



COTTON
AUSTRALIA



**2026 Murray-Darling Basin
Plan Review**
Michael Murray

2026 Murray-Darling Basin Plan Review

Submission prepared by Michael Murray

Contents

Submission prepared by Michael Murray.....	2
1. Executive summary	3
2. Recommendations	3
4. Submission response	6
4.1. Introduction.....	6
Detailed chapter by chapter response to discussion paper	6
4.1 Context for the 2026 basin plan Review.....	6
4.2 The evidence base for the 2026 basin plan review	9
4.3 an initial assessment of sustainable diversion limits.....	10
4.3.1 Barwon-Darling SDL Resource Unit.....	10
4.3.2 Gwydir SDL Resource Unit.....	12
4.3.3 Murrumbidgee SDL Resource Unit.....	13
4.3.4 NSW Murray SDL Resource Unit	15
4.4.5 Groundwater SDL Units.....	16
4.4 Maximising the benefits of water for the environment.....	16
4.4 Improving river connectivity in the northern basin	17
4.6 Improving floodplain and wetland health	19
4.7 responding to native fish decline	19
4.8 managing water quality.....	20
4.9 water infrastructure and critical human water needs.....	20
4.10 basin plan regulatory design.....	20
4.11 improving science and knowledge to inform Basin water management.....	21
4.12 how to have your say.....	21
5. Conclusion.....	22

ABOUT COTTON AUSTRALIA

Cotton Australia is the peak body for Australia's cotton growers, representing up to 1,500 cotton farms mainly in New South Wales and Queensland but also in the Northern Territory and Western Australia. Cotton Australia works with growers and stakeholders to ensure the Australian cotton industry remains viable.

Cotton Australia supports the Australian cotton industry to be globally competitive, sustainable and valued by the community. It drives the industry's strategic direction, retains a strong focus on research and development, promotes strength of the industry, manages sustainability reporting and implements policy objectives.

1. Executive summary

This submission outlines Cotton Australia’s position on the 2026 Murray–Darling Basin Plan Review and calls for the next phase of Basin management to shift from delivering the Plan “by the numbers” (primarily through further water recovery) to delivering measurable environmental outcomes alongside improved social and economic outcomes for Basin communities.

Cotton Australia supports the Review and agrees the evidence base shows environmental improvements from existing environmental water, but argues gains can be significantly amplified through a more holistic program of complementary measures—better timing and delivery of flows, targeted infrastructure and constraints projects, invasive species control (particularly European carp), riparian and wetland restoration, and improved water quality management—rather than by prioritising additional entitlement buybacks.

A central concern is that the Discussion Paper gives insufficient recognition to the Plan’s social and economic impacts, particularly in smaller irrigation-dependent towns across northern NSW and southern Queensland and in parts of the southern Basin. The submission argues that transferring a substantial share of water from productive use to the environment has profound community consequences and that the Review should explicitly assess and acknowledge these impacts when considering any further reform.

Cotton Australia supports a mature, transparent water market and contends that policy outcomes should be pursued through voluntary market mechanisms rather than rules-based changes that erode entitlement characteristics or reliability. It cautions against approaches that “acquire water by stealth” and opposes reforms that shift risk or cost onto existing entitlement holders, including via connectivity-rule changes in the Northern Basin that are not supported by comprehensive, Basin-wide hydrological analysis.

Cotton Australia generally supports the view that there is no current case to adjust Sustainable Diversion Limits (SDLs) on the basis of climate projections, noting allocation frameworks already prioritise planned environmental water and critical human needs, with lower-reliability products carrying the climate risk. The submission recognises First Nations as genuine stakeholders and supports aspirations to hold water entitlements but argues transfers should occur via the market to avoid diluting existing entitlements. Overall, it urges governments to: invest long-term in complementary environmental measures (including fish passage and carp suppression), progress constraints and deliverability solutions, maintain equivalent rules and compliance for environmental water holders, and create a targeted opportunity to test draft MDBA recommendations with key stakeholders before advice is finalised to the Minister.

2. Recommendations

3. **Recommendation:** That there is no adjustment of the SDL’s in the three Groundwater SDL units that the Authority has identified as being of concern; and the Authority rely on the NSW Government to work with entitlement holders to ensure any “hot spot” draw down issues are managed appropriately.
 1. **Recommendation:** Recast the next phase of Basin management from delivering the Plan “by the numbers” to delivering measurable environmental outcomes alongside improved social and economic outcomes for Basin communities.
 2. **Recommendation:** Prioritise long-term investment in complementary environmental measures (e.g., better timing and delivery of flows, targeted infrastructure and constraints projects, invasive species control—particularly European carp—riparian

and wetland restoration, and improved water quality management) over further entitlement buybacks.

3. **Recommendation:** Explicitly assess and acknowledge the social and economic impacts of Basin Plan settings—particularly in smaller irrigation-dependent communities—when considering any further reform or recovery.
4. **Recommendation:** Maintain a mature, transparent water market and pursue policy outcomes through voluntary market mechanisms rather than rules-based changes that erode entitlement characteristics, reliability, or property rights (including measures that “acquire water by stealth”).
5. **Recommendation:** Do not adjust SDLs on the basis of climate projections at this time; instead recognise existing allocation frameworks already prioritise planned environmental water and critical human needs, with lower-reliability products bearing climate risk.
6. **Recommendation:** That there is no adjustments to any surface SDLs as a result of this review, but the focus be placed on other solutions, tailored to each relevant SDL unit.
7. **Recommendation:** That there is no adjustment of the SDL’s in the three Groundwater SDL units that the Authority has identified as being of concern; and the Authority rely on the NSW Government to work with entitlement holders to ensure any “hot spot” draw down issues are managed appropriately.
8. **Recommendation:** Support First Nations aspirations to hold and benefit from water entitlements, but ensure transfers occur via the market (and/or existing, defined reserves) so that any rebalancing does not dilute or erode existing entitlements.
9. **Recommendation:** Extend and embed ongoing, transparent evaluation of Basin health (including continued use of the Sustainable Rivers Audit) to guide adaptive management and investment decisions.
10. **Recommendation:** If considering changes to improve Northern Basin connectivity, first review the findings of the 2016 Northern Basin Review and commission comprehensive, Basin-wide hydrological modelling that includes all post-2012 reforms (including environmental water recovery, floodplain harvesting licensing changes, and relevant water sharing plan reforms).
11. **Recommendation:** Clearly define (with stakeholders) what “connectivity” should mean in an ephemeral Northern Basin system before proposing rule changes, and ensure any proposed reforms are supported by robust analysis of costs, benefits and distributional impacts.
12. **Recommendation:** Do not pursue further rules-based changes on the Barwon–Darling to address perceived connectivity needs; allow time for the cumulative environmental benefits of existing reforms (including first flush rules, IDECs, pumping thresholds, resumption-of-flow rules and Menindee-related settings) to be realised.
13. **Recommendation:** Focus native fish recovery on key drivers—water quality, fish passage and invasive species—by investing in carp suppression/eradication, effective fishways, and infrastructure that reduces fish-kill risk, rather than assuming additional flow recovery is the primary solution.
14. **Recommendation:** Progress constraints and deliverability projects (e.g., Gwydir and Reconnecting River Country programs) through open, respectful, transparent and flexible negotiation with affected landholders, and avoid further entitlement or reliability impacts on irrigators where the issue is deliverability rather than volume.

