



ADIC submission on efficiency measures: additional criteria for on-farm projects

The Australian Dairy industry Council (ADIC) is the national peak policy body for the Australian dairy industry and represents all sectors of the industry on issues of national and international importance. Its constituent organisations— Australian Dairy Farmers Limited (ADF) and the Australian Dairy Products Federation (ADPF)—represent the interests of dairy farmers, manufacturers, processors and traders across Australia.

Australian dairy ranks third in farm gate value behind beef and wheat (\$4.3 billion in 2017/18).ⁱ

Dairy Australia estimates that within the Murray Darling Basin alone there are approximately 1405 dairy farms (see Table 1), producing around 1830 ML of milk and supplying 18 different processing companies (see Table 3). This accounts for approximately 20% of the national milk production. The Dairy Industry in the Murray Darling Basin region supports approximately 8850 direct jobs on farm and at processing facilities (see Table 2). For every \$1 of farm gate value it's estimated that there is another \$1 in local processing and transport valueⁱⁱ

Table 1: Murray Darling Basin Dairy Industry by State:

MDB Region by State	Number of dairy farms	Total Milk Production (ML)
SA	39	66 - 73
Vic	1146	1,374
NSW	105	254
Qld	Approx. 115-130	136
Total	Approx. 1405	1830

Table 2: Direct employment generated through the Murray Darling Basin dairy industry by state*

MDB Region by State	Employment on farm (FTE)	Employment through milk processing (FTE)	Total direct employment generated through the MDB dairy industry (FTE)
SA	78-90	90-100	170-190
Vic	3916	2027	5942
NSW	430	975	1405
Qld	649	683	1332
Total	5073	3775	Approximately 8850

* Based on milk production volumes

Table 3: Milk processor numbers

State	Number of milk processing companies receiving milk supply from dairy farms operating within the Basin.
SA MDB	3
Vic MDB	10
NSW MDB	7
Qld MDB	3
Total number of different companies	18

The industry has the potential to grow substantially over the next decade to meet growing domestic and international demand.

The ADIC welcomes the opportunity to make a submission to the Department of Agriculture and Water Resources *Consultation on efficiency measures: Additional criteria for on-farm projects*. The ADIC considers that ongoing, genuine consultation on the implementation of the 450 gigalitres (GL) efficiency measures is key to ensuring neutral or beneficial socio-economic outcomes for the dairy sector, and for the communities supported by dairy investment.

The Australian dairy industry supports the ambition of the Basin Plan to achieve better environmental outcomes. However, the industry only supports the recovery of the additional 450 GL of water for the environment once the 2750 GL has been recovered and constraints projects completed, and only if the 450 GL can be recovered with neutral or positive social and economic effects. This sequencing of events may require a review of the 2024 completion deadline.

Raw milk is a perishable product and processing occurs locally, unlike some other commodities grown in the Basin. Most of the value add for Basin dairy farms also occurs within the Basin. ADIC estimates that for every dollar of farm income in dairy there is at least another dollar in value of local processing and transport. Dairy remains an important part of a diverse and resilient Basin community.

Milk processing assets are capital and labour intensive facilities. They have a number of fixed operating costs. When these fixed costs are amortised over cumulatively lower milk volumes then the asset viability is compromised. Dairy investors accept, and deal with, seasonal fluctuations in volumes but sustained lower volumes provides increased risk of impairment of “non-mobile” assets.

Additionally irrigated dairy provides a point of difference that is not available in other dairy regions. Irrigated dairy allows farms to produce “flat” production across the year. Dryland dairy produces “peak” productions where the ratio of highest month volumes to lowest month may be 10 to 1 or higher. Reliable year round supply to high value export and domestic customers requires an element of “flat milk” that only irrigated dairy can provide. There is limited ability to relocate farm and processing assets to dryland areas to access these high value markets.

Irrigated dairy in the Murray Darling Basin has a strong future, but there is compelling evidence that the loss of up to 450 GL of water in the absence of a robust social and economic test would have severe impacts on milk production, processing and the viability of communities in the Basin. Without the development of a suitable test, as well as consideration of timelines and phasing as outlined in this submission, continued dairy industry support for the Basin Plan will be called into question.

Key Points:

- Only when 2750GL has been secured (including 605GL fully accredited supply measures) should any further water recovery for the environment be contemplated. Recovering up to 450GL additional water must be viewed only as a last resort in the sequence of Basin Plan implementation to achieve environmental aims.
 - Progress on recovering 605GL is a significant barrier to achieving any aims from an additional 450GL. All supply and constraints projects must be secured, their outcomes fully evaluated and their prospects fully exhausted before plans to recover an additional 450GL are considered. For example, over-recovery and deliverability must be accounted for and be attributed to the 605GL mechanism. In relation to efficiency projects, 62GL must be secured (if not fully delivered) and all off-farm works, environmental works and water saving measures must be exhausted before contemplating additional recovery from on-farm works.
- Furthermore, the predicted enhanced environmental benefits under the 450GL scenario should be re-evaluated and proven prior to initiation of any efficiency projects. The first step in this would be in defining the nature of the enhanced environmental benefits we are seeking, which would presumably include flow and non-flow benefits.
- The ADIC believes that the MDBA should consider reviewing timeframes for completion of projects and water recovery if required to enable this additional design and assessment to occur.
- Once the environmental outcomes from a 2750GL Basin Plan are clear and confirmed, ADIC considers that all additional efficiency projects must be considered against the following criteria to determine ‘socio-economic neutrality’:

- In the first instance, a cost benefit analysis (CBA) should be the preliminary gateway for all projects. CBA is an accepted methodology to consider if there is likely to be a net beneficial impact at the national scale. However, while it's useful as a first gateway, CBA does not consider the distributional effects of a change, and therefore is not sufficient alone to fulfil the requirements of the social and economic neutrality test.
- Secondly, if the CBA is positive, the following criteria must be considered:
 - Consideration of cumulative impacts (social and economic) at local, district and Basin wide level, including any impacts affecting operation of existing irrigation infrastructure (e.g. stranded assets and 'Swiss cheese' effect), food processing, manufacturing and other allied industries, along with impacts of water loss to a particular region. A process that engenders the trust of stakeholders must be established.

