, 2020)





Major Irrigation Areas

'The irrigation schemes were designed to drought proof inland Australia and provide food security for the nation.

The Murrumbidgee Irrigation Area (MIA) was established in 1912 following construction of Burrinjuck Dam, on the Murrumbidgee River, Berembed Weir and associated canals.

Murray Irrigation Area and Districts were constructed between 1933 and 1964 when the NSW Government undertook the development of the state's largest irrigation network known as the Murray Irrigation Area, fed by the waters of the Murray River.

Coleambally Irrigation Area was developed in the 1950s and uses water from the Murrumbidgee River.

The irrigation areas were governed by the State Government until privatisation in 1990s.'

(NSW Planning and Environment, 2019, p. 7)

RAMJO is supportive of improvement to any of the four main categories of water infrastructure to increase the efficiency of water use in the Murray Darling Basin:

- ***Improvements directed at water retention and greater water reliability, such as dams, evaporation reduction techniques***
- ***Improvements directed at the reduction of water losses to the system, such as Lock Zero***
- ***Improvements directed at the more efficient transmission of water within the system***
- ***Improvements directed at increasing total inflows into the Basin***

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Mulwala Canal, December 2019



RAMJO Recommendation 4 – Infrastructure – Now and the Future

RAMJO recommends the federal government undertakes to create a Sovereign Wealth Fund, complemented with a long-term plan incorporating a national approach to water infrastructure investment and with a view to sustaining our nation across all environmental, social and economic sectors now and for decades to come.

Note - This could be done in part via a review of unspent funding already allocated for delivering requirements of The Plan, and an assessment of future investment requirements into the Murray Darling Basin infrastructure to better 'drought proof' and 'future proof' our nation.

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of planning for **Infrastructure - Now and the Future** that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

4. Infrastructure – Now and the Future Options

4.1 **National Approach:** Approach the Murray Darling Basin as a national piece of infrastructure, and undertake investment and asset maintenance as such.

4.2 **Infrastructure Evaluation:** That the federal government undertakes a comprehensive evaluation of future infrastructure investment requirements which secure both the environmental and productive requirements of the Murray Darling Basin for decades to come.

4.3 **Alternative Arrangements:** Evaluate alternative management options for South Australian flows, including Lock Zero construction and a revised approach to the use of the barrages.

4.4 **Upper Murray Darling Infrastructure:** Significant investment in infrastructure such as dams to improve total water availability in the MDB and reduce increasing reliance on lower basin rivers for downstream requirements.

4.5 **Sovereign Wealth Fund:** That the federal government give consideration to the establishment of a permanent fund (Sovereign Wealth Fund) directed at the maintenance of the security of the sector in times of drought, or the investment into maintaining and improving the infrastructure supporting the industries and population which relies on the Murray Darling Basin.

4.6 **Return Flow Credits:** Where harvested storm water is returned to rivers via infrastructure (i.e. roads and footpaths), credits for the infrastructure owners could be considered.





5. Conveyance Water and Losses

Description of Issue

There is a lack of transparency in how conveyance losses are calculated and where the financial liability for these losses should be accrued. Furthermore, the transfer of water allocations from upstream to downstream sites has placed significant strain on river systems to deliver the water, particularly with respect to areas of constraint, such as the Barmah Choke.

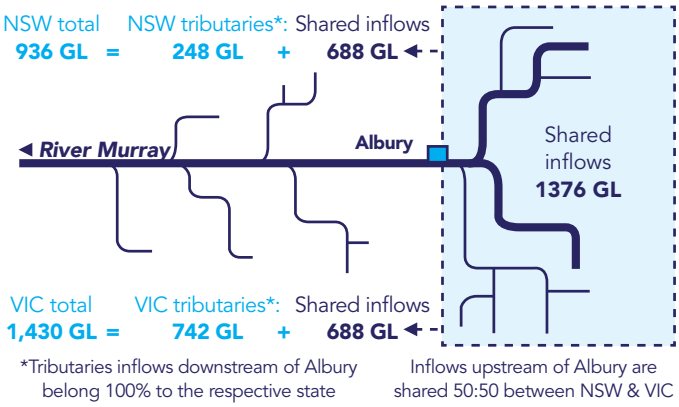
Released by the MDBA in March 2019, the report 'Losses in the River Murray System 2018–19' states 'The conveyance sharing arrangements mean that in some years, when there is a high discrepancy between Victorian and New South Wales water availability (such as 2018–19), the states cover half the conveyance losses despite one state receiving a larger proportion of the water being delivered. Under the Murray–Darling Basin Agreement both states have a responsibility to supply water to South Australia.'[44]

State share

In line with Basin agreement, **conveyance losses between Hume Dam and the SA border are shared equally by NSW and Victoria.**

For 2018-19 Victoria's share of total inflows are 60 per cent, compared to 40 per cent for NSW. The **higher inflows for Victoria mean the state has more water available** for entitlement holders.

