



**SA Dairyfarmers'**

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The Independent Panel  
Assessment of Social and Economic conditions in the Basin  
<https://www.basin-socio-economic.com.au/draft-report-submission>

Dear Mr Sefton,

Re: **Submission to Independent Assessment of Social and Economic conditions in the Basin**

Thank you for this opportunity to make a submission to your draft report.

### **Summary**

At the outset SADA expresses its concurrence with the NFF and ADIC submissions to the Panel.

SADA agrees with the Panel's observations that there were unintended consequences of the MDB plan which had affected regions unequally, particularly to the detriment of the GMID and the Choke. As the Panel has indicated in this region the impacts have been exacerbated by, firstly the unbundling of water, and secondly, uneven commodity prices which encouraged buybacks in the MDB plan and recent drought, adding to the price of water.

However, in the Panel's review, on-farm efficiency projects were given credit early but then largely discredited later in the discussion paper.

SADA believes there should be a section in your review that highlights the benefits of these projects not least of which is a statement acknowledging that the efficiency gains thus far, have in many instances, resulted in increased productivity and profitability.

SADA believes that if the community aren't appraised of the importance of the 450GL then it is likely they would not be interested in the on-farm efficiency program, as some water is given to the environment which is perceived, albeit incorrectly, as a loss to agriculture.

At the core of SADA's observations is that at present the 450 GL will still need to be found and it is at very best a remote possibility that there will be another pathway. If it needs to be found, then on-farm efficiency projects that pass the socio-economic neutrality test will be a vital method for irrigators to find water.

SADA is of the firm opinion that a pathway can be found for the benefit of all participants in the MDB. As the Panel observes, efficiency projects can be of great benefit to the profitability of the irrigators that use them. Opportunities are open to all irrigators and no one need miss out.

Funding for on-farm efficiency projects is vital to the plan. Some will want to join but others will not.

The benefits of the program should be open and assertively promoted to all irrigators in the MDB. This will enable irrigators to determine where these projects, (that pass the socio-economic neutrality test), will fit into their businesses. Disappointingly, there is a fair amount of pressure in

some regions not to participate. SADA believes these water savings must also be pursued in the form of off-farm efficiencies as an important component of the plan.

Many SA dairy farmers have participated in on-farm efficiency projects over the past years.

Some farmers approached these projects with apprehension at first, but later came on board in second and third rounds. This often occurred after farmers observed neighbouring farms and project outcomes. Initially, having been wary of the outcomes in the first place, the merits of these projects became increasingly irresistible. These farmers can, and do, vouch for the benefits of these projects to their businesses. Some dairy farmers are now applying for a third time. Many irrigators in the Riverland region have had similar experiences. As noted from your review they have had benefits throughout the basin.

The difficulty is that at present the 450GL is linked to the 605GL offsets in the Water Act, so if one part is removed it will remove the other, reverting back to a 2,750 GL plan. If the water is then not found, farmers are then confronted with the reality of it being recovered through further buy backs. Buy backs represent a cheaper way of finding the water, but as outlined in the Panel's review, that leads to unintended and uneven consequences across the regions.

## Discussion

The issues which are faced by many communities in the Basin are in many respects a manifestation of some long-recognised economic principles. The scheme has in a large part been delivered through the mechanisms of incentive packages. In 1776 Scottish economist Adam Smith observed, with regard to incentive schemes:

*“Public services are never better performed than when their reward comes in consequence of their being performed, and is proportioned to the diligence employed in performing them.”<sup>1</sup>*

The correctness of this observation has been borne out over subsequent centuries. It has been equally true of the roll out of the Murray Darling Basin Plan, (the Plan), not least of which was the water buy backs and efficiency schemes which have realised many of their intended consequences as well as some unintended consequences.

The manifestation of a substantial cash value for water, coupled with incentives for efficiency, has seen insightful operators in the rural sector realise the rewards which have flowed from the consequence of performing the intended acts expected in the plan. They have shown a diligence in their performance proportionate to the rich rewards those schemes offered.

