



COTTON
AUSTRALIA



NORTHERN BASIN CONNECTIVITY PROGRAM

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NORTHERN BASIN CONNECTIVITY PROGRAM

Submission prepared by Michael Murray, General Manager

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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

Cotton Australia strongly opposes the Northern Basin Connectivity Program in its current form. This submission argues that the program is being advanced on the basis of inadequate hydrological, economic and social modelling, and that the likely impacts on water entitlement holders, agricultural production and irrigation-dependent communities would be significant. The submission contends that the environmental benefits identified to date appear limited relative to the scale of reduced water availability and the potentially very large compensation costs that could arise if changes proceed.

Accordingly, Cotton Australia recommends that the NSW Government reject the current body of work, terminate the program, and refer any remaining connectivity concerns to the Murray-Darling Basin Authority through the Murray-Darling Basin Plan Review. The submission also argues that rules-based changes that diminish water property rights should be rejected, and that if the program is nevertheless pursued, any further consideration must be supported by comprehensive contemporary modelling and full assessment of compensation, production and community impacts before any decision is made.

2. Recommendations

- 2.1. That the NSW Minister for Water, Rose Jackson, and the NSW Cabinet publicly reject the work of the Department of Climate Change, Energy, the Environment and Water on this program due to the complete inadequacy of the hydrological and economic modelling to support sound decision-making.
- 2.2. That the NSW Government terminate the Northern Basin Connectivity Program and refer consideration of any perceived connectivity issues to the Murray-Darling Basin Authority as part of the Murray-Darling Basin Plan Review.
- 2.3. That rules-based changes that negatively affect the property rights of entitlement holders be rejected by the NSW Government as a means of acquiring additional water for the environment.
- 2.4. If the NSW Government decides to continue the program, it must commission comprehensive hydrological modelling that accurately reflects current water management in the Basin, including the impact of held environmental water, changes in access rules since 2012, the volumetric licensing of floodplain harvesting, and a realistic representation of inflows from Queensland.
- 2.5. If the NSW Government decides to continue the program, it must commission comprehensive economic modelling of the full impact of reduced water availability on agricultural production and irrigation-dependent communities, together with a robust assessment of the cost of fully compensating entitlement holders for any impact on their property rights, whether through entitlement transfers or rules-based changes.

3. Submission response

Cotton Australia is the peak body representing approximately 1,500 cotton growers across New South Wales, Queensland, the Northern Territory and Western Australia.

A large number of our growers operate in the inland northern NSW valleys of the Macquarie, Barwon-Darling, Namoi, Gwydir and the Border Rivers.

These growers not only produce cotton, but also grow a wide range of other crops, including wheat, barley, sorghum, chickpeas and canola, and raise livestock. They are employers, community members, supporters of a wide cross-section of businesses, sporting coaches, P&C members, and volunteers for countless organisations. In short, they are part of the fabric of their communities, care deeply about them, and want to see them thrive socially, environmentally and economically.

Against that background, it is deeply disappointing that they, and the organisations that represent their interests, are being asked to participate in a process that has been presented so poorly.

The Northern NSW Connectivity Review is a standout example of how water policy development **should not** be done.

The process has been so flawed, and so heavily reliant on inadequate and inaccurate hydrological and economic modelling, that Cotton Australia has at times been tempted not to participate at all.

However, the potential impact to water entitlement holders, their businesses, their employees and their communities are so significant there is no choice but to provide this input.

Cotton Australia is an active member of the NSW Irrigators Council (NSWIC) and has strong working relationships with Macquarie River Food and Fibre, Namoi Water, Barwon-Darling Water, Gwydir Valley Irrigators Association, and Border Rivers Food and Fibre. It endorses the submissions made by these organisations and acknowledges that several of them provide more detail than is contained in this submission.

However, in this case, there is limited value in engaging closely with the detail provided by the Government, and before it the Independent Panel, because the underlying quality of that information is so poor.

3.1. SCALE OF THE ISSUE

It is difficult to overstate the scale of what is being proposed. The program identifies three key desired outcomes:

1. During non-dry periods, ensure base flows are protected across the Northern Basin.
2. During dry periods, extend the Barwon-Darling resumption of flow rules into the Northern Basin tributaries.
3. Establish a connectivity environmental allowance in the Gwydir, Namoi and Border Rivers.

To achieve these outcomes, the program has considered five rules changes that could affect them.

However, the table below, drawn from the Department's *Analysis of the Connectivity Expert Panel Recommendations* information paper dated February 2026, clearly shows that even if all recommendations were implemented, the environmental improvements would range from negligible to moderate. Large improvements would occur only if significant high security

reserves were established in the headwater storages of the Border Rivers, Gwydir and Namoi valleys.

Table 3. Effectiveness of different approaches in improving the occurrence of baseflow, small fresh and large EWR (1895-2023). Categories of effectiveness* show the average change (improvement) from base case across sites for the relevant EWR metrics as well as the range.

