



Ricegrowers Limited

Submission to the ACCC inquiry
into water markets in the
Murray-Darling Basin
Issues Paper

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1 Executive Summary

1.1 Overview

Ricegrowers Limited, trading as SunRice (**SunRice**), welcomes the opportunity to provide this submission in response to the Issues Paper published by the ACCC as part of its inquiry into Water Markets in the Murray-Darling Basin (**Inquiry**).

This Inquiry raises issues of critical importance for the future of many industries and communities in regional Australia. We therefore welcome the ACCC's review of the regulatory settings and conduct that currently affect the efficient and equitable operation of these key water markets.

Rice growers — on which both Australia's domestic and export rice industries and many regional communities depend — rely heavily on obtaining access to adequate and affordable water entitlements. Accordingly, it is important that, as part of its Inquiry, the ACCC considers the particular impacts on rice growers and the Australian rice industry that arise from:

- a lack of market transparency and information in relation to water ownership, entitlements, use, supply and demand;
- the failure of governments and the Murray Darling Basin Authority (**MDBA**) to deliver on commitments made during the development of the National Water Initiative, and on which growers and communities have relied;
- the operation of NSW allocation policies which has exacerbated current issues facing growers. This is namely because allocations are not made early enough, the allocation "hierarchy" means general security entitlements are the last to be met, and there is a lack of transparency around decision-making;
- regulatory and institutional settings and reporting practices that have developed over time, but which are uncertain, not appropriately reviewed or consulted on, and which may distort market behaviour; and
- market conduct such as speculative trading which can drive up the price of water and make it more difficult for rice growers to obtain affordable, firm and timely access to water for rice production.

1.2 Policy commitments have not been met

While the terms of reference for the Inquiry do not expressly call for it, SunRice believes it is critical for the ACCC to consider the historical policy context and administrative decision-making that has influenced the evolution of water markets in the Murray-Darling Basin.

The 2004 National Water Initiative was developed with the objective of providing greater certainty for investment and the environment and to underpin the capacity for Australia's water management regime to deal with change responsibly and fairly.¹ As part of these reforms — implemented by the *Water Act 2007* (Cth) (**Water Act**) — the Federal Government made a number of firm commitments to protect water entitlements. This included that:

- general security water entitlements would not be eroded;
- water entitlements would not be affected by others' carryover;
- there would be increased certainty and reliability of water access for users; and

¹ Section 5, Intergovernmental Agreement on a National Water Initiative.

- the government would bear the risks associated with reduction in water entitlements arising from government policy (including the Murray-Darling Basin Plan).

Families, businesses and communities in the Riverina have made significant life decisions based on these commitments. However, these commitments have not been met, with the consequence that the Murray-Darling Basin Plan has failed to deliver the outcomes expected by many people and communities.

Appropriate governance and regulatory settings have also not been established. Instead, a series of policy decisions by successive governments have:

- resulted in speculative trading of water rights, which has pushed up the temporary water price for actual water users;
- encouraged hoarding of water (including through the introduction of carryover rules) — this has further driven up prices for growers and also resulted in an under-utilisation of water entitlements;
- exacerbated conveyance losses by not factoring these losses into water allocations. The increased delivery of water to the lower reaches of the Murray Darling Basin — in particular, below the Barmah Choke — has increased conveyance losses which are not factored into the operation of the allocation “hierarchy”. This has disproportionately impacted Murray and Murrumbidgee general security rights holders whose entitlements are the last to be fulfilled; and
- contributed (in conjunction with environmental factors such as drought) to a significant reduction in the amount of water available for general security rights holders. Again, this has had a disproportionate impact on agricultural industries that rely on general security water, such as rice.

Contrary to the commitments made by government (and the basis on which many growers supported previous water reforms), these policies have created winners and losers and there has been a significant erosion of some water rights. New South Wales and Victorian growers now have far **less** security and reliability of access to water. These growers have limited recourse in a system that is overly opaque and complex. Some growers and other water users are experiencing material financial losses. Meanwhile non-water users may be able to exploit the water markets to their advantage.

These issues have been compounded by lack of communication, transparency, governance and accountability in how policy settings and decisions have impacted industries that rely on access to water. For example:

- there have been significant changes made to, and delayed reviews of, NSW Water Sharing Plans, without appropriate consultation with stakeholders (see section 5.1 below). This is leading to rushed decision-making and approvals without proper consultation or consideration of the impacts;
- there is limited transparency around the actions and decisions of market participants, including significant participants such as Snowy Hydro, which can have a major impact on water supply conditions for other users (see section 4.1 below); and
- there is limited coordination across a range of local, State and Federal bodies. Local councils in NSW can approve permanent plantings without having regard to the impact on the water market, which further highlights the lack of an effective policy framework and coordinated approach to manage these issues.

These issues are serious, and have the potential to threaten the continued viability of the rice industry and other annual irrigated industries in New South Wales, and the regional communities they support.

1.3 Recommendations

The need for immediate action to address the issues set out above cannot be understated. A coordinated response which adopts a holistic approach and encompasses both policy and regulatory changes is urgently required.

SunRice generally supports the submissions and recommendations made to this Inquiry by the Ricegrowers' Association of Australia Inc. (**RGA**), and the submissions made by other commodity industry bodies to State ministers in recent letters (**Attachments 1 – 3**).

In particular, SunRice supports calls for:

- (a) improved market transparency for growers and water users. This requires the provision of accurate, up-to-date and accessible water market information (such as via a single online platform water register) to enable more informed decisions about water prices and purchases;
- (b) halting any further work on Water Resource Plans and Water Sharing plans — and halting the granting of new approvals for permanent plantings — until the issues raised in this Inquiry (and other current inquiries) are fully resolved;
- (c) updated policy and regulatory settings to ensure:
 - (i) general security rightsholders have certainty and confidence in the system, that reliability of yield will be reinstated and maintained, and that their existing water rights will not be further eroded;
 - (ii) clear roles and responsibilities for the various regulatory bodies and local, State and Federal government bodies involved in water policy issues. This includes greater transparency and certainty in relation to policies and processes, and improved coordination and consistency of regulatory arrangements and enforcement;
 - (iii) clear, simple and regular reporting by relevant agencies – and consultation in accordance with agreed timeframes when it comes to amending policies and water plans — in each case to ensure appropriate accountability by all levels of government, including the MDBA;
 - (iv) harmonisation of the rights and obligations attaching to the various water entitlement products available in each region of the Murray-Darling Basin;
 - (v) the Productivity Commission's 2010 recommendation is implemented to clarify how the risk assignment provisions in the Water Act apply to the reductions in water availability under the Basin Plan;
 - (vi) conveyance losses are factored into water entitlement trades downstream and carryover water used downstream;
 - (vii) incentives are reduced for the hoarding of carryover allocations which drive up prices and distort the market to the detriment of actual water users. This could be achieved, in part, by announcing general security entitlements earlier in the season; and
 - (viii) brokers are licensed, registered and properly regulated.

These actions and recommendations should be considered and implemented as matter of urgency as the impacts on farmers and businesses are being felt more acutely.

SunRice also supports calls for further investigation by the ACCC as to whether there is any conduct by water traders and speculators that may be distorting water markets.

2 SunRice and its involvement in water markets

2.1 Overview of SunRice

SunRice is an integrated rice food company and one of Australia's major branded, processed-food exporters with revenue of approximately A\$1.2 billion per annum.

SunRice formed in 1950 when rice growers from the Riverina region of New South Wales pooled funds to establish a co-operative and build a rice mill in Leeton. SunRice corporatised in 2005 and listed on the National Stock Exchange of Australia in 2007. In April 2019, SunRice listed on the Australian Securities Exchange, with a unique dual class share structure, under which only rice growers can hold A Class shares, giving growers control over director elections and constitutional changes.

SunRice has over 2,000 employees, a large proportion of whom are located in regional areas including the Murray-Darling Basin during normal rice production years.

SunRice processes Riverina-grown rice into value-added premium and branded products for sale in Australia and overseas. SunRice products are exported to around 50 countries around the world.

As a major participant in the Riverina region, SunRice contributes close to \$400 million annually in normal rice production years. This is through supporting growers, employing approximately 600 full-time employees and investing significantly in Riverina manufacturing and processing facilities, as well as rice research and development with New South Wales and Federal governments.

Rice growers are crucial to the success of SunRice. New South Wales growers both control SunRice and provide high-quality rice paddy which, after providing value-adding services at its facilities in the Riverina, SunRice exports to approximately 50 markets around the world. This supports SunRice's reputation in Australian and global markets and underpins the strength of its brands.

The size of the annual rice crop from the Riverina is driven mainly by the availability and cost of water sourced from the Murray-Darling Basin. Accordingly, water availability and affordability is critically important to the success of SunRice, rice growers and the rice industry in Australia.

2.2 Overview of NSW rice industry currently

Growers in the NSW Riverina region (predominantly in the Murrumbidgee and Murray Valleys) form the majority of the Australian rice industry's supply base. In CY18, rice was supplied by 628 growers across 935 Riverina farms².

NSW rice production in the last 20 years has been highly variable (from almost zero production up to over 1 million tonnes annually) depending on water availability³. Riverina rice production in particular is heavily dependent on the availability and affordability of irrigation water from the Murray-Darling Basin. Lack of availability and high prices for irrigation water can have a significant negative impact on the quantity of rice produced.

Substantial increases in the price of irrigation water for rice production⁴ have led to some farmers deciding not to plant rice. This significantly reduces the volume of the rice crop in any year.

² Ricegrowers Limited, SunRice Information Memorandum, March 2019, page 31.

³ RMCG, *Recognising underuse in the Southern Basin- and taking action*, November 2019, page 1.

⁴ Now up to around \$550 per megalitre for average monthly allocation prices in July 2019, from \$230 per megalitre in July 2018 (Aither Report, *Water supply and demand in the Southern Murray-Darling Basin: an*

The C19 rice crop (at 54,000 tonnes) is currently the second lowest on record. However, it is expected that the C20 crop will be even lower. This is a result of continued drought, low general security water entitlements and high temporary water pricing, which have significantly impacted SunRice's operations and rice growers, including approximately 230 full-time equivalent job losses since November 2018. SunRice believes the impacts of drought, low water availability and high water prices have been exacerbated by water policy settings.

SunRice sought to support rice growers in C20 by offering record-high fixed price contracts to encourage the commercial growing of rice and to ensure that seed and paddy stock is replenished. However, many growers have decided not to take up fixed price contracts,⁵ and lower water availability and high water prices continue to be key concerns for rice planting in C20 and for the future of the NSW rice industry.

SunRice Chairman, Laurie Arthur, recently stated that:

"The drought has certainly been a big factor in reducing what will be grown, but there are a whole series of man-made factors and policy settings also hurting general security irrigators, and our communities.

*Water users have a lot of money invested in general security entitlements but somehow the characteristics those licences represent have been lost - they're yielding less."*⁶

SunRice's CEO, Rob Gordon, has also stated that:

"Due to concerns, particularly from rice growers, around the allocation of General Security water in the southern Murray-Darling Basin, SunRice commissioned an external report from RMCG to investigate these issues.

Whilst the water reform process has been immensely complex, this report identifies unintended consequences associated with the rollout of the Murray-Darling Basin Plan and with the NSW Government's water allocation practices.

The report shows those consequences include over recovery of water, significantly eroding the rights of General Security NSW irrigators, who grow rice and other annual crops.

*We have every confidence that if changes are made to policy settings to address these inequities, the rice industry will be able to bounce back as it did following the Millennium Drought."*⁷

The RMCG report is set out in **Attachment 4** to this submission.

assessment of future water availability and permanent horticulture irrigation water demand, Friday 7 June 2019, available <https://www.aither.com.au/water-markets-report-2018-19/>)

⁵ <https://www.abc.net.au/news/2019-11-26/100-more-jobs-to-go-at-sunrice/11739704/>

⁶ <https://www.stockjournal.com.au/story/6513322/murray-darling-savings-overkill-cripples-crops-and-jobs/?src=rss>

⁷ SunRice Media Announcement, dated 26 November 2019 "SunRice announces further downscale of Riverina manufacturing facilities"

3 Market trends

3.1 Overview

A key concern confronting the rice and other annual irrigated industries in the southern connected basin is the apparent erosion of yield from General Security water entitlements in the Murray and Murrumbidgee valleys.

To assist in its consideration of these challenges, and its assessment of their impact, SunRice has commissioned a report by RMCG into the impact of the Murray-Darling Basin Plan (see **Attachment 4**). The RMCG analysis of MDBA reports shows that in the nine-year period between 2009 and 2019, the average annual water use in NSW of combined Murray and Murrumbidgee General Security and Supplementary Entitlements reduced by 1,650GL to 46% of the long-term average, at a time when there have been good inflows in the system.⁸

This so-called “underuse” relative to the cap has contributed to lower annual harvest volumes, as growers either opt not to plant for a season, or exit their businesses altogether. This is, in part, a consequence of the changing fundamentals of the water market, government policy settings and the implementation of the Murray-Darling Basin Plan, which together have altered participants’ behaviour — to the detriment of particular types of growers and water users.

These distortions to supply and demand have created incentives for speculative water trading behaviour and favour permanent plantings to the detriment of rice and other annual irrigated cropping industries. In particular, there has been a disproportionate impact on general security water entitlement holders in the Murray and Murrumbidgee valleys since the Murray-Darling Basin Plan commenced.

The RMCG report found that “*in recent times, the available water appears to have taken a step change downwards, and this appears to be much lower than anticipated, even allowing for climatic conditions and government water recovery programs.*” The report also found:

- a significant reduction in the volume of water used by irrigators in the Southern Murray-Darling Basin, which is greater than can be explained by seasonal conditions since the end of the millennium drought; and
- that increased permanent plantings (e.g. for tree nut crops) has increased pressure on general security water entitlements.