Insightful growers and producers were able to see the opportunities that the Plan extended to their businesses. Others did not see the opportunities, or if they did, did not act on the opportunities which were presented.

In either case the consequences of the Plan have eventuated in a disparity your Panel is now tasked to contemplate. The truth of this is recognised by the Panel regarding investment in *“the water literacy of participants and users of Basin assets”<sup>2</sup>*

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<sup>1</sup> The Wealth Of Nations, Book IV, Chapter III, Part II, p.495, para. c11 - 1776

<sup>2</sup> Recommendation 1

This observation leads SADA to make a comment that many will find uncomfortable. Nothing in the business world remains static. Changes occur and practices and models which have worked in the past decay in their relevance with the passage of time. Whether in the Basin or not, the dairy industry in SA has undergone substantial change in the past 30 years. In 1990 in SA there were 969 dairy herds servicing communities. Today there are 228.

Those farms which have survived have embraced changes in herd size management, genetic changes in dairy cattle, changes in the systems of herd management and changes in the marketplace.

In spite of the loss of 75% of the number of farms since 1990, drinking milk consumption in SA has lifted from 150 million litres to 219 million litres in that time.

Farmers who have not been able to adapt to change have fallen away. This has enabled the South Australian dairy industry to remain competitive on the national and international stage. This has been hard for many and there is no doubt these events caused anguish. These experiences have offered salient lessons that are worth remembering in the context of the considerations the Panel is facing.

Some of the anguish that is being felt is the result of a resistance to change because some farmers have become too used to their existing systems. Failure to recognise the changing commercial world which farming is, will lead to anguish for some and extinction for others.

From the outset there have been people living in the basin who have not kept abreast of changes, challenges and opportunities that have surrounded them. For many the implementation of the Plan has felt like an earthquake leaving them to question the integrity of the ground under their feet.

Uncertainty is the breeding ground of misinformation.

There continues to be a range of opinions and “facts” expressed about the lower Murray and how it can or can’t be managed.

SADA is keen to put a view.

There is an inference around that any water taken out of the consumptive use pool and given to the environment puts the price of water up and thus having a negative socio-economic effect on the community in general. There are some examples where efficiency projects are of benefit to the whole community and they weren’t highlighted in your report.

As an upfront comment for context approximately 88% of water use in the SA Murray system is applied to permanent horticulture.

Growers of these crops don’t have the flexibility to turn off irrigation for a season when water prices are high and therefore the water used to irrigate these crops is not available to the ‘consumptive pool’. Growers are committed to production year in year out. A grape grower or orange grower simply cannot switch a crop on and off. However, if we invest in making these permanent crops more water efficient then the savings can potentially be added into the seasonal allocation pool, or the growers existing demand on the allocation market is reduced.

In terms of a permanent crops SADA offers a case study.

## A Case Study

As there is mindfulness in the dairy industry of participating in on-farm efficiency projects, SADA will take the opportunity to comment on other industries as each industry has an impact on overall consumption.

The study we offer is that of a wine grape grower.

SADA offers the example of a wine grape grower in the Renmark area on a farm producing on 20 hectares. This grower is possessed of permanent water owned to an amount of 150 megalitres (ML).

The current water use of this grower equates to 150ML (7.5ML/ha). In short, this grower owns sufficient permanent water to meet annual crop needs.

The grower then converts from sprinkler to drip irrigation in an effort to reduce water consumption. This alteration to the watering system results in savings that equal 30ML (1.5ML/ha) per annum.

This then returns the equivalent of 30ML to the farmer.

Using this saving the grower only returns 15ML to environment as that sell back, covers the cost of the conversion from sprinkler to drip irrigation.<sup>3</sup> This is enough to pay for the conversion using the 1.75 multiplier for the water saved. The conversion saved 30ML water so the grower returned 15ML to environment and so now has 15ML surplus.

