Murray Regional Strategy Group

Socio-economic neutrality of recovering the 450 GL 'upwater'

Report of community workshop, Deniliquin, 15 October 2018

Executive summary

It should as simple as governments assessing the evidence already available of the devastating impacts water recovery has already had socially, economically and environmentally in this region. Already they should have acknowledged that recovering an additional 450 GL is impossible without dismantling communities, industries, businesses and families.

Protection of rural communities is a non-negotiable component of additional criteria for the 450 GL 'upwater' program under the Murray-Darling Basin Plan.

Leaders representing agriculture, industry, local government, community and indigenous groups in the NSW Murray are seeking a water-tight guarantee that job losses and economic decline linked to Basin Plan water recovery come to an end.

No structural adjustment package can compensate for the value of lost production and value-added economic activity if more water is lost from the region.

The 450 GL 'upwater program, projects and proposals must meet the following, non-negotiable socio-economic neutrality principles. If inconsistent with these principles, they must not proceed.

- An independent Cost-Benefit Analysis of the social, economic and environmental impacts of the 450 GL 'upwater' program.
- No cumulative adverse third-party impacts, including on jobs, economic activity, small service businesses, riparian landholders, indigenous wellbeing, population, mental health and community wellbeing.
- No adverse impact on reliability or water market prices for food and fibre producers.
- No adverse impact on operational costs for irrigation infrastructure operators.
- No adverse impacts from environmental water delivery.
- Independent assessment must be at appropriate land and time scales, and the assessor agreed with regional representatives.

Introduction

The Murray Regional Strategy Group is a coalition of leaders representing local government, landowners, agricultural processing companies, local businesses, the general community and indigenous community. The group is focused on finding practical and effective solutions to the challenges facing the agriculture sector, service industries and communities in the NSW Murray.

The socio-economic and environmental impacts of water recovery under the Murray-Darling Basin Plan are a priority concern, in particular, the prospect of another 450 GL of 'upwater' (defined as Efficiency Measures in the Basin Plan) being recovered over the next six years. The 'upwater' program is formally known as the Murray-Darling Basin Water Infrastructure (MDBWI) Program.

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The Basin Plan intends the 'upwater' to be primarily recovered through on-farm water use efficiency programs, in which participating farmers transfer entitlements to the environment in return for Commonwealth funding for on-farm infrastructure upgrades to improve water use efficiency.

The 'upwater' can only be recovered if the socio-economic impacts are neutral or positive but the neutrality test in the Basin Plan requires no more than individual farmers deciding to participate in the program on the basis the effects on their business will be neutral or positive. It takes no account of the broader impacts of reducing the consumptive pool by another 450 GL.

On 8 June 2018, the Basin ministerial council acknowledged the neutrality test was too narrow, and committed to developing additional criteria to take account of third-party and water market impacts. The criteria will be considered at the next council meeting in December 2018. The need for effective community and stakeholder communication and consultation was acknowledged.

On Monday 15 October 2018, the Murray Regional Strategy Group conducted a workshop in Deniliquin attended by representatives of local government, the indigenous community, business, and food and fibre producer organisations. We discussed what socio-economic 'neutrality' means to communities along the Murray River in southern NSW and northern Victoria, and decided the additional criteria that must apply to the 450 GL 'upwater' program, proposals and projects.

On the same day, the workshop was advised that the Commonwealth would begin consulting communities the following week, four months after the process was promised by the Basin ministers, and with only a few weeks left till the ministers meet again.

The workshop emphasised that while the ministers has acknowledged the need for effective community and stakeholder communication back in June, from past experience the community's intentions and concerns were often watered down. Concern about the short notice and rushed consultation schedule were expressed.

Water recovery to date

Pre-2009, 828 billion litres (GL) was recovered to increase environmental flows in the Murray and Snowy rivers through various programs including the Living Murray and Water4Rivers. The 2012 Basin Plan aims to recover an additional 2750 GL. It allows for another 450 GL 'upwater' above the 2750 GL target, conditional on no additional adverse socio-economic impacts.