In practical terms, these trends have seen water being diverted to other areas and uses, including for environmental purposes, and also to sustain increased demand for permanent plantings (e.g. almonds) below the Barmah Choke, which have also led to conveyance losses. These trends have come at the expense of the rice and other seasonal cropping industries and the communities they support.

General security water entitlement holders have also seen significant erosion of their rights over the last 10 years, driven by:

- the increased delivery to the lower reaches of the Murray-Darling Basin of vast quantities of water purchased in the upper reaches. This has exacerbated conveyance losses which are not factored into the allocation hierarchy in NSW and have resulted in Murray and

⁸ RMCG Report, *Recognising underuse in the Southern Basin- and taking action*, November 2019, page 2

Murrumbidgee general security water right holders bearing a disproportionate impact as their allocations are reduced; and

- forced changes to irrigator behaviour in relation to carry-over provisions (including for example “parking” Murray Valley general security carry over water under Victorian low reliability licences), caused by the unintended consequences of government allocation policies and non-transparent decision-making.

4 Market transparency and information

4.1 Lack of information makes it difficult for growers to make water purchase decisions

The Murray-Darling water market is understandably complex, being an interconnected system that involves entitlements, allocations, trading and carry-over of different types of rights and products akin to complex financial products, and yet there is not an equivalent level of regulatory and compliance oversight as to how these products are used, sold or traded.

This means that transparency is critical — not only for the operation of an efficient market for water rights, but also for small and medium-sized farming operations to manage their participation and investment in the water market. The efficient functioning of markets is based on ready access to information, enabling market participants (including growers who depend on access to annual water entitlements) to make informed purchasing, carry-over and trading decisions. Conversely, unequal access to information undermines confidence as the market participants who are privy to the information hold an unfair advantage — contributing to an imbalance in bargaining power.

The level of transparency and disclosure of water market information is not currently sufficient to support a properly functioning market. SunRice understands from growers that there is only limited information available about how rights are created, what volumes are available, who is acquiring water, and how it is being used, consumed or traded. There is currently no water holdings / entitlements register or platform. In addition, the information that is available is difficult to access and understand, and is not always updated in real time. As a result, it provides limited useful insights or information for water users.

Transparency is further undermined by the lack of visibility of the water usage and release activities of major infrastructure operators such as the Snowy Mountain Hydro-electric Scheme. These information deficiencies harm competition for water entitlements. Growers have expressed concerns that this lack of transparency leaves the market open to manipulation by traders and speculators. For example, rice growers have anecdotally indicated to SunRice that some traders have been known to manipulate volume to deliberately distort the market and increase price.

SunRice supports measures that will improve water market information availability and transparency and that will remove the potential for market distortion. In particular, SunRice supports RGA’s proposal for a central online trading platform showing all available allocations and entitlements for sale in each trading zone and water system in real time. All commercial trades and participants should be required to go through the central platform, and all buy and sell offers (without multiple listings for the same parcel) should be listed to show true market depth. The platform should also disclose the type of trade (for example, whether the trade is for a forward lease product, or a spot market trade) and require explanations for \$0/ML trades.

A platform of this nature would improve pricing, liquidity and transparency, enabling buyers and sellers of water rights to be confident that these rights are being priced competitively by brokers and traders.

SunRice considers that the water exchange platform operated by Murray Irrigation Limited⁹ is one of the few examples of a platform that offers market participants valuable and real-time information transparency in respect of water trading activities (including prices and volumes) within the Murray Darling Basin. Replicating a platform of this type on a region-wide basis is one option that would be very likely to improve the level of transparency, and therefore overall market outcomes, for the trading of water.

5 Regulation and institutional settings

The evolution of various governments' water policies, regulatory and institutional settings over the past two decades has had a significant impact on the rice growing industry in New South Wales. It is also not clear that the objectives of the National Water Initiative and Water Act are being met, or that the current regulatory settings are delivering desired or appropriate outcomes for water users.

In particular, SunRice is concerned about the erosion of growers' general security water rights, and the lack of consultation, transparency and accountability when it comes to proposed changes to regulatory plans and reporting. This is particularly the case in relation to the lack of consultation on proposed amendments to Water Resource Plans and Water Sharing Plans, both of which have a material impact on the water rights of end users, particularly in the Murray-Darling Basin.

The regulatory framework for the Murray-Darling Basin, and water products themselves, are understandably complex. However, it is not as clear as it should be. Currently the piecemeal and uncoordinated approach of the various regulatory agencies is hindering sensible and effective policy execution. Given the interconnected nature of the Murray-Darling Basin system, a clear and coordinated approach across all levels of government is crucial.

5.1 Regulatory policies and processes are complex and not transparent

Over the past 15 to 20 years, there has been a lack of transparency around water reform policies and the regulatory processes involved. SunRice considers that there needs to be greater clarity as to the roles and responsibilities of the various governmental bodies involved in the regulatory framework, and their policies and processes to aid regulatory transparency and accountability.

In addition to the State Ministers and their respective Departments for Water and/or the Environment, regulatory responsibilities are divided between the MDBA, local governments and the ACCC. In addition, other federal agencies such as the Australian Tax Office, ABARES, the Bureau of Meteorology and the Productivity Commission all have input into water policy and planning.

Each of these bodies has different responsibilities and roles (including to their respective state-based or local constituents) which can lead to unclear and potentially conflicting objectives and priorities. A clearer delineation of the roles and responsibilities of these bodies would help to facilitate market and regulatory transparency. Greater coordination between entities responsible for regulation and those responsible for policies and planning decisions — and clear, timely communication to growers — is also essential to limit the number of administrative decisions that lead to adverse and/or disproportionate outcomes

⁹ <https://www.murrayirrigation.com.au/exchange-tables/>

for the growers, businesses and communities that rely on the availability of adequate water resources.

For example, in 2015 thousands of rice growers missed an opportunity to purchase water during an inter-valley trade¹⁰. This was due to poor communication which meant that growers were not sufficiently aware that the trade window had opened and would be closed in one day. It also potentially enabled only those with intimate knowledge of the system to benefit from the trading windows at the expense of growers.

There is also a clear need for greater and more timely consultation in relation to matters that have the potential to affect growers and grower communities. For example, the RGA, in its letter to the NSW Minister for Water dated 31 October 2019, raised concerns that despite industry requests, there has been little to no consultation with industry in the development of the NSW Department's draft 2020 Water Sharing Plan, despite the fact that it contained many material changes to the 2016 plan. SunRice understands there were also significant delays to the review of the Water Sharing Plans by the NSW Department of Primary Industries.

SunRice understands from the public Long-Term Water Plans that the proposed changes in the 2020 Water Sharing Plan are intended to increase planned environmental water and to redirect environmental water to South Australia. While this may be intended to deliver Murray-Darling Basin Plan objectives for high flows over the South Australian border, the RMCG Report found that more water than was committed is already being delivered to South Australia.¹¹ This is likely to lead to a further reduction in the amount of water available for consumption, particularly for users in the southern river systems of the Murray-Darling Basin.

It is problematic that these regulator reports are delayed, and that recommendations continue to be proposed without consultation with industry groups. This is particularly so given the significant detrimental impact on irrigators and growers who rely on water from the Murray-Darling river systems for their livelihood.

SunRice appreciates that there are a large number of stakeholders with different views on how the Murray-Darling Basin should be managed. However, there has been a lack of proper oversight or regular and timely reporting in relation to such a strategic and critical asset as water. For this reason, a wide-ranging consultative inquiry — like that currently being undertaken by the ACCC — is important to ensure that policies and processes that directly involve participants in the water market are developed, implemented and reported on transparently.

SunRice considers that there needs to be clear, simple and regular reporting and consultation in compliance with agreed timeframes by agencies when it comes to amending policies and water plans, to ensure appropriate accountability by all levels of government and the MDBA. For example, there has arguably been too much focus on water buybacks as an outcome, where there should be greater focus instead on actual water usage in the Murray-Darling Basin and the practical, on-the-ground impacts of that usage.

To that end, SunRice also supports an immediate halt to any further work on Water Resource Plans and Water Sharing Plans until the critical issues raised in this Inquiry (and other current inquiries) are fully resolved.

SunRice also supports clearer communications by the NSW Department of Primary Industries to water purchasers about the triggers for, and timing of Inter-

¹⁰ See <https://www.theland.com.au/story/3565661/ricegrowers-slam-dpi-water/>

¹¹ See pages 14, 17 and 22 of the RMCG Report.

Valley Trades so that they have transparency and predictability when making water purchase decisions.

5.2 Governments should clarify and address harm to growers from the erosion of water rights

The rice growing industry has been significantly impacted by various regulatory plans and regimes proposed by governments over the past two decades. In particular, governments have not kept their commitments to water entitlement holders in respect of the risks associated with the reduction in water available for allocation as a result of government policy.

Following concerns relating to management of Australia's water use, the Federal, State and Territory governments, through the Council of Australian Governments, agreed to implement the Intergovernmental Agreement on a National Water Initiative in 2004. There were a number of drivers for this — the need to increase the productivity and efficiency of Australia's water use, the need to service rural and urban communities, and to ensure the health of river and groundwater systems. The National Water Initiative was developed with the objective of providing greater certainty for investment and the environment, and to underpin the capacity for Australia's water management regime to deal with change responsibly and fairly.¹²

In agreeing the National Water Initiative, the Federal, State and Territory governments made commitments relating to water use and management. One of these commitments relates to the development of a risk assignment framework in respect of future reductions of water for consumptive use.¹³ Under this framework, the governments agreed who would bear the risk of future reductions in, or less reliable, water allocations. Importantly, section 50 of the National Water Initiative expressly provides that governments are responsible for bearing the risks of any reduction or less reliable water allocation, arising from changes in government policy (for example, new environmental objectives).¹⁴

In January 2007, the Federal Government introduced the National Plan for Water Security, which was designed to improve water efficiency and address water over-allocation. Shortly after, the Water Act was developed to implement the National Water Initiative, and was designed to enable State, Territory and Federal governments to manage the Basin's water resources in the national interest. In doing so, the Water Act established the MDBA, and provided for the development of a Basin Plan. These reforms formalised a system of water entitlements and allocations, enabling the economic trading of water rights. The Water Act facilitates this through the implementation of a water trading regime across the entire Murray-Darling Basin, which is managed by the MDBA.

The Water Act implements the risk assignment framework which, together with the Basin Plan 2012, sets out when the government is responsible for the risks in the reduction of water availability. Importantly, this framework implements the government's obligation under the National Water Initiative to bear the risks of any reduction in water allocation arising from changes in government policy.

The framework also sets out when water access entitlement holders (which include irrigators and growers) may be entitled to financial compensation for risks that the government has agreed to bear.¹⁵ SunRice understands that the Federal Government intended to meet its responsibilities (as far as practicable) for policy-induced changes in water availability by purchasing entitlements and investing in

¹² Section 5, Intergovernmental Agreement on a National Water Initiative.

¹³ Sections 46 to 51, Intergovernmental Agreement on a National Water Initiative.

¹⁴ Section 50, Intergovernmental Agreement on a National Water Initiative.

¹⁵ Section 77 and 83, Water Act.

water-saving infrastructure.¹⁶ The Federal Government also intended to make payments to water entitlement holders to cover the value of any reductions that were not mitigated by these purchases and investments.

However, it does not appear that these intentions have been acted on, as growers have seen their general security entitlements further eroded since 2004. As identified by the Productivity Commission in its 2010 research report, considerable uncertainty exists about the application of the risk assignment provisions in respect of compensation that might be payable to irrigators upon the implementation of the Basin Plan¹⁷. This has significantly impeded the ability of irrigators to plan for the future and make decisions about water purchases, given that the Federal Government's commitment to this aspect of the National Water Initiative is uncertain. This is despite comments made in the Second Reading Speech for the Water Act, which stated:

“The allocation of responsibility for any reductions in water availability between the Commonwealth and the States agreed under the National Water Initiative will remain. I assure Victorian irrigators that the Commonwealth will meet its share of the risk in Victoria, as it will in other jurisdictions, as set out in the National Water Initiative.”¹⁸

SunRice has concerns that — despite public and legislated commitments that the Government would bear the risks associated with reduction in water allocation arising from government policy (including the Basin Plan) — water rights continue to be eroded, to the detriment of rightsholders. Two decades on, there does not appear to be any greater certainty about how the Government intends to meet its promises to those who relied on commitments made to irrigators as part of the National Water Initiative.

On this basis, the Productivity Commission's recommendation — that the Government should clarify how the risk assignment provisions in the Water Act will apply to the reductions in water availability that are likely under the Basin Plan—still holds true. SunRice supports the Productivity Commission's finding that this clarification should occur, and be acted upon, as soon as possible. This would further facilitate market transparency and allow growers to assess the risks and compensation that may be available in relation to their water rights.

5.3 Conveyance losses must be factored into allocation trades downstream and carryover water used downstream

SunRice shares the concerns raised by rice growers that conveyance losses have not been adequately factored into allocation trades downstream and carryover water used downstream. The RGA has provided a comprehensive explanation of this issue in its submission.

Conveyance losses refer to the amount of water in the river system that is lost due to evaporation, transpiration or seepage into the ground. The MDBA is responsible for ensuring rivers flow as efficiently as possible to minimise these losses. Several factors influence the amount of conveyance losses — including soil type, climate, seasonal conditions, river flow rates, river channel, and catchment topography — and some degree of loss is unavoidable. However, rice growers are concerned that conveyance losses have been amplified by trading in the water market, and are disproportionately affecting general security rights holders.

¹⁶ Water Bill 2007, Explanatory Memorandum.