15. **Recommendation:** Ensure environmental water holders maintain the same entitlement characteristics as originally acquired and are subject to equivalent use rules, metering and compliance requirements; any special rules should only proceed
16. where there is demonstrated net environmental benefit and no adverse impact on other users.
17. **Recommendation:** Streamline environmental watering planning and governance to reduce duplication and unnecessary overlap, improving transparency and efficiency without reducing accountability.
18. **Recommendation:** Enable the Commonwealth Environmental Water Holder to operate as a nimble participant in the water market (including leasing and options/derivative-style arrangements) and allow proceeds from market activity to be reinvested in other water products or long-life environmental assets (e.g., fishways and cold-water pollution mitigation).
19. **Recommendation:** Commit sustained Federal funding for complementary measures, including not only capital works but also long-term operations and maintenance costs, recognising the national public benefit of improved environmental outcomes.
20. **Recommendation:** For Menindee Lakes, make a clear policy decision on the primary management objective (storage, wetland, or a defined combination) and invest in modern infrastructure, including removal of barriers to fish movement; ensure any triggers affecting Northern Basin management are fair and reflect inflows/management realities.
21. **Recommendation:** Improve water quality through practical on-ground actions (riparian management, reduced unrestricted grazing/watering, nutrient run-off controls consistent with industry programs such as myBMP) and prioritise these actions over simply changing formal water quality targets.
22. **Recommendation:** Address critical human water needs by investing in resilient town water and river-regulation infrastructure designed for climate variability, rather than defaulting to reducing access for lower-reliability entitlement holders to compensate for infrastructure limitations.
23. **Recommendation:** Pursue Basin Plan regulatory reform to reduce overlap and compliance burden (including better alignment between Commonwealth requirements and existing State water sharing/resource plans), while maintaining clarity, transparency and accountability.
24. **Recommendation:** Continue to invest in science and knowledge to inform decision-making, while ensuring a clear focus on decision-relevant monitoring and an appropriate balance between information gathering costs and practical management action.
25. **Recommendation:** Add a defined “missing step” in the consultation timeline by convening targeted meetings with key peak and local Basin organisations to test draft MDBA recommendations before advice is finalised to the Minister.

4. Submission response

4.1. INTRODUCTION

Cotton Australia is the peak body representing Australia's 1500 cotton growers, the vast majority of whom operate within the Murray-Darling Basin. The future of the Basin Plan is of critical importance to our growers, and just as importantly the Basin communities that they live and operate in.

Cotton Australia is a very active member of the National irrigators council (NIC), National Farmers Federation (NFF), NSW Irrigators Council (NSWIC) and Queensland Farmers Federations (QFF). It also has a very strong working relationship with the valley-based irrigator groups that operate across the Basin in New South Wales and southern Queensland.

Cotton Australia endorses the submissions from these organisations, but should there be a divergence of view, the views expressed in this submission are the views of Cotton Australia.

Cotton Australia has structured the submission to respond chapter by chapter to the 2026 Murray-Darling Basin Plan Review.

Detailed chapter by chapter response to discussion paper

4.1 CONTEXT FOR THE 2026 BASIN PLAN REVIEW

Cotton Australia welcomes the 2026 Basin Plan Review and sees it as a timely mechanism to address the fundamental flaw of the existing Basin Plan, which is its almost singular focus on "just adding" water as the pathway to a healthier and vibrant Basin.

The Review and its associated documents such as the 2025 Sustainable Rivers Audit and the 2025 Basin Plan Evaluation make it clear that while additional water has helped to improve environmental outcomes, much greater improvement could be made by adopting a more holistic approach.

This is the time to pause, reflect and reconsider the current direction of simply completing the Basin Plan by the numbers, and focus on delivering real environmental outcomes while enhancing the social and economic outcomes for all who call the Basin home.

It is disappointing that the Review document has given little regard or acknowledgement to the impact the Plan has had on Basin communities. While accepting that some of the high-level social and economic data available in the country is not at the scale to identify impacts, there can be no doubt that when approximately 20% of the water that was available for extraction productive use (mainly in agriculture), has through the implementation of the Plan been transferred to the environment, the social and economic impacts must be profound.

To be clear, these impacts are not felt in Albury, the Tamworth, the Dubbo and Toowoomba and the other larger communities of the Basin, but in the smaller irrigation dependent communities of St George, Dirranbandi, Bourke, Collarenebri, Moree, Wee Waa, Walgett, Narromine, Warren, Hillston, Coleambally, Jerilderie, Finley and Wakool to name just a few.

The impacts were well identified in the 2016 Murray Darling Basin Authority Northern Basin Review, and the 2019 Independent Assessment of Social and Economic Conditions in the

Murray-Darling Basin Plan, and it is disrespectful to all those impacted communities, not to have the cost the Plan as had on them recognised in the Review Discussion Paper.

Cotton Australia largely agrees with the Operating Environment that is outlined on pages 4-6 of the Discussion Paper, however, is disappointed that the Authority has once again deliberately missed an opportunity to highlight that approximately 72% of the Basin's total water balance is reserved for the environment as either Planned or Held Environmental water, and instead focuses on the fact that the Commonwealth Environmental Water Holder holds 27% of all entitlements. There is no doubt this is both a very large and environmentally powerful portfolio, but for those not closely associated with water, it is easy to assume this means that just 27% of total water is held for the environment.

