

**Submission
No 74**

INQUIRY INTO ADEQUACY OF WATER STORAGES IN NSW

Organisation: Murrumbidgee Valley Food and Fibre Association Inc (MVFFA)
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MURRUMBIDGEE VALLEY FOOD AND FIBRE ASSOCIATION (MVFFA)

SUBMISSION

TO

THE STANDING COMMITTEE ON STATE DEVELOPMENT

INQUIRY INTO THE ADEQUACY OF WATER STORAGES IN NSW

(AWS INQUIRY)

MVFFA represents business owners in the Murrumbidgee Valley. Many of our members are directly engaged in irrigated agriculture, producing a wide range of agricultural commodities. Our membership also includes those engaged in related businesses including processing, marketing and provision of professional services, from towns and cities within the Murrumbidgee Valley. Our focus is on water policy at all levels of government because the ecological, economic and social sustainability of communities like ours is largely dependent on how water is managed.

MVFFA welcomes this opportunity to submit to The Standing Committee on State Development Inquiry into the Adequacy of Water Storages in NSW. This inquiry is particularly relevant to our membership as our community is a purpose built irrigation community and our association focuses primarily on water policy.

We are currently celebrating 100 years of irrigation and we are highly aware of the benefits and the pitfalls associated with storage capacity and storage management.

Background

The Standing Committee on State Development is conducting an Inquiry into the Adequacy of Water Storages in NSW.

The Committee's Terms of Reference are:

That the Standing Committee on State Development inquire into and report on the adequacy of water storages in NSW, and in particular:

- a) the capacity of existing water storages to meet agricultural, urban, industrial and environmental needs***
- b) models for determining water requirements for the agricultural, urban, industrial and environmental sectors***
- c) storage management practices to optimise water supply to the agricultural, urban, industrial and environmental sectors***
- d) proposals for the construction and/or augmentation of water storages in NSW with regard to storage efficiency, engineering feasibility, safety, community support and cost benefit***
- e) water storages and management practices in other Australian and international jurisdictions***
- f) any other matter relating to the adequacy of water storages in NSW.***

MVFFA recognises and supports submissions that encourage proposals for the construction and/or augmentation of water storages in NSW. MVFFA is aware that this Inquiry will receive submissions from many different organisations and individuals who have chosen to be involved in this inquiry and a previous Coalition task force.

We respectfully suggest that the short time frame of this inquiry has hindered our ability to collect relevant material but we are aware of its existence and would request that this inquiry remain open to the introduction of new material particularly in relation to **section d)** of this inquiry.

The Definition and Recognised Benefits of Dams

We concur with the generally accepted definition of dams as a means to store and conserve water. They are usually constructed by erecting a barrier across a river or stream that manages the flow or stores the excess flow of that river or stream to be used at a later time for a number of different purposes.

Although requiring significant investment in the short term and sometimes creating a large land footprint, there are many quantifiable and significant long term benefits to dams. The MIA area is a 100 year example of the benefits of building secure storage capacities. The construction of the currently available storages in the southern MDB has underpinned the development of vibrant and productive irrigation communities, a plethora of 'value add' industries and excellent support/logistic networks. Other well recognised benefits include:

- the generation of green energy through hydro electric power
- the ability to mitigate damage from floods
- permanent wetland habitat for native flora and fauna
- recreational facilities for water based activities and associated hospitality and tourism industries
- the ability to store large volumes of excess water which can be used to underwrite the security of water supply in times of drought or low inflow sequences.

The Capacity of Existing Storages to Meet Agricultural, Urban, Industrial and Environmental Needs

The Prime Minister recently described Australia as the future "*food bowl of Asia.... It would involve building our food-processing industry so that it can supply Asia's growing consumer markets and developing the research, technologies and logistics that strengthen irrigation, grow higher-yield crops and improve safety*"¹.

With present management that sees a cap on the capacity for capture and storage in NSW, this state cannot realistically plan to participate in the anticipated national growth in food and fibre production. There is insufficient storage to encourage further agricultural development and also offer security to industry, environment and critical supplies. There are competing demands on our existing storages that are presently squeezing out irrigated agriculture in NSW. Those competing demands will increase with urban/industrial development, mining development and community expectations for the environment.