Consequently:

- the farmer now owns = 135ML (150ML – 15ML), but
- now Uses = 120ML (6ML/ha)

Therefore, an amount of surplus water is visited upon the farmer equivalent to 15ML (being 135ML – 120ML).

In this scenario the surplus water can be made available to the allocation market so the grower gains not only the benefit of the water saving and likely productivity improvement but also an additional cash flow source and a buffer to help adapt against reduced water availability e.g. irrigation restrictions in the future.

Changing the numbers in the above example to reflect 50% (75ML) of permanent water owned and the other 50% (75ML) is sourced on allocation market each season and the farmer completes the same works as outlined above the impacts are as follows:

- Currently Owns = 75ML + needs to source 75ML (returns 15ML to program)
- Now owns = 60ML
- Now Uses = 120ML
- Leasing Need = 60ML (120ML – 60ML)

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<sup>3</sup> The price collected is 1.75 times the value of the water entitlement.

Despite returning 15ML of entitlement the grower is now only required to source 60ML each season on the allocation market instead of 75ML prior to the efficiency works.

Even if 100% of the water saving was returned in either of the above scenarios the result would be a neutral impact on the water market from a demand perspective.

The obvious question to ask is, "Why can't the grower just sell their water to another irrigator, or borrow the money from the bank and use the proceeds/funds to pay for the efficiency works?"

The reality is however that the examples above assume there is a requirement to recover the 450GL which is the case currently despite the debate about this. The grower also doesn't receive the benefit of the 1.75 x multiplier with either the private sale, or bank lending options. (At present the 450GL is linked to the 605GL offsets in legislation, so if one part is removed it will remove the other, reverting back to a 2,750 GL plan or thereabouts).

Efficiency projects in the lower regions of the Murray have been completed by dairy farmers and some farmers are applying for funding for the third time.

It has helped them be efficient in their farming practices and is getting the same outcome with less water and helping them survive in tight times. It is important that on-farm efficiency projects are offered to the community as there could be real benefit to the environment, farmers and community all round.

However, nobody is compelled to engage in efficiency projects if they don't want to. The question begs, "Will dairy in the Basin miss an opportunity if it is not progressed by industry leaders?" A parachutist falling to the ground is not compelled to follow the instruction on the ripcord which suggests that "Pull" may be a good idea. But with every decision there are consequences.

SADA also wishes to make observations particularly regarding the comments in the report on page 52. For the purpose of this submission it is worth reproducing the comments here,

*"Water demand on Basin farms receiving on-farm upgrades increases after the upgrade, as noted above. This demand change has been observed in other work, and often happens because farms use on-farm infrastructure grants to increase their irrigation area. This increased water demand can lead to increasing water market prices. The Panel understands this price pressure can potentially have negative impacts on both program participants (who, because they gave up a portion of entitlement in return for the infrastructure, now rely more on allocation markets), and non-participants (who did not achieve any profitability improvements from upgrades, so may be relatively more affected by price increases).*

*In short, we found strong evidence that on farm irrigation infrastructure upgrades create a comparative advantage for irrigators and irrigation communities receiving the upgrade grants. At the same time, these grants put other irrigators and irrigation communities at a comparative disadvantage. For this reason, distributional impacts may arise from this form of recovery.*

*These upgrade investments can be considered as a form of offset or adjustment assistance, and even as an attempt to address the negative consequences of water recovery reducing the consumptive pool. But the benefits of this expenditure seem to have largely accrued largely to participating irrigators and their local communities rather than all irrigators and Basin communities more generally."*

Firstly, there are a number of assumptions in this section which SADA would seek to challenge.

Increases in irrigation area were not allowed under the On-Farm Irrigation Efficiency Program (OFIEP). What SADA understands happened in many cases, especially in the Northern Victoria dairy region, is that prior to modernisation many farms had inefficient irrigation systems and hence only grew annual crops (starter/finish winter cereals e.g. ~3ML/ha) as summer crops were too water intensive to grow with inefficient systems.

