

# Submission to the ACCC Murray-Darling Basin water markets inquiry

## Introduction

The Murray–Darling Basin Authority (MDBA) welcomes the opportunity to provide a further submission to the ACCC’s inquiry into Murray-Darling Basin (Basin) water markets.

Basin water markets have provided benefits to water users in managing their business, and have increased the efficiency of water use. However, water markets are still maturing. Regulation, operational frameworks and governance must also evolve to support market efficiency, effectiveness and confidence.

Basin states are the primary policy makers and predominant regulators. Under the Constitution, each Australian State maintains authority for water resources in its jurisdiction, and has water resource management legislation, water entitlement and licensing regimes, water allocation policies and regulatory and compliance frameworks. Basin states must ensure their legislative, policy and processing frameworks for trade are consistent with Commonwealth legislation, including the *Basin Plan 2012* (Cwlth) (Basin Plan), which contains the Basin Plan Water Trading Rules. If there is to be any significant improvements made, proposed changes to water markets will need to have the full and unqualified support of the States.

Roles and responsibilities are an area which continues to be problematic for water users and other water stakeholders. It warrants deep consideration. Further fragmentation is not desired. Improved clarity around who sets, manages and enforces the rules is desirable.

The MDBA suggests a focus on consistency across jurisdictions supported by a set of minimum standards as a way forward on many of the issues raised by the ACCC in the interim report.

## Reform is not without impact

Water management has undergone significant reform over a relatively short period of time. For example, the 2004 National Water Initiative and the commencement of the *Water Act 2007* (Cth) were both significant reform commitments within the space of just four years. The Basin Plan continues to be implemented and has several years of significant water management reforms to complete.

Recent reviews into water management have highlighted the significant impacts of water reform. In particular, reform to the operation of water markets to date has seen the uneven distribution of costs and benefits.

Stakeholders tell us time and again that communities are under immense pressure and their capacity to engage is finite and governments should not continue to ask more of the community and their representatives than they can deliver. General reform fatigue and uncertainty are being acutely felt in regional communities.

In line with the broader water management reforms of the last 25 years, the water market has also undergone significant change from virtually non-existent to a fully formed market. It will be important that the pace of reform is considered and managed. It is also equally important that the review and adaptation of market regulation keeps pace with other market reforms. In the development of a forward plan, the MDBA encourages the ACCC to be sensitive to the ability of water users and communities to undertake the proposed reforms. We encourage consideration of what is possible now in the broader context. The next 25 years should be well planned and appropriately staged. The MDBA would encourage a pragmatic approach to reform which seeks a tangible action plan with achievable targets.

## Markets can't solve everything

The market is only one piece of a bigger puzzle. Water markets need to work in concert with the operation of Basin river systems. Together they must balance the delivery of consumptive entitlements, to maximise economic production with the environmental watering requirements to maintain a healthy functioning river system.

Whenever thinking about water markets, systems, and products it is essential that the physical constraints of the systems are considered. For example, deliverability risks are a key factor for river operation decisions as outlined in the [Independent Panel for Capacity Project Review](#).

Delivery risks can be realised through various sets of conditions and the MDBA acknowledges that the market can impact on deliverability. However, the MDBA believes that the market would be unable to address all of the risks. As an example, delivery shortfalls arise through local heatwave conditions leading to peak irrigation demand that is in excess of water available in the reach. Access to deliverability or capacity shares is unlikely to solve this issue.

A number of reforms, including the development of water markets, have been implemented under the National Water Initiative, the Water Act, and the Basin Plan, to bring consumptive use of water in the Basin to sustainable levels, and to ensure the social and cultural value of water is maintained alongside the value of water for economic production.

Although water markets are only one aspect of these reforms, markets provide water users the ability to make decisions to manage their risks around access to water. Having a well-functioning water market helps manage the impact of other reforms for individual water users.

Another factor that also needs to be considered is how best to manage risks arising from trade. The best instrument to manage these risks may not be a market mechanism. In the [ACCC's 2010 advice on the Basin Plan water trading rules](#) the ACCC acknowledge that the environmental impacts from using water on land should be addressed through the use of water use approvals.