As of 30 June 2018, about 1744 GL of water had been recovered in the southern Basin[1], including more than 1430 GL[2] from irrigators mostly through buybacks but also entitlement transfers in return for Commonwealth funding for farm infrastructure upgrades. This represents about 20 per cent of all high reliability and general security entitlements in the southern Basin.

In the southern NSW Riverina, Murray Irrigation Limited (MIL), the Basin's largest irrigation infrastructure operator, reports that the business holds around 450 GL (28 per cent) fewer entitlements than it did in 1995 as a result of all environmental recovery programs to date[3]. This

[1] DAWR surface water recovery progress. http://www.agriculture.gov.au/SiteCollectionDocuments/water/progress-recovery/surface-water-recovery.pdf. Accessed 6 October 2108.
[2] RMCG 2018. 'Update on GMID water availability scenarios and Irrigated Production across the Southern connected Basin'. Report prepared for the Goulburn Broken Catchment Management Authority, 6 June 2018.
[3] Aither 2017. A review of socio-economic neutrality in the context of Murray-Darling Basin Plan implementation**.** A Final Report prepared for the NSW Department of Primary Industries – Water March 2017.

includes more than 260 GL under the Basin Plan water recovery programs[4]. This represents a reduction of almost $2.5 million a year in sales revenue (user charges).

The effect on the NSW Murray region

The Commonwealth's water recovery program has reduced the annual average volume of water allocated for growing food and fibre in the southern Basin by about 20 per cent. Various reports all point in the same direction: that the Basin Plan is having substantial negative socio-economic effects on some communities, the impacts are unevenly spread, and further recovery from the irrigation pool may cause additional hardship[5].

In the NSW Murray, water recovery has left a lasting legacy of reduced production, lost jobs and hardship in towns and communities. The productivity and economic impacts are exacerbated by high water entitlements also being traded out of the region to downstream users in southern NSW, Victoria's Sunraysia region and South Australia.

The impacts are evident in the Murray Darling Basin Authority's own assessment of Australian Bureau of Statistics socio-economic indices for areas (SEIFA)[6] in the southern Basin. The indices compare relative levels of disadvantage, advantage, wealth and qualifications/education across all Australian communities.

A decile score of 1 indicates a community is among the 10% most challenged locations in Australia for that measure. Rural communities experiencing relatively good socio-economic conditions tend to score around 4, 5 or 6. This was true of the NSW Murray towns of Berrigan and Finley in 2001.

Communities whose scores decline by at least two deciles over time are likely to have reduced capacity, according to the MDBA. Further, if three or four of the indices change over time, this indicates the strength of change in the social conditions experienced within a community.

Table one shows that all major NSW Murray towns experienced marked SEIFA declines across all categories in a negative trend shared by few other of communities studied by the MDBA. This clearly shows the NSW Murray has not had time to adjust to the rate of water recovery.

Table 1. SEIFA – Berrigan and Finley

Town	Disadvantage	Advantage/Disadvantage	Wealth	Education
Berrigan 2001	5	4	4	3
Berrigan 2016	3	3	2	2
Decline	2↓	1↓	2↓	1↓

[4] MDBA 2018. Community profiles in the southern Basin. https://www.mdba.gov.au/publications/mdba-reports/southern-basin-community-profiles. Website accessed 21 October 2018.

[5] For example:

- RMCG 2018. 'Update on GMID water availability scenarios and Irrigated Production across the Southern connected Basin'. Report prepared for the Goulburn Broken Catchment Management Authority, 6 June 2018.
- Ernst & Young 2018. 'Analysis of efficiency measures in the Murray Darling Basin'. Report for the Basin ministerial council, 19 January 2018.
- MDBA 2017. MDBA Basin Plan Evaluation, December 2017. https://www.mdba.gov.au/basin-plan-roll-out/2017-basin-plan-evaluation. Website accessed 6 October 2018.
- TC&A and Frontier Economics 2017. 'Social and Economic Impacts of the Basin Plan in Victoria'. February 2017.

[6] MDBA 2018. Community profiles in the southern Basin. https://www.mdba.gov.au/publications/mdba-reports/southern-basin-community-profiles. Website accessed 29 October 2018.