Cotton Australia endorses in principle the Authorities three-point approach to responding to the changed operating environment being; *Broad ambition to practical delivery, Centralised decision-making to enabling local leadership and Identifying outcomes to acknowledge dependencies.*

In regard to addressing climate change Cotton Australia generally supports the Authority's view that there is no current case to adjust Sustainable Diversion Limits (SDL) based on climate change predictions.

Cotton Australia well recognises climate variability, be it short-term or long-term, natural, or human enhanced, and our growers manage for year by year, day by day, drought by drought, flood by flood.

However, it is critical that all those who have an interest in how the Basin is managed must fully understand just how well the Basin's water allocation system already manages climate change or climate variability.

Planned environmental water is prioritised first, followed by critical human needs and town water supplies, followed by stock and domestic, then high security water products and final the lower security products such as general security, medium priority, supplementary, water harvesting, overland flow and unregulated.

Whether these lower security products are held by irrigators or the environment, it is they that bear the risk of any reductions in water availability due to a changing climate.

Cotton Australia recognises that it is right that First Nation Australians are recognised as full and genuine stakeholders in the Basin's water management, and that collectively they bring a wealth of knowledge, that should be included equally in the management of the Basin.

Cotton Australia recognises First Nation's aspiration to hold and benefit from water entitlement, and believes where existing water resources plans do not have specific, allocated First Nation water reserves that have not be drawn on, then the appropriate way for entitlements to be transferred to First Nation parties is through the market

The maturity of Basin water resource sharing is at a stage where the creation of additional, new entitlements can only erode the value of existing entitlement holders, and this is not an acceptable outcome.

Going far beyond the issue of First Nation water rights, a fundamental of all water management in the Basin must be that any rebalancing of entitlements between any parties, including the environment and First Nation interests, must not come at the expense of existing entitlement holders.

Over the past 40 years, an active, and maturing water market has developed, at different rates, across the Basin, and this market is undermined when policy decisions are implemented through Rutes-Based changes, rather than respecting the role of the market.

What is particularly disappointing in this Review, is that the Authority has not stepped up and called out the foolishness of continuing to complete this initial version of the Basin Plan ‘by the numbers’.

The Federal Government appears committed to do all it can to acquire the full 450GI of ‘Upwater’ and is unrestrained in using its additional latitude that it received under the Restoring the Rivers Act, to put aside the active consideration of the neutral or better social and economic test, and simply dive enthusiastically in purchasing water through the market.

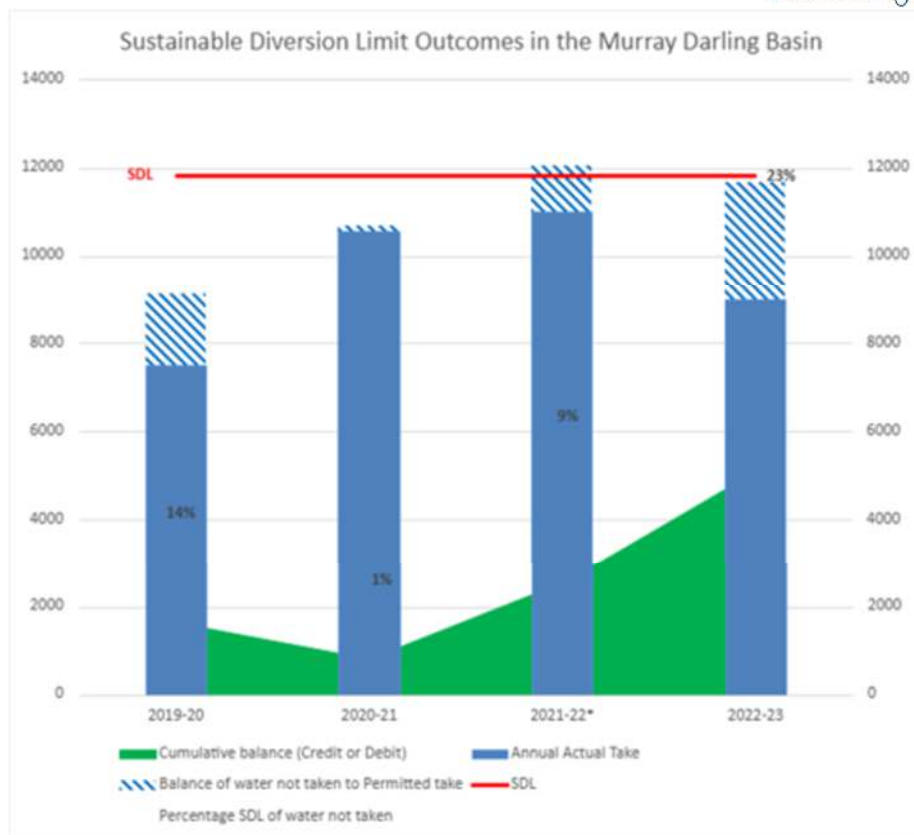
Make no mistake, Cotton Australia fully supports the water market and respect entitlement’s holders right to participate in it, but the Federal government does not have to be in this market.

The Government, if determined to acquire entitlement, could have taken the slower and to be fair in the short-term more expensive route of funding on and off-farm efficiency projects, and sharing the savings between productive users and their communities and the environment, or it could have actively considered the growing body of evidence, including so much of the evidence gather has part of this review, that shows far greater returns can be achieved through the judicious investment in a whole suite of complementary measures that will enhance the environment.

Further, on its current trajectory the Federal government will seek to acquire entitlement to make up for any shortfall under the “605GI” Sustainable Diversion Limit Structural Adjustment Mechanism (SDLAM) projects.

There is a significant case that the Government should either simply “write-off” any shortfall, and re-allocate any unspent SDLAM budget commitments funds on investment in a suite of complementary measures; or extend the SDLAM timeframes, commit to fully offsetting the 605GI, but recast the eligibility criteria for SDLAM projects so the focus is much more on achieving environmental outcomes, rather than the current very narrow assessment on environmental water use avoided.