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The ACCC also observes in its interim report, that there are several externalities, or unintended consequences of water trading. Although governments generally try to minimise these externalities, they are not always successful, especially in relation to minimising environmental costs/damage. This can be partly attributed to the speed at which Basin water markets have been evolving and maturing, but it can also be partly attributed to market policy or design.

Improvements in Murray–Darling Basin water markets should focus on the delivery of clear benefits to water users and regional communities. However, any market reforms must be undertaken in parallel with other activities to balance the competing economic and environmental objectives.

## The Basin Plan Water Trading rules

Since 2008, the MDBA has been responsible for facilitating and coordinating interstate and inter-valley trades in the southern-connected Basin. The rules around these arrangements sit in the Protocols to Schedule D of the Murray–Darling Basin Agreement. The MDBA’s responsibilities include:

- assisting Basin states to coordinate and facilitate interstate and inter-valley water trade and reviewing and updating interstate and inter-valley trade arrangements, and
- accounting for and adjusting Basin state shares of water to reflect interstate and inter-valley water trade.

The MDBA is also responsible for compliance with the Basin Plan, including the Basin Plan Water Trading Rules. Since 2014, the MDBA has worked with Basin state governments to ensure state-based trading rules comply with the Basin Plan Water Trading Rules. The MDBA has some further responsibilities in regulating market participants, as well as being a central point for some water market information.

The Basin Plan Water Trading Rules provide a consistent approach to trade across the Basin, while Basin states set trade rules at the catchment level. The Basin Plan Water Trading Rules include three main elements:

- managing restrictions on trade,
- increasing water market transparency, and
- maintaining market confidence.

Prior to the Basin Plan, Basin states set trading rules without any formal, consistent regulatory oversight on how they may have had regard to these types of wider market principles. Regulating Basin states in an area where they have not traditionally been regulated is a challenge for both the MDBA and Basin states.

The water market has experienced exponential growth in a short period, which has tested how appropriate and robust the Basin Plan Water Trading Rules and state trading arrangements are.

The MDBA agrees that the governance, regulatory and operational frameworks supporting water markets have not developed to accommodate a market of this scale. The majority of the proposed governance reform options provided in the Interim Report would need to be considered in the context of the relative constitutional powers of the Commonwealth and State governments and negotiated with the Basin states. Another alternative option is to explore agreed minimum standards. A model for this

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could be the Council of Australian Governments minimum trade processing times policy. A common standard was applied for allocation trade processing times. At the beginning, Basin States had some difficulty meeting the standards. But improvements in trade processing (which were partly driven by requirement to meet the minimum standards) have meant that the standards are out-of-date as they are easily met.

The Basin Plan continues to evolve. All governments and agencies have committed to adaptive management as part of Basin Plan implementation. The rules must also adapt as we learn more. The BPWTRs were predominantly developed with regulated river systems in mind. There are challenges translating the BPWTRs into unregulated systems whilst maintaining the intent and outcomes sought. These predominantly relate to the competing physical barriers of the system and trade rules designed to eliminate barriers. These types of issues must be reconciled through pragmatic implementation and regulation. Regulatory discretion is one tool to navigate these challenges.

The evolution of environmental water provides a useful example. At the time of developing the Basin Plan and the associated trade rules, the consideration of issues associated with the delivery of large volumes of environmental water would be managed was predominantly theoretical. Whilst these were deep considerations of policy makers when the rules were developed, the practical experience of implementation must now feedback into the policy domain.

The operational frameworks of regulated river systems were designed primarily for consumptive water delivery, and these settings do not recognise the different water delivery needs of the environment. The requirement under the Basin Plan for Basin states to give effect to policy measures that enable piggybacking of water on unregulated flows, and to recognise return flows downstream, anticipated the need to develop policy and management mechanisms to enable environmental water delivery in a way that achieves environmental outcomes through the use of environmental water holder's entitlements.

There has been and continues to be significant work in partnership with Basin states and environmental water holders to ensure environmental watering needs can be met within the river operational framework without creating third party impacts.

The MDBA is currently conducting a review of the operation of section 12.02 of the Basin Plan which provides limited exemptions for environmental water deliveries. The review has highlighted the complex relationship between trade and environmental water delivery. Competing aspects of efficient market operation and environmental outcomes are becoming more acute. The matters which river operators must balance in the pursuit of objectives and outcomes is getting more complex.