¹⁷ Productivity Commission, Market Mechanisms for Recovering Water in the Murray-Darling Basin, Productivity Commission Research Report, March 2010, Finding 6.2.

¹⁸ Second Reading Speech, Water Bill 2007, Senator Colbeck (15 August 2007).

Certain parts of the Murray Darling are natural “choke points”, where flow capacity is significantly constrained. Rice growers have expressed concerns that entitlements downstream, and carryover water that is used downstream from its source entitlement zone, have increased demand for water downstream. To meet this demand (which also arises due to the increase in demand from permanent plantings in the downstream regions), there has been prolonged high flows at these “choke points” — particularly the Barmah Choke (which consists of three “chokes”, the Edward, Tocumwal and Barmah). Increased southern flows from the choke are leading to greater water conveyance losses, and have also caused significant damage to the chokes through silt movement and the erosion of the river banks, resulting in increased conveyance loss. Conveyance losses have also arisen due to the overflowing of water at choke sites onto surrounding land (i.e. isolated flooding).

These conveyance losses cumulatively reduce the water available to irrigators that rely on general security entitlements. The “hierarchy” of the water allocations under the NSW government policy — which prioritises water for critical use, over water for conveyance, over high security water entitlements, over general security water entitlements — means that general security entitlements are the last “bucket” to be filled, or entitlement to be met. General security rights holders are therefore directly impacted by, and bear the brunt of, conveyance losses, even where they have no role in trading of the high security water rights that drive the increased flows and, in turn, lead to increased conveyance losses.

Put another way, the increase in conveyance losses as a result of a change in the geographic pattern of demand and river operations can be likened to an externality, as the conveyance losses are not recognised in the characteristics of (downstream) water entitlements / delivery. As a result of how allocations are determined, the impact is disproportionately borne by general security entitlement holders (and the annual irrigated crops, communities and regions that rely on those entitlements).

This is an inequitable and possibly unintended outcome of market design. There is also no regulatory oversight or regulatory action currently being taken to address these losses. The impact of these losses is particularly acute given that drought and climatic conditions have resulted in higher than average losses.

SunRice agrees with the RGA that allocation trades downstream and carryover water used downstream should factor in conveyance losses, so that the costs of conveyance losses are internalised in pricing and trading decisions undertaken by participants in the market. To this end, it will be important that the conveyance losses that are assessed and factored in should be based on actual analysis.

5.4 Carryover rules are encouraging speculation and hoarding, driving up prices for growers

SunRice supports the retention of carryover, which is an important risk management tool for irrigators to manage their water supply across wet and dry seasons. However, SunRice has concerns that carryover rules are influencing traders’ behaviour in water markets during the drought where there is uncertainty about the amount of water available to irrigators that rely on general security allocations of water. As the RGA describes in its submission, irrigators are being forced into the market to buy temporary water for carryover, to mitigate the risk that actual allocations of water may be reduced (and / or announced later) in the upcoming seasons.

There are particular concerns that some investors may be taking advantage of ongoing water shortages by hoarding water entitlements in one season and driving up prices for water entitlements and selling at a profit in subsequent seasons. As a result, irrigators (including rice growers), who rely on general security allocations of water, are forced to pay these higher prices for actual water use. At the same time, the water allocations that are carried-over by

traders may remain unused. This is entirely contrary to the initial objectives of carryover rules, which were designed to help irrigators manage risk.

Because of the risk that future seasons will be even drier, and that the price of water will be even higher and/or the announcement of allocations will be delayed, growers of annual irrigation crops such as rice are facing increased uncertainty about water access at the point in the season when planting decisions must be made. This uncertainty is exacerbated by the trend in recent years of permanent planting growers using carryover to secure adequate access water for their operations which is further increasing the price of temporary water (see section 6.2 below). This uncertainty is likely to continue to contribute to reduced annual harvest volumes in the future, as more growers choose to avoid the risks of planting some or all of their crop, and instead elect to trade or carryover their water allocations to future seasons.

The development of new water products, such as forward supply leases, has also had a significant impact on demand for water. Traders who do not have adequate allocation of water to meet contracted forward lease volumes have entered the market to buy water to carryover. This has had the effect of putting further upward pressure on pricing, which is an acute concern in dry years.

Market design and harmonisation issues

The carryover rules are one of a number of examples where flaws in the market design have led to sub-optimal commercial outcomes.

More broadly, there are also substantial problems with a mismatch in rights and obligations under different water products on offer in various regions. For example, over-drawing on a water allocation is treated as immediate breach of entitlement in some regions, while in others an entitlement holder has a period of time in which to balance (or “true-up”) their overall water usage.

There are also a number of administrative inconsistencies across the various regions of the Murray Darling Basin. For example, SunRice understands that the processes for executing water trades differ dramatically in different regions, to the point where some trades can be completed electronically, while other regions require paper-based processing.

Another practice that has emerged in recent years and may represent a market design failure is the use of “parking” for certain general security water. The practice of “parking” refers to a licence holder storing allocation water on another owner’s water licence. The owner agrees to carry over water on their water licence into the new season on the first licence holder’s behalf. Under the current rules, water can be “parked” in the same licence region or another water region and/or state (subject to trading restrictions between some regions).

SunRice understands that some market participants are using Murray Valley general security carry over water and “parking” it in under Victorian low reliability licences at the end of the year. In Victoria, water parked against low reliability water licences is generally returned at the start of the season and not subject to risk of spill. Therefore, owing to the rights attaching to the Victorian low reliability licences, this “parked” water is able to be brought back in circumstances where the licence holder has been able to create something close to a high security product.

These mismatches, inconsistencies and a general lack of coordinated design create unintended arbitrage opportunities and gaps in the market design framework which some participants may be able to exploit. These issues also undermine the degree to which inter-regional water trading is able to take place, and can contribute to a lack of confidence among participants in the overall integrity of the water markets.

SunRice agrees with the RGA's recommendation that further work needs to be undertaken to review current rules relating to carryover, and water trading more generally. In particular, this review should involve modelling to determine the impact on general security water entitlements if the permitted proportion of entitlement that can be carried-over is adjusted. The outcome of the review should ensure that the design of, and rules for, regional water markets enable those markets to function properly and consistently, without any unintended adverse effects on particular participants.

5.5 Brokers should be licensed, registered and properly regulated

The products that water brokers trade in are complex, expensive and function similarly to other regulated financial products. Despite this, there are currently no financial regulatory principles or requirements in relation to water products – in contrast to the regulatory framework that has been developed for other forms of financial products, including many commodity derivatives. There is also no requirement for water brokers and other intermediaries to be registered or licensed.

Amendments to the *Australian Securities and Investments Commission Regulations 2001* (Cth) in 2014 expressly exclude tradeable water rights, and contracts to buy and sell these rights, from being financial products.¹⁹ Similarly, amendments to the *Corporations Regulations 2001* (Cth) exclude these arrangements from being derivatives.²⁰ The consequence of this is that brokers trading in basic tradeable water rights are not required to hold an Australian Financial Services Licence, and operators of markets in basic tradeable water rights are not required to hold an Australian Market Licence and are not subject to regulation by ASIC as a financial market.²¹

In addition, we understand that most brokers are not members of the Australian Water Brokers Association, which has developed a voluntary code of conduct, and are not otherwise subject to oversight.

SunRice supports the concerns expressed by our growers that there are no rules against insider trading and other behaviours that brokers could potentially engage in to manipulate supply and prices on the temporary water market.

Given the critical nature of water as an input for rice growers, SunRice agrees with the RGA's recommendation that brokers should be licensed, registered and regulated. SunRice supports the implementation of prohibitions against brokers holding their own allocation accounts and conflicts of interest such as giving advice while trading water in their own right. SunRice also supports a requirement that brokers hold clients' water and funds in trust accounts.

6 Market participant practices and behaviours

6.1 Speculative trading is pushing up the temporary water price for actual water users

SunRice understands that growers are particularly concerned that speculative traders of water rights have played a significant role in increasing the temporary water price and distorting market supply and demand conditions where they have no direct consumptive use. This has been to the detriment of the rice and dairy industries which bear the brunt of water scarcity and higher water prices. These concerns are particularly acute in the context of the drought, where many growers are already under significant financial pressure.

¹⁹ *Australian Securities and Investments Commission Regulations 2001* (Cth), regulation 2BC.

²⁰ *Corporations Regulations 2001* (Cth), regulation 7.1.04(8).

²¹ *Corporations Laws Amendment (2014 Measures No. 1) Regulation 2014: Water Trading Exemptions*, Explanatory Statement.

The most concerning conduct is the purported hoarding of water rights by speculative traders for carryover in subsequent years (as described above).

These concerns are not unique to rice growers — see the letter sent to the State and Federal Water Ministers on 11 November 2019 on behalf of a number of industry commodity representative bodies that echoes these comments (**Attachment 2**).

SunRice agrees that the water trading rules and regulatory settings need to be adjusted to encourage behaviour that supports sustainable apportionment of valuable water resources in the best interests of irrigators, river and growing communities, rather than encouraging speculative trading merely for profit without direct water use.

SunRice would welcome the ACCC investigating any concerning conduct by water traders and speculators which may be distorting and adversely affecting competition in water markets.

6.2 Permanent planting is increasingly relying on general security water allocations at the expense of annual crops like rice

The Murray-Darling Basin system is one of the most variable river systems in the world. Accordingly, there is a critical need for regulatory settings which ensure an appropriate and sustainable balance between annual crops and permanent plantings when it comes to allocation and use of this highly variable and scarce resource.

The Aither Report into *Water supply and demand in the Southern Murray-Darling Basin* published in June 2019 (**Aither Report**²²) notes that “[s]trong commodity prices for almonds, citrus and grapes are driving sustained investment in these industries. Consequently, demand for high reliability water entitlements is increasing.” The RMCG report also found that the increase in permanent plantings (e.g. for nut tree crops) has increased pressure on general security water entitlements.

SunRice considers that the unplanned and non-strategic rise in permanent plantings is coming at the expense of annual irrigated industries (particularly rice in New South Wales) and Victorian dairy. These plantings and changes in land use are often approved at the local government level, without coordination with any other regulatory bodies that have responsibilities for water allocations and planning within the Murray-Darling system. This lack of coordination has the potential to cause further damage to growers, investors, and the rural communities that form part of these otherwise profitable annual irrigated industries, particularly if commodity prices for permanent plantings cannot be sustained.

This concern is supported by the feedback provided at the recent ACCC public forums held in Griffith and Deniliquin. A key theme at these forums was the significant increase in permanent plantings below the Barmah Choke leading to significant losses in water delivery downstream and reducing the amount of general security allocations. This outcome disproportionately impacts general security irrigators such as annual crop growers.

Agribusiness enterprises that involve permanent plantings (such as tree nuts) involve significant upfront capital commitment to establish an orchard, and then require the operator to ensure sustained water supplies for the life of the trees (which may be a 10 to 12-year investment) in order to realise appropriate returns.

²² Available at <https://www.aither.com.au/water-markets-report-2018-19/>

This means that unlike an annual crop (for which water demand is determined on a year-by-year basis), a tree nut operation is committed to very similar annual water usage over the life of the plantation, irrespective of the commercial returns available in a given year.

A key consequence of this is there is far less variance in annual water demand in regions where permanent plantings are prominent (including regions south of the Barmah Choke). This leads invariably to increases in prices, and a lack of available water for other allocations. The impacts of the scale of permanent plantings that have occurred in regions of the Murray Darling Basin have not been properly accounted for in the way in the water markets (and the rights attaching to high security entitlements in particular) have been designed.

To further illustrate the challenges for water market design created by these recent trends, SunRice notes that state governments have been forced to enact water reservation policies to withhold water from allocation for lower security entitlements in order to ensure high security water allocations for future years are secured. These outcomes, which have the effect of further driving up water prices, demonstrate the extent to which the current water market design and policy settings appear to be no longer capable of delivering efficient and equitable market outcomes.

SunRice supports a recommendation to halt the granting of new approvals for any further permanent plantings below the Barmah Choke (similar to the moratorium imposed in Victoria on the granting of new irrigation licences). This halt should apply until the ACCC and the relevant levels of government can:

- fully assess the impact permanent plantings and high security water allocations have had on water availability and prices in the Murray-Darling Basin (based on both current and future demand profiles); and
- propose regulatory reform to address market design failures.

7 Further questions

SunRice would welcome the opportunity to provide the ACCC with further information in relation to the issues raised in this submission.

If the ACCC would like further details, please contact Julian Luke, Head of Corporate Affairs.

Ricegrowers Limited
20 December 2019



31 October 2019

The Hon. Melinda Pavey
Minister for Water

CC. Peter Hyde
Manager - Planning
NSW Department of Environment, Planning and Industry – Water

Sent by email: Tom.Chesson@minister.nsw.gov.au; peter.hyde@dpi.nsw.gov.au

NSW Murray and Murrumbidgee Water Resource Plans

Dear Minister Melinda Pavey,

The Ricegrowers' Association of Australia (**RGA**) and its members have actively participated in the development of the Murrumbidgee and NSW Murray and Lower Darling Water Resources Plans, including lodging submissions and having formal and informal representation on the Stakeholder Advisory Panels.

We have raised concerns in previous correspondence about the process undertaken to develop these Water Resource Plans. In particular, the RGA feels there has been insufficient opportunity to review the rules contained in the 2020 Water Sharing Plan component of the Water Resources Plans, particularly when the draft 2020 plans include a number of material changes compared with the 2016 plans.

DPIE-Water staff verbally assured us again at information sessions in September that the water sharing plans will be subject to an ongoing review process following the commencement of each plan (and before the next formal review period in 2030.). We have requested, but not received, this commitment in writing.