Approach	Baseflow	Small fresh	Large fresh
End of system - high security accounts	Large (moderate to very large)	Small	Small (negligible to small)
End of system - translucency	Small to moderate	Negligible	Negligible
Extended resumption of flow	Negligible	Small	Small (negligible to moderate)
Connectivity EWA - dam inflow trigger	Small	Small to moderate	Small (negligible to small)
Connectivity EWA - Bourke flow trigger	Negligible	Small	Negligible
Combination**	Moderate to large	Small to moderate	Small (negligible to moderate)

* Categories effectiveness: no change/negligible <2%; small ≥2 to < 10%; moderate ≥ 10to <20%; large ≥ 20 to < 30%; very large ≥30%.

** Combination includes extended resumption of flow, end of system - translucency, connectivity EWA - Bourke trigger.

However, the impact of achieving these negligible to moderate gains (or large gains if the High Security option is adopted) is huge.

The tables below illustrate those impacts. For example, Table 39 in the report indicates a total reduction in take across the valleys of 85 GL. Approximately half of that volume has already been recovered through the Murray-Darling Basin Plan, in addition to the approximately 100 GL reduction in take resulting from the licensing of floodplain harvesting.

Table 39. Combination. Change in long-term average annual diversion (1895-2023), Includes absolute change (GL/y) and relative change (%) from the base case. Combination modelled the end of system -translucency, extended resumption of flow, and connectivity EWA – Bourke flow trigger being implemented together.

Valley	Base case	Combination	Absolute change	Relative change
	GL/y	GL/y	GL/y	%
Border Rivers	214.2	195.9	-18.3	-8.5
Gwydir	446.2	408.8	-37.4	-8.4
Namoi	252.6	229.7	-22.9	-9.1
Macquarie	330.2	327.6	-2.6	-0.8
Barwon-Darling	171.3	167.8	-3.6	-2.1

While the paper makes no serious attempt to calculate compensation based on market water values, a conservative estimate using a value of \$15,000 per megalitre for high-security water in the Northern NSW Basin suggests minimum compensation in the order of \$1.275 billion to recover 85,000 megalitres. Cotton Australia acknowledges that this is a high-level estimate and believes that proper, comprehensive analysis would likely produce a materially higher figure.

For an investment exceeding \$1.275 billion, the report estimates an ecological change of only 4%, as shown in the following table.

Table 6. Technical advisory panel (TAP) estimate of ecological improvement associated with the Panel’s recommendations

Approach assessed	Average score (from TAP)	Estimated ecological change (%)
End of system - high security account	0.71	3.6%
End of system - translucency	0.50	2.5%
Extended resumption of flow	0.36	1.8%
Connectivity EWA – dam inflow trigger	0.46	2.3%
Connectivity EWA – Bourke flow trigger	0.27	1.3%
Combination*	0.80	4.0%

* Combination approach modelled the extended resumption of flow, end of system - translucency and connectivity EWA – Bourke flow trigger.

In summary, according to the *Analysis of the Connectivity Expert Panel Recommendations* information paper, reducing total extractions in most northern valleys by 8% to 9%, or 85 GL, may produce environmental improvements ranging from negligible to large, but at a direct cost estimated by Cotton Australia to exceed \$1.275 billion.

This estimate does not account for lost production or the flow-on effects on irrigation-dependent communities.

Even if the program's modelling were sound, which it is not, the NSW Government should ask why it would assume such a substantial financial burden for limited environmental gains when any genuine connectivity issues could instead be considered by the Commonwealth through the Murray-Darling Basin Plan Review.

3.1. INADEQUACY OF MODELLING

The central issue is that the work completed to date is of such poor quality that no responsible government should make decisions on its basis.

This deeply flawed body of work departed from a credible foundation when the Independent Panel excluded the effects of held environmental water acquired and deployed under the Murray-Darling Basin Plan, the 100 GL reduction in take arising from the volumetric licensing of floodplain harvesting, and realistic inflows from Queensland. These are not matters of conjecture; they are established facts. The same omissions continued when the Department assumed responsibility for further modelling.

This approach is difficult to justify. It is akin to seeking improvements in the health system using the system of 25 years ago as the baseline, rather than the system as it operates today.

The deficiencies continue in the superficial treatment of social and economic impacts and the complete failure to model the compensation that would be payable to entitlement holders if the current recommendations were adopted.

There is also an even more fundamental question that needs to be considered by the NSW Government – why is it doing this work at all?

Recommendation: *That the NSW Minister for Water, Rose Jackson, and the NSW Cabinet publicly reject the work of the Department of Climate Change, Energy, the Environment and Water on this program due to the complete inadequacy of hydrological and economic modelling to support sound decision-making.*

3.2. MURRAY-DARLING BASIN PLAN

In 2012 the Murray-Darling Basin Plan commenced, after a five-year gestation, under the auspices of the Murray-Darling Basin Authority (MDBA).