Finley 2001	7	7	7	7
Finley 2016	3	3	3	5
Decline	4↓	4↓	4↓	2↓
Deniliquin (Town) 2001	7	7	7	7
Deniliquin (Town) 2016	5	5	4	5
Decline	2↓	2↓	3↓	2↓

(Source: Murray Darling Basin Authority 2018: Community Profiles)

On-farm water use efficiency programs can impact irrigation infrastructure operators' business models. MIL has reported that participants in past programs were more likely to increase their reliance on water allocation markets. From 2012/13 to 2014/15, annual water use by on-farm program participants went from 122 per cent of entitlement, to 131 per cent, to 140 per cent. Non-participants' water use by comparison went from 97% to 106% to 123%[7].

If water demand increases following on-farm upgrades, then the water allocation price could increase for all farmers, including non-participants in the Commonwealth on-farm programs. This in turn could make irrigation unviable in more years for enterprises that are highly sensitive to market prices, such as rice and dairy, MIL's main customer base.

As water use falls, revenue falls further and puts upward pressure on water charges for all customers. The alternative was to scale back system operations, which could result in job losses and flow-on community impacts[8].

About one in three jobs in the southern NSW Riverina are on-farm or in agricultural manufacturing. Around 900 FTE agricultural sector jobs were lost between 2001 and 2016, with about half those lost between 2011 – 2016 after buybacks linked to the Basin Plan and despite the Millennium drought breaking. While the total workforce in this region declined over the same period, the decline in the agricultural sector was proportionately and significantly higher[9].

We are aware of the continued risks our region faces with the Basin Plan's ongoing implementation. We are aware the Commonwealth is prepared to pay 1.75 times the market value of entitlements under the Murray-Darling Basin Water Infrastructure (MDBWI) Program to recover the 450 GL.

No mechanism currently exists to prevent 'upwater' program participants outside the NSW Murray or northern Victorian GMID systems, from repurchasing entitlements from our systems to replace those they transfer to the Commonwealth. The NSW Murray and GMID proportionately have already contributed more water than any other regions to the environment.

The 450 GL upwater program's risks go beyond the actual extraction of entitlements from the region. The risks also encompass reliability risks, river operational risks, risks to river pumpers and riparian landholders, risks to our local communities, through jobs and businesses.

[7] Aither 2017. A review of socio-economic neutrality in the context of Murray-Darling Basin Plan implementation**.** A Final Report prepared for the NSW Department of Primary Industries – Water March 2017.
[8] *Ibid*
[9] MDBA 2018. Community profiles in the southern Basin. https://www.mdba.gov.au/publications/mdba-reports/southern-basin-community-profiles. Website accessed 21 October 2018.

Discussion

Workshop participants were asked to identify potential socio-economic impacts from the 450 GL 'upwater' program across various potential 'impact' categories. In groups, they then discussed what would be the principle or test required to avoid negative impacts occurring. The full list of impacts and principles is captured in Appendix A.

The discussions among the groups were wide-ranging, but the strongest recurrent theme was that while individuals might benefit, the Basin Plan's current neutrality test did not account for the cumulative third-party impacts. The main impacts identified were:

- Compounding the Swiss Cheese effect, increasing the risk of stranded assets and higher water charges for all irrigators whether or not they participated in the 'upwater programs.
- Reducing the southern Basin consumptive pool by another 450 GL will increase demand and therefore prices for everyone whether or not they participated in the 'upwater' program.
- Loss of the critical mass of production in commodities such as rice, without which companies such as Sunrice are no longer competitive in international markets.
- A smaller consumptive pool would drive a boom and bust dynamic in commodity sectors such as rice and cotton, as irrigators become more opportunistic about whether they plant or sell their water each year. The volatility would undermine company competitiveness.
- Lost jobs and skills if irrigated industries lose critical mass, tip over the edge and close.
- Reduced agricultural economic activity affecting small businesses and essential services.
- Entitlements leaving small-scale private irrigation schemes, potentially making the system unviable for remaining irrigators due to the cumulative impact on costs of operation.
- Impacts on landholders and the environment due to running the rivers high for prolonged periods to deliver another 450 GL to downstream environmental assets.
- Loss of new investment in economic activity to benefit the indigenous community in partnership with irrigators.