Unfortunately verbal assurances do not fill us with confidence given past experience. The water sharing plans for both the Murrumbidgee and Murray/Lower Darling commenced in 2004 and were due for review and renewal before their 10-year anniversary in 2014. Due to a lack of preparedness, the then Department responsible for Water postponed this review until 2016.

However, despite consistent requests from industry, the review did not occur and the plans were rolled over with little to no consultation. Instead, the Department promised a comprehensive review of the water sharing plans prior to the commencement of the Water Resources Plans. This has not occurred either, for the reasons articulated in our 12 July 2019 letter to yourself.

Once the 2020 Water Sharing Plans are accredited as a component of Water Resources Plans, we have no confidence the Department will be prepared to address the issues raised in our submissions before the next formal review in 2030. We believe the excuse will be changes are not possible because that would alter what the MDBA has accredited via the resources plans.

The draft 2020 Water Sharing Plans contain many material changes compared to the 2016 Water Sharing Plans. Collectively, the changes amount to NSW ceding sovereignty over its water resources to the MDBA via the resources plans, and removing the NSW Water Minister's discretion over allocating water, particularly supplementary water events. Based on the Long-Term Water Plans released for public consultation, these changes in the 2020 Water Sharing Plans are intended to increase planned environmental water and redirect environmental water allowances to deliver Murray-Darling Basin Plan objectives for high flows over the South Australian border. These objectives erode water availability for consumptive use. This is unacceptable and we believe also contrary to the intent of the Water Act 2007.

We have requested in our submissions that the Water Resources Plans are not submitted to the MDBA for accreditation until stakeholders can review the 2020 Water Sharing Plans. We need to see whether our concerns have been addressed and changes made, and that further consultation occurs to resolve any outstanding issues. We asked for written assurance from DPIE-Water by 31 October, as of today, we have not yet received this assurance.

Many people in voluntary positions have spent hours engaging through meetings, consultation sessions and writing submissions, and yet the Department has not been proactive in addressing the issues raised. Why has your department been unresponsive to stakeholders? These water plans are critical for our State.

We are now seeking from you, the minister, and DPIE-Water, written confirmation by 15 November that the water resource plans will not be submitted to the Murray Darling Basin Authority until the community and stakeholder advisory panels have had the opportunity to go through the water sharing plan component with DPIE-Water staff, specifically whether issues identified in submissions have been addressed.

We also urge the Minister and the Department to take a strong position to uphold and defend the water resources and associated interests of the State of NSW.

If you wish to discuss these matters further please contact Rob Massina, RGA President (details included below) or Claire Miller, acting RGA Policy Manager, on T. 0409 509 677 or E. cmiller@rga.org.au

We otherwise look forward to your response.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rob Massina', written in a cursive style.

Rob Massina
RGA President

T. 0448 999 288

E. rmassina@rga.org.au

FOR INDUSTRY,
BY INDUSTRY

**Australian
Grape and Wine Inc**

Postal Address

PO Box 2414
Kent Town SA 5071

Adelaide

Level 1, Industry Offices
National Wine Centre
Botanic Road
Adelaide SA 5000

T +618 8133 4300

Canberra

NFF House
14-16 Brisbane Avenue
Barton ACT 2600

T +612 6239 8300

ABN 45 903 873 163

E info@agw.org.au
W agw.org.au

11 November 2019

The Hon Lisa Neville

Minister for Water

lisa.neville@parliament.vic.gov.au

The Hon David Speirs MP

Minister for Environment and Water

minister.speirs@sa.gov.au

The Hon Melinda Pavey MP

Minister for Water, Property and Housing

oxley@parliament.nsw.gov.au

The Hon Dr Anthony Lynham

Minister for Natural Resources, Mines and Energy

nrm@ministerial.qld.gov.au

The Hon David Littleproud MP

Minister for Water Resources

Minister.Littleproud@agriculture.gov.au

Dear Ministers,

Urgent intervention needed to free up water markets

This letter is written on behalf of the following industry commodity representative bodies: Australian **Almond** board; **Citrus** Australia, Australian **Olive** Association, Australian **Table** Grape Association, Australian **Grape** and **Wine, Pistachio** Growers Association, Australian **Walnut** Industry Association, **Summerfruit** Australia, **Hazelnuts** Growers of Australia and **Chestnuts** Australia.

Much has been made of the drought impact on the dryland farming community and rightly so, but our irrigated industries are also facing an existential threat.

You will be well aware the drought is driving up temporary water prices. While we recognize this is in part the result of supply and demand under extremely dry conditions, speculative trade is amplifying the drought impact on the southern Murray-Darling Basin (sMDB) water market. For many family and larger enterprises, this additional price pressure will be the difference between surviving the drought or going bankrupt.



The Murray-Darling Basin Plan aims to sustainably apportion limited and valuable water resources between environmental and consumptive use, without negatively impacting on river communities. That goal is **not** being realized, as the water market is not working in the best interests of irrigators. Without immediate intervention, agricultural businesses across the southern MDB will soon suffer irreparable damage, and the associated industries and river communities will likewise suffer.

While temporary water can be expected to be more expensive during drought, we have two key concerns:

- The presence of water speculators is increasing the temporary water price beyond what would be expected under the current supply and demand conditions. It is evident during the last irrigation season that speculative buying of temporary water resulted in material upward pressure on the market. This is dramatically affecting farm viability.
- Recent changes to trading rules combined with increasing compliance demands on irrigators to maintain positive water accounts at all times has meant that they must buy earlier in the season. This has materially distorted normal market supply and demand balance to our detriment. In times of low water availability, it also leads to greater early season market volatility, which can affect water prices for the remainder of the season. At the same time, speculators and traders are taking advantage of carryover rules (originally designed to help irrigators manage risk) to short irrigators of water.

In the 2018-19 season, we understand one water investor purchased an estimated 140 GL (140,000 ML) of temporary water. To our knowledge, this company does not own land and has no direct consumptive use, so it can only be assumed the water was intended for speculative trade. To put this volume in context:

- In **Victoria**, the estimated Lower Murray Water districts total combined water use in 2017-18 was **104,000 ML**¹. Total annual irrigation use for the Mildura and Red Cliffs districts was approximately 94,000 ML in 2017-18².
- In **New South Wales**, according to the ABS the total estimated water use in NSW Murray and Riverina districts for "Fruit trees, nuts or plantation berry fruits" in 2017-18 was **111,900 ML**³.
- In **South Australia**, the estimated total irrigation applied to almonds in 2019 was **122,930 ML**⁴.
- Total Water use in **Murray Irrigation district** in 2018-19 was **296,149 ML**⁵

While this trading activity may be permissible under current laws, it is clearly not delivering on Murray-Darling Basin Plan objectives and is adding to the hardship of drought-affected businesses. It is highly likely the temporary water price in 2018-19 was materially higher due to the behavior of speculators and some brokers. Many irrigators used all available cash reserves when water prices should have been much lower. They are now not in a financial position to buy water again at even higher prices now. This has been particularly devastating for the dairy, rice and cotton sectors who wore the brunt of water scarcity and high prices last year.

¹ https://waterregister.vic.gov.au/images/documents/Water-Market-Trends-Update-2018_web.pdf, p2.

² Lower Murray Water Annual Report 2017-18; https://www.lmw.vic.gov.au/wp-content/uploads/2018/09/LMW-2017_18-Annual-Report-Full.pdf

³ Australian Bureau of Statistics 46180DO001 201718 "Water use on Australian Farms 2017-18"

⁴ PIRSA, Pers Comm

⁵ https://www.murrayirrigation.com.au/wp-content/uploads/resource/2019/10/Interactive-Annual-Report_online-version.pdf

We would also like to make ministers aware that we have many reports that banks funding irrigators and businesses in the southern MDB are getting very nervous due to the high demand for increased debt facilities to purchase water. Lending criteria is becoming very stringent and loans for many are unattainable.

Water speculation during a drought may be legal but enforces hardship on others. Would it be acceptable, for example, for an investment company to accumulate supplies of fodder during the current drought and withhold that from livestock farmers in order to sell it later at an increased price?

It is such a serious issue for irrigators who have no choice but to buy water to keep their business going and is particularly devastating for family farmers who often don't have the financial resources or options available like corporates. Many family farmers are already in a desperate and dire situation. The flow-on effect to rural communities who rely on irrigators cannot be overstated.

To quote former Harvard Business School professor Jonathan West *"I think the behaviour of some water traders during this drought could be compared to speculators hoarding food during a famine, to drive prices up. Its immoral, and it's got to stop."*

Water market reviews underway

We support the two initiatives currently underway, with final reports due by the end November 2020:

- ACCC Inquiry into Water Markets in the Murray Darling Basin (**Inquiry**); and
- Senate Select Committee on the Multi-jurisdictional Management and Execution of the Murray-Darling Basin Plan (**Select Committee**).

URGENT – Proposed interim solutions

Noting the Inquiry and the Select Committee will not report for more than a year, we request the Australian and Basin State Governments urgently implement the interim solutions below:

1. **Only water users can purchase temporary water allocations** – anyone who is not an irrigator with direct consumptive use or does not have a pre-existing bona fide supply contract to an irrigator cannot purchase any temporary water allocations in the Southern MDB.
2. **Only water users holding permanent entitlement with a carryover facility can carryover water from one season to the next, subject to the following limitation** – this carryover volume cannot be higher than their direct annual consumptive use and cannot be sold or loaned to another party for their use.
To protect against unintended consequences, hardship or pre-existing contractual arrangements, a threshold could be considered. For example, non-water users (including related parties) with cumulative allocation account balances lower than 2GL or \$2m (whichever is triggered first) may be still be able to carryover.

Immediate action is urgently needed in line with the serious challenge imposed by the drought. It's not just the potential for economic damage, but the human cost with many accounts emerging of suicidal irrigators.

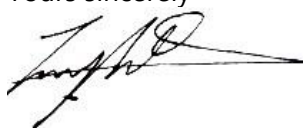
Time is of concern as we approach a period of increasing water use for most irrigated crops over summer. Without some form of immediate relief, it may will be too late for many farmers, business and regional communities.

We respectfully call on you and your Government to collaborate with other Basin State Governments and the Commonwealth to explore measures to free up more water for trade. There is no time to lose. The seriousness of this issue warrants an emergency response, and bipartisan, cross-border commitment.

The proposed interim solutions are sensible and benign and should be implemented urgently.

We would appreciate the opportunity to meet with you to discuss these issues in more depth.

Yours sincerely



Tony Battaglione
Chief Executive

On behalf of the following industry bodies:



4 November 2019



The Hon. M.J Pavey, MP.
Minister for Water, Property and Housing
GPO Box 5341
SYDNEY NSW 2001



CC. The Hon. G. Berejiklian, MP.
Premier

The Hon. G.D. Barilaro, MP.
Deputy Premier, Minister for Regional New South Wales, Industry and Trade

Mr Peter Hyde
Manager - Planning
NSW Department of Environment, Planning and Industry – Water

Sent by email: office@pavey.minister.nsw.gov.au; Tom.Chesson@minister.nsw.gov.au; peter.hyde@dpi.nsw.gov.au;



Murray Irrigation

Water Resource Plans

Dear Minister Pavey,

The undersigned groups and their members have actively attempted to participate in the development of the NSW Murray and Lower Darling Water Resources Plans, including lodging submissions and have had formal and informal representation on the Stakeholder Advisory Panel.

The Water Sharing Plans (WSP) for each valley in NSW are the instrument to ensure equitable distribution of water between all water users in that valley and contributions to state distribution obligations downstream.

As SAP members, the representatives were taken aback by the content of the draft WSP and the extent of wording changes in clauses that clearly preference the environment over any other water use. It is not a balanced and equitable plan that will provide any certainty for consumptive water users into the future as it's currently written. It is an environmental plan, with the incorrect assumption that more flows infinitely equal more ecological outcomes. The consistent prioritisation for the environment over all social and economic objectives, whilst supposedly designed for equitable water sharing between all NSW Murray water users, has not been achieved.

The seemingly insidious move to incorporate unrealistic, aspirational and unilateral change to water sharing to the detriment of consumptive users was confirmed when the long-term Watering Plan (LTWP) was cross referenced to changes in the WSP. The detail of the unrealistic volumes in the Draft LTWP were not discussed at SAP other than to be at best, 'aspirational' but undeliverable. To now find them hard wired into the WRP and manipulated into the WSP is unacceptable.



MVPD



This environmental prioritisation is reflected in numerous amended provisions that change the intent of NSW Murray water sharing arrangements, compared with previous plans.

The SAP process was two years of very limited consideration of SAP community members views, and this has effectively resulted in a wasted opportunity for the potential of some real improvements to the WSP. To add to this end of valley targets in some WRP have changed and now the NSW Murray is expected to cover the difference. These changes erode this valleys water availability and hand it over to the environment or other valleys. These amended provisions contravene clear objectives outlined in the Water Act 2007, which these WRP and indeed the MDBP must not move outside of. Most notably; “section (c), promotes the use and management of the Basin water resources in a way that optimises economic, social and environmental outcomes” & “section (e) to improve water security for all uses of Basin water resources.” The draft 2020 Water Sharing Plans contain a number of material changes compared to the 2016 Water Sharing Plans. Collectively, these changes amount to NSW ceding sovereignty over its water resources to the MDBA via the resource plans and removing the NSW Water Minister’s discretion over allocating water, particularly supplementary water events.



We urge the Minister and the Department to take a strong position to uphold and defend the water resources in each valley and associated interests of the State of NSW.

Recommendation: That the Murray Lower Darling WSP and WRP not be submitted to the NSW Water Minister and the Murray Darling Basin Authority until the community and SAPs have had the opportunity to resolve grievances in both the WRP and the WSP component, and these have been appropriately addressed.