ADIC acknowledges the difficulty associated with the assessment of impacts of a project on the viability of the connected, irrigation system in the Southern Basin system. A robust social and economic test will prevent negative impacts of any reduction in the consumptive pool on the whole system and not just for the participating farms.

Consultation Questions

What opportunities do you see for on-farm projects?

Although there may be some opportunities at the farm level (for example privately funded on-farm efficiency works), the above test of social and economic neutrality must apply to all projects.

What further practical steps could governments, businesses and communities take to manage these risks?

Better consultation

The Basin Plan variously requires 'public consultation', 'public collaboration', 'community input' and 'participation' in development of aspects of the Plan, however these terms have not been defined. The dairy industry is frustrated and concerned about the current engagement process, timeframes and expected outcomes.

True consultation means listening, evaluating, responding and adjusting approaches accordingly. Six years into Basin Plan operation, much has been learnt, measured and observed, including emerging analysis of negative impacts that go beyond the 'willing participant'. A number of reputable reports are now in the public domain pointing to the impact on the dairy industry of the Basin Plan to date, including the economic modelling undertaken by the MDBA this year in the Goulburn Murray Irrigation District. While we have supported and continue to support the Plan, the industry can sustain no further reduction to the consumptive pool.

The ADIC considers that opportunities for deeper levels of engagement of industry and stakeholder groups should be considered for future consultation, including through the Research & Development Corporations (such as Dairy Australia) and mechanisms such as community 'co-design' of projects.

Delivering a 2750GL Basin Plan that achieves on its aims

We note and support the Productivity Commission (PC) 5-year evaluation review, which acknowledges the impacts of recovery to date (recovery that we have supported) on some communities and calls for a review of the benefits and costs associated with additional water recovery beyond 2750GL. Recovery of 450 GL should only occur once 2750GL has been secured and its intended benefits for the environment are known. It's important to note that the Water Act provides remedies for failure to deliver on 2750, however a shortfall in the 450GL has no legislated remedy.

The ADIC has concerns not only about how the environmental outcomes of water recovery under the Basin Plan as a whole will be evaluated but also how the water will be delivered. Easing delivery constraints is essential to achieving the environmental flows and outcomes sought. The MDBA's own modelling has suggested that additional recovery (450GL) will have 'few or limited benefits' if work to remove or ease constraints is not undertaken first. The PC 5-year evaluation review confirmed this view in August 2018, finding that a deadline to complete constraints projects by 2024 was 'highly ambitious'. The PC recommended an extension of the 2024 deadline. We understand that only one Water Resource Plan developed by the Basin States has been accredited by the Minister for Water to date.

Given this, consideration should be given to adjusting deadlines within the Plan such that constraints projects are secured, or at least commenced and comfortably on track, and potential environmental outcomes are real and achievable.

The 'practical steps' to be taken by Basin State Governments and the MDBA to realising the goals of the Basin Plan are clearly articulated by the PC, whose draft report the dairy industry fully supports.

What other criteria could governments consider, including any criteria identified by Basin governments?

ADIC believes that the social and economic neutrality test, based on the criteria outlined in the 'key points' above should be applied to all water recovered towards 450GL in all states, and not just on-farm projects. A test must consider impacts beyond the individual farm to include impacts at the local, district and Basin-wide level.

Currently, under the Basin Plan provisions, Basin States can either assess neutrality using a 'willing participants' test, or through alternative arrangements of their own determination. This has resulted in negative impacts for some non-participants and inconsistent application of the test across States, and potentially unequal outcomes for industries and communities across the basin.

In general, current test criteria do not account for:

- impacts on people who are not directly participating in the program
- impacts that are a result of the cumulative or aggregate implementation of entire programs
- the distribution of impacts across stakeholders. ⁱⁱⁱ

The flow-on effects on irrigators and irrigation infrastructure operators resulting from cumulative or aggregate changes in irrigation water demand and water use can include water market effects, irrigation infrastructure operator effects and flow on effects to irrigation industries and communities.

As Aither (2017) stated in the report referenced above:

Overall, based on a qualitative assessment, there are grounds to suggest that on-farm efficiency measures, including those likely to take place under COFFIE, could have material socio-economic impacts on individuals other than program participants. These impacts are likely to be a result of cumulative or aggregate changes in irrigation water demand and water use and should be considered in implementing the underlying intent of the Basin Plan. (Exec. Sum. p.3.)

Therefore, the social and economic impacts need to be considered at an appropriate cumulative or aggregate level. ADIC considers that a definition and methodology for determining 'socio-economic neutrality' should be developed as outlined in the 'key points' above.

The future of irrigated dairy in the southern Murray Basin is at a tipping point and there is compelling anecdotal evidence that the loss of an additional 450 GL of water from the consumptive pool, without the application of strong test of social and economic neutrality, could have severe impacts on milk production, processing and communities.

ⁱ Australian Dairy Industry in Focus, Dairy Australia, 2018

ⁱⁱ [A Guide to Investment and the Dairy Industry](#), Dairy Australia, 2017

ⁱⁱⁱ A review of socio-economic neutrality in the context of Murray Darling Basin implementation, Aither 2017