River Murray System inflows June 2018 to January 2019.



Source: Summary Report (Murray Darling Basin Authority, 2019b) p.2

44 (Murray Darling Basin Authority, 2019b)





RAMJO Recommendation 5 – Conveyance Water and Losses

RAMJO recommends a critical review of the accountability of conveyance losses including capturing true costs of buyer and seller trades, and intra/inter valley delivery costs, and below Barmah Choke infrastructure impacts. Evaporation mitigation and seepage reduction initiatives should be explored.

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of **Conveyance Water and Losses** that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

5. Conveyance Water and Losses Options

5.1 **Capture True Costs of Water Transfers:** Implement the principle of 'user-pays' as per Part 2(d) of the Water Act 2007 to incentivise efficient water transfers (noting that every transaction has a conveyance cost that shouldn't necessarily be socialised). Implement a requirement whereby downstream transfers of water incur a cost to the buyer equivalent to the cost of transmission losses. (For example, a system not dissimilar to metropolitan transportation ticket zoning could be considered to determine cost of transmission losses).

5.2 **Inter-Valley Transfers:** Where water is sold inter-valley, the upstream licence holder should be liable for all or part of the conveyance loss. This would reduce the inter-valley sales for profit (e.g. upstream at Goulburn Valley down to Lower Murray).

5.3 **Incentivise:** Consideration might be given to incentivising upstream transfers, particularly when it involves a transfer from below a constraint to above a constraint. In circumstance where the establishment of adaptive agriculture in upstream areas is inhibited by the cost of land, incentivisation could stimulate such investments while reducing conveyance losses.

5.4 **Reduce Losses:** Evaluate the cost/benefit ratio of investment in the further reduction of conveyance losses via channel lining, utilisation of routes around constraints and evaporation mitigation (noting that using irrigation infrastructure is significantly more efficient than natural water ways).

5.5 **Transparency:** Improvement of conveyance losses reporting and calculations would greatly reduce frustrations regarding the current water management arrangements.

5.6 **Sustained Future Flows:** Undertake an evaluation of means to add to inflows (e.g. water redirection), retain inflows (e.g. further dam construction) and reduce system losses via efficiency options mentioned in this paper.



6. Drought

Description of Issue

Droughts are a part of the Australian landscape, and an integral part of the challenge faced by communities and the agricultural sector. Nonetheless, the severity and duration of recent droughts is without precedent and is consistent with the scientific consensus that climate change is, at least in part, contributing to these conditions. According to the Bureau of Meteorology *'Rainfall for the 22 months from January 2018 to October 2019, and for the 34 months for January 2017 to October 2019, has been the lowest on record for the Murray–Darling Basin and for New South Wales.'*[45] Undoubtedly, droughts will continue to be a feature of the climatic conditions in the Basin.

Drought conditions over the last 20 years have served to complicate the debate around the efficacy of The Plan. During the Millennium Drought there were extended periods of low rainfall not dissimilar to the current conditions.[46] The perceived inadequacies of The Plan and the impact of drought conditions are often conflated. Much of the modelling by the MDBA has been based on 'average' or historical inflows, which bear little resemblance to the inflows in recent years, or to those predicted by MDBA in the next 10 years. The NSW Office of Environment and Heritage's Murray Murrumbidgee Climate Change Snapshot predicts an increase in maximum temperatures in the near future by 0.4 to 1.0 degrees Celsius.[47] With a one-degree increase the average annual inflow in the Southern Basin could decrease by up to 22 percent. [48]

Clearly, drought affects dryland farming and irrigated agriculture alike, increasing RAMJO communities risk of bushfire and associated impacts.[49] While recognising the devastating impact of drought on dryland agriculture, the focus of this document is on irrigated agriculture and associated industries. As mentioned in Section 3, RAMJO believes that environmental flows should mimic natural environmental conditions, including when a region is in a period of severe drought.