The [ACCC section 12.02 advice](#) considers that movement of held environmental water by environmental water holders be 'trades' for the purposes of the Basin Plan. The MDBA does not consider that all movements of water are trades. For example, as set out in the MDBA's [Objectives and Outcomes for River Operations](#), the MDBA when releasing water needs to meet several water requirements. These include, minimum planned regulated releases, conveyance water orders, delivery of SA entitlement and bulk transfers to Lake Victoria. Of those deliveries, 'trades' are captured within orders.

Several of the issues raised by the ACCC have linkages to other policy, implementation and operational matters such as river capacity sharing, constraints projects and deliverability risks. These matters need to be considered carefully against the suite of Basin Plan water reforms and water management objectives more broadly.

## Is the energy market a good model?

Deciding on the most appropriate institutional and governance arrangements for water markets in the future is a critical next step.

It is important to recognise that water markets have very specific characteristics which develop from the underlying characteristics of water in the natural environment. They are driven by climate, geography and other natural physical features such as rivers and creeks. We must constantly remind ourselves that water is a natural commodity which is different from many other natural commodities, and it forms an essential service. Quite literally, water underpins everything we do as a society.

When looking for exemplary examples of how best to manage water markets it is difficult to find peers. Energy is an essential service which has evolved in recent decades from a state-based set of arrangements to a number of semi-national markets. Energy markets and arrangements offer a tempting benchmark which may not be the best guiding light. We note that the energy market experience and the institutional governance arrangements have been fraught with challenges and controversy. The successful outcomes of the energy market experience are still hotly contested.

There are several distinct and fundamental differences between water and energy which are worthy of note and substantial consideration. Energy is generated in a controlled way whereas rainfall is sporadic and dispersed. To generate and deliver more energy, more infrastructure can be built. Water is captured. Generally speaking, it cannot be generated to increase supply. Energy transmission and distribution share some monopoly characteristics. However, water is not easily or inexpensively moved. When delivering water on a large scale, natural channels and gravity are relied upon, especially in large scale connected river systems and large irrigation channel systems.

Comparisons of water markets to energy markets should be considered carefully.

However, aspects of existing, well-functioning markets should be considered to improve water market design. The unbundling of land and water was driven partly from a desire to create a real property right for water, like land assets. Because of this there are firm parallels with real estate markets. A method to examine improved market design could be to examine the characteristics of water access entitlements and related products and pick the elements out of a range of regulatory models that suit the unique needs of Basin water markets.

## Transparency of information is a critical fix

The MDBA supports the Commission’s finding that foundational work is required to harmonise and coordinate adequate data collection and reporting.

The MDBA supports investment in the aggregation of data in systems and sources as an important aspect of the pathway forward however we caution that this alone is unlikely to be transformational against the backdrop of issues highlighted in the interim report. Solutions must continually be assessed against the problem to be solved and the outcome sought.

Many aspects of water use and trade are necessarily localised as compared to a truly mobile product. Therefore, many of the benefits of reform should also be pursued at a local scale rather than seeking scale for the sake of scale. Customer needs should continue to drive the ideal design of markets. A deep understanding of needs and desired products is the ideal starting point for evidence-based reform. A national platform is likely to be a mirage.

The MDBA's 2019 [Trade Price Audit](#) (Price Audit) identified some market data collection and reporting issues. The Price Audit suggested understanding the information needs of users, helping market participants understand their obligations, and identify barriers to harmonise data in existing trade registers as areas for improvement. The MDBA notes that progress on the implementation of these recommendations by relevant jurisdictions and agencies is slowly progressing. Both NSW and Victoria have made improvements to their allocation trade forms based on recommendations from the Price Audit.

## Compliance and enforcement help with building trust

The MDBA agrees with the ACCC that the diversity and complexity of water markets in the Basin is a significant issue. Reforms are needed to streamline the management and regulation of water trade. Such reforms must be considered in the context of the relative constitutional functions and powers of the Commonwealth and State governments.

A perpetual pursuit of the MDBA Office of Compliance is consistency and harmony in frameworks across jurisdictions. The MDBA strongly supports all measures which aspire to this goal. The costs of disparate arrangements amongst jurisdictions are far outweighed by the many and varied benefits of consistency.

