National Irrigators' Council
Food · Fibre · Future

2 December 2024

Briefing Note: Wentworth Group of Concerned Scientists "Murky Waters" article

For: NIC Members

Action: For background information for Members.

Strategy: NIC media commentary was handled directly upon request and coordinated with NFF, with a detailed Media Release provided to selective journalists. The decision was not to provide additional oxygen, saving our response and our solutions focused approach, to our own Basin Plan vision document due in early 2025.

The media release has additional facts and figure of value to Members and is attached to this Briefing note.

Overview: The report identifies 27 (largely new) indicators to assess the Basin Plan, with a media statement reporting the Plan a failure. It is noted that many indicators are not within the scope of the Basin Plan or are carefully constructed to not tell the full story. The indicators are often different to those being adopted by the MDBA in previous evaluations.

Key Considerations:

- The Murray Darling Basin Authority sets the indicators by which to measure performance of the Plan (some are contained in legislation, and others as part of the Evaluation Framework). They are collecting data right now for the evaluation and review. The timing of this publication algins with 12-months since the Restoring Our Rivers 2023 Act was made, as well as the publication of an updated draft National Water Agreement.
- The Wentworth Group have a history of using science for activism and being selective to present a case to the government. They have been called out previously by the MDBA and a state government for 'not telling the full story' and for significant errors in the methodology. In this instance, the purpose of this work appears to be to:
    - Downplay the economic impact on irrigators, yet they largely ignore the impact on communities.
    - Present a case of failure to encourage more action – constraints, water purchase, and resetting the SDL.
    - Broaden the next scope of the Murray Darling Basin Plan.
- Our own Murray Darling Basin paper will consider these and ensure we address them accordingly.

- There is opportunity to use "their science" to drive our case for complementary measures, as many of the indicators are beyond the scope of just adding water.
- Highlights current Basin Plan complexities:
    - How to measure outcomes when they are not specific.
    - What is the Environmentally Sustainable Level of Take meant to achieve – more river flows, more fish, more birds, or just to be implemented?
    - Environmental water secured takes time to result in benefits and is constrained by water decisions, environmental conditions and water availability as well as delivery constraints.

Key NIC Messages:

- Many of the indicators are out of scope of the Murray Darling Basin Plan, if you assess it against targets, it's not designed to meet, then of course it will fail.
- The article ignores the progress and water recovered for the environment, with farmers handing over 1 in 3 litres to the environment - the discussion should now be how to value add to the 2,100GL of water already recovered for the environment.
- If we want to achieve these new indicators, more than the 'just add water' approach is needed - government investment through complementary measures is the only way forward.
- Socio-economic findings don't match the lived experiences from the Basin, nor the data from all towns within the LGA (the scale the Wentworth Group use) - also it's not about irrigators but their communities.
- Support comprehensive, validated approach to data collection and reporting on key environmental and social measures across the Basin. Policy decisions must have the best available information and a system to evaluate effectiveness and adapt, over-time. We are pleased the MDBA are establishing a 'challenge panel' to provide independent scrutiny of input into the Basin Plan review, and this work shows why that's important.
- The article does acknowledge that water use in the Murray-Darling Basin has declined by between one-third and one-quarter.

Report summary:

- Creates 27 new indices (see Table 1) and provides reasons for them linked to the Murray Darling Basin Plan or the Water Act and their assessment. The indicators and targets used are not the indicators for the Basin Plan, and many are out of scope – they have simply been made up.
    - For example, while Indigenous water holdings are important, this was never an intended outcome of the Basin Plan, as water recovery goes to the Commonwealth Environmental Water Holder.
    - Others have questionable value to the Basin Plan.

- 12 are assessed by NIC as not appropriate and another 4 are considered partly relevant but that measures are not all encompassing.

- Highlights issues regarding the coordination, effectiveness and completeness of data to measure success but then goes on to score the Basin Plan according to their new set of indices.

- A key finding is "*Despite A$13 billion committed to water reforms, trends of most indicators (74%) show no improvement or are worsening. Of those indicator targets that were met, five of seven were from the economic theme. Our results support the finding that 'irrigators came out of each subsequent stage of the reform process better placed than the environment'. Economic analysis:*

  - Uses 'mean personal community income' which is not an established measure, and we are unsure of the relevance to the Basin Plan.

  - 'income disparity' is also not relevant to the Basin Plan – this has been used to make the case that irrigation communities have not experienced significant economic disadvantage. However, all other economic indicators, and lived experiences, show otherwise.

  - Article uses 'Gross value of irrigated agricultural production' which ceased to be measured since 2018, prior to SDLs, the centrepiece of the Basin Plan, commencing.