In essence, it transferred much of the responsibility for ensuring the environmental sustainability of the Basin from the states to the Commonwealth.

The Plan sets Sustainable Diversion Limits (SDL) for each catchment at a level that the MDBA believes will meet the Environmentally Sustainable Level of Take (ESLT) and then accredits the State's Water Resource/Sharing Plans as a tool to ensure the level of take is not exceeded.

Importantly, the Commonwealth has been taking full responsibility to ensure any entitlement holders impacted from take reductions due to the implementation of SDLs are fully compensated, and it has quite correctly been doing this through the involvement of willing sellers, at market prices or through the funding of voluntary on-farm and off-farm irrigation efficiency programs.

The MDBA is currently undertaking its first major statutory review of the Basin Plan, and it acknowledges concerns about Northern Basin connectivity in Chapter 5 of its Review Discussion Paper.

The fundamental question for the NSW Government is why it has undertaken this work at all, particularly given its inadequacy, when responsibility properly rests with the Commonwealth through the MDBA and there is a timely opportunity to address the issue through the current Review.

It makes no policy sense for the NSW Government to impose further reductions in allowed take beyond Basin Plan requirements while also assuming responsibility for compensation.

That concern is compounded by the fact that the Government is being asked to make these decisions on the basis of fundamentally flawed modelling.

The sensible approach is for the NSW Government to formally raise its concerns around connectivity with the MDBA and seek consideration as part of the Basin Plan Review. Then if the MDBA sees merit in the issue, it could commission the appropriate and comprehensive modelling that has been completely lacking in the NSW work to date.

Recommendation: *That the NSW Government terminate the Northern Basin Connectivity Program and refer consideration of any perceived connectivity issues to the Murray-Darling Basin Authority as part of the Murray-Darling Basin Plan Review.*

3.3. RULES BASED CHANGES

For the past 40 years, Australia, including NSW, has been developing a world-class system of water property rights and an associated market.

This system underpins investment in irrigated agriculture and has created a sound system for the movement of water between different users, including from productive extractive use to the environment.

The appropriateness of this was recognised from the outset of the Basin Plan, where the movement to meet Sustainable Diversion Limits has been achieved through the adoption of voluntary market mechanisms.

Disturbingly, NSW appears to be moving away from the appropriate use of the market and back toward the pre-Basin Plan approach of rules-based changes, which are a blunt instrument that in effect amounts to compulsory acquisition with uncertain, and almost certainly below-market, compensation.

Rules-based changes are a lazy and inequitable approach to public policy and should not be used where they negatively affect water property rights.

There may be instances where a rules-based change, developed through full consultation and agreement with entitlement holders, results in a neutral outcome for water property rights.

Cotton Australia would be open to genuine exploration of such options where they may benefit the environment without reducing overall entitlement reliability.

Recommendation: *That rules-based changes that negatively affect the property rights of entitlement holders be rejected by the NSW Government as a means of acquiring additional water for the environment.*

3.4. NEXT STEPS

As noted earlier in this submission, Cotton Australia believes the NSW Government should advise the Murray-Darling Basin Authority that Northern Basin connectivity issues should be properly considered as part of the Murray-Darling Basin Plan Review and, if necessary, addressed through further action by the Authority.

The NSW Government should discontinue the Northern Basin Connectivity Program.

However, if the NSW Government decides to continue the program, it must commission proper hydrological, social and economic modelling, together with full compensation costings, before putting any recommendations to Cabinet.

Recommendation: *If the NSW Government decides to continue the program, it must commission comprehensive hydrological modelling that accurately reflects current water management in the Basin, including the impact of held environmental water, changes in access rules since 2012, the volumetric licensing of floodplain harvesting, and a realistic representation of inflows from Queensland.*

Recommendation: *If the NSW Government decides to continue the program, it must commission comprehensive economic modelling of the full impact of reduced water availability on agricultural production and irrigation-dependent communities, together with a robust assessment of the cost of fully compensating entitlement holders for any impact on their property rights, whether through entitlement transfers or rules-based changes.*

4. Conclusion

In conclusion, Cotton Australia's position is that the Northern Basin Connectivity Program should not proceed on the basis of the material currently available. The work undertaken to date does not provide a credible foundation for sound public policy, particularly given the scale of the potential impacts on entitlement holders, regional production and rural communities, and the limited environmental gains identified in the program materials.

The NSW Government should instead raise any genuine connectivity issues with the Murray-Darling Basin Authority as part of the Basin Plan Review and rely on a proper, contemporary evidence base before considering any further action. If the Government chooses to continue examining this issue, it must first commission robust hydrological, economic and social analysis and fully account for compensation obligations. Until that occurs, the current program should be discontinued.

For further information about this submission, please contact Michael Murray, General Manager, at michaelm@cotton.org.au or 0427 707 868.



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