The only way that NSW can grow or even maintain agricultural productivity in the face of increasing internal and external demand, is to increase storage capacity for Agricultural purposes and include water management strategies that are designed to support the long term viability of irrigated Agriculture in NSW. At present NSW is not well placed to participate in the benefits that will be derived from the anticipated future export dollars from supplying Asia with food and fibre.

¹ PM Julia Gillard – Global Foundation conference Melbourne – 03 May 2012

Models for determining water requirements for the agricultural, urban, industrial and environmental sectors,

NSWIC in its request for information regarding this section found that:

(quote)

“This has been an extremely difficult area to gather relevant information on. Contact with the NOW and State Water did not provide sufficient information to fully expand on this point:

We are extremely concerned to learn that the Departments which have the responsibility for operating and managing the water resources in NSW, have not done significant modelling of, or planning for future water requirements in NSW.

The one sector which has incorporated some future planning is the urban water sector. Through the development of Strategic Business Plans, local water utilities have taken into account future needs for their area.

Unfortunately, the information which summarises the future demand for urban water has not yet been released.” *(End quote)*

MVFFA along with NSWIC is concerned that there is very little information available from the relevant state departments.

A widely accepted figure for western urban, industrial and critical human needs water supplies is 1 mega litre (ML) per 9 people or approx 1,100,000 litres per person/year. It is not a particularly difficult mathematical exercise to determine how much water will need to be sourced in the future to service our growing urban, industrial and mining sectors. The important question is where this water should be sourced and how it will be managed and upgraded to stay ahead of development and population increases.

Currently, these growing sectors are a competitor for existing storage space in our dams. This has led to a political and legislative ‘redefinition’ of the historical purpose of some of our larger water storage facilities in NSW, particularly in the MDB. This ‘redefinition’ has impacted on the ability to adequately supply the requirements of irrigated agriculture and even more particularly the requirements of broad acre irrigated agriculture in NSW.

There are other options to source urban, industrial/mining water requirements that include desalination, recycling and private rain water storage from extensive roof space and concrete runoff. All options should be examined and modelled for their short and long term benefits and their ability to securely store and supply the requirements of these sectors in a long term, cost effective framework.

Agricultural use is a higher figure/head of population and the requirements are highly variable for many reasons and therefore more difficult to model.

In the business of irrigated agriculture, water is a singular business input and delivery requirements will vary depending on crops grown, prevailing weather,

distance from source to paddock, the prevailing hydrological conditions of the catchment, cost benefits, international markets, interest rates, availability of excess supplies, new management practices, etcetera. This sector is highly vulnerable to changes in legislation and policy related to water access as the water requirements have specific timeframes attached to them as well as volumetric and quality requirements.

One of the major frustrations for irrigation dependent communities like the MIA is the lack of understanding in the relevant legislative bodies, that irrigation water is a business product or input (similar to fertiliser or chemical) and a requirement subject to many variables. The timing of access and the quality is just as important as the volumetric requirements. The 'end product' or 'the marketable product' is the food or fibre product....not the water (or the fertiliser etcetera).

A further frustration is that modelling needs to be regularly updated with 'real time' data if it is to be used successfully and realistically as a management tool. Otherwise it is likely that poor decisions that result in the waste of storage capacities will be made. An overriding consideration in modelling and water management is that it needs to be current and flexible when considering Agricultural and Environmental requirements. These two sectors differ from the others in this regard.

Management Practices to Optimise Water Supply to the Agricultural, Urban, Industrial and Environmental Sectors.

This particular issue has been simmering and festering at the bottom of a rather dysfunctional debate about our stored/regulated water resources for a minimum of 30 years in NSW. MVFFA welcomes the opportunity to comment on this issue.

From the perspective of MVFFA's membership, changes in storage management practices and regulatory legislation have been primarily a politically based process which has seen the historical purpose of our major storage facilities undergo a radical and mostly impractical/unrealistic redefinition. This appears to be driven by a lack of 'political will' to source extra storage to supply increasing demands on, and changing community expectations for, our secure storages. An emotionally charged debate has been raging about the level or order of 'priority' that should be assigned to competing demands which are sometimes called 'vested interests'. This debate has not just raged in NSW, it is also raging in the federal political arena.

MVFFA would rather not get involved in such a complicated and political debate as it has demonstrated a lack of practical and useful outcomes or results for what our members regard as a relatively simple problem.

Our submission and our questions would relate directly back to the terms in this section. What are the requirements of all these sectors and do we have enough secure water access to supply them?