  - There were also updates to the methodology for calculating GVIAP where the ABS has said "as a result of the change in scope the 2017-18 GVIAP will not be directly comparable to GVIAP outputs published prior to 2015-16". The WG has done just that.

- Environmental indicators include flooding extend on Ramsar Wetlands, native vegetation, fish and cold water pollution and water quality. Many of these issues cannot be address through water alone, or address with acknowledgement that we operate and live in a mange environment now, limited by infrastructure, towns, communities and industries.

- Notes that "T*he main objective of the Basin Plan is to return water to the environment by reducing diversions by irrigators to redress the balance between consumptive use and the environment*" and refers to diversions being reduced by "*one-third and one-quarter*" but then downplays this as "*river flows have not increased*" using their flawed 2020 analysis.

- The target of 'the volume of surface water diversions for consumptive purposes is declining' has been measured by the WG through the actual area of the Basin irrigated, not the volume of water used, volume of water recovered, or the limits in place.

  - To the contrary, the MDBA reports that "*since the 2012–13 water year, when the Basin Plan was implemented, there has been a marked*

decrease in surface water take including interceptions, with more water remaining for environmental benefit at the Basin scale"[10]. The below figure shows the trend of declining annual actual take across the Basin from 2012-13 to 2022-23.

- Figure 1: Surface water and groundwater annual actual take across the Basin, from 2012–13 to 2022–23 (source MDBA)[11]
- This indicator also has no mention of the volume of water recovered for the environment over this period, the core mechanism of the Plan, which is over 2,100 GL.

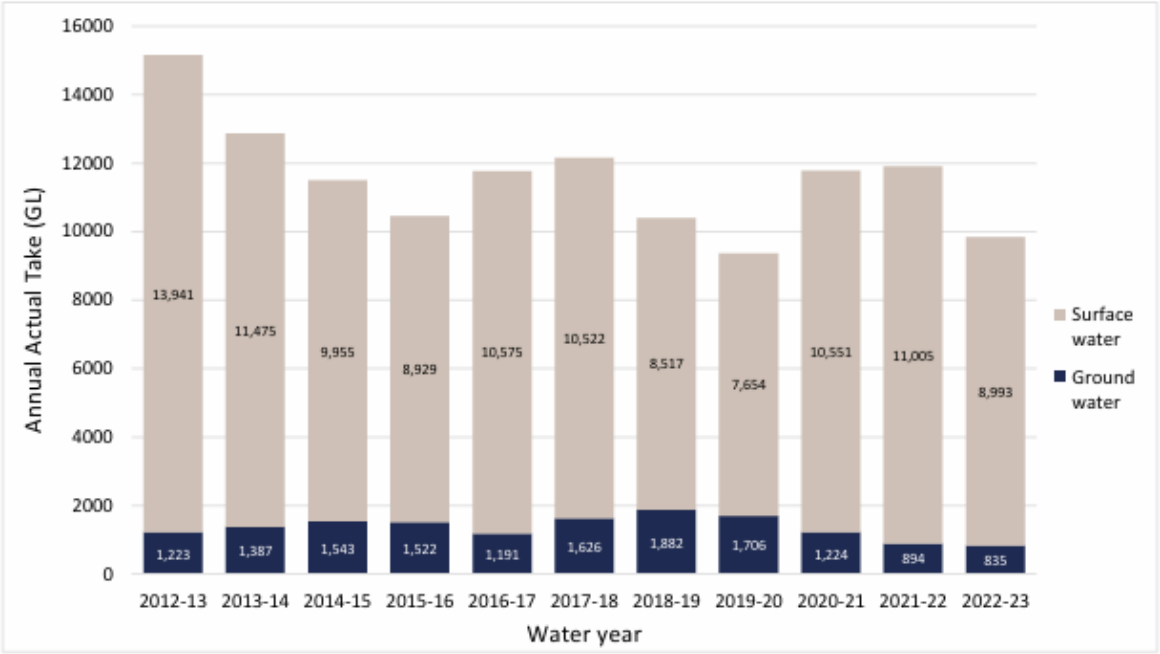

Figure 1: Annual Actual Take

- The commentary also is confused about the efficiency measure program, which fails to recognise that participation in that program requires a transfer of water on an entitlement to the CEWH, and adjustment to the SDL, so that portion of water is permanently out of irrigation.

- Economic indicators are based on "individual" or " local government scale impacts and benefits, these ignore accepted community indicators such as Socio-Economic Indexes for areas through the ABS presented in Figure 2 as well as, the updated Regulatory Impact assessment vulnerability information, which outline different perspective in Figure 3 below.