The workshop agreed that compensation was a short-term response that would not replace the loss of economic activity and jobs now or in the long-term. Sustained, long-term investment in structural adjustment and transition was required, even without further water recovery. It was agreed that any structural adjustment package must be equivalent to or greater than an independent assessment of the value of lost production and value-added economic activity in the region (timeframe/long-term)

The group was concerned that irrigation industries that close down in a region are unlikely to reopen. The question asked was whether reducing water availability and water use in a region rendered its irrigated industries unviable. If yes, then further water recovery was not neutral.

Cost-benefit analysis of the 450 GL program, and program proposals and projects, was considered essential, but the workshop agreed the analysis must be independent of government and government departments. How independence might be determined was discussed: the solution was perhaps a range of stakeholders agreeing on the assessment framework.

Any cost-benefit analysis must also consider the opportunity cost of reducing water availability at regional and commodity levels. It was pointed out that doing a cost-benefit analysis across the

whole Murray River catchment would reveal regional ups and downs that would mask each other at the macro catchment scale.

Deliverability of the 450 GL was a concern, particularly where it may cause negative environmental, production or tourism impacts in transit to the intended asset. An example was the inundation of the Tocumwal beaches on the Murray River during popular holiday camping periods, in order to deliver high flows to an environmental asset downstream.

Conclusion

The socio-economic neutrality test proposed in the executive summary must be adopted following genuine community consultation, and applied to the 450 GL 'upwater' program, and all projects and proposals.

An independent Cost-Benefit Analysis must be conducted before any further water recovery occurs. If the financial and social costs of recovering more water for the environment outweigh the environmental benefits, then the 450 GL 'upwater' program fails.

Water supply needs to be stable, reliable and affordable. If many individuals participating collectively results in third-party impacts, including on water prices on the market and water company charges, then it fails the neutrality impact test.

Appendix A.

Socio-economic impact test for 450GL 'upwater' program – workshop exercise	
Categories (issues)	**Principles/test**
Cost benefit test	
• Will the incremental environmental gains outweigh the incremental costs to the taxpayer? • What is the benefit in the cost-benefit analysis? Just environmental? If so, how good is the model for assessing the value of it? • Cost-benefit test to taxpayers: are they getting value or can alternatives to recovery of 450 GL deliver environmental outcomes cheaper? • Impact on the Murray River as a whole – all along the river • Winner and losers • Driving up user infrastructure cost to all remaining irrigators. • Scale – is it Basin-wide or where the impacts are? If Basin-wide, it shows limited impacts • Will the program reduce industry production? • Who assesses? • What test?	Must ensure environmental outcomes are achieved without negative social and economic impacts Must be based on community of interest: • Appropriate scale • Not all communities are impacted equally • Must include all other parties and their impacts Independent cost-benefit analysis Does the cost (financial and social) outweigh the incremental environmental benefit? • If yes, it fails the neutrality test
Voluntary participation	
• Must maintain the voluntary principle to protect property right • Open to abuse by trading for capital gain • Currently driving demand, speculators.	The cumulative impacts of voluntary participation cannot result in broader regional, third-party impacts.
Individual irrigators: • **Program participants and non-participants** • **Market participants (i.e. influencing market behaviour)**	
• Irrigators want reliable water in a stable/ affordable market with no negative third-party impacts. • Impacts on individual irrigators: reduced profitability and reliability.	Will individual participation impact on: 1. Water reliability? 2. Water market prices?