If you wish to discuss these matters further please contact Alan Mathers, Chairman of MRSRG by T: 0427 209 606 & E: alanmathers@bordnet.com.au or Rob Massina, RGA President by T: 0448 999 288 & E: rmassina@rga.org.au or John Lolicato, MVPD Vice Chair by T: 0428 539 226 & E: whymoul2@bigpond.com or Phillip Sowden Chairman of MIL by T: 0427 839 217 & E: Phillip.Snowden@murrayirrigation.com.au

Yours sincerely,

A handwritten signature in black ink that reads "Alan Mathers".

Alan Mathers
Chairman
Murray Regional Strategy Group



MVPD



RMCG

NOVEMBER 2019

Recognising underuse in the Southern Basin - and taking action. Methodology and analysis.

Final Report

Rob Rendell & George Warne

Ricegrowers Ltd trading as SunRice

Level 1 East, 1100-1102 Toorak Road, Camberwell Victoria 3124

(03) 9882 2670 – rmcg.com.au

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IMPORTANT NOTICE REGARDING THIS REPORT

Please note this report has been commissioned by Ricegrowers Limited (SunRice) to present an analysis of water use in the Southern Basin within the context of current policy settings. The views expressed in this report are RMCG's and should not be construed as an endorsement by the company.

Sydney Office
Level 24, MLC Centre, 19 Martin Place, Sydney | NSW 2000
PO Box Q166 QVB Post Shop | NSW 1230
T +61 (0)2 9268 2000 | F +61 (0)2 8916 8360

Registered Office
57 Yanco Avenue Leeton | NSW 2705
Locked Bag 2 Leeton | NSW 2705
T +61 (0)2 6953 0411 | F +61 (0)2 8916 8350

www.sunrice.com.au

Ricegrowers Limited
ABN 55 007 481 156
trading as SunRice



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This report has been commissioned by Ricegrowers Limited and prepared and issued by RMCG. This report is provided for information purposes only. RMCG has been paid a fee to prepare this report. All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however neither Ricegrowers Limited nor RMCG guarantee the accuracy or completeness of this report. This report has been prepared and issued by RMCG and the opinions contained in this report represent those of the principals of RMCG at the time of publication. Ricegrowers Limited does not endorse or confirm the analysis, findings or opinions in the report, and you are cautioned not to place undue reliance on anything contained in this report.

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1 Introduction

The rice industry expanded throughout southern NSW over the period 1970's to 2000 with production rising consistently from 0.2 to 1.7 million tonnes. In the last twenty years production has been extremely variable ranging from almost zero production up to 1 million tonnes annually depending upon the available water, as illustrated.

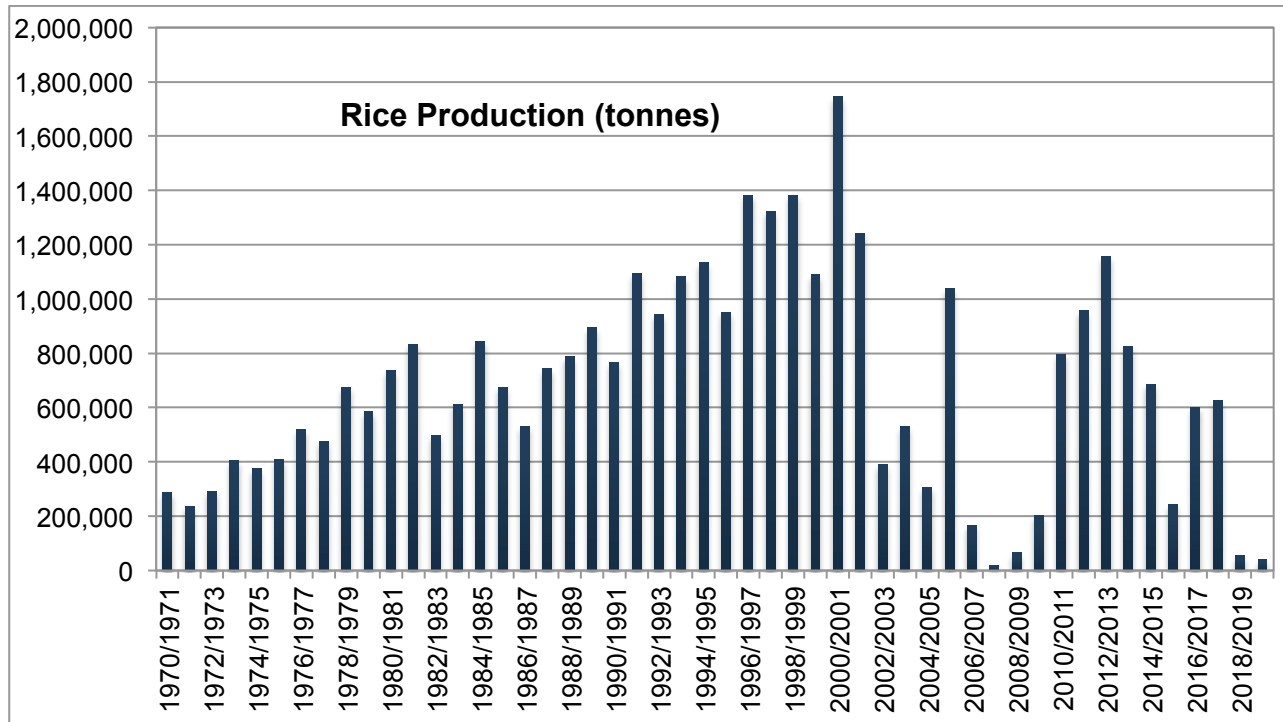


Figure 1-1: Rice production

In recent times the available water appears to have taken a steep change downwards and this appears to be much lower than anticipated even allowing for climatic conditions, transfer of water to other crops and Government water recovery programs.

This change in available water has led Ricegrowers Cooperative Pty Ltd (or SunRice) to request that RMCG review, compare and make recommendation for action if required in regard to:

1. The aims of the Murray Darling Basin Plan (2012) in terms of water recovery targets
2. The principles agreed to between States and the Australian Commonwealth in developing and signing-off on the 2004 National Water Initiative
3. The current allocation policies, water sharing practices, trading of water and water use particularly in relation to the NSW Murray and the Murrumbidgee Valleys.

In response, RMCG have undertaken an analysis of water use within the southern Murray Basin. The initial analysis by RMCG is based on water use and availability data collected by RMCG over many years, and particularly the MDBA's – Transition Period Water Take Report 2017/18 – report on Cap compliance and transitional SDL accounting (published by the MDBA in July 2018).

This analysis particularly focuses on water users dependent on irrigating using allocations derived from NSW General Security Entitlements and Supplementary Water in the NSW Murray and the Murrumbidgee Valleys, and Victorian Low Reliability Water Share owners in the Goulburn and Murray Valleys. The analysis has found that there has been an unexpected steep change in water use by these irrigators. In the nine year period between 2009 and 2019, annual average water use in NSW of combined Murray and Murrumbidgee General Security (GS) and Supplementary (Sup) Entitlements has reduced by 1650GL to 46% of the long term average.

This report addresses the reasons for the steep change and associated inequities that this has created. From this understanding, the opportunities for action and next steps to implement these opportunities are outlined.

This report has been provided to SunRice to substantiate the key findings outlined in a separate short form report provided to the SunRice Chair, Laurie Arthur earlier in October 2019.

2 Transition Period Water Take Report 2017/18 (MDBA)

2.1 CAP MODELLING

Since first preparing the report in 2015, the MDBA have been providing an annual report comparing water use throughout the Murray Darling Basin with the *1995 Cap on diversions* or The Cap, agreed between the Commonwealth and the States. The Cap has been the basis for limiting diversions throughout the basin and is the basis for establishing Sustainable Diversion Limits or SDL's for each water source throughout the Basin. The SDL's are a corner stone of the Murray Darling Basin Plan. Sustainable Diversion Limits, which are a limit on diversions by water users other than the water diverted for the environment, take effect from June 2019.

The MDBA have been producing the transition reports based on Cap compliance, as a proxy for SDL diversion limits being formalised, commencing with a report of the 2012 water year. The latest report, which measures water use for almost twenty years up to June 2018 was published in July 2019. The data collection and analysis of use contained within the report covers the whole basin, however the report focuses on the Southern Connected Murray Darling Basin.

The MDBA transition report provides an up to date analysis of water use and provides the basis for the analysis of the underuse by irrigators in the southern connected basin.

2.2 CAP MODELLING AND THE SUSTAINABLE DIVERSION LIMIT

The Transition Report 2017-18 outlines the comparison between the current Cap modelling and the ultimate Sustainable Diversion Limit or SDL modelling. The report uses the best available data from the MDBA River Operations Group, the Basin States and also uses data provided by the Commonwealth Environmental Water Holder regarding the ownership, allocation and storage of environmental water.

The report provides a summary table of the key features of the two approaches i.e. "*Table 1-1: Comparison of the key features of Cap and SDL water accounting and compliance*".

RMCG's summary of the key differences between the approach are:

- i. Groundwater – The SDL modelling also extends to monitoring groundwater use, and the use in several more than the twenty four 'cap valleys' identified in the 1995 'Cap' agreement. In terms of evaluating the issues associated with underuse by irrigators this aspect is not a significant difference.
- ii. Water Recovery – The SDL's adopted are effectively the cap volumes (see item iii. below) less the water recovered for the environment. However, the cap accounting in the transition report takes into account water recovery as well as climatic conditions. Thus, this difference has been accounted for.
- iii. Cap Factors – The cap Factors are similar to the SDL LTAAY in most cases except for some of the NSW valleys where revised factors for many important entitlement types were adopted in 2018. Effectively reducing the available volume in those valleys. However, it is noted that the SDL adjustments and water recovery calculations were based on the original Cap Factors, not the recently adjusted factors.

Therefore, the cap accounting recorded in the transition report in terms of water use is the same as would occur under SDL accounting except for the addition of groundwater considerations and the use of modified factors in some NSW valleys.

Thus, the transition report of cap accounting (adjusted for water recovery) enables the evaluation of compliance with the Basin Plan projections and SDL's.

2.3 ABOUT THE REPORT

Under the terms of the Basin Plan, the MDBA is required to report actual water use against the 1995 Murray Darling Basin Cap (The Cap) targets for each valley throughout the Murray Darling Basin. The report is called The *Transition Water Take Report 2017-18*. This critical activity, to measure the changing balance towards a greater environmental component of water used as the Murray Darling Basin Plan is implemented, and to measure irrigator use against The Cap benchmark, ensures compliance by users during the period of transition, as every river basin throughout the MDB develops a Sustainable Diversion Limit or SDL under the terms of the Basin Plan.

The latest report relates to water use and allocation up to June 2018, has been produced by the MDBA since reporting commenced on the 2012/13 water year, and was published in July 2019. Tony McLeod is the lead author with the MDBA. Tony is well respected and has a strong understanding of water allocation and use.

The use of the 1995 Cap as a benchmark is now almost redundant, as reporting against benchmarks moves from state-based reporting against "Cap", to the Commonwealth and SDL's. The new SDL limits are to be included into Commonwealth Minister approved Water Resource Plans (WRP's) for each valley, and to apply from 1 July 2019. Some States, particularly NSW have not yet finalised the drafting of compliant Water Resource Plans.

Importantly the new Sustainable Diversion Limits will be based on diversions for use by irrigators and others in addition deduct environmental water holdings. As discussed above though this transition report has been adjusted to allow each year for the growing volume of environmental water held by Governments.

In NSW the practical matters of water allocations, water entitlement management and river operations are outlined in State Instruments, or Water Sharing Plans. The Water Sharing Plans are currently being revised to be "WRP compliant" and will become subservient documents to the approved WRP's. RMCG believes changing water sharing arrangements by State Governments to meet adaptive management requirements (for example), once WRP's are endorsed by the Commonwealth Minister and are adopted, will be difficult thus may require approval of the Commonwealth and other State Governments.

The executive summary of the report confirms that the 2018 report attempts to create the basis for future SDL compliant reporting. The summary indicates although the report has "no compliance status" it has adopted the same basis for reporting as will be applied from 1 July 2019, as set out in the Basin Plan.

In the Forward to the report released July 2019 by Joanna Hewitt AO, acting MDBA Chair noted:

Readers may be interested in the analysis of the cumulative Cap credits that is provided in this report. The MDBA expects that the factors influencing accumulation of credits will be less pronounced post 2019. Moving forward the methods used to determine how much water is permitted to be taken each year under the Basin Plan will reflect current levels of development rather than those that existed in 1993-94, which is the reference level of development for Cap.

This analysis is interesting because it clearly acknowledges compliance, or rather significant underuse by irrigators in almost every valley. It also suggests that in future this underuse by irrigators will no longer be recognised.

RMCG suggest that the only practical way that the current level of development will become the reference level is by two possible actions:

- i. To reduce the volumes by the water recovered
- ii. To change the LTAAY (which replace the cap factors) to reflect revised yield based on:
 - a. Assumed climatic change
 - b. Government policies that have occurred e.g. more conservative reserve policies
 - c. Changed irrigator behaviour e.g. use of carryover.

The first action is well understood and has been already accounted for in the transition report accounting. However, the second action (partially implemented in some valleys e.g. NSW) is problematic and not yet well understood in terms of impact on irrigators.

The transition report forms the basis of future SDL compliant reporting however the MDBA have flagged changes to reflect the “current levels of development” without defining what that might mean.