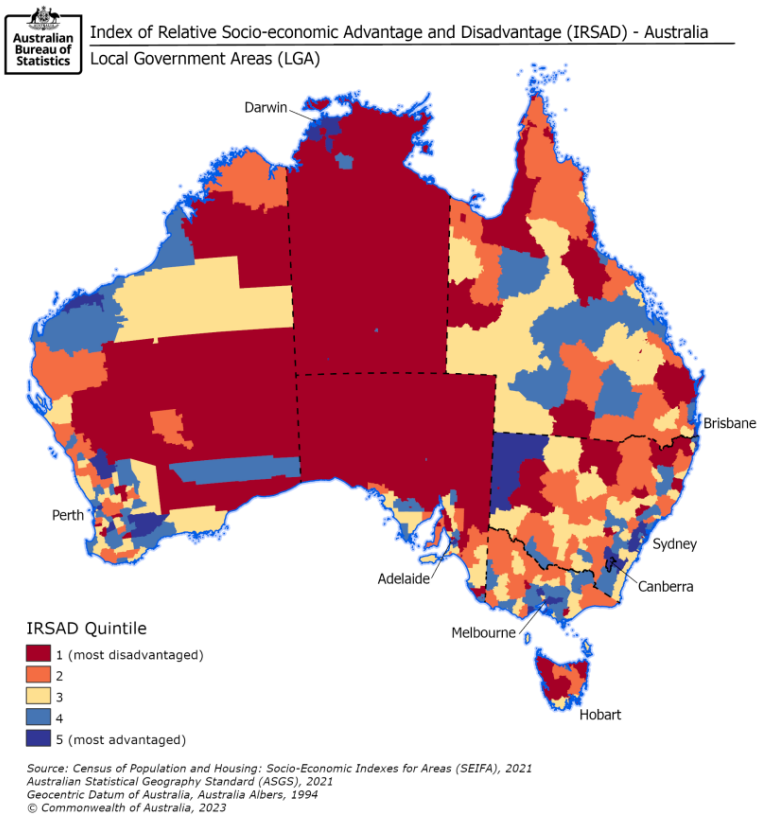

Figure 2: Seifa indexes from ABS

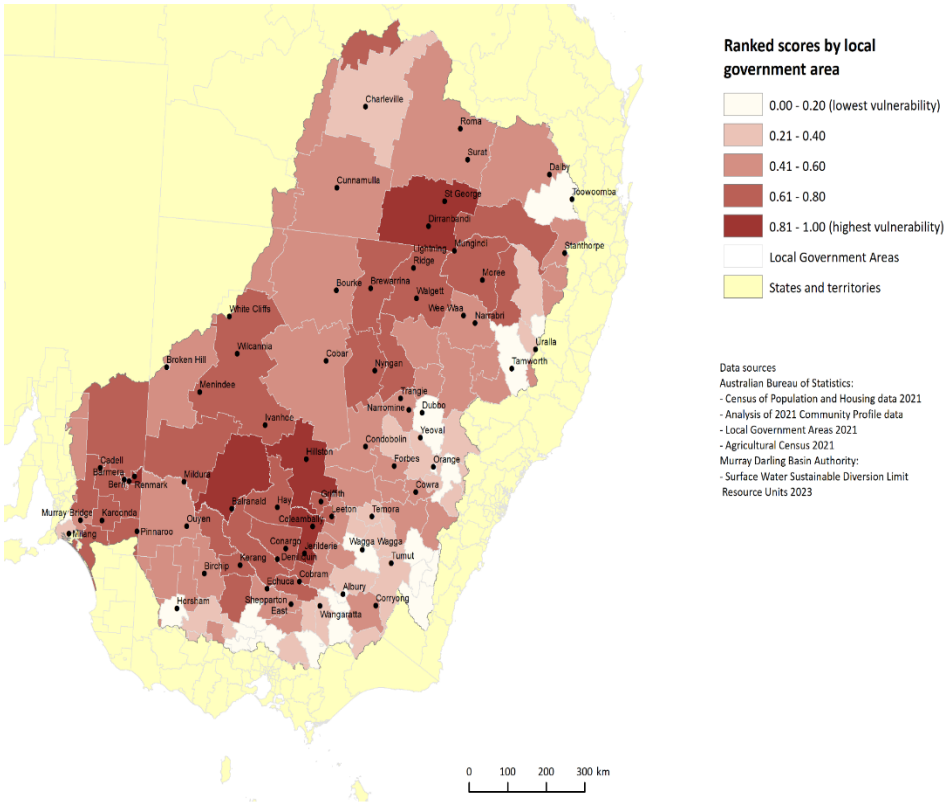

Figure 3: Baseline Relative Community Vulnerability by ABARES 2024

Review of Table 1 from Wentworth Group Article

Notes:

- Columns on the left (1-6) are directly copied from the Wentworth Group article, and NIC analysis is on the right.
- A broad approach was taken when considering what targets could be considered within scope – targets that are not directly written into the Basin Plan, but could be reasonably considered to be classified under social, economic, environmental or cultural objectives were included. Therefore, identification as 'in scope' does not mean an immediate Basin Plan objective or indicator, necessarily.
- Identification as 'out of scope' is not an expression of the value / importance of the indicator, rather, just whether it was intended to be addressed by the Plan.
- Overall, it should be noted that there are 'core' targets of the Basin Plan (such as to establish SDLs and reduce diversions through water recovery), and then other more general targets which may fall within the general objectives of the Plan. For this reason, not all indicators can be considered equally in determining if the Basin Plan has 'failed' or not.

Table 1 from Wentworth Group article						**NIC Response**		
No.	**Theme and Target**	**Data can be used as reported publicly?**	**Data completeness (spatially and temporally)**	**Status**	**Trend**	**In scope of current Basin Plan**	**Status based on information by authorities (if relevant)**	**Commentary**
	Indigenous							
1	Proportion of water held by Indigenous organisations is improving	Additional analysis required	Available for NSW Basin: only 3 annual data points	Poor	Declining	No	N/A	While Indigenous water holdings are important, this was never an intended outcome of the Basin Plan, as water recovery goes to the Commonwealth Environmental Water Holder - an Australian Government entity, to manage a portfolio of water entitlements to meet a diverse range of objectives, including cultural outcomes.
2	Volume of water released to wetlands in areas of Indigenous	Additional analysis required	Complete	Intermediate	No trend, variable	No	N/A	The Basin Plan enables water to go to wetlands, but the extent or operations of Indigenous organisations on these wetlands is not within scope, as this

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	organisations is increasing							would require separate programs and initiatives outside of just water management.
	Economic							
3	Personal income of Basin LGAs is steady or improving	Additional analysis required	Complete	Good	Improving	No, not irrelevant, but secondary to other indicators	Various, depending on the community.	The MDBA says: *"Much of the available data on social and economic conditions across the Basin are averages for local government areas (LGAs). This means that the stories of smaller communities within areas with larger communities will be missed."* "Mean personal community income" is not an established measure.
4	Disparity between LGAs with lowest and highest median income is steady or improving	Additional analysis required	Complete	Good	Steady overall for irrigation LGAS	No	N/A	This analysis focuses on income inequality, which is not an objective of the Basin Plan, and is largely out of scope of water management.
5	GVIAP is steady or improving and the trend is equal to or greater than the national average	Yes	Most recent data is only for 2018–19	Good	Stable	Yes*	Insufficient data	The data used is only up until 2018-19, which is prior to SDLs commencing. There were also updates to the methodology for calculating GVIAP where the ABS has said *"as a result of the change in scope the 2017-18 GVIAP will not be directly comparable to GVIAP outputs published prior to 2015-16".*

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6	Value of production per unit of irrigation water used is steady or improving	Yes	Most recent data is only for 2018–19	Good	Improving	Yes* (but alongside other indicators of community outcomes)	Yes	As above, the data used is only up until 2018-19, which is prior to SDLs commencing. There were also updates to the methodology for calculating GVIAP where the ABS has said *"as a result of the change in scope the 2017-18 GVIAP will not be directly comparable to GVIAP outputs published prior to 2015-16".* As the Basin Plan has driven higher water prices, and water markets have pushed water to its highest value use, this outcome would be expected as a by-product. This does not necessarily translate to economic outcomes in a community, however, in fact, it can result in other changes (positive and negative).
7	Cash income and rate of return of irrigation farms is increasing	Yes	Most recent data is only for 2015-16	Good	Declines during drought then recovers	Yes* (but alongside other indicators of community outcomes)	Insufficient data, impacts vary	The data used is only up until 2015-16, which is prior to SDLs commencing, and does not capture half of the Basin Plan implementation, and is therefore redundant.
8	Farmland price is improving	Yes	Complete	Good	Improving	No	N/A	This is influenced by many factors, external to the Basin Plan, and is occurring beyond the Basin.