Significant work has been done by the Basin states and the Commonwealth over the last few years to improve compliance in water take and increase trust and confidence that users are following the rules. The key tool utilised to generate this uplift was the Compliance Compact. These efforts could be extended to water trade so that the benefits of being able to trade water are more equitably shared and market confidence is improved.

The Commonwealth Water Minister recently announced changes to the institutional arrangements for water compliance at the Commonwealth level. An Inspector-General of Water Compliance is to be established with the existing Office of Compliance in the MDBA to be transferred to this new entity. It is intended that the existing compliance and enforcement functions of the MDBA will transfer in full and this will be affected by changes to relevant legislation. The compliance and enforcement of the Basin Plan Water Trading Rules is currently undertaken by the Office of Compliance and is intended to transfer to the Inspector-General. It will be important for independent governance arrangements to be maintained and a strong policy feedback loop established to ensure enhanced outcomes. The gap

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between recommendations and action, as evidenced through the Price Audit, must be closed for the full effect of this change to be realised.

The MDBA notes that some barriers exist to the Commonwealth’s ability to regulate aspects of Basin water markets under the Water Act. These barriers have been identified in previous reviews into water compliance and management in 2017-2018, including by the Independent Panel for the Murray-Darling Basin Water Compliance Review (2017). The MDBA has provided advice on these limitations and potential changes are under consideration by the Commonwealth Government. Information transparency and accessibility also make it difficult for the MDBA to have regulatory oversight of market behaviour, and the MDBA recommends this area for reform.

There are several agencies regulating Basin water markets, including the MDBA and Basin states. The MDBA has found it challenging to effectively regulate Basin states under the Basin Plan Water Trading Rules. There has been limited attention given by Basin States to voluntarily address matters of non-compliance. Since the formation of the MDBA Office of Compliance in 2018, the MDBA has developed the frameworks and processes to support its regulatory responsibilities but these have not been strenuously tested. The MDBA’s experience suggests that the effectiveness of regulatory reform options proposed by the ACCC may be limited without strong, uniform support, or some referral of power from Basin States. A clear legislative mandate is required for any regulatory agency to substantially affect change in behaviour.

The MDBA has identified improvement in water trade regulation as a compliance [priority area for focus during 2020-21](#). The MDBA has recently published its [Audit and Assurance Work program 2020-21](#). In 2020-21 there are two audits specifically targeting the implementation of Basin Plan water trading rules that support transparency and market confidence. These include audit of an IIO and also examining options for a more structured approach to monitoring insider trading.

## Improving trade processes and market transparency

The MDBA strongly supports the ACCC’s recommendations in relation to improving trade processes and market information. Increasing market transparency, consistency and information accessibility underpin many issues highlighted in the Interim Report. Improvements to market information needs to be guided by users and complemented by capacity building.

The MDBA also considers that information needs to be presented clearly and understood appropriately by users. For example, information about water management and delivery at a bulk scale cannot provide a clear or reliable indication of water availability at the retail (individual or user) scale. Reliance by water market users on the bulk water and river operations information as an indicator of water prices and market trends to reliably inform water trading decisions should be discouraged or, where it is used, the limitations of the information should be made clear.

Access to clear, relevant information enables water users to make well informed decisions and operate in the market equitably. Improvements in relevant data collection and reporting are also needed to

enable effective market participation to complement regulatory improvements. Such improvements to market transparency would also improve users' confidence in markets.

The MDBA sees three primary areas to improve market transparency:

- Improving the quality and accessibility of information to inform trading decisions,
- Comprehensive and consistent reporting of market data, and
- Harmonising trade processing across jurisdictions and entities.

## Information availability to inform trading decisions

Increasing access to information is important to support water holders to make the best use of their water assets. However, there are disparities in water holders' capacity to use the information available. Complex information favours those who can access the expertise needed to analyse information and take advantage of opportunities.

Improvements to information need to be guided by users in terms of the type of information, level of detail, and access channels that suit their needs. Improvements should be complemented by education activities to ensure improved decision making. Dissemination of information also needs to be managed to ensure equal access and avoid creating opportunities for arbitrage.