• Capital investment on-farm required: greater production (water) to maintain same return on capital. • Market participant: Will the program reduce the productive pool and increase price? • Increased water pricing. • Large entitlement holders buying water for projects, raising prices. • Cost-benefit/individual irrigator: barrier to young farmers entering irrigation faming re high cost • Individual assessment of impacts should no longer be considered appropriate • Any third-party impacts • Individual participants: will there be any third-party impacts?	3. Third parties? (i.e. riparian landholders?) 4. Costs (ongoing pricing) for those left? If the answer to any is yes, then it fails the neutrality test
Impacts on irrigation industries	
• Loss of economies of scale • Critical mass required for effective industries • Will it increase costs for those left in the system? • Boom and bust situation – no long-term job security • Irrigation industries will be threatened with closure • Will it affect the productive pool? • Will the program reduce water availability for a specific industry? • Impact of the 1.75 multiplier • Short and long-term fee impacts • Impact on new investment in economic activity to benefit the indigenous community in partnership with irrigators.	Irrigation industries require a critical mass (confidence): 1. Opportunity cost of water (supply, cost of finance, capping of market). 2. Need to maintain a minimum cycle. (3/5 good years) or else exit (market restructure). 3. Frequency and volume. Threat to industry due to reduced water mass. Industries once closed are unlikely to reopen. Are existing irrigation industries viable on export markets?
Impacts on irrigation infrastructure operators/stranded assets	
• Potential for worsening of the Swiss cheese effect • No more Swiss cheese • Taxpayer invested $300m plus in MIL: buyback has created Swiss cheese, greatly reducing the cost/benefit • Irrigation operator has an optimum design capacity; reducing this has ongoing cost for remaining users • Increase to operating/fixed costs • Swiss-cheese effect driving up operating cost	The potential reduction in user volume cannot increase the 'Swiss cheese' effect, and increase costs for remaining users to maintain infrastructure.

• Entitlements leaving small-scale private irrigation schemes, potentially making system unviable for remaining irrigators. • Cumulative impact on costs of operation, passed on to customers.	
Impacts at community level	
• Against what base case? • Decrease in employment opportunities? • Increased mental health funding required to assist with adjustments • Ongoing cost to taxpayer for fixed fees for enviro water not well known by the public • No incentive to keep young people on farm • SEIFA research of 40-41 communities' data: narrow; water focused. • No inclusion of small businesses and essential services, jobs etc. • No credit for doing more with less. • Community relationships under strain • Population decline • Increased mental and physical health issues • Model for assessing $ value of health impacts • How will the social wellbeing of the community be impacted? • Employment - will the program cost jobs in communities?	There shall be no recovery that adversely impacts on regional communities, including on employment, economic activity, indigenous wellbeing, population, mental health or overall community wellbeing.
Role of compensation or adjustment assistance	
• Not a key message – avoid getting to this situation • Long-term to cement adaptation • Inadequate compensation or adjustment • Structural adjustment s a political solution, not a community one • Capacity to attract new investment • Role of compensation: no amount of compensation can replace production long-term • What is the form of compensation and adjustment? Duration? New industry development? • Compensation is only short term when lost water impacts are long term – not an option • Capacity to attract new investment • Impact of implementation on the PRICE of water	That any structural adjustment package must be equivalent to or greater than an independent assessment of the value of lost production and value-added economic activity in the region (timeframe/long-term)
Potential for program design to reduce impacts	

• Stock and domestic systems seem to have been left out. Essential. • Smart, innovative options for environmental outcomes • Needs to be coordinated to close sub-systems, not dilute those that remain, and allow compensation to change land use. • Will entitlements from the productive pool be impacted?	
Independent cost-benefit assessor	
• Consortium: previous such consortiums included RMCG, Marsden-Jacobs, EBC etc. • Stakeholder contribution into Terms of Reference • How? By who? • Critical to have an all-encompassing test, including broader business and impacts to riparian landholders from high flow, 450 GL	The assessor should be truly independent The assessor should be agreed by a range of community
Deliverability of water to environmental assets	
• If constraints not sorted = no 450 GL. • 80,000 ML over SA border is unrealistic – reject. • Refocus from high-flow targets to strategic infrastructure to water assets. • Ability to be able to deliver the extra volumes of water. • If 18 environmental indicator sites are deemed necessary to get watered (450 GL), how many in the Murray, how many already have a Living Murray interest?	The delivery of the 450 GL cannot result in negative environmental or productive impacts (i.e. constraints), and must have evidence-based environmental benefits. How can the 450 GL be delivered through existing constraints without environmental cost? How can incremental environmental benefits be valued?
Non-irrigators	
• How is the social and economic wellbeing of indigenous Australians impacted? • Opportunity for greater social engagement • Industries like Sunrice not able to react to variability of supply; skills leave town • Non-irrigators not recognised n any impact assessment: e.g. business and riparian landholders.	There shall be no recovery that adversely impacts on regional communities, including on employment, economic activity, indigenous wellbeing, population, mental health or overall community wellbeing.