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9	Surface water diversions are declining	Yes	Complete	Intermediate	No trend, variable	Yes	Yes	The MDBA reports that "*since the 2012–13 water year, when the Basin Plan was implemented, there has been a marked decrease in surface water take including interceptions, with more water remaining for environmental benefit at the Basin scale*"[1].
	Environmental							
10	Ramsar wetlands are flooded at an appropriate extent to meet their water requirements	Yes	Complete: based on remote sensing data	Poor, target not met	No trend, variable	Yes	Yes (to the extent possible)	The 2020 Basin Plan Evaluation says: "Water for the environment has been applied to inundate many of the wetlands that are known to support waterbirds and the majority of internationally important wetlands (Ramsar) sites in the Basin." It must be acknowledged that certain natural and physical constraints limit the Basin Plan's effectivess/role in this indicator.
11	Condition of vegetation in Ramsar wetlands	Yes	Complete: based on remote sensing data	Poor, target not met	No trend, variable	Yes	Yes	The MDBA says: "Vegetation condition has been largely maintained, but varies between catchments."

[1] 2022–23 Water Take Summary Report (P 2).

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	is maintained or improving							
12	River flows at Hydrological Indicator Sites match projections and predictions by MDBA	Additional analysis required	Complete	Poor, observed is below expected	Declining	No (as the Basin Plan didn't project flows)	Yes (but a different measure is used to the extent possible)	The modelling used to inform the Ecologically Sustainable Level of Take was not intended to be used as the 'bench mark to achieve'. NSW DPE said in 2021 of the Wentworth Groups previous analysis that "the method used in the report is inconsistent with the proposed operation of the Basin Plan, which requires a recovery of water and a limit on take in order to deliver specified environmental outcomes. The Basin Plan does not mandate a specific increase in flow." The MDBA finds with high-confidence that: *"Hydrology indicators have mostly remained stable or improved. Environmental water has played an important role in these findings."* *"The Basin Plan has protected flow regimes across much of the southern Basin, including base and fresh flows in some rivers. Positive ecological*

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								responses have resulted from this water for the environment. *In the regulated rivers of the northern Basin, the Basin Plan has protected some rivers from the worst impacts of the unprecedented drought. Implementation of the Basin Plan has been associated with improvements to flow regimes. This includes reductions in the effects from the severity and duration of dry spells and protection of the first flows after much-needed rainfall. This has, however, only been possible in regulated rivers where water can be delivered from storages."*
13	Waterbird abundance of key species is steady or improving	Additional analysis required	Complete	Poor	Declining	Yes	Yes	The CEWH reported in 2023 the "Largest bird-breeding in decades as water for the environment flows". The CEWH also reported in 2022 "the most widespread breeding across the Murray-Darling Basin in more than 20 years". The MDBA finds that in the Coorong, Lower Lakes and Murray Mouth

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								"Waterbirds have been maintained, although their numbers are variable".
14	Frequency of occurrence of selected threatened species is steady or improving	Additional analysis required	Data based on field surveys at only 9 sites Basin-wide	Intermediate	One sp. declining, two no change, two improving	Yes	Yes	MDBA says: "since the implementation of the Basin Plan, there have been some improvements in fish indicators and recovery of 2 of the 3 Lower Lakes' threatened fish, Murray hardy head and southern pygmy perch."
15	Number of fish kills is falling	Additional analysis required	Only available for NSW Basin	Poor	Number of severe fish kills rising	No	N/A	Fish kills occur for a variety of reasons, including following flooding and droughts, as well as heat, and following fires.
16	EC in Murray River below target levels >95% of the time	Yes	Complete	Intermediate	Improving but EC not met at Burtundy	Yes	Intermediate	The MDBA reports that: "Salinity targets for 4 of the 5 Basin Plan reporting sites were met for the 2014–19 reporting period. The Basin salinity target at Morgan, South Australia was met over the period since 2012." The MDBA also finds that: "Salinity and water level targets have been met for the Lower Lakes. Targets in the Coorong have not been met but the indicators have improved."
17	Discharge 2×10^{6}Mg salt	Yes	Complete	Poor	Discharge target not met	Yes	N/A	The MDBA says: Salinity targets for 4 of the 5 Basin Plan reporting sites were met