There is time to extend the SDLAM projects, without putting SDL compliance at risk. Ever since formal account of compliance against SDLs commenced in 2019, extractions from SDL units have been less than allowed under the Basin Plan. In this way, water extraction across the Basin has been outperforming the Basin Plan requirement consistently. The evidence for the is contained in the annual Murray-Darling Basin Inspector-General Compliance Reports, and shown below in the graphic prepared by the National Irrigators Council:



* National Irrigators Council

4.2 THE EVIDENCE BASE FOR THE 2026 BASIN PLAN REVIEW

Cotton Australia welcomes the pool of evidence that has been gathered by the Authority that clearly shows the implementation of the Basin Plan has had a largely positive impact on the environment, but critically, if environmental improvements are to grow, a much more holistic approach the Basin Management must be taken.

It was always a fundamental flaw of the Basin Plan, that it took an almost single-handed approach – “Just add water, and all would be good again”. Cotton Australia accepts, that the acquisition of more water for the environment has had positive outcomes, but how much more could have been achieved if a holistic approach was taken from the outset. The Basin is a complex system, and no complex system can be controlled by just pulling one lever.

The evidence gathered by the Authority for this Review clearly shows that the better timing of flows, investment in critical infrastructure, the control of invasive species and the better management of riparian zones will significantly leverage the gains from environmental water.

Further, the evidence has shown that very little improvement in environmental conditions will come from acquiring more environmental water. The time has come, as the Authority has recognised, to move strongly away from delivering a plan simply by the numbers, to have a comprehensive, holistic approach that can really leverage environmental outcomes, from the available environmental pool.

Cotton Australia welcomes the return of the Sustainable Rivers Audit and strongly believes this should be an ongoing component of Basin Plan evaluation.

One conclusion that Cotton Australia disputes strongly is that water management must better support connectivity in the Northern Basin. This will be discussed in more detail in our

response to Chapter 5, but consideration of any “evidence” generated by the NSW Northern Connectivity Review is fraught with reputational and poor decision-making danger.

By the admission of the Independent Panel, and more recently by the NSW Government, the very limited hydrological modelling that has been done to support this NSW review has entirely ignore the contribution of all the water and additional flows that have been generated by the Murray-Darling Basin Plan, and by the approximately 100GL reduction in extraction through the volumetric licencing of floodplain harvesting.

If the Authority seeks to make water management changes to enhance connectivity in the Northern Basin, there very first steps should be to review the finding of the 2016 Northern Basin review, and commission comprehensive hydrological modelling which does take in all the environmental water, and changed environmental water management rules that have occurred since the introduction of the Basin Plan in 2012.

Further, it must carefully examine, in consultation with all stakeholders, what connectivity should mean in the Northern Basin, fully recognising the very ephemeral nature of the Northern Basin.

4.3 AN INITIAL ASSESSMENT OF SUSTAINABLE DIVERSION LIMITS

Cotton Australia welcomes the overall assessment that the vast majority of Surface and Groundwater SDL units across the Basin are supporting environmental outcomes and are assessed as continuing to reflect an Environmentally Sustainable Level of Take (ESLT).

Cotton Australia supports the assessment of the Authority that 21 out of 29 Surface Water Units, and 77 out of the 80 Groundwater Units are supporting the Basin Plan’s environmental outcomes.

The following will provide commentary on some of the 8 Surface SDL units, and the three Groundwater SDL units where the Authority has expressed concern that the SDL may not support Basin Plan environmental outcomes.

4.3.1 Barwon-Darling SDL Resource Unit

Issue

The MDBA’s initial assessment identifies a risk that environmental outcomes are not being met in the Barwon–Darling Watercourse SDL Resource Unit and that further work is required before it can determine whether the SDL continues to reflect an environmentally sustainable level of take. The key at-risk themes are ecosystem function and native fish, with pattern of flow identified as the leading driver of risk.

MDBA Identified Key concerns

Current condition is mixed. Flows and connectivity, ecosystem functions and native vegetation were assessed as moderate, while waterbirds and native fish were assessed as poor, with only low to medium confidence in the condition assessment.

The main concern is not overall water volume, but the reduction in low flows and longitudinal connectivity, especially in the downstream reaches. Over the last 25 years, cease-to-flow events have increased in frequency and duration, river connectivity has declined, and prolonged dry spells have been linked to low ecosystem resilience, localised species collapse and vulnerability of native fish. Mass fish deaths have been strongly linked to insufficient low flows and resulting water quality problems during critical periods.

Native fish are rated critical risk and ecosystem function is rated high risk. For native fish, the identified impacts include reduced access to refuge waterholes during dry periods, poor water quality during cease-to-flow events, and loss of connection with Menindee Lakes for fish movement. For ecosystem function, the issue is reduced longitudinal and lateral connectivity and declining ecosystem resilience due to insufficient flows.

Cotton Australia's response

As previously discussed in this submission, Cotton Australia is very concerned that the Authority may be basing much of concern in the Barwon-Darling on the very flawed modelling that has been conducted by the NSW Government as part of the Northern NSW Connectivity Review, which has ignored the very significant contribution of the 320Gl of water recovery across the Northern Basin as part of the Basin Plan, significantly underestimates inflows from Queensland catchments, and has not taken into account the large reduction in average annual extractions through the volumetric licencing of floodplain harvesting in NSW, and other reform in the Basin and on the Barwon-Darling itself – ie: the major 2020 Water Sharing Plan reforms which included “first flush rules, and changes to the Individual Daily Extraction Conditions (IDECs), and raising of “A” class pumping thresholds. .

Further, there appears to be a habit when comparing Barwon-Darling flows to limit comparisons to the first 25 years of this century (with two very significant drought sequences, to the second half of the last century which was wetter than usual. An examination of flow patterns in the Barwon-Darling over a longer period (including the first half of the last century), or an examination of the contemporary reports of river boat captains during the 1800's would show that the Northern Basin in general, and the Barwon-Darling in particular is no stranger to long period of low or no flow events.

There must be a very clear realisation and acceptance that the Barwon-Darling is an ephemeral system in the very real sense of the word.