The effect of drought on irrigated agriculture is twofold. The reduction of rainfall combined with the scarcity or non-availability of water for irrigation renders much traditional agriculture impossible or unsustainable. Farming dependent on irrigated pasture (such as dairying) is the most vulnerable, and is evidenced by the almost total disappearance of dairying from within the RAMJO footprint. Those remaining are doing so while incurring year-on-year losses. Other high-value annual crops such as rice and cotton are also heavily constrained by drought, low or zero water allocations and high water prices. These crops become a year-by-year proposition, and the infrastructure supporting their processing is under growing economic pressure, with kick-on impacts on the communities in which they are situated.[50]

Horticulture, represented by permanent plantings such as nuts and annual high value crops such as tomatoes, is the most resilient sector based on economic return. However, this sector presents its own challenges in terms of water and food delivery, constraints and land use as discussed throughout this paper. An example includes a company bordering the RAMJO region that successfully produces almost 50% of the processed tomatoes consumed in Australia.[51] Whilst a thriving industry that RAMJO supports, we are concerned about the proliferation of high intensity water crops downstream and the impact this may have on water pricing and infrastructure.

45 (Bureau of Meteorology, 2019, p. 4)
46 (NSW Office of Environment and Heritage, 2014)
47 (NSW Office of Environment and Heritage, 2014)
48 (Murray Darling Basin Authority, 2018a)
49 (NSW Office of Environment and Heritage, 2014)
50 (Grain Central, 2019)
51 (Sampson, 2016)



RAMJO Recommendation 6 – Drought

RAMJO recommends that the federal government, in collaboration with the states, leads the development of a comprehensive National Adverse Events Management Plan (incorporating a Drought Management Plan for the Murray Darling Basin) to plan for, mitigate and manage impacts to the food bowl. This should include forecast risks such as a changing climate, reduced flows and unanticipated events that impact food security and local employment. Agreed actions in the plan should be resourced through a permanent fund (Sovereign Wealth Fund) and should facilitate relief and foster agricultural innovation.

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of **Drought** preparedness that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

6. Drought Options

6.1 **National Adverse Events Management Plan:** That the federal government, in collaboration with the states, leads the development of a comprehensive National Adverse Events Management Plan (incorporating a Drought Management Plan for the Murray Darling Basin) to plan for, mitigate and manage impacts to the food bowl. This should include forecast risks such as a changing climate, reduced flows and unanticipated events that impact food security and local employment.

6.2 **Recognition:** That the federal government acknowledges the critical role played by Murray Darling agricultural production and its contribution to Australia's GDP and food security.

6.3 **Waste Water:** Consideration of reusing water based on international precedent and minimum standards.

6.4 **National Leadership:** That the federal government provides meaningful and lasting leadership through the fund to the development and maintenance of innovative agricultural practices that will be sustainable in a water-scarce environment (See Recommendation 8).





7. Climate Change

Description of Issue

In unity with the Commonwealth of Australia[52] position, it is RAMJO's view that the overwhelming scientific evidence for climate change as a real phenomenon now is undeniable, and that its impact will continue to worsen into the foreseeable future. For the Murray Darling Basin, it will be manifested by increased average temperatures, more severe weather events, increased risk for disasters, shifts in seasonal rainfall patterns and progressively reduced inflows into the Basin. [53]

'The dry conditions experienced over the past two years (2017-18) were exacerbated by record-high temperatures. Unusually warm temperatures have dominated Australia's climate in recent years, and particularly so in the drought affected regions'. Bureau of Meteorology, Australian Government[54]

The Murray Darling Basin Authority (MDBA) has forecast a reduction of inflows in the Murray Darling Basin catchments by 2030.[55] The impact of this reduction is further exacerbated by the predicted increase in demand on water by 2031 across the Nation.[56] This reality alone makes the issue of optimal use of water within the Basin of critical importance and underlines the need to evaluate future measures to supplement inflows and reduce system losses.

Infrastructure projects such as dams, flow redirection and modifications in the lower Murray lie outside the scope of The Plan's brief however constitute a challenge that must be addressed in a coordinated approach by state and federal governments.

The Bureau of Meteorology has acknowledged at the 2018-19 summer was the warmest on record. Its modelling reveals that the period April to August 2018 was the highest on record for potential evaporation across the Murray Darling Basin[57] and this may continue. According to the MDBA 'The atmosphere is warming, rainfall patterns are shifting, and extreme weather events such as storms, droughts and floods are becoming more frequent and intense.'[58]

Furthermore, the current water storage infrastructure does not allow for predicted decreases in inflows due to changing weather patterns and periods of drought. The combination of decreased inflows into the MDB, combined with population increases[59] and demand for water, paints a clear picture that critical intervention relating to water capture, storage, management and quality will need to be addressed to ensure all who rely on the MBD network can see a future where water security is guaranteed.