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	year^{-1} from Murray Mouth							for the 2014–19 reporting period. The Basin salinity target at Morgan, South Australia was met over the period since 2012.
18	Reduce nitrogen and phosphorus concentrations towards water quality standards	Additional analysis required	Only available for River Murray	Fair	Some improvement	Yes	Yes	N/A
19	Cold water pollution is declining (installation of TPCDs)	Additional analysis required	Complete	Intermediate	No trend; TPCD installation sporadic	No		Not currently addressed by the Basin Plan, due to focus on water volumes, but could be included.
20	Populations of large-bodied fishes are maintained or increasing	Yes	Only available for NSW and Victoria	Fair	Improving	Yes	Yes	MDBA says: "ppopulations of Murray cod have been maintained, although there was a decline in the iconic species following the 2016 floods and blackwater events."
21	Murray Mouth open >95% of time without dredging	Additional analysis required	Time Murray Mouth is open not reported regularly	Poor	Target unlikely ever to be met	Yes	N/A (identified as unrealistic)	The MDBA finds that: "Water for the environment accounted for between 44% and 100% of the total flow through the barrages (Stewardson and Guarino 2020). This means that the targets related to flows over the barrages have been largely met, with 2-year average discharges volumes > 600 GL

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								per year each year since 2012. The 3-year target of average annual flows > 2,000 GL per year has been achieved every year except for 2015–16.Water for the environment has contributed to maintaining water levels in the Lower Lakes over the past 5 years (2014–2019).” “The evidence suggests that mechanisms of the Basin Plan are having a positive impact towards the expected outcomes. However, it appears that under the drying climate the target for the Murray Mouth opening is unachievable.”
	Social							
22	Town water security: days per year of water restrictions is declining	No–full dataset no longer publicly available	Complete for NSW Basin LGAs only	Poor	No.days /yr of water restrictions is increasing	No	Varies	This is not an appropriate measure, as town water restrictions are set by Local Councils, and are not harmonized or standardized. This is also subject to so many contributing factors, including the risk appetite of the local council, the local restriction system (some councils have level 1 restrictions as BAU), local storage capacity, availability of alternative supplies, variations in demand, and climate. These factors all

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								have a much larger influence than the Basin Plan over the frequency of restrictions. A more accurate indication would be reliability of TWS.
23	Number of drinking water quality incidents is declining	No–full dataset no longer publicly available	Complete for NSW Basin only	Poor	No. boil water notices is increasing	Yes	Insufficient data	There are a number of contributing factors to this, including the capacity of treatment plants.
24	Water quality threat events to domestic, cultural and recreational water uses are declining in number	Data not publicly archived	Some reports missing	Intermediate	No trend, variable	To an extent.	Yes	The latest 'River Murray Water Quality Monitoring Program Data Trends Analysis 2022 reports' shows: We show the general pattern is one of decreasing levels across the majority of water quality (WQ) constituents and parameters, across all sites; the exception is water temperature which is generally increasing at all sites.
	Compliance and enforcement							
25	SDL for each SWRU are met	Yes	Complete	SDL not met for 2 SWRUs	Trend toward increased exceedance of SDL compliance threshold	Yes	Yes	SDLs came into effect in 2019. The latest MDBA Water Take Report finds: "No SDL resource unit was non-compliant with the Basin Plan requirements".

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								"All 10 NSW SDL resource units recorded annual credits." The IGWC SDL Compliance Report finds: *"I have reviewed the 2022-23 Registers of Take report and I find that all 55 SDL resource units on the registers were found to be compliant. This covers Queensland, Victoria, South Australia and the Australian Capital Territory."*
26	Adjusted cumulative SDL balance for each SWRU is stable or increasing	Yes	Complete	Target not met	Balance has declined in 8/29 resource units	No	N/A	Water take is to be at the SDL, not above or below. It is not intended for there to be credits. However, it is noted that credits are being accumulated under the SDL, similarly to how Cap credits developed (see MDBA Cap Reports).
27	Breaches of water laws: prosecutions and enforcement notices are declining in number	Additional analysis required	Data incomplete in NSW prior to establishment of Natural Resources Access Regulator	Intermediate	No trend, variable	No, a measure of proportion of investigations to prosecutions and enforcement notices is a better measure.	Yes	This is a poor indicator / measure, as it is better measured by rates of effective compliance. There has been a significant strengthening of compliance through the new IGWC, and state authorities such as NRAR in NSW. It is not correct for the WG Report to suggest otherwise.

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MEDIA RELEASE

Muddying the waters: Report finds Basin water take declines by up to one-third of previous levels, yet authors still find ways to call it a failure

A new paper published by the Wentworth Group of Concerned Scientists has found water use in the Murray-Darling Basin has declined by between one-third and one-quarter.[2]

However, instead of recognising this step change in water management, which was the entire point of the Basin Plan, the article has created 27 new indicators, some of which are not directly required by the Basin Plan, in order to call it a failure.

"The work creates new targets that were never intended to be achieved by the Plan (and are out of scope) in order to call it a failure, and glances over the actual targets in the Plan which have in fact largely been met," said CEO of NIC, Zara Lowien.