2.4 REPORT FINDINGS OF UNDERUSE

Some of the most important findings in the *Transition Water Take Report 2017-18* Executive Summary, and the reason for this report by RMCG, is that there has been:

1. Cap compliance over kill (or underuse) of water in all States. In the case of the Murray River the underuse has been very large.
2. A large ‘cap credit” or underuse against the benchmark use agreed, particularly since 2010 as a result of the “difference between cap reference conditions and current policies and operational rules”.
3. A spill of two thirds of cap credits from storages on the Murray River (note: this has led to more than 8,000GL of water flowing into SA between 2010 and 2018 than would have been the case if users were utilising water at Cap or benchmark levels).

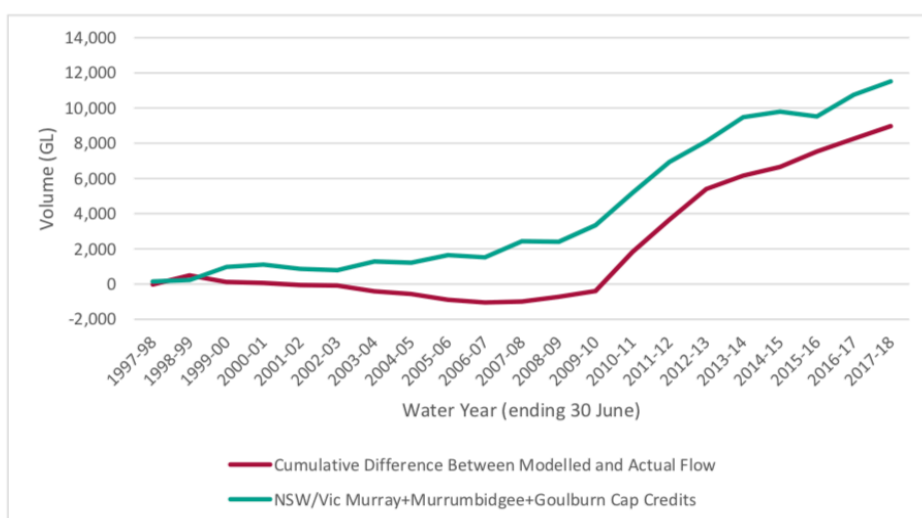


Figure 2-1: Cumulative difference in Cap modelled and actual flow to South Australia and the cumulative Cap credit from the combined New South Wales and Victorian Murray, Murrumbidgee and Goulburn Cap valleys to 30 June 2018

This is best summed up by Transition Period Water Take Report 2017/18 summary finding No 5:

An analysis of the increase in cumulative Cap credits across the Basin since 2009-10 suggests that this is largely a result of the degree of difference between Cap model reference conditions (generally set at the 1993-94 level of development) and current water sharing policies and operational rules. The effect of these differences was masked during the millennium drought however have been revealed more clearly through several wet years since 2010-11. In the New South Wales/Victorian Murray, two thirds of the cumulative Cap credits have spilled from storage.

2.5 NSW REVIEW OF LONG-TERM YIELDS IN THE MURRAY AND MURRUMBIDGEE

The NSW Government appears to be pre-empting the changes in use observed by reducing the utilisation, LTAAY or *average use* figures for a number of key entitlement products throughout NSW. This is important because it may reinforce or embed a number of inequities into new water sharing arrangements, thus in some cases the changes seem counter to actual observed use patterns.

In May 2018 NSW DPI published new Cap Factors for a number of key NSW entitlement products, which reduced the expected long term expected average yield, or “factors for water recovery” for NSW Murray and Murrumbidgee General Security entitlements significantly. The updated and significantly lower factors were based on updated “planning assumptions”.

For NSW Murray GS Cap Factor (or measure of average utilisation of water, the basis of water recovery assumptions for the Commonwealth) from 81% to 69.9%, and the Murrumbidgee Cap Factor from 64% to 59.1%. Actual nine year av-announced end of season allocations (not use) in the nine years from 2009 to 2018 were 74.3% for the NSW Murray GS and 71.1% for the Murrumbidgee GS.

For Victorian LRWS the cap factor (or Long-term Average Annual Yield or Long-term diversion limit equivalence) for the Murray LRWS is deemed by the Commonwealth as 37.1% and for The Goulburn is 54.1%. There has been no Goulburn LRWS allocated since 1998 and only a single 5% allocation in 2016/17 of Victorian Murray LRWS. This was the only allocation of Murray LRWS since 2006. There were positive changes in the NSW Murray and Murrumbidgee Supplementary license “factors”, once regarded by many NSW irrigators as being very low yielding, likely to be abolished, and of very low value.

Interestingly in Victoria, where the Low Reliability Water Share (LRWS) was once a valuable contributor to annual water availability for many irrigators, no review was conducted. There has been no allocation of Victorian Goulburn LRWS in the last ten years and one allocation of Victorian Murray LRWS (of only 5%) since 2009. LRWS in Victoria is now almost exclusively used and valued as an ‘un-spillable’ carry over vehicle. Realistically owners of Victorian LRWS do not expect an allocation in all however the most unusual type of season.

Despite some consultation in NSW, there has been little comment from users about these changes. This includes the Commonwealth Environmental Water Holder, with large volumes of both Vic, LRWS and NSW GS water entitlements in the three valleys. RMCG believes most of the reported underuse of available water in the Southern Murray Darling Basin since 2010, which has led to the large cap credits, is attributable to the changes in allocation and underuse of NSW Murray and Murrumbidgee GS and Victorian LRWS.

If the change from the 2011 cap factors are implemented in the transition to SDL’s then this will entrench the underuse without any recognition to irrigators of the change. It will effectively further reduce the SDL in each valley.

The actions of NSW in changing the LTAAY has serious ramifications for transitioning to SDL’s in a fair and equitable manner that reflects the underuse findings of the report.

2.6 TRANSITION PERIOD REPORT AND ENVIRONMENTAL WATER

Most importantly, the work done by the MDBA in assessing water user behaviour recognises and adjusts usage to account for water held by the environment. The report 'uses current methods agreed with Basin States for the adjustment of annual Cap targets in recognition of environmental water recovery'¹. This is an important consideration, as at June 30, an estimated 2,097GL² of water was held by the combined Government agencies. Most of this water is held in the Southern Connected Murray Darling Basin.

The current ownership of more than 2,000GL of water entitlements by environmental agencies, mostly held in the Southern Connected Basin is a critical factor in understanding changes in available water in any season for irrigated agriculture. Environmental water is an important reason that there is less water for irrigation today than would have been available in a repeat of the same season in *The cap* benchmark season of 1993/94.

However, the transition report recognizes this, and adjusts the Cap targets for irrigator use to reflect water recovery.

Importantly, the underuse and subsequent year after year spills into SA as a result of this multi-season cumulative underuse that is so clearly demonstrated in the Transition Report is not as a result of the change of ownership of water entitlements from irrigators to E-water holders. It is a function of changing allocation policy, carry over behaviour and irrigation choices.

¹ *Transition Water Take Report 2017-18*

² Pp 18 *Transition Water Take Report 2017-18*

3 Factors that have caused the underuse since 2010 (and why they will not go away)

3.1 UNDERUSE IS SYSTEMIC

RMCG have reviewed the data and assessed the commentary provided by the MDBA around the underuse recorded. There is view expressed by MDBA that the large cumulative underuse of water by irrigators during the period from 2009/10 to 2017/18 outlined in the *Transition Water Take Report 2017-18* will 'correct itself' and that the likelihood of use by irrigators continuing to be dramatically overestimated by those establishing targets for use will not happen in a future nine year period.

On the contrary, RMCG firmly believes the new reality is that the increased volumes of water in the river, flowing into SA, as a result of dam spills and reduced use of available water is now firmly entrenched and should be recognised as part of the adjustment now occurring. RMCG's analysis indicates this reduction in use in the NSW and Victorian connected MDB is attributable to lower use by NSW General Security (or GS) and Victorian Low Reliability Water Share (or LRWS) users.

This presents an opportunity for the entrenched lower use of water by irrigators to assist in being recognised as an effective measure to lower diversions (similar to mandating lower allocations, or recovering water for the environmental water holder), and for the subsequent increase in spills into the River system from full storages in wetter seasons to be credited against environmental flow targets.

3.2 IMPACTS OF THE DROUGHT OF RECORD

The 2007/08 Drought in the Southern connected Basin was the worst drought period recorded. As a result, a number of important factors and behaviours changed for all irrigators. RMCG have listed the factors identified and attributed a ranking in terms of the impact on available water for NSW GS users and Victorian LRWS water users. These changes in use and utilisation of allocated water obviously often interact with each other.

1. **Lower allocations, later allocation announcements:** In response to record low inflows recorded, States increased the reserves needed from 2007 onwards to secure future season water for run-of-river and basic human needs. This effectively increased dead storages in all years except a repeat of 2006/07. One important factor often overlooked is that the increased requirement for reserves, and the lower minimum expected inflows (now based on 2006/07) have led to both a lower opening allocation announcement, and later allocation announcements than would have been the case during the benchmark years prior to 1995. For Rice, Corn and Cotton growers the delayed allocation announcements acts to reduce the areas planted, and to reduce in-season water usage, even if ultimately the water becomes available. The fear of a low opening allocation also acts to encourage underuse in the previous season.

2. **Surge in volumes of Irrigator driven carry over:** After the drought, irrigators recognised even secure allocations from High Reliability Entitlement products were at risk and sought to be able to carry over water between seasons as individuals. Most importantly Victoria introduced carry over in 2007 with a range of products and a very high total carry over capacity. Irrigators and water investors in all states have embraced carry over and now strategically and deliberately chose not to use or sell water in one season, in case they need it or can sell it at a premium in the next. Water trades late in the season are no longer driven by irrigation demand, however simply on an analysis of the need to store carry.
3. **Trade and carry over combined:** The volume of water traded between states and valleys has accelerated as barriers to trade have been removed and state agencies have improved and streamlined water transfer arrangements. The proportion of water traded has grown since the drought of 2007, and in some cases the volume traded exceeds the volume allocated each year. Whilst most industry commentators thought increasing water trade opportunities would increase water utilisation for a given volume allocated, one important impact of more trade in allocation was to increase the volume of water being purchased on annual markets to carry over for possible use in a future season. The Transition Report has highlighted that often this water subsequently spilt.
4. **Snowy supplies became less predictable:** In 2006/07 there was also an unprecedented shortfall of the annual commitment by Snowy Hydro to provide 1026 GL to the Murray River and 1062 GL to the Murrumbidgee³ as part of the Required Annual Release (or RAR). These large and secure volumes had been considered very secure and formed part of the annual base volume available for Southern Basin irrigators in the Murray and Murrumbidgee valleys since Snowy Hydro came online in the 1970's. Since 2007, the RAR has often been compromised and is no longer considered by users and water managers as a certainty. **Impact Moderate** (and difficult to accurately determine).

3.3 DELIVERY EFFICIENCY AN ISSUE

Alleged additional losses: During 2018 there has been a well-publicised campaign led by Southern NSW irrigators, which may lead to a legal action, criticising the efficiency of water delivery by the MDBA and other agencies whilst operating the Murray River. The claimants believe the extra losses through poor water delivery by the MDBA was a key factor in the 2018/19 zero allocation for GS water entitlement holders in the NSW Murray.

The largest volume of water recovery has been from the large traditional irrigation areas, The Goulburn Murray Irrigation District (Vic) and the Coleambally Irrigation Area (CICL), The Murrumbidgee Irrigation Ltd (the MIA) and Murray Irrigation Ltd in NSW. These large scheme areas divert from the Murray, Goulburn and the Murrumbidgee at diversion points close to the storage dams.

As downstream horticultural developments mature, and E-water recovery is finalised, an increased proportion of all regulated water supplies in the southern connected basin will continue to be diverted further down the Murray River for use downstream of the natural choke in the Murray. Therefore the proportion of water lost (or spilt) to water delivered will inevitably grow, as the median 'kilometres of river per ML delivered' continues to grow.

Rather than learning from the successful and cooperative river operations emergency measures implemented in 2007/08 when loss levels fell significantly and improving as new management technologies are introduced, river loss levels appear to be growing, thus reducing water available to be allocated to users.

There may be an opportunity to recognise deliveries of water that end up as system losses as environmental flows, particularly if the spills are occurring into recognised wetlands such as the Barmah/Millewa forest at times that assist environmental outcomes.

³ As modified by the recovery volumes for the Snowy river

3.4 HIGHER UTILISATION OF HIGHER SECURITY PRODUCTS (NSW)

1. **High security utilisation:** The annual use of the very reliable 170GL of NSW Murray and 407GL of NSW Murrumbidgee High Security water allocations were traditionally underused. Historically, this underused water remained in storage for re-allocation in a following year⁴. This historic under use by owners of NSW HS water allocations is now systematically used or transferred to a Victorian or NSW Carry over accounts by its owners, who are keen to maintain access to every ML allocated. The underuse of NSW High Security allocations so prevalent in the 1990's, is no longer part of the shared available water at the start of each season. It is a contributing factor to lower opening GS allocations, relative to the 1995 benchmark.
2. **Composite products:** As a result of the rapidly escalating price of High Security water entitlements, a number of irrigators have sought to 'create' a high security water 'product' by purchasing a large volume of NSW GS entitlements, and utilising carry over to make sure future irrigation demand can be met. RMCG notes that although Victorian irrigators in the Murray and the Goulburn utilise a large proportion of available allocations of Murray and Goulburn HRWS, they still carry over significant volumes of water. This carry over is prioritised to be carried over on Victorian LRWS entitlements when capacity is available, which have proven to be almost 'unspillable'. Much of the water carried over since 2008 comes from interstate trades of allocation, from NSW & SA. Recent carry over data indicates a large proportion of this water will remain in storages in all even the driest of sequences.