52 (Commonwealth of Australia, 2017)
53 (NSW Office of Environment and Heritage, 2014)
54 (Bureau of Meteorology, 2019, p. 11)
55 (Murray Darling Basin Authority, 2019c)
56 (Australian Government, 2015)
57 (Bureau of Meteorology, 2019)
58 (Murray Darling Basin Authority, 2019c)
59 (Australian Bureau of Statistics, 2008)



RAMJO Recommendation 7 – Climate Change

RAMJO recommends that the federal government leads an evaluation of the impact of climate change on Basin inflows and losses to determine the feasibility of infrastructure and other interventions to stabilise and, if possible, enhance inflows and storage capacity into the Basin in the face of predicted future water scarcity.

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of **Climate Change** readiness that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

7. Climate Change Options

7.1 **Changing Patterns:** Undertake a science-driven comprehensive long-term evaluation of the likely impact of climate change on Basin inflows and drought frequency and severity to assess water availability in the decades to come.

7.2 **Water Storage:** Additions to the number and capacity of dam storages across the Basin to address water scarcity now and into the future.

7.3 **Flow Redirection:** Investigation of mechanisms to redirect flow from northern river systems into the Murray Darling catchment.





8. Agricultural Adaptation – Investment and Research

Description of Issue

The introduction of the MDBA and its reclamation of operational water for environmental purposes, together with the effects of drought and climate change, have changed the farming landscape in the Basin permanently. As addressed in Section 7, the impact of climate change will ensure that the environmental change will continue to occur and as a result adaption to our agricultural practices will be necessary. There will undoubtedly be good years and bad years, but the long-term trend will, without major infrastructure investment, continue towards a future of slowly declining water inflows and subsequent reduced availability of water in our region.

Adaption: According to the Australian Department of Agriculture, Water and the Environment 'Changes in climate are expected to impact on Australia's $22 billion crop industry in a number of ways. Increased temperatures may change the locations where crops can be grown, and elevated CO2 levels could affect crop growth and grain yield. Research is underway across the country to develop crop varieties as well as cropping practices for the future.'[60]

Many opportunities exist to improve the efficiency and equity of the current Plan, some of which have been addressed in this document. Nonetheless to be competitive, agricultural practice in the Basin, and particularly within the irrigated agricultural sector, will need to adapt to increased productivity with the same or less resources. The decline of the irrigation-dependent dairying sector in the Goulburn and Murray valleys is a harbinger of the agricultural landscape. The impact of this change is not localised, with consequences seen right across the region we represent and beyond albeit varying in nature from one place to another.

'The stark reality is that the availability of water will decline, and as a consequence, its price will rise as seen already in the current market. In such circumstances the inevitable question must be asked 'How can my business generate additional revenue to offset this rising input cost?'

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Innovation: There are green shoots of innovation occurring in many places across the RAMJO footprint. The growing of higher value irrigated specialty crops such as teff is being attempted. There are numerous examples of horticultural enterprises being used to add value to water use. In addition, there are instances of local value adding to traditional crops.

However, these attempts at innovation are sporadic, uncoordinated and lack scientific and financial support. In the face of this inevitable change, the protection of our productivity and livelihoods, and ultimately of Australia's food security, demand a more comprehensive targeted investment to secure that future. Agencies such as the CSIRO, federal and state departments of agriculture, regional universities and agricultural colleges, and the federal government, in concert with local farmers, major industries and entrepreneurs could collectively nurture an innovation-led adaption to a more water-scarce agricultural future.

Investment: A 2014 Parliamentary report into foreign investment in Australian agriculture stated that 'There is a widespread acknowledgement among researchers and policy makers that in the decades ahead, the demand for Australian food products from the emerging economies will grow substantially. Accordingly there is a sense of urgency that Australia needs to be ready to accommodate higher trade and higher investment in domestic agriculture, to make it highly successful and globally competitive'.[61]

With this in mind, foreign interest in agricultural land in Australia equates to approximately 13.5%. According to the Australian Tax Office's Register of Foreign Ownership of Agricultural Land 'The total area of agricultural land in Australia with a level of foreign ownership has risen from 50.5 million hectares at 30 June 2017 to 52.6 million hectares at 30 June 2018.'[62] Furthermore, 2017 ABS figures show that 'The volume of water entitlements owned by businesses with some level of foreign ownership was 12.5% of the total volume of water entitlements for agricultural purposes in Australia.'[63]