It also must be emphasised that the Barwon-Darling has one of the lowest, if not the lowest extraction allowance in any of the SDLs with just 5% of total flows being available for extraction,

Further, since the Basin Plan commenced there have been significant changes to the Barwon-Darling Water Sharing Plan, providing for the protection of environmental water, limitations on Floodplain Harvesting access when the active water storage level in Menindee falls below 250Gl, and the introduction of Resumption of Flow rules, which protect small to medium flows after prolonged dry periods.

In addition, while basically off-limits till the passing of the Restoring the Rivers Bill 2023, the Northern Basin may end up contributing up to 100Gl of water as part of the 450Gl “Upwater” target, and this too will have a positive impact on base flows across, down and through the Northern Basin.

The environmental benefits of these reforms need more time to be fully realised before any additional actions are taken, in particular any adjustment to the SDL.

Cotton Australia accepts that native fish populations are poor across the Basin but strongly disputes the myth that the primary cause in the Northern Basin is reduced flows.

If we consider the two “headline” mass fish death events that have occurred at Menindee, the 2018-2019 event occurred towards the end of the very severe “Tinderbox” drought. For at least two years before hand there had been no water extraction from the NSW Northern Basin, because the drought, no-flow conditions had allowed no extractions; therefore, no manipulation of the rules, or a decrease in the Sustainable Diversion Limits would have changed the outcome.

The 2023 event occurred at the tail-end of one of the largest and most prolonged flow events in recorded Barwon-Darling history. The clear message here is that change in flow patterns or volumes, was not the driving factor in either event, despite the popular view and the somewhat selective quoting of official reports.

What is common in both cases were three very clear factors:

Water Quality – Due to a mixture of high nutrient loads, water temperature inversion and low oxygen levels, water conditions were not suitable for fish survival,

The Fish were trapped – Due to the lack of effective infrastructure, the fish were trapped within the overall Menindee Lakes system and were unable to move to better quality infrastructure.

European Carp – the European Carp biomass in the system was extraordinarily, and when coupled with the first two factors, the sheer biomass levels significantly reduced the native fish capacity to survive the low water quality.

Possible solutions / response options

Cotton Australia does not support any further changes to the water management rules for the Barwon-Darling as a measure to address the perceived need to “improve connectivity”.

It believes the significant changes, which have come at the expense of irrigator reliability, that have been instituted since the start of the Basin Plan, both as part of the Plan and external to the Plan, need time to fully demonstrate environmental benefits.

Cotton Australia believes the greatest improvement Barwon-Darling health (and indeed the health of the entire Basin) will be a focus on eliminating or significantly reducing the European Carp population, and the installation of effective, and cost effective fishways, along with investment in improving the environmental condition of the riparian areas, and improved infrastructure to meet critical human needs..

4.3.2 Gwydir SDL Resource Unit

Issue

The MDBA’s initial assessment identifies a risk that environmental outcomes are not being met in the Gwydir SDL Resource Unit. The primary at-risk theme is waterbirds, with flow pattern and delivery constraints, rather than total water availability, identified as the leading drivers of risk.

MDBA Identified Key concerns

Overall environmental condition is assessed as moderate, although this is uncertain which indicates uncertainty in system performance. Waterbirds are identified as the only at-risk theme, with outcomes assessed as “about as likely as not” to be supported under both current and full Basin Plan implementation scenarios.

The key issue is the inability to deliver environmental water to the Lower Gwydir Wetlands, due to river operating constraints and delivery limitations, particularly during peak consumptive periods (spring–summer). These constraints restrict wetland inundation and limit the ability to support waterbird habitat and breeding events.

Waterbird outcomes in this system are also strongly dependent on episodic natural flood events, with environmental water playing a secondary role in maintaining habitat conditions once flooding occurs. As a result, even where water is available, ecological outcomes are constrained by delivery capability rather than volume alone.

Cotton Australia's Response

Cotton Australia agrees, that if there is a concern in the Gwydir, it is not about water volumes, but possible delivery constraints. With its Planned Environmental Water, which includes the 45,000 megalitre Environmental Contingency Reserves and the significant adaptive environmental water held by both the Commonwealth and the NSW governments, the Gwydir has ample environmental water to draw on.

Cotton Australia recognises that progress on the Gwydir Constraint project has been slow, but it is also something that Cotton Australia, and indeed irrigation organisations, have no control over. Constraint issues can only be resolved through open and transparent negotiation between the government and primarily dryland farmers and graziers.

It would be unacceptable that irrigators face further loss of either entitlements or reliability, to try and solve a problem that is recognised not to be about the volume of available water.

Possible solutions / response options

Cotton Australia supports the following MDBA proposed responses as identified in the Discussion paper.

- Addressing operational and physical flow constraints, including improving the ability to deliver water to the Lower Gwydir Wetlands
- Environmental works, including measures to reconnect wetlands and improve delivery flexibility
- Implementation of existing programs such as the NSW Gwydir Reconnecting Watercourse Country Program and broader constraints relaxation initiatives

4.3.3 Murrumbidgee SDL Resource Unit

Issue

The MDBA's initial assessment identifies a risk that environmental outcomes are not being met in the Murrumbidgee SDL Resource Unit. The key at-risk themes are flows and connectivity, native fish, and native vegetation, with flow pattern, delivery constraints, and altered seasonal regimes identified as the leading drivers of risk.

MDBA Identified Key concerns

Native fish and native vegetation are assessed as poor, while all other themes are moderate. Confidence in most themes is low, with higher confidence only for waterbirds.

The most significant concern is the alteration of natural flow regimes across the system, including:

- A ~95% reduction in flows in the Upper Murrumbidgee compared to pre-development conditions
- Unseasonal flow patterns driven by irrigation demand (higher summer flows, lower winter/spring flows)
- Constraints on delivery of overbank flows, limiting floodplain inundation and lateral connectivity

These changes have reduced longitudinal and lateral connectivity, disrupted ecological cues for native fish (including breeding and migration), and limited floodplain inundation required for vegetation and wetland health.

At a system level, risks are spatially variable:

- Upper Murrumbidgee: severe flow reduction and connectivity loss
- Mid Murrumbidgee: strong regulation and delivery constraints
- Lower Murrumbidgee: some improvement under environmental water delivery, but still constrained

Cotton Australia's Response

Cotton Australia recognises that there has been a significant reduction in Upper Murrumbidgee River (UMR) flows, but this was largely because of the development of the Snowy Mountain scheme and is part of the historical development of the Basin as a working basin.