"You cannot judge the Basin Plan by 27 indicators that it was never intended to fix, and expect any other outcome, than failure. But if you judge it by its actual objectives and indicators, as authorities do on an ongoing basis, it shows enormous progress towards its objective to rebalance water for the environment."

NIC has called out the paper, saying "this is just another attempt to undermine the significant progress in water management, yet the data speaks for itself," said Ms Lowien. [See more detailed responses to specific area of interest below]

The report does highlight the need for strong investment in monitoring and evaluation for environmental and social outcomes, which NIC support.

"We welcome a comprehensive, validated approach to data collection and reporting on key environmental and social measures across the Basin. It's an important input into policy decisions and we must have the best available information and a system to evaluate effectiveness and adapt, over-time."

In response to concerns regarding the confidence in science and data to inform the Basin Plan evaluation and subsequent review, the MDBA are establishing an independent 'challenge panel' to ensure the scientific rigor of evidence used.

"We aren't convinced the Wentworth Group article has it right, and we welcome publication of the review by the MDBA and how it may be considered in the upcoming evaluation and review. As everyone loses if the facts get skewed and Government's make community changing decisions on the wrong information."

[More detailed responses to specific areas]

Measuring reduced surface water diversions, is the key outcome of the Basin Plan:

[2] See Wentworth Group paper, Page 11: *"Since then, in New South Wales, the largest consumptive water user (mean 55% of total volume, 1983–84 to 2021–22), Victoria (mean 32% of total volume) and Queensland (7% of total volume), take declined by between one-third and one-quarter from 2012–13 to 2021–22. Basin-wide, take declined from almost 14,000 GL year−1 in 2012–13 to ~11,000 GL year−1 in 2020–21."*

The report scores the most relevant indicator 'surface water diversions are declining' with an amber 'intermediate' status, with 'no trend', despite official MDBA data indicating a 'marked decrease' in surface water diversions, and the paper itself also finding 'take declined by between one-third and one-quarter from 2012–13 to 2021–22'.

The latest MDBA water take reports say: "*since the 2012–13 water year, when the Basin Plan was implemented, there has been a marked decrease in surface water take including interceptions, with more water remaining for environmental benefit at the Basin scale*"[3].

The paper also conveniently glances over that the core target of the Basin Plan to buyback over 2,100 GL of water for the environment, has been exceeded[4], as the mechanism to bridge-the-gap from pre-2012 levels of water use to new Sustainable Diversion Limits.

Assessing environmental benefits of reduced irrigation take are complex and take time:

Authorities have in the past called out the Wentworth Group for not telling the full story in their research.

In September 2020, the MDBA published a statement titled "*Wentworth Group report not the full story*"[5], to correct false claims, saying "*our analysis illustrates that in the past seven years, the Basin Plan has increased flows and is making a difference to the environment*".[6]

In December 2021, the NSW Department of Planning & Environment also had to publish a critique of another Wentworth Group publication, where they said: "*The method used in the report is inconsistent with the proposed operation of the Basin Plan", and* heavily critiqued the methodology[7].

"Most concerning is that despite this previous feedback on their hydrological analysis from authorities" said Ms Lowien, "this article adopts this same heavily critiqued methodology without discussion or debate on its accuracy and relevancy. Adopting the 2020 evidence to demonstrate the apparent failure of one of their new indices to increase river flows (Indicator 12)."

The new indices highlight a need for new investment approach:

"Many of the new indicators created by the Wentworth Group are important measures, but they are beyond the scope of the current Basin Plan and its 'just add water' approach."

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[3] 2022–23 Water Take Summary Report (P 2).

[4] See Progress on water recovery | Murray–Darling Basin Authority: "The Murray–Darling Basin Authority (MDBA) estimates that the contracted (including registered) surface water recovery in the Murray–Darling Basin, as at 30 September 2024, is 2,132.7 GL/y... While the total amount of water recovered across the Basin is higher than the overall target of 2,075 GL/y, there remain some SDL resource units with local water recovery targets that have not yet been achieved.

[5] Wentworth Group report not the full story | Murray–Darling Basin Authority

[6] Wentworth Group report not the full story | Murray–Darling Basin Authority

[7] Statements from NSW DPE included: "*you shouldn't expect a post-implementation result prior to implementation*", and "*it is not valid to apply average level estimate of environmental water availability in years when little or no water was actually made available and doing so will artificially inflate the apparent water that "should" have been present".*

"The new indicators highlight that a new program of complementary measures such as fish passageways, riparian land and water management, and invasive species control, will be needed to make further environment improvements. Now water sharing has been addressed, with diversions down to just 28% of inflows, it's time to focus on these other critical measures and indicators," said Ms Lowien.