3.5 RESERVE POLICIES

1. **Conservative reserves increase spills:** State Governments and the MDBA were all shocked into action to review reserves policy and water reserve management after the 2007 drought. During the worst of this period of record low monthly and whole year inflows, fears grew that water for human consumption in a number of towns, including Adelaide, may not be able to be supplied if drought conditions continued.

One response since this period has been the far greater focus on making sure reserves are held between seasons to enable minimum flows to be maintained to meet basic human needs, in almost all circumstances. This has led to a more cautious reserves policy in almost every State, which effectively increases the volume stored between seasons and reduces the amount of water available for irrigators.

The progressive introduction of carry over since the early 2000's in NSW and in Victoria in 2007 has made the need for state reserves even more acute, as water managers can no longer assume even modest levels of irrigators water underuse returning into the 'pool' at the end of each season.

3.6 OTHER FACTORS

There are a wide range of other factors which may be leading to lower water use by irrigators. These include:

1. **Climate change:** Although the data prepared by the MDBA has been adjusted for seasonal variation, it is likely the model uses whole season water availability. Consistently lower Spring and Autumn rainfall may be distorting irrigation demand and limiting irrigators capacity to utilize available water during key irrigation periods.

⁴ As a large proportion of this water was held within MI's bulk water account, actual past utilization is difficult to determine.

2. **Less Water coming down the Darling:** In better resource years it is now likely water available from this once small yet important source has reduced. As well as increased capacity to divert water by northern irrigators, the reduction in maximum capacity in the Menindee System since the mid 1990's has also reduced its capacity to contribute to regulated Murray flows and NSW Murray allocations. (Prior to 1996 Menindee was able to be surcharged to more than 2,200GL, full capacity now is 1,731GL).
3. **Changes in commodity prices, crop yields:** Normal agricultural commodity and input cost factors also drive water use, farmer risk appetite and trade in water. Clearly since benchmark conditions were established in 1995 there have been very significant changes in crop types, yields per ML and prices for commodities. The collapse of milk prices in Victoria in 2016 and the introduction of cotton into the Murrumbidgee Valley in the early 2000's, two significant examples of 'other factors' that have led to not only led to more efficient water use by irrigators, however also changes in water demand and even water entitlement ownership.
4. **Conveyance water not 100% secure:** In Victoria the water to fill and operate the State owned GMW's extensive 6000km channel system is given absolute water allocation priority. In the NSW Murray and Murrumbidgee the allocation of conveyance water to the large irrigation corporations occurs only after more than 95% of High Security water is available. For many investors and water users even the *possible* inability to have water delivered in an extreme drought, is a recognised hurdle to investing and may be another factor leading to water entitlements and annual allocations leaving the recognised NSW irrigation districts, particularly in the NSW Murray Irrigation Area.

3.7 THE IMPACT OF UNDERUSE

The beneficiaries of the year on year underuse by irrigators, mainly irrigators depending on NSW General Security, or Victorian Low Reliability (LRWS) water allocations, are:

- Environment, (or simply SA water quality) from even greater than mandated flows over the border into SA (1000GL/annum)
- High Security water holders with enhanced relative security of supply (and value of entitlements) despite the increased utilisation of the available allocations in their accounts
- Horticulture/dairy users dependent on using actual NSW General Security allocations, which have been purchased in prior seasons, and converted through carry over against a Victorian Murray or Goulburn LRWS into a higher secure product through interstate trade and the use of carry over.

It is considered that although some of the irrigator behaviours are simply market based and reflect sensible risk management by both buyers and sellers involved, some of the behaviours (policy changes) and outcomes observed fail the NWI principles of "no third party impacts" as policy decisions appear to favor allocation or access of water to one group over another.

The systemic lower use per ML allocated, the policies that set lower allocations for some users and the practices that prioritise some users unfairly all require action by both State and Federal Governments to acknowledge and/or redress the industry impacts, the quite dramatic over shooting of each key valley's design use limitations or *1995 Cap*, and the issues of NWI non-compliance.

4 What are the numbers

4.1 OVERVIEW AND RMCG ESTIMATE

Since the drought in mid 2,000's (since 2009/10) annual yield or usage, of water allocations from Entitlements held in the Southern MDB by NSW General Security users and Victorian Low Reliability Water Share Users deteriorated 58% or 2,000GL compared to the calculated long term average yield on these two large categories of water entitlements. The allocations from these two products were key drivers of rice production in NSW and Dairy feed production systems in Northern Victoria.

Whilst the water recovery program for State and Commonwealth Environmental water and the higher incidence of drought years have contributed to the deterioration, the impact is much greater than just these factors alone.

Recent cap data and analysis suggest that there has been considerable underuse (1,200GL/year) of available water compared to the agreed cap (after considering drought and water recovery) resulting in extra river losses, increased dam-spills and increased Murray river flows (an increase of 1,000GL/year) to SA.

This overall cap underuse is attributable to policy changes, the introduction of carryover and water management shifts. Carry over became very firmly entrenched when introduced by Victoria in 2007.

This result during the nine water years up to June 2018, when combined with substantial water recovery and drought, means only 42% (1,415GL) of the GS/LS water was allocated and is utilised by irrigators now compared to pre 2004 allocation and use practice of 3,388GL. From NSW GS entitlement holder's perspective their use has declined to 46% and from Victoria LS perspective the decline in use has been absolute i.e. almost zero.

This finding is supported by:

- The MDBA *Transition Water Take Report 2017-18*
- A comparison of entitlements and modelled yield held by irrigators in 1997 with actual entitlements and allocations held between the nine years, 2009/10 and 2017/18
- Water recovery volumes by the environment are on the public record and incorporated in a detailed analysis in the *Transition Water Take Report 2017-18*
- RMCG have referred to industry, regional water authority data, NSW Irrigation company annual returns, and ABS data on the actual water use by the various irrigated crops over this period (rice/grazing/cereals/maize/cotton).

4.2 BASIS FOR ESTIMATION OF THE REDUCTION IN USE

Over the last nine years there has been 2,000GL less available to GS/LS users (compared to the *1995 Cap agreement*, the basis of NSW Water Sharing Plans and the SDL's). RMCG have attempted to attribute the reduction to assist in identifying the relative contributions to this change in water use. It is noted that whilst the individual components will vary with different analysis the overall total change of 2,000GL is confirmed by reconciling with the transition report.

The following shows the basis for the 2,000GL estimate.

4.2.1 HISTORIC YIELD

The **historic yield** for GS/LRWS/Supp water is based on Long-term Average Annual Yield (LTAAY) of 3,388GL (i.e. The combined 1995 Cap levels for these key products).

Total NSW GS + Vic LRWS entitlements on issue was 4,277GL entitlements with conversions to LTAAY of:

- Victorian Murray and Goulburn
av LRWS @43% = 713GL
 - NSW Murray @81% = 1,354GL
 - NSW Murrumbidgee GS @ 64% = 1,211GL
- add, in NSW some access to the *supplementary* and *uncontrolled* flows (say 110GL), however only in wetter years.
- = a total of **3,388GL** expected average yield or total use each year from these key products.

4.2.2 ESTIMATING THE ACTUAL INDUSTRY USE

RMCG have utilised Industry data, ABS data and Water Corporation data to estimate that the average annual water use by non-hort' and non-irrigated dairy users, although varying significantly, has averaged over the last nine years approximately:

- Rice production – 600GL
- Cereal/Maize cropping – 300GL
- Irrigated pasture for Livestock NSW Murray and M'Bidgee – 200GL
- Cotton (also uses some Murrumbidgee HS and Groundwater) approx. 300GL.

RMCG's industry reconciliation indicates a total average consumption of 1,400GL p.a.

Note in total Southern Basin there are 500GL of Ground Water available and used in drier years.

This is documented in RMCG's report for GMID Leadership group which was updated for the Goulburn Broken CMA 2018 and also in a recent publication: [It's not all about almonds](#)" Rob Rendell. Background on issues affecting the "Connected Murray" system, August 2019.

Therefore, this water use suggests that the total reduction in water use is 2,000GL.

4.3 KEY ELEMENTS OF 2,000GL REDUCTION

4.3.1 WATER RECOVERY – 775GL

The total combined recovery from the Victorian LRWS and the NSW GS in the Southern MDB was 775GL (LTAAY. @ May 2019).

4.3.2 REDUCTIONS IN ALLOCATIONS – 598GL

Applying the actual announced allocations in the two states over nine years between 2009/10 and 2017/18 to the pre basin plan entitlements indicates that the volume allocated would have been 2,015GL i.e. a reduction of 1,373GL.

This total reduction in actual volumes allocated of 1,373GL comprises 775GL from water recovery leaving the **net reduction in irrigation water use due to allocations being less than historic is 598GL**.

The reduction in use due to lower allocations of 598GL comprises an estimated 150GL due to climate (reduces allocations 5%), 50GL due to extra losses 398GL due to policy changes (which reduces allocations by 12%).

For further detail regarding the basis of this attribution of reductions, refer to the Table in Appendix 2.

4.3.3 CARRYOVER SPILLS TO SA – 450GL

The additional spills into SA are the result of both carryover increasing spills and policy changes that reduce allocations and increase spills. Some of the spills are due to the environmental agency carryover too.

The transition report identified that the total underuse was approx. 1,100GL per annum and that the increased flows to SA were 1,000GL.

Apportioning the impact of carryover to the increased flows to SA is an inexact calculation even through iterative approach it is suggested that the **irrigator carryover impact is approx. 450-500GL**, 250GL are due to reduced allocations that have spilt and 250GL due to the environment.

4.3.4 GS WATER CONVERTED TO HORTICULTURE USE – 150GL

There has been a net trade from the Murrumbidgee and Murray systems to Victoria over the nine year period of approx. 40GL per annum. In addition, there has been a net trade from the NSW GS to NSW Murray Horticulture. The volume can only be guessed at, it suggested could be of the order of 50-150GL p.a.

This suggests that NSW GS water is being converted to Horticulture with the use of carryover provisions in Victoria and NSW Murray of 100-200GL.

4.4 ESTIMATING THE INDIVIDUAL REDUCTION COMPONENTS

The following table summarises the component reduction of the 2,000GL underuse.

Starting with a historic yield for GS/LS/Supp water based on LTAAY of **3,388GL** ('97 cap).

Lost on average 2,000GL/year over the last nine years due to:

- **775GL – Water recovery** since '97 from these pools – (LTAAY. @ May 2019) (Living Murray, buyback, farm efficiency, 80/20 etc.)
- **598GL – Reduced allocations** announced by NSW and Victoria – total comprising
 - *Dry period* (150GL), 83% average inflows in the nine years between 2009/10-2017/18 (although five seasons in the nine years after the 2009/10 season had 100% allocations in the NSW Murray GS)
 - Extra allowance for delivery losses (50GL), by:
 - Increased downstream flows for environment
 - Changing operations including spills from Lake Victoria (50GL)
 - Policy changes (398GL) that:
 - a. Prioritise HS over GS/LRWS water to HS(98GL)
 - b. Prioritising conveyance allocations to deliver carryover

- c. Trade and carryover reducing underuse of HS
 - d. Increase spills (250GL)
 - e. By adopting higher reserves (06/07 inflows)
 - f. Reduce max allocations
 - g. Victorian decision to prioritise Carryover over LRWS allocations
 - h. Snowy releases in wet periods
 - i. Barmah/Millewa spills
 - j. Enabled Darling river contributions to reduce (50GL)
- 600GL – Irrigator carryover impact – comprising
 - Private spills, accumulated dead storage, (450GL)
 - Horticulture/dairy turned water into reliable product used (included) 150GL.

What's left on average for GS/LRWS users in Victoria/NSW (SCB) =1,415GL (42%) for growers of rice, pastures, irrigated cereals/maize, cotton etc.

Note this is an approximate split even the total lost, however the Transition Report confirms the volume is definitely of the order of 2,000GL.

- People will argue with the split however let's start the debate with acknowledging the big change
- If one increases the loss due to dry period, then other components of reduced allocations must correspondingly reduce.

A visual explanation of the changes in allocation policy along with impacts of the changes has been included as Appendix 3.

5 Basis for action related to fairness— inequities have arisen

The reduction in water use has been a combination of climate, water recovery, the use of carryover and policies that reduce allocations. The beneficiaries of the year on year reduced allocation levels to NSW GS and the virtual abolition of Victorian LRWS allocations have been:

- The environment from even greater flows into SA in most years. This has averaged 1,000GL/annum in the nine years up to 2018. This is a large annual volume.
- High Security holders in all States, with enhanced or maintained security *with volume available* despite the dryer climate, thus increased utilisation of their announced allocations each year.
- Horticulture/dairy users in all States who are, through water market activity and carry over, converting NSW GS water into a more secure product.

It is considered that some of the State allocation policies that have delivered this outcome fails the NWI principles of “no third-party impacts” of policy decisions. Therefore, this analysis suggests that a number of inequities have arisen.

1. Horticultural irrigators have increased water use (offsetting particularly the reduced Victorian Torrumbarry ID use) thus maintaining total downstream of choke river irrigation demand with associated environmental impacts yet upstream irrigators have given up the greatest proportion of the water.

There is emerging evidence of difficulty delivering both irrigators water and environment demand to the lower reaches of the Murray River.