That been said, Cotton Australia is aware that the UMR is subject to consideration as part of the Snowy Water Inquiry Outcomes Implementation Deed (SWIOD), and the Authority should await the outcome of this review before even considering any adjustment to the Murrumbidgee SDL. Cotton Australia would be opposed to any recommendation that came out of SWIOD, that resulted in a negative impact on either irrigation entitlements or their reliability.

Importantly, Cotton Australia supports that any delivery losses associated with the delivery of environmental water in the UMR should be met from the environmental water accounts, rather than being socialised across all water users.

Cotton Australia is also very opposed to any rule changes that either acquire environmental water by stealth, or impact on the property rights of entitlement holders.

The MDBA also flagged impacts from the seasonality of river flows, basically an inversion of natural flow timings, with greater flows now in summer to service irrigation, and lower than natural flows in winter and autumn.

The Murrumbidgee Water Sharing plan already does much to address this with its translucency rules, and the various environmental water holders can further address this issue through the timing of their releases.

Apart from the identified issues in UMR, the Authority has made no substantive case to adjust the SDL's in the Murrumbidgee Unit.

Cotton Australia recognises that progress on the NSW Reconnecting River Country has been disturbingly slow, but this work is essential if some of the challenges associated with effective environmental water delivery had to be met. Cotton Australia urges government to continue to work openly, transparently and adaptively with landholders to progress this important project.

Possible solutions / response options

Cotton Australia supports the following response options that have been identified by the MDBA in the Review paper:

- Environmental works and measures, including enhanced fish passage and improved connectivity outcomes
- Implementation of Community supported programs such as the NSW Reconnecting River Country Program (Murrumbidgee Project) and the Constraints Relaxation Implementation Roadmap
- Review of environmental objectives and outcomes.

4.3.4 NSW Murray SDL Resource Unit

Issue

The MDBA's initial assessment identifies a risk that environmental outcomes are not being met in the NSW Murray SDL Resource Unit. The key at-risk themes are flows and connectivity, ecosystem functions and native fish, with flow pattern and delivery constraints, particularly deficiencies in lateral connectivity and unseasonal flow regimes identified as the leading drivers of risk.

MDBA Identified Key concerns

Environmental condition is uneven across the Unit. Ecosystem functions, native fish and other species are assessed as poor, while all other themes are moderate. Confidence is highest for native fish, medium for flows and connectivity and native vegetation, and lower for other themes.

The Unit is one of the most highly regulated systems in the Basin, with major storages, weirs and regulating structures shaping flow behaviour. The key concern is not simply total water availability, but the highly altered pattern of flow, including:

- reduced lateral connectivity to floodplains and native fish habitat
- infrequent overbank flows
- low winter flows and high, sustained summer and autumn flows driven by consumptive delivery demands

These altered flow patterns reduce floodplain connectivity, affect nutrient movement and water quality, and limit maintenance of open wetland habitat for breeding and foraging. The assessment also notes strong spatial variability across the Unit: assets that receive regular environmental watering tend to perform better, while areas that rely on unregulated flows or where water cannot be effectively delivered are more variable in condition. Deliverability problems at Koondrook–Perricoota Forest are specifically identified as contributing to poor condition within part of the NSW Central Murray Forests Ramsar site.

Additional key drivers of poor native fish outcomes include:

- barriers to fish movement
- introduced species, including carp
- riverbank erosion
- cold water pollution
- sedimentation of instream habitat

Cotton Australia's Response

Assessment of the key issues identified by the Authority, indicate very little if any further additional environmental improvement would be gained through the acquisition of more environmental water.

Looking at the eight identified drivers of environmental issues, greater volume, in a regulated and restricted river system provides very little opportunity.

As across the whole Basin, native fish health will only be addressed through the eradication or significant suppression of European Carp and other invasive species, and the removal in an effective, cost effective and long-term funded model of barriers to fish passages.

In the Murray, and in other rivers of the Basin, environmental water of some floodplains and wetlands is best achieved by the use of innovative infrastructure and other solutions such as the Murray Irrigation Restoring Murray Waterways project, which could be replicated in other parts of the Basin.

Cotton Australia recognises that progress on the Reconnecting River Country program has been slow, but work on it must persist.

Possible solutions / response options

Cotton Australia supports the following response options that have been identified by the MDBA in its Review paper.

- Environmental works and measures, including the Reconnecting River Country Program associated with constraint relaxation
- improving fish passage and habitat quality

4.4.5 Groundwater SDL Units

Cotton Australia notes the review identifies three Groundwater SDL Units that in its view may not support Basin Plan Environmental outcomes, being the Lower Gwydir Alluvium, the Upper Namoi Alluvium and the Lower Namoi Alluvium.

Cotton Australia believes the ongoing management of these Alluviums is best managed by the NSW Government in close consultation with the groundwater entitlement holders.

Cotton Australia is not aware of any system wide issue in these alluviums but is aware that there can be local drawdown "hotspots" that are best managed by dynamic rules, established by those with a deep understanding of these ground water systems.

Cotton Australia does not believe that a case has been made for an Authority adjustment of the SDL's.

4.4 MAXIMISING THE BENEFITS OF WATER FOR THE ENVIRONMENT

Cotton Australia is supportive in principle with the listed options to maximise the benefits for water for the environment.

Like any water user, environmental managers must seek to gain the maximum benefit from the water resources that it has deployed.

While supportive in principle of the options proposed, any individual change or enhancement must be able to be the subject of scrutiny and other entitlement holder input prior to being adopted.

Cotton Australia supports the principle that environmental water holdings should maintain the same characteristics as the entitlement that was originally acquired, and that environmental water holders should also be subject to the same use rules, metering and compliance requirements.

Further, the deployment of environmental water should not impact on the entitlement characteristics or reliability of other users, or the ability of other users to access their water when they want to.

Having said that, if environmental water managers can provide convincing arguments of significant improvement in environmental outcomes, if special rules are applied to environmental water, and there no negative outcomes on other entitlement holders, Cotton Australia is supportive of active consideration of those proposals.

Cotton Australia does agree that there appears to be considerable duplication and unnecessary overlap in environmental water use planning and is confident that this can be streamlined without any negative impacts on other water users.