60 (Department of Agriculture, Water and the Environment, 2019)

61 (Kali Sanyal Economics, 2014)
62 (Australian Taxation Office, 2018)
63 (Australian Bureau of Statistics, 2017)





Whilst mechanisms in place attempt to balance foreign investment interest in agricultural and water resources in a transparent manner, RAMJO would like to see a significant increase in domestic investment in our industries. In 2018, whilst Treasurer, the current Prime Minister The Hon Scott Morrison commissioned a Parliamentary Report titled 'Super-charging Australian Agriculture'. The report identified 'the cause of low superannuation investment in Australian agriculture is complex and contested (and that) no one single barrier—regulatory or otherwise—is to blame.' The report concluded that 'recommendations outlined will hopefully lead to change in both the superannuation and financial sector and the agricultural sector, to bring about mutually-beneficial relationships going forward.'[64]

Commissioned by the then Treasurer, The Hon Scott Morrison the report titled 'Super-charging Australian Agriculture' recommends:

'that the Australian Government engage with Council of Australian Governments councils and agricultural peak bodies to develop an information and promotional platform on the benefits of investing in Australian agriculture. This platform could then be promoted to the superannuation and investment sector, both domestically and internationally, to supplement the existing international promotion undertaken by Austrade.'

Super-charging Australian Agriculture Inquiry Committee, 2018



Case Study: Soil moisture data probes

Riverine Plains Inc is an independent farming systems group dedicated to improving the productivity of broadacre farming systems in north-east Victoria and southern New South Wales. Soil moisture information is highly valued by farmers in dry seasons and drought, and the group established a network of weather stations and soil moisture probes in southern NSW, with several within the Federation Council region. However climate and soil type varies across the region, casting doubt on the relevance of information provided by the existing probes. It is proposed to install a further 5 soil moisture probes (at approx. $5K per probe) within Federation Council across areas and soil types not currently represented. The probes will be located on farming land with farm owners signing a memorandum of understanding (MOU) which clearly outlines obligations and ongoing requirements. All information / data from the probes once installed will be available for public access via the Riverine Plains website. https://riverineplains.org.au/

For more information on this and other drought-related projects, visit:
https://www.federationcouncil.nsw.gov.au/News-Media/1M-Drought-Funding-15-Projects

64 (Parliament of Australia, 2018)



RAMJO Recommendation 8 – Agricultural Adaptation – Investment and Research

8a) RAMJO recommends that a Sovereign Wealth Fund be created to provide a permanent source of funding for drought relief, infrastructure development, system maintenance and adaptation.

8b) RAMJO in addition recommends that changes in both the superannuation and financial sectors are made to encourage investment into the Australian agricultural sector to ensure its future success and ability to remain globally competitive.

8c) RAMJO recommends that, with support from the Federal Minister, an interested NSW Government Organisation be nominated by the NSW Minister for Agriculture to partner with RAMJO and a regionally based NSW University within our region to collaborate on an application for a major Australian Research Council 'Centre of Excellence' grant.

8d) RAMJO in addition recommends, as part of this collaboration that Innovation Hubs be introduced into our region as a cooperative model of research, innovation and investment for the future sustainability of Australian agriculture.

DISCUSSION AND REVIEW

The RAMJO Water Security Sub-Committee has considered the following concepts and options which might address key elements of **Agricultural Adaptation – Investment and Research** that are sub-optimal as they relate to our communities and industries.

Please note: The Sub-Committee acknowledges that some options may not be possible to implement or desired by various stakeholders.

8. Agricultural Adaptation – Investment and Research Options

8.1 **Support Further Domestic Investment:** As per the recommendations of Super-charging Australian Agriculture, changes in both the superannuation and financial sectors to encourage investment into the agricultural sector is required to ensure its future success and ability to remain globally competitive.

8.2 **Sovereign Wealth Fund:** Evaluate the establishment of a sovereign wealth fund to provide a permanent source of funding for drought relief, infrastructure development, system maintenance and adaptation.

8.3 **Visionary Leadership in Adaptation:** Create and maintain a major investment commitment to the creation of science-driven hubs throughout the Basin to maximise the productivity from water use. Such hubs would necessarily provide leadership in adaptation and innovation, and involve partnerships with tertiary institutions, agricultural bodies and industry. All levels of Government to work with stakeholders of irrigated water to understand the legacy, value and future of primary producing industries to our nation and its people.