In the period of post modernisation, due to improved irrigation layouts many farms were able to move into summer crops such as maize which uses more water. Therefore, it's not an increase in irrigation area but rather more changes to the crops grown noting the summer crops are more profitable.

Furthermore, if water savings were real then they should have no greater reliance on the allocation market post project compared to pre-project. Many however have chosen to do as outlined in the preceding paragraph and used more water.

The case studies described above show that there are wins for everyone and SADA is sceptical that many other projects aren't also wins for everyone in the long term. In short if a farmer does an on-farm irrigation infrastructure upgrade the farmer cannot increase the area irrigated.

As an extension of the opening observations in this submission all irrigators have had the choice to join on-farm irrigation efficiency projects.

Whether exercising strategic intent or not, there have also been irrigators that haven't sold their entitlement and consequently don't need to buy temporary water. In their cases there has been no adverse impacts of water efficiency projects. Often on-farm irrigation infrastructure upgrades effects are confused with the effects that water buybacks had.

It is also worth noting that non-participants in farm efficiencies also increased consumption. In the "Future Focus Murray Industry Strategy Murray Region 2019" report, at page 34, it was observed that:

*"On-farm water use efficiency programs can also impact irrigation infrastructure operators' business models. MIL has reported that participants in past programs were more likely to increase their overall volume of water required. 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 per cent to 106 per cent to 123 per cent."*

SADA agrees with the observation that increases in water use occurred regardless of participation in water consumption reduction programs, so directly linking increases to efficiency programs is of questionable merit.

Over the years both groups have increased their water use. On-farm efficiency by 18% over 3 years and non-participants 26% over the 3 years. There is no doubt that non-participants had a lower starting point, but it is the nature of people who are wary of new technology to be more conservative.

The lesson in this is that observers and commentators need to be careful how numbers are interpreted and relied upon. Observers are left with the challenge of Disraeli's maxim, inasmuch as there are lies, then there are damned lies, and then there are statistics.

SADA also seeks to draw the Panel's attention to "Aither Water Markets Impacts of WUE Programs 17-12-18" report, which looked into these issues. The report observed regarding its results:

*"It was estimated that a further 450 GL (long term average annual yield) of water recovery through on-farm WUE programs with entitlement transfer would lead to a \$13 per ML increase in water allocation prices to irrigators in northern Victoria in average water availability years. The impact is likely to be highest in extremely dry years, with an estimated increase of \$18 per ML.<sup>4</sup>*

This modelling was based on taking the 450 GL out of the consumptive pool. It was also based on the assumption that farmers doing WUE projects would want even more water outside their entitlement due to WUE programs and then would put more demand on the temporary market. The analysis also assumed the 450GL would all come from on-farm recovery. However, there has always been potential for large volumes of recovery to be via off-farm delivery which is water that has never been in the consumptive pool. This is because there was no allowance for losses occurring prior to the farm gate. Therefore, the dollar increases represented a worst-case scenario and even so they did not reveal a significant impact given the current price of water at \$18/ML in a dry year.

SADA notes that in cases where there is upgraded infrastructure one can become even more efficient with growing pasture by getting the right amount of water on your pastures at the right time and this may require more frequent watering than in the past. That translates into using less water more often and WUE programs give the farmer the ability to do this. This also usually produces more tonnes of dry matter per ML of water used, more efficiently and at less cost.

If a neighbouring non-participant farm may observe such an approach being applied, they may also choose to do more frequent watering but in a less efficient way. Nevertheless, both produce more tonnes of dry matter per ML of water used. The consequence could be that both become more efficient water users.

As seen above from both Future Focus and WUE, non-participant irrigators increased water use over the 3 years.