Economic change around the Basin occurs a various scales, all are important to those communities:

The Murray Darling Basin Authority in their 2020 evaluation indicated that "Much of the available data on social and economic conditions across the Basin are averages for local government areas (LGAs). This means that the stories of smaller communities within areas with larger communities will be missed."[8] This is an ongoing challenge for social and economic assessments, largely overlooked by the article's economic conclusions.

"Perhaps the most telling example of how flawed some of the analysis presented in the article can be, is when you consider the different scale of impacts; local, regional, basin or national, and the finding that apparently irrigation communities at a local government scale, are not experiencing severe economic hardship from the Plan."

"We invite the Wentworth Group to come out to our communities and see how their desktop study aligns with the practical reality and lived experiences of those living in the Basin," said Ms Lowien, "perhaps we can go to Collarenebri part of the Moree Plains Local Government Area where that community had 66% of the irrigation water recovered, resulting in the area population declining by 36% and employment by 37%[9]; or Wakool within the Murray River Council region, where 38% of available water in that community was recovered and the population decreased by 46% and farm employment fell by 72%[10]."

"Over half of their economic indicators which have apparently increased are for the local government regions overall, not the individual communities, and the analysis is based on data up until 2018-19 and 2015-16, before Sustainable Diversion Limits even commenced," said Ms Lowien, "at least they acknowledge they are using outdated data, but it makes their final conclusions on economic conditions rather redundant".

ENDS

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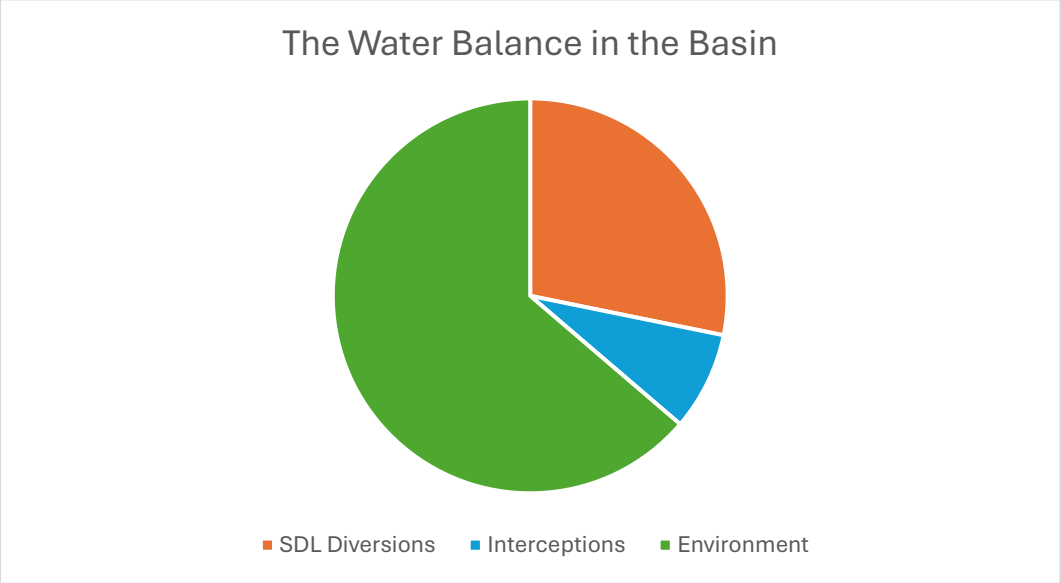
[8] www.mdba.gov.au/sites/default/files/publications/bp-eval-2020-evidence-pack-social-cultural-economic.pdf
[9] 630-nbr-community-profile-collarenebri.pdf
[10] community-profiles-wakool-june2018.pdf

Appendix 1: Full water balance in the Basin

Diversions in the Basin are now just 28% of inflows, which is well within global standards.[11]



Notes:

- The total SDL for the Basin is 11,807.4 GL/y, however, this includes interceptions (BDL of 2,626.9 GL)[12], leaving total diversions at 9,180.5 GL/y.
- The Basin Plan legislation states that long-term annual surface water inflows into the Basin are 32,553 GL.
- This means diversions as a proportion of average annual inflows, is 28.2%.
- It is noted that both the actual annual level of diversions, and the actual level of inflows annually, both vary each year, subject to actual water availability.

[11] The ecological limits of hydrologic alteration (ELOHA): a new framework for developing regional environmental flow standards

[12] Murray–Darling Basin Sustainable Diversion Limits for 2023–24 water year Murray–Darling Basin Baseline Diversion Limits – estimates for the 2023–2024 water year