Another important consideration in this work is recognising that users have a better intrinsic understanding of water management within their own state. In water markets that are within the one state, this is less of an issue. In connected markets, that cross state borders, the presentation of information needs to be carefully considered. In connected systems the presentation of information needs to consider all users in the system, not just users within the state.

Without these considerations, increasing the availability of information will create further complexity and confusion, and increase knowledge disparity between users.

The MDBA recognises it is a custodian of some data and information, and that it has responsibilities under the Basin Plan for publishing water market information. To assist water users and traders, the MDBA reports weekly on current and future river management operations, including information regarding likely Inter-valley trade call outs, and publishes an annual outlook twice yearly. Other relevant information includes water availability data, conditions of water access entitlements, and trading rules across the Basin.

The MDBA recognises the presentation of the water market-relevant information it holds could be improved in the short-term to address some of the issues raised by the ACCC, such as the availability and harmonisation of carryover information. Work has been started to improve the transparency of the information including improving the quality and relevance to users of the information routinely published on the MDBA's river operations activities, and examining how to improve the information that is required to publish about water access rights, based on previous advice provided by the ACCC.

However, the MDBA also notes that river operations decisions and information on bulk water management and delivery are not clear indicators of water availability. There are several influences on

water availability, and the information provided by the MDBA on climate outlooks, inflows, storage capacity and state shares at the bulk water management scale do not have a simple relationship with how water is allocated and made available for trade by Basin states. River operations also need to respond to emerging weather and demand patterns, providing additional uncertainty for market participants utilising operations and bulk water accounting data to inform investment decisions. Making these processes more transparent may help, but it would also increase the complexity of information. Market participants should be looking to state-based allocation information as the more direct influence on trade decisions and market trends. Basin states also need to improve the information available on the key assumptions that underpin the determination of allocations.

There also are many other factors influencing water use decisions, influencing trading patterns, such as local climate outlooks, agricultural production decisions and water needs, and global commodity markets. Reliance on the bulk water and river operations information as an indicator of water prices and market trends should be discouraged and, where done, the information used with caution.

There are many custodians of data and information that inform the market, and in principle the Authority supports the longer-term goal of a single platform for water market information. However, there are differing views on what is meant by a ‘single information platform’. This may be a central site which provides information on market data only (trade prices etc) or could provide broader information to inform trading decisions. It could also provide trade rules and policy, or could be a one stop shop in which water market participants have all this information to hand and are able to undertake a commercial trade through a central exchange at this site.

The MDBA’s view is that further work is needed to understand what information would benefit all users on a centralised water market platform and what function(s) the site should provide. This information would inform discussions with the Basin states and the Commonwealth government on what trade information could be provided on a shared platform, the quality of information provided, assurance methods to appropriately verify the information, the standardisation of market data and the systems to provide that data in a near real-time manner. Without these preliminary steps, no centralised system will achieve the desired outcomes.

To that end, the MDBA has been working with the Basin states to identify the high-level gaps in achieving better sharing of water market information between IT systems and registers. This work is likely to be a medium-term objective as not all states currently have the IT architecture in place to enable seamless data sharing between systems. Any improvement to market information will need this work to be undertaken as a starting point for a future work program.

## Collection and reporting of market data

The MDBA’s Price Audit aligns with the ACCC’s findings that the collection and reporting of trade information has significant shortcomings. This is a key area for reform to support improved market participation. Better information on market behaviours is also critical to improve regulatory oversight of the water market and inform further market reforms.

The MDBA is implementing responses to the findings of the Price Audit, including the publication of a report on [secondary water market products](#) which explores issues raised in the audit and will be used by the MDBA to update its guidance on price reporting.

The MDBA has also been working closely with Basin states to take initial steps to improve their market data collection processes, including identifying common data fields and collecting data on reasons for trade. However, more can be done.

The MDBA strongly agrees that more work is needed to improve the quality and availability of market data, and fully supports the ACCC’s preliminary options for improvement. In particular, the MDBA strongly supports the ACCC’s option to establish a trade processing and market reporting framework. However, there are some significant barriers to progress in this area and further incentives and legislative mandates may be needed to drive improvement under such a framework.