8.4 **Centre of Excellence:** Collaborate with federal and state government to apply for Australian Research Council Centre of Excellence funding for long-term innovation of Australia's agricultural sector. Use inputs from this model to create informed decision making regarding the future of agricultural industries in Australia.

8.5 **Innovation Hub:** Introduce Basin-wide innovation and adaptation hubs as part of a collaborative hub and spoke model, which are located adjacent to regional education centres, industries and townships where a strong culture relating to that industry exists. Partner with Commonwealth Government (CSIRO, Department of Agriculture, Department of Foreign Affairs and Trade), state government, tertiary institutions, industry hubs and communities to invest in a "Centre for Excellence".

Final Word

RAMJO is a collective of local government representatives with one voice and a solution-focused approach to engaging with state and federal government bodies. We seek to build a mutually beneficial relationship with these bodies to act as a 'sounding board' on matters and recommendations listed in this document, and to create the opportunities for the important issues of our communities to be heard and understood.

Our vision of having 'a thriving region abundant in sustainable communities' is only possible with collaboration with likeminded organisations and industry stakeholders that are prepared to advocate for real and meaningful change to drive improved solutions for the major issues in our regions.

Importantly, we recognise that the RAMJO footprint is only part of the Basin, and strategies that strengthen agriculture in our region must be developed in the context of the health of the entire Basin.

We wish to contribute to solutions that balance environmental, social and agricultural needs that will sustain future generations for decades to come.

We want to see our communities thriving and with a future they can work towards and build upon.

RAMJO Water Security Sub-Committee



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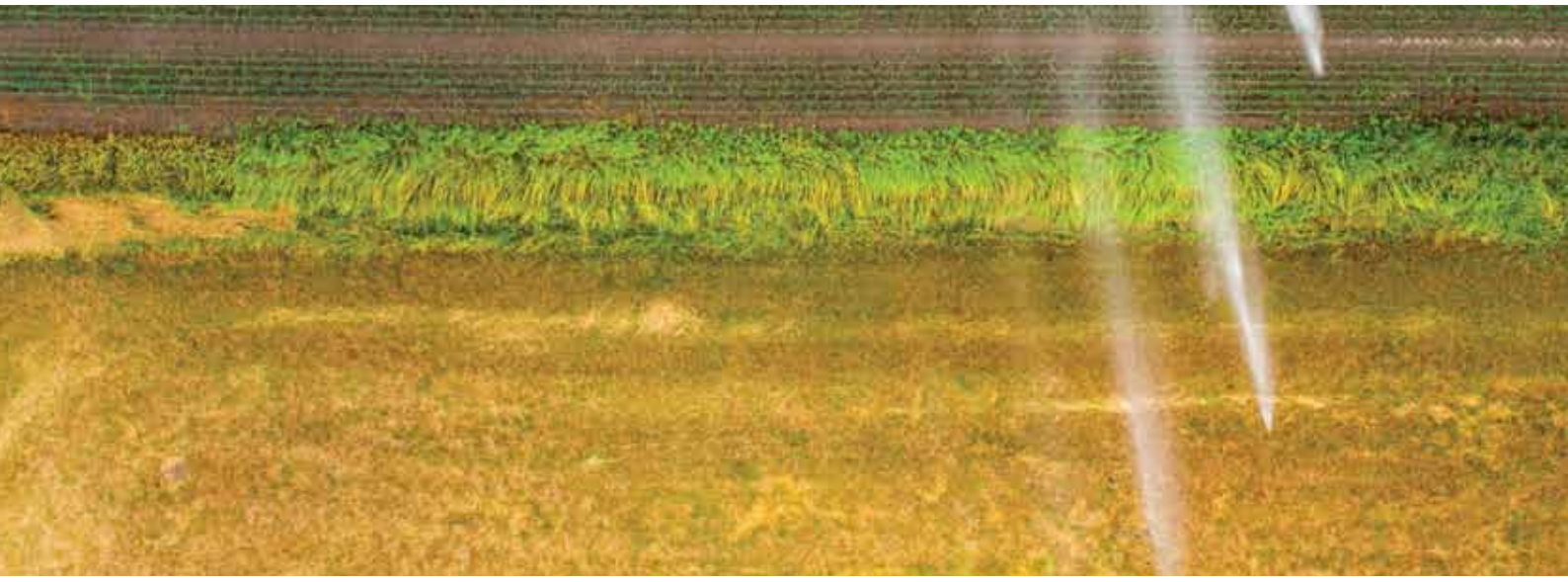
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