Cotton Australia also believes that the CEWH should be a nimble participant in the water market, with the same rights and obligations as any other water user.

This participation should be extended to the use by the CEWH of options like leasing, or derivatives that would allow the CEWH and water entitlement holders to enter into long term arrangements, where trades are triggered based on available water allocations.

Considerable work was done on the by the National Irrigators Council and Murrumbidgee Irrigation in and around 2012, where potential models were developed.

The CEWH should be able to direct proceeds from water market activity to either the purchase of other water products, or investment in long-life environmental assets such as fishways, or infrastructure to mitigate cold-water pollution.

There are great examples in the Northern Basin when the CEWH was able to enter the market and acquire access to flows that have significantly enhanced bird breeding events.

In addition to what the CEWH can directly do, there needs to be a long-term Federal government commitment to invest in complementary measures that will really leverage environmental outcomes from the environmental pool. This funding must not only cover capital costs, but the long-term operational and maintenance costs of these projects, in recognition that the environmental outcomes that are derived from these benefits, if for the long-term benefit of all Australians, and must not be a cost borne specifically by water users.

Improved environmental outcomes will come from adopting a far more holistic approach to water management that does not simply release environmental water but ensures a whole range of complementary measures are incorporated into the environmental water program.

This will require significant and long-term funding by the Federal Government.

4.4 IMPROVING RIVER CONNECTIVITY IN THE NORTHERN BASIN

The weakest section of the Discussion paper is unfortunately Chapter 5 Improving River Connectivity in the Northern Basin. It is very disappointing that the Authority has swallowed

the NSW narrative in regard to Connectivity in the Northern Basin, without undertaking any independent verification.

As outlined earlier in this submission, the work of the NSW Independent Panel, and subsequent work by the NSW Government has deliberately and completely not taken into account:

- The almost 320GI of water acquired across the Northern Basin under the Basin Plan, and now managed by the CEWH.
- The approximately 100GI reduction in allowed extraction across the NSW portion of the Northern Basin through the volumetric licencing of Floodplain Harvesting
- The actual inflows from Queensland into the Basin
- Changes to the Barwon-Darling Water Sharing Plan that have occurred since the commencement of the Basin Plan.
- The share the Northern Basin (up to 100GI) will now contribute to the 450GI “Up Water” target.

The omission of the above, is so fundamental, that Cotton Australia is struggling to meaningfully contribute to this element of the Review Discussion paper.

If the Authority genuinely believes that more work needs to be done to enhance connectivity in this part of the Basin, it's very first step should be to review the 2016 Northern Basin Review, which found less water was needed to meet the environmental objectives rather than more.

If it is still then determined to pursue changes it must commission its own Independent hydrological assessments, taking into account all the additional water that now flows through the Northern Basin that the NSW Government has deliberately chosen to ignore.

And then if it finds that more needs to be done, it needs to carry-out a realistic assessment as to the costs of any reform, and how that cost will be met, rather than the less than half-baked economic modelling that has been commissioned by the NSW government.

The current NSW Government options under consideration rely on rules-based changes, rather than acquiring water through the market.

Rules-based changes fundamentally attack the property right that exists with water and is in direct opposition to the long-held Murray-Darling Basin position that water should be acquired through market mechanisms from voluntary participants.

Cotton Australia cannot support Rules-Based changes that have a negative impact on existing water entitlement holders, which of course would also include the CEWH.

Menindee Lakes

Cotton Australia will be providing a submission to the MDBA's Menindee Lakes Review, but in general, Cotton Australia:

- Believes a clear decision needs to be made whether the Lakes are managed primarily as a water storage (an inefficient one) a wetland or a combination of the two (favoured by Cotton Australia).
- Regardless of the above, the lakes need modern infrastructure, that includes the removal of barriers to fish movement.
- Any triggers that impact on Northern Basin water management, should not be based on the volume in Menindee, but rather on the volume that has flowed into Menindee (the Northern Basin has no say on how the Lakes are managed, but under the current trigger arrangements, management of the Lakes has a critical impact on when and how often trigger events occur). The management of Menindee Lakes should not be

able to rely on the Northern Basin being a Magic Pudding, to be constantly drawn on to fill Menindee regardless of how the Lakes are managed.

- In principle, Cotton Australia supports the protection of environmental water from the north, passing through Menindee and into the Southern Basin, subject to the government clearly showing this will have no negative impact on Southern Basin allocations or entitlement reliability.

4.6 IMPROVING FLOODPLAIN AND WETLAND HEALTH

As discussed in early part of this submission Cotton Australia is generally supportive of efforts to improve the effectiveness of environmental watering.

Cotton Australia does support the continuation of the Reconnecting Rivers programmes, while recognising progress has been slow. As an organisation we respect landholder rights, but believe open, respectful, transparent and flexible negotiations will allow achievement of outcomes.

Cotton Australia urges environmental water managers to be open to infrastructure solutions and believes the Murray Irrigation Restoring Murray Waterways program is a model that could be replicated.

4.7 RESPONDING TO NATIVE FISH DECLINE

Cotton Australia is largely supportive of the options canvassed in the Discussion Paper to help address Native fish decline.

Cotton Australia is absolutely convinced that until European Carp is either eradicated or significantly suppressed there will be no major improvement to the health of our river system.

European Carp are often referred to as the Rabbits of the Waterways, and this analogy is alarmingly correct. Carp not only massively dominate the aquatic biomass, but they also completely destroy the riparian environment and actively prey on native fish.

Fish barriers are a very significant issue across the Basin, and it has to be recognised that either completely removing these barriers where appropriate or replacing them with fish friendly infrastructure will be a hugely expensive task and one that cannot be borne by water users, but must be paid for by the country as a whole. It also must be recognised that over and above the initial capital costs there will be ongoing maintenance and operational costs that should also be borne by the Federal Government.

Restocking is a short to medium term fix, but its effectiveness is limited till key issues such as European Carp are addressed.

Cotton Australia has been pleasantly surprised by the reaction and support cotton growers have had, when they have been able to access funding to install fish screens on their irrigation pumps.

Fish screening of pumps is not economic for irrigators to do by themselves, but prior to installation irrigators had concerns that screens would reduce pump efficiency, increase energy use and cost, and lead to higher maintenance, they have found the opposite to be true. Cotton Australia believes that financial support for the introduction of fish screens by irrigators would be well supported.