For example, under section 12.48 of the Basin Plan the obligation to report the price of a trade is on the seller. There is no requirement for Basin states to ensure that they accurately collect and record this information and there are limited levers for the MDBA to influence improvement in this area.

The development of a trade processing and market reporting framework would need to be supported by a review of the legislated reporting obligations, to ensure reporting requirements match the data sought under the framework (i.e. reporting of irrigation and water delivery rights as well as water access rights) and the responsibility for data collection and reporting is clear and appropriate.

## Harmonisation of trade processing

The MDBA supports the ACCC’s preliminary view to harmonise and coordinate trade processing and reporting. This would generate clear benefits in terms of reducing market complexity and improving market efficiency. A consistent framework would also be a sensible first step to harmonise trade market data across different water registries as a prerequisite for creating a single water market information platform.

The suggestion to develop a trade processing and market data framework could facilitate this process. However, given the number of entities involved in processing trades, significant consultation would be needed to develop an effective framework, with sufficient buy-in from stakeholders. Legislative change may also be needed to ensure there are clear obligations to adhere to the framework.

## Improving market architecture

The MDBA supports reforms to improve the consistency of market settings to accommodate market growth and support an efficient and effective water market.

The MDBA considers that market settings and any measures to manage market efficiency and effectiveness are best implemented at the retail scale where trading occurs. The introduction of new water market products at the bulk delivery scale, or changes to existing management approaches at this scale, may lead to a more complex market and exacerbate barriers to market participation.

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In the MDBA’s view, the most efficient and effective solution would be to adjust and harmonise market settings at the retail scale.

Trade is an important consideration of river management, as it provides great benefit to the output of Australia’s agricultural sector and can assist farmers in mitigating risk to their businesses. However, water trading is one of several factors river operators consider when managing and delivering water in the River Murray System. The primary concern, as set out in the Murray-Darling Basin Agreement, is to deliver water in an efficient and effective way to fulfill State water shares. The multiple objectives of river management need to be considered when proposing river operation reforms primarily designed to improve water markets.

## River operations

The River Murray has been managed collaboratively since 1914 under joint government arrangements between the Commonwealth, Victorian, New South Wales, and South Australian governments, as set out in the Murray–Darling Basin Agreement (the Agreement). Under the Agreement, the MDBA’s role is to manage the system’s built assets, share the waters between the States, and deliver water to meet orders and requests.

The MDBA allocates the States’ share of River Murray water according to the rules set out in the Murray-Darling Basin Agreement and schedules releases so there is enough water in the right part of the river at the right time to meet demand. As part of this river operations role, the MDBA also facilitates the accounting for trade of water entitlements and allocations between States and valleys and is responsible for monitoring trade across the Barmah Choke.

The rules and practices of river management have been set by the Basin Officials Committee and now reside in the MDBA’s [Objectives and Outcomes](#) document. This document outlines how the river is operated and contains rules on specific flow limits amongst other rules, as agreed by the Basin states. However, in a complex hydrological system subject to variable inflows and long travel times, which is run not as a pure ‘order and deliver’ system but must balance water availability, reliability, and environmental needs, there is limited benefit to being overly prescriptive on the daily decisions of running the Murray. Therefore, requirements are set down as Objectives and Outcomes, not a set of prescribed rules or mandated actions.

The Murray-Darling Basin Agreement, Objectives and Outcomes, and governance arrangements through the Basin Officials Committee, ensure the river is operated to fulfil state water requirements. The MDBA has clear responsibilities to protect all States from third party impacts arising from the delivery of the shared waters of the River Murray system, and to manage risks to the environment that result from the regulation of the river system.

As such, there are many interconnected aspects of river management that must be considered alongside the water market in any change to how the Murray’s water is managed. This includes consideration of water users not involved in the market; how rules and operations done to benefit the trade market affect third parties; the physical limitations of the system; long standing fundamental principles around socialisation of shared waters; and, how water is shared between states.

Most options proposed in the Interim Report to address issues identified in relation to market architecture focus on the introduction of new market products or management approaches at this bulk water management scale. While the bulk management of water in the River Murray system needs to consider and appropriately manage the impacts of trade patterns to protect the reliability of water, the majority of water trading, and hence water market settings, occurs at the retail level of water delivery.