In such circumstances, is it left open to the reasonable and critical observer that it is possible to blame the WUE program or the better management of water use? SADA suggests not.

Assuming the correctness of the AITHER report that the increase value of water is \$13 average years to \$18 dry years, other commodities in the market for example, almonds and other adverse events such as drought will impact market prices to a much higher order and that the effect of WUE projects would be negligible within the frame of the larger picture.

The important takeaway from these observations is that if water is limited then WUE pasture producers at least have more chance in the temporary market because of their capacity to stretch a drop. A WUE program farmer could upgrade less area and by doing this is able to put more water on per hectare in a more efficient way (i.e. more Dry Matter of pasture grown per ML water) overall to

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<sup>4</sup> Source: Aither water allocation price model (2015 version)

grow the same amount of feed. In short, same output using less water. This is water which can be given back.

Basin growers live in an open market. Market forces are applied to sort the market out. WUE program farmers have utilised a program that is available to all farmers to gain efficiencies. These programs have always been available to all farmers.

SADA asserts that there is nothing inherently unfair regarding these arrangements in spite of some suggesting the contrary.

There has been criticism that farmers in northern Victoria and southern New South Wales have less water at present due to the Plan and asserting this is creating higher temporary water prices.

The Plan cannot make it rain.

The fundamentals of the Plan were to buy back entitlement for the environment so the environment had water for them to use, to keep the river healthy and resilient all the way through.

With buy backs irrigation users voluntarily sold their entitlement for the going value of the water market at that time. If needing capital at the time some of the tender prices presented themselves as good deals.

They were seen to be a good deals because they were. If they weren't, the farmers would not have agreed to them as they were voluntary arrangements.

Some who looked at the deal at the time however, looked at the operation of their farm as a photograph still in time rather than a single frame in a movie with an evolving plot.

Some irrigators have voluntarily sold some or all their entitlement. Some of these have exited the industry. Others have not left the industry and made a decision to look for water on the temporary market. Some have sold all their water and used the capital from the sale of water to build infrastructure for better efficiencies but still need water from the temporary market. These farmers are struggling now.

As a matter of strategic business planning there were those who sold their water to pay off debt and continued farming as usual relying on the temporary water market. These farmers are now exposed to the full impacts of price variability. Indifferent to the leg up, these farmers are now exposed to borrowing. Charles Dickens in *David Copperfield* described a Mr Micawber. Mr Micawber, observed, "*Annual income twenty pounds, annual expenditure nineteen pounds, nineteen shillings and six pence, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery.*"

Some farmers are often now one penny on the wrong side of Micawber's equation.

Overall, the big picture consequence is that some irrigators have sold their permanent water as buybacks to the environment, but their business is still vying for that same water in the temporary market (and the permanent market). The overall consumptive pool remains, which includes the environmental water, but now there is a substantial increased demand coming from these irrigators that sold their water back.

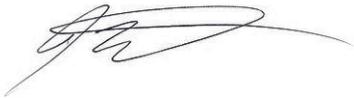
Those that kept their water have a high value asset and they are in a good position as a result. It needs to be remembered in keeping the water they also took a risk. Had water remained abundant due to good seasons then those farmers would not be in the position they are now and would perhaps be considered as the losers in the conversation.

Now it is argued that instead of reducing the demand on the consumptive pool there should be an effort to reverse water earmarked for the environment back into consumption.

SADA does not concur with this position regardless of the pressing nature of current circumstances. The approach reflects the same approach used by farmers who have not planned well for the future. Moreover, the likelihood of this outcome is somewhere between Buckley's and none.

With the predictive models of climate change proving to be increasingly accurate, the basin will become 10 to 15% dryer into the future. It is time that our modelling reflected this reality and we abandon a 'credit card' attitude to the problems of the Plan.

Yours sincerely

A handwritten signature in black ink, appearing to read 'John Hunt', with a long, sweeping horizontal line extending to the right.

John Hunt  
President