4.8 MANAGING WATER QUALITY

Cotton Australia believes all government and landholders can do more to improve water quality.

First and foremost the removal of European Carp from our aquatic systems would be a huge step forward in improving quality, particularly by reducing turbidity.

Further, landholders can adopt a range of measures, as outlined in the cotton industry's myBMP programme to minimise any risks of nutrient run-off into our river systems.

Government support to help landholders manage and improve their riparian zones by minimising unrestricted grazing and watering, will all assist to improve water quality outcomes.

Cotton Australia believes a proactive approach to better riparian zone and run-off management would be more effective in this next period of the Basin Plan rather than formally changing water quality objectives and targets.

4.9 WATER INFRASTRUCTURE AND CRITICAL HUMAN WATER NEEDS

Cotton Australia recognises the right of every Australian to have access to safe and adequate water to meet their critical water needs. It also recognises that in many cases there is a significant backlog of investment in both replacement and maintenance.

Cotton Australia is concerned that water infrastructure for critical human needs must be designed, built and maintained to meet the challenges of climate variability.

Too often the default position when planning for less water under climate change scenarios is simply to reduce access to lower reliability entitlement holders rather than ensure the infrastructure is capable of managing these challenges.

For example, even relatively small non-flow periods on the confluence of the Barwon-Darling and the Namoi River, puts Walgett's river town water supply at risk, yet it is located on a highly ephemeral river system.

At Wilcannia we have seen a very well supported proposal to rebuild its town weir with much greater capacity falter and now stall due to huge cost blow-outs.

Poor investment in critical water infrastructure cannot be simply countered by defaulting to drawing on access held by less reliable water entitlements. As there must be efficiency in all levels of water management there must efficiency and capacity in critical water supply infrastructure.

Cotton Australia also recognises that much of the infrastructure that underpins the regulation of our river system is aging and may not meet the environmental expectations of today.

There needs to be an investment plan, over and above what water users contribute toward maintenance and operation, to ensure that our infrastructure is sufficient for a modern, working river basin.

4.10 BASIN PLAN REGULATORY DESIGN

Cotton Australia does believe there could be huge improvements in the Basin Plan regulatory design, that could significantly reduce overlap and improve efficiency.

For example, Cotton Australia believes consideration whether many of the underpinning elements of the Commonwealth Water Act are required today.

Cotton Australia believes there is potentially a case that the Reserve Power relating to Foreign Treaties, which in effect underpinned the Federal government's entry into water management may not have been required at all.

In retrospect, what would have stopped the Commonwealth simply deciding to create the role of the CEWH and invest environmental water holding which could have been deployed with the assistance of the States.

The need for State to invest in creating Commonwealth approved Water Resource Plans greatly duplicates the efforts that have gone into the State's own Water Sharing/Water Resource Plans, why can't the Commonwealth simply accredit these plans.

As discussed earlier in this submission there appears to be multiple layers of environmental watering plans, and surely there must be options to streamline the planning.

The duplication of so many activities not only place additional burdens on the jurisdictions, but it must be recognised that they also place additional burdens on entitlement holders and those that represent them.

4.11 IMPROVING SCIENCE AND KNOWLEDGE TO INFORM BASIN WATER MANAGEMENT

Cotton Australia is generally supportive of the options listed to support Science and Knowledge for Basin Management. Science knowledge is critical to help inform sound Basin management decisions.

The only word of caution is there is never enough knowledge, it all comes at a cost, and at some point, there needs to be a balance between the cost of knowledge gathering, and the cost of implementing sound management in the Basin.

4.12 HOW TO HAVE YOUR SAY

Cotton Australia appreciates the lengths the Authority has gone to engage in this Review. Authority staff have certainly made themselves available, and there have been many opportunities to receive briefings, as part of both large and small events.

However, the Review and Consultation process does appear to have a significant flaw. The Discussion paper and all the associated evidence that has helped inform this consultation are comprehensive, but they contain little in the way of proposed recommendations that the Authority is considering taking to the Federal Minister.

In some ways this is refreshing, it could be seen as an indication that the Authority genuinely wants to consider the views of stakeholders before developing recommendations. The publication of the "What we Heard" report will be important, but there is a later "missing step" in the proposed timeline, with currently no defined opportunity to "test" and provide feedback on any specific recommendations the Authority's Board may draft post consideration of the Discussion paper submissions and the other evidence collected throughout the review process.

Cotton Australia would envisage the Authority hosting targeted meetings with key Basin organisations, at both a peak and local level, so as to allow frank and constructive feedback on draft recommendation. Targeted meetings will allow for openness and constructiveness that is unlikely to occur in more open forums.

5. Conclusion

Cotton Australia welcomes the 2026 Murray–Darling Basin Plan Review and supports a next phase of Basin management that is focused on delivering real, measurable environmental outcomes while also improving social and economic outcomes for Basin communities. The evidence assembled for the Review demonstrates that environmental water has contributed to improved conditions but also highlights that the largest marginal gains are now more likely to come from better delivery, better complementary measures and better governance—not from an ongoing singular focus on additional water recovery.

The submission emphasises that a mature, transparent water market must remain central to any rebalancing of water between users, including the environment and First Nations interests. Cotton Australia does not support rules-based reforms that undermine entitlement characteristics, shift risk to existing holders, or effectively acquire water “by stealth”. Any proposals—particularly in the Northern Basin—must be informed by comprehensive, Basin-wide hydrological assessment and be subject to scrutiny by affected stakeholders.

Accordingly, Cotton Australia urges governments to commit to long-term investment in complementary environmental measures—including constraints and deliverability solutions, fish passage and carp suppression, riparian and wetland restoration, and actions to improve water quality—so the existing environmental water portfolio can deliver the best possible outcomes. It also supports equivalent rules, metering and compliance expectations for environmental water holders. Finally, Cotton Australia recommends the MDBA include a targeted opportunity to test draft recommendations with key Basin stakeholders before advice is finalised, to ensure the Review’s outcomes are practical, evidence-based and maintain the confidence of Basin communities.

For more information on this submission please contact Michael Murray – General Manager – 0427 707 868 or michaelm@cotton.org.au .



COTTON
AUSTRALIA