The MDBA believes that on a first principles basis, market settings and any measures to manage market efficiency and effectiveness are best implemented at the retail scale where trading occurs. This is because trading is primarily driven by state-based water allocation decisions, whereas bulk water deliveries must account for a range of other water use needs including meeting critical human water needs and delivering water to achieve environmental outcomes.

The MDBA's view is that the introduction of these types of new water market products at the bulk delivery scale, or changes to existing management approaches at this scale, may lead to an even more complex market and may exacerbate the barriers to market participation for smaller players who are already disadvantaged compared to bigger players with the resources to better navigate the complexity.

The MDBA is available to explore these issues with the ACCC to ensure that any recommendations take into account the full implications on all aspects of river management set out under the Murray-Darling Basin Agreement, and that potential third party risks are appropriately identified and mitigated. However, the MDBA notes changes to river operations arrangements set out in the Agreement require broad political support, and a more efficient and effective solution would be to adjust market settings at the retail scale in state-based instruments.

Some observations in relation to the market architecture changes proposed in the Interim Report are offered below to highlight some of these issues of concern.

## **New market products**

The concepts of delivery and capacity shares are generally applied at a retail level, and agreement on how such a concept could apply for bulk deliveries and between the three southern Basin states would need to be discussed further, particularly in the context of the long-standing water sharing arrangements set out in the Murray-Darling Basin Agreement.

Having specific market products to facilitate 'parking' may achieve clearer market data and provide more information for river operators to better assess what trades are occurring for use in the current year versus what trades to maximise carryover and do not have to be immediately delivered. However, users would need to understand that formalising this type of arrangement may lead to less flexibility to respond to seasonal changes.

Changes to water access entitlements such as incorporating or splitting off delivery or storage capacity shares can affect the property rights and reliability of current entitlements. Careful consideration should be given to these options to ensure any recommendations appropriately consider potential risks. As noted by the ACCC, a significant portion of farming businesses value is in their water access rights, and changing the value of water entitlements risks governments picking winners and losers in the market.

## Continuous accounting

The MDB Agreement sets out how water is shared at a bulk level for the Murray and is based on a water year. It also sets out how the water is managed across years and currently includes a principle that all water in the system is set aside first to conveyance and critical human water needs. To provide continuous carryover of traded water, states would have to agree that traded water should be quarantined and be unavailable to socialise for reserves such as critical human water needs. Under current State allocation frameworks, carryover is prioritised over new allocation determinations, but in extreme low water availability conditions, all water held in the Murray is first set aside to ensure conveyance and critical human water needs. Continuous accounting then may have the effect of advantaging traded water over other entitlements, as this water would be protected. This may cause unrest for those who choose not to trade and are disadvantaged by such arrangements. The MDBA believes that the hierarchy should be not be changed but should be made clear and the risks explained.

## Loss factors

In large natural systems that deliver many gigalitres of water a day, it is well known that accurate measurement of every megalitre of water in the system is unrealistic. Losses vary both temporally and spatially and are affected by many factors. Variables such as weather, localised inflows and instrument accuracy limit the precision with which incremental losses may be apportioned to specific causes including changed patterns of delivery due to trade. Applying a loss factor may disadvantage market participants by applying a cost that may not equate the true impact of the trade.

More work needs to be done on understanding the scale of incremental losses compared with the total losses of delivering all water orders. This will help policy makers consider if the benefits of a simpler market process outweigh the additional cost and complexity of applying possibly minor loss provisions.

If losses are applied, there are several complexities to consider such as trading zones. Under current trading zones, if a loss is applied from the Goulburn Zone to the Murray below choke zone, the same loss cost would apply to geographically distant locations (e.g. a water entitlement holder in the Torrumbarry system may pay the same loss as someone near the SA border). A more complex set of zones would be needed to ensure these costs are equitable, but this would add additional layers of complexity to water market settings. As such an appropriate balance would need to be considered in any loss arrangements.

Determination of a loss factor that accurately represents the true incremental loss in all circumstances is not possible. If loss factors were to be implemented, extensive analysis would be required to determine appropriate values. It would also be necessary to establish a baseline entitlement pattern against which any future trades would be assessed.

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