2. NSW water sharing commitment to share the pain of water recovery between user types has not been honoured:
 - The maintenance of the High Security NSW product, and NSW (and by transfer Victorian Carry over) has been, in part at the expense of reducing water available for the supply of NSW GS/Victorian LS/supplementary access/Corporation conveyance in NSW
 - Water recovery to E-Water accounts has been dominated by sale of water from GS users providing water to buy-back and infrastructure recovery programs in NSW – virtually no NSW HS has been recovered
 - Upper Darling water has stopped flowing into Menindee for extended periods, and the northern NSW and SE Queensland rivers are not delivering their pre 1995 share of flows into the Murray. This is a result of both drought and the alleged regulatory failure in managing extractions from the key tributaries to the Darling River.
3. NWI principles are for water management, water sharing policies and E-water management to have no third-party impacts. However, significant third-party impacts have occurred as a result of:
 - Carryover rules prioritised carryover above entitlement holder’s rights to allocations from inflows
 - Victoria is using its carryover to also store NSW GS in many recent seasons, converting it into a higher reliability product. This has been encouraged by Victorian spill rules that secure carry over water, and then prioritise carryover relative to a LRWS allocation announcement when it is stored.
 - Most environmental water released from storages is ultimately delivered into SA. This delivery incurs higher delivery losses that are not debited. Formalisation of E-Water Shepherding in the NSW Murray and Murrumbidgee to enable multiple uses of E Water releases will exacerbate this therefore have the

potential to further limit access by irrigators to flows previously declared as *uncontrolled or supplementary*.

- Previous rules (Barmah/Millewa allocation or B-MEWA, Lake Victoria spill and prescribed minimum monthly flow to SA) have not adapted to being flooded by E-Water. Some of these rules are now fifty years old and will be very difficult to amend.
- Snowy River release patterns impacts may be making boom and bust cycles worse (i.e. SHL high release rates concentrated on wetter years). SHL's current and proposed release operations need to be better understood.

Key points regarding the extra water into SA:

1. The environment gets extra spills into SA that are most valuable for environmental outcomes, (Higher and longer flood events occur in wet periods also are not subject to constraint limitations applied to those caused by man-made flooding), i.e. more water is now stored at any time. This effectively creates a dead storage therefore makes the dams spill more often.
2. Transition from cap accounting to SDL (1 July 2019) may entrench the inequities/underuse that have developed between the policy changes since 1995, the finalisation of water Sharing Plans in 2004 and now into Commonwealth endorsed Water Resource Plans. These factors have possibly caused a re-setting of each valley's water access rules and therefore use levels, at new, much lower, annual levels.

6 Proposed Actions - What needs to be done

The *Transition Report* provides compelling evidence that water allocation policies, together with water user behaviour are combining to reduce available water for irrigators and to increase the volume of E-Water available each year.

Immediate actions recommended:

1. **Recognise the savings:** A lot has changed since the cap was introduced based on 1995 Diversions for irrigation. There is clearly an opportunity to recognise the measures that have led to this entrenched and recognised extra flow into SA and underuse by irrigators as a water recovery action, and to reduce, or even eliminate the need to pursue the 450GL of up-water. (The higher flows could also be used to reduce the minimum monthly mandated flow requirement into SA, originally designed to counter high salinity, that now serves little purpose and seems counter to natural flow cues).
2. **Allocate more water in better years:** State allocation policy within the NSW Murray and Murrumbidgee Water Sharing Plans could also be adjusted to enable more access to water in better resource seasons, to enable increased irrigated production. Even with adjustment, water use by irrigators in NSW will remain well below the Sustainable Diversion Limit.
3. **Adjust sharing and carry over policy within NSW and VIC:** Some of the changes to policy and revised entitlement characteristics by State Agencies appear to contravene a number of the agreed the 2004 National Water Initiative principles. It is worth considering some modest adjustments within NSW water sharing to make water access fairer between user-groups. It is also worth considering changes to Victorian carryover spill rules, to enable actual allocation announcements of LRWS in better seasons.
4. **Stop any transitions to SDL:** Compliant Water Resource Plans (WRP's) and associated state sharing principles that entrench entitlement-owner inequities associated with underuse until this matter of high underuse of available water is recognised and resolved fairly.

Further measures that would enable greater use of available water by NSW GS and Victorian LRWS owners:

5. Limit expansion in Horticultural developments that further increase in horticultural demand in SA and the NSW/VIC Lower Murray until full consideration of the impact on environment, additional losses and deliverability is accounted for.
6. Assess losses in delivering E-Water recognising any spills are likely to create an environmental benefit. Debit these losses to E-Water accounts.
7. Improve efficiency of river operations in line with improvements observed within all irrigation supply corporations in NSW and Victoria. Credit savings to all entitlement holders.
8. Reconsider water sharing and special entitlements related to salinity management, and design better environmental flows accordingly. The flushing of salts in the greater Murray system is effectively a battle that has been won.
9. Reconsider the structure and use of the Barmah Millewa water account. This watering regime has effectively been swamped by the environmental water entitlements created as a result of the Basin Plan.
10. NSW should align the priority of NSW conveyance loss allowances for the NSW irrigation corporations. With High Security allocations, not after full High Security allocations have been announced.

Other actions that also could be considered:

11. Snowy River flow & release management should be subject to an independent review to avoid a bias towards wet year releases that may lead to future reductions in the Required Annual Release. (The RAR).
12. Regardless of the reconfiguration, the Upper Darling tributaries in NSW and QLD⁵ need to contribute more water into the Lower Darling and the Murray in accord with the NSW commitment to actually cap diversions across the whole of NSW at the 1993/4 levels of development.
13. Change the Lake Victoria spill rules – consider debiting any Lake Victoria spills to E-water accounts.

⁵ Queensland later agreed to a cap at 2000 levels of development.

Appendix 1: The National Water Initiative

The National Water Initiative was agreed between Murray Darling Basin States, Territories and the Federal Governments (COAG) in June 2004. This statement of objectives was part of a comprehensive review.

The National Water Initiative (CI23)

The NWI sets out a number of specific objectives that, when fully achieved, would have a major impact on water management. Clause 23 of the agreement states that full implementation of the NWI will achieve:

- **effective water planning:** transparent and statutory based water planning that deals with key issues such as the natural variability of water systems, major water interception activities, the interaction between surface water and groundwater systems, and the provision of water to achieve specific environmental outcomes
- **clear, nationally compatible and secure water access entitlements:** providing more confidence for those investing in the water industry through more secure water entitlements; better and more compatible registry arrangements; better monitoring, reporting and accounting; and improved public access to information
- **conjunctive management of surface water and groundwater resources:** so that the connectivity between the two is recognised, and connected systems are managed in an integrated manner
- **resolution of over allocation and overuse:** returning over allocated systems to sustainable levels of extraction as quickly as possible
- **clear assignment of the risks associated with changes in future water availability:** ensuring that the risks arising from reductions in the pool of water available for consumptive use are shared between Governments and water users according to an agreed framework, to provide investors and entitlement holders with certainty about how changes will be dealt with
- **effective water accounting:** providing information on how much water there is, where it is, who has control of it, who is using it, and what it is being used for in order to support confidence about the amount of water being delivered, traded, extracted and managed for environmental and other public benefits
- **open water markets:** removing artificial barriers to trading in water entitlements and allocations, bringing about more productive water use and enabling more cost effective and flexible recovery of water to achieve economic, social and environmental objectives
- **effective structural adjustment:** ensuring that water policy, planning and management are facilitating and expediting adjustment, rather than impeding it.

These actions, taken together, would achieve:

- Economically efficient water use and related investment that maximise the economic, social and environmental value of Australia's water resources
- Improved environmental water outcomes, including the identification and effective and efficient delivery of water to sustain the health of water-dependent ecosystems of waterways and wetlands.

Figure A1-1: Principals of The National Water Initiative 2004

RMCG has reviewed the Transitional Water Take Report for 2017-18 published in July 2019. Combined with other independently sourced data related to water use, water allocations, water trading and water stored in reserves, there is compelling evidence that the objectives of the NWI are clearly not being met. Furthermore, some elements of the current Murray Darling Basin Plan are in need of immediate review and adjustment to avoid embedding unfairness in State water allocation practice, paralysis of large user groups, stranded assets, and continuing large annual over recovery of flows relative to recovery targets.

It is now likely the economic benefits of trading water to its highest use (or value) may be counter to a successful balance between the best possible environmental outcomes, equity between user groups and community wellbeing.

Appendix 2: Calculation of allocations

Table A2-1: Southern Murray Darling Basin allocations: nine years to June 2018 (Sources various)

	Entitlements on issue	LTAAY 2011 factors	Total Historic yield	Environmental water	Historic Environment yield	current Irrigator entitlements	Actual av allocation 09/10 - 17/18	Av actual irrigator water
NSW Murray GS	1672	81%	1,354	370	299.7	1302	66.90%	871
NSW Murray Supp	250	73%	183	111	81.03	139	15%	21
NSW M'Bidgee GS	1892	64%	1,211	282	180.48	1610	64.70%	1,042
NSW M'Bidgee Supp	199	14%	28	22	3.08	177	15.00%	27
Low Bidgee NC1	393	45%	177	393	176.85	0		-
Low BidgeeRBN2	1	34%	0	0	0	1		-
Low BidgeeRBS3	354	34%	120	0	0	354	15.00%	53
Vic Murray LRWS	300	43%	129	35	15.05	265	0.50%	1
Vic Goulburn LRWS	413	45%	186	42	18.9	371	0%	-
	5474		3,388	1,255	775	4219		2,015
		total reduction in irrigator yield	1,373	environment recovery yield	775	means allocation reduction in irrigation yield		598

Appendix 3: Visual explanation of reduction

The following four Figures below illustrate the change in available GS water since the 1990's:

Water Storage Model for G.S/H.S product

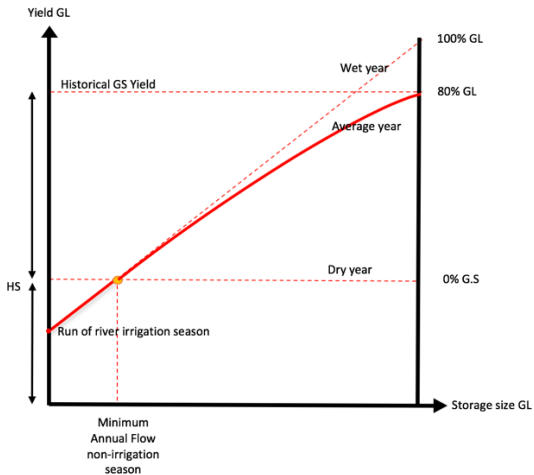


Figure A3-1: Standard Storage/allocation model

Water Storage Model for G.S/H.S product
Allocation reduction impact

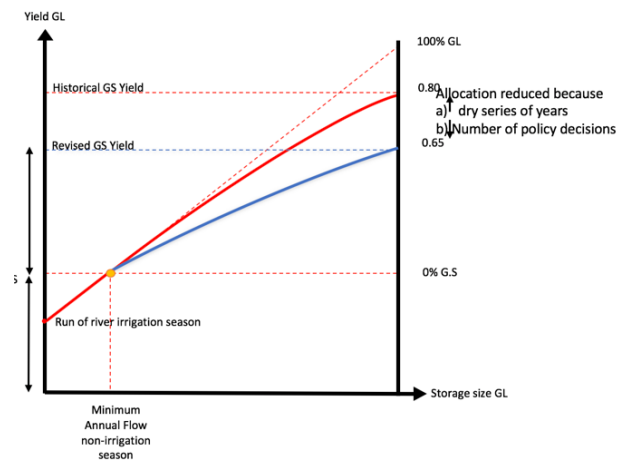


Figure A3-2: Showing impact of reduction in allocations

Water Storage Model for G.S/H.S product
Allocation reduction impact
plus
Impact of minimum carryover

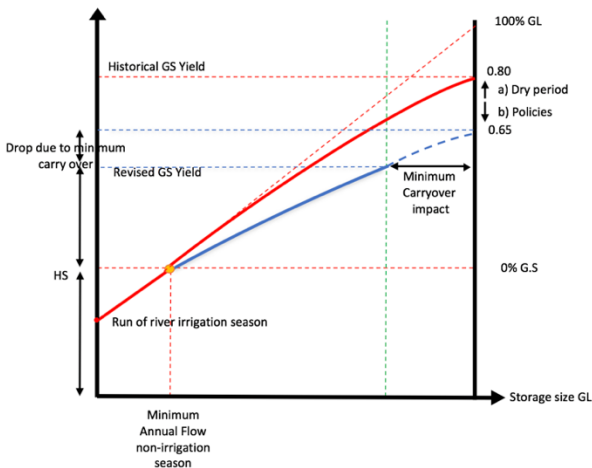


Figure A3-3: Showing the impact of minimum carryover

Water Storage Model for G.S/H.S product
Allocation reduction/minimum carryover impact
plus
Impact of converting carryover to reliable water

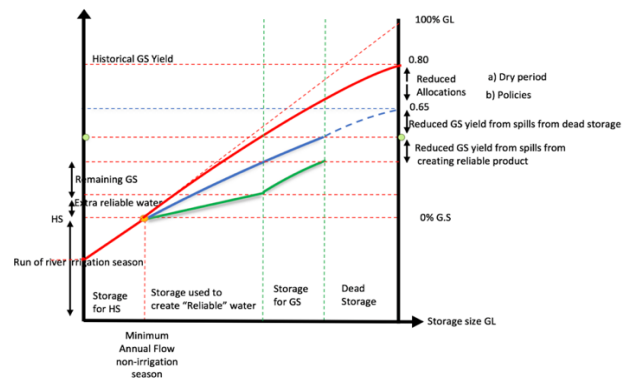


Figure A3-4: Showing the impact of converting carryover to a more secure product

This report has been prepared by:

RM Consulting Group Pty Ltd trading as RMCG

Level 1 East, 1100-1102 Toorak Road, Camberwell Victoria 3124

(03) 9882 2670 — rmcg.com.au — ABN 73 613 135 247

Offices in Bendigo, Melbourne, Torquay and Warragul (Victoria) and
Penguin and Hobart (Tasmania)



Key Project Contacts

George Warne



Rob Rendell



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