If the rhetoric, the politics and the ideologies are omitted from an answer to this question, MVFFA would submit that the answer to the second part of that question is a resounding **NO!**

Our existing storage facilities were clearly built as human and community resources to mitigate problems associated with our drought prone climate. MVFFA would submit that any attempt to redefine the purpose of these storage facilities without also upgrading them is doomed to fail, as that approach requires a 'trade off' between sectors and also requires the storages and regulatory systems to supply requirements that they simply were not designed for.

Flood mitigation, environmental flows and increasing urban/industrial/mining demands have all been demonstrated as quantifiable demands, but our existing storage capacities were not designed to cater for or adequately supply these added requirements. If we are to successfully optimise the supply of water to these different and developing sectors in the future, MVFFA would submit we need to upgrade our existing storage capacities and source extra storage options.

Proposals for the Construction and/or Augmentation of Water Storages in NSW with Regard to Storage Efficiency, Engineering Feasibility, Safety, Community Support and Cost Benefit.

MVFFA is aware of the existence of numerous proposals for the construction and/or augmentation of water storages in NSW. MVFFA is also aware that this inquiry will receive some detailed submissions that refer to such options dating from the Snowy Hydro Scheme to the present day.

There is no shortage of acceptable technical, engineering or long term cost efficient options. Neither is there a shortage of excess flows that could be captured and used for the benefit of all community expectations and demands, including the relatively recent demands based on concerns about clean energy and the environment.

MVFFA submits the lacking ingredient in NSW water policy and water management for approximately 30 years is a lack of 'political will' and perhaps 'political foresight' to sufficiently investigate these options in terms of their benefits to the long term prosperity of NSW.

MVFFA also submits that information regarding proposals for the construction and/or augmentation of water storages should not have the timeframe of this particular inquiry attached to it. If the State Government of NSW is serious about options and proposals for upgrading existing storages and constructing more storages, it will take some time to overcome the time gap that has developed in the relevant departments.

The NSW departments which are currently administering water policy have not been directed to work in this area or directed to model anything related to new storages for many years. While relevant information is undoubtedly archived in NSW, much of it will need to be updated and upgraded in line with new technologies, changed community expectations and modern safety and costing methods.

MVFFA does not have the expertise or the resources to supply specific information but is fully aware that it exists and would encourage this inquiry to direct the relevant

departments to find it and update it within the terms of reference that guide this inquiry.

This organisation would also submit there is plenty of supplementary evidence available to qualify the long term benefits that can be achieved by constructing dams. Our community (MIA) is a living example of many of those benefits. We have attached (as an appendix) a summary of some of the benefits for NSW that are returned by only **ONE** of the many industries that are underpinned by securing reliable water storages. This exercise can easily be repeated throughout the Irrigated Agricultural sector, as well as other urban/industrial/ mining developments that need to be underpinned by secure access to water.

Water Storages and Management Practices in Other Australian and International Jurisdictions.

MVFFA is aware that this inquiry will receive some excellent information regarding this topic. Some of our members have been involved in the NSWIC submission and the Griffith City Council submission and have seen the relevant information those organisations have collected. We are also aware of other organisations and individuals who have collected an impressive array of relevant facts and figures. Our effort would merely be a reproduction of theirs and therefore we do not believe it is productive for MVFFA to supply duplicated details about '*water storages and management practices in other Australian and international jurisdictions*'

Our observation from viewing the work of others however, is that Australia and therefore NSW, has quite clearly fallen behind the rest of the world in this field. This is particularly concerning because our country and the State of NSW is highly prone to drought.

We do not accept the commonly held belief that Australia is 'the driest continent on earth'. That is not a factual statement. We submit that our continent is vulnerable to drought sequences and that we can and should do more to mitigate that problem. In terms of population, productive capacity and urbanisation, water and gravity are in fact among our most abundant and renewable resources. The ability to increase their availability in terms of production and clean energy has been under utilised in comparison to the rest of the world. There is available expertise in Australia and overseas to realise those possibilities. The missing ingredient appears to be 'political will' rather than anything else. That lack of 'political will' is evident at the State level as well as at the federal level.

Considering future water requirements need to be accounted for on a per capita basis, the following article in the Australian on 03/08/12 has some pertinent information:

<http://www.theaustralian.com.au/national-affairs/opinion/unleash-water-to-boost-growth/story-e6frgd0x-1226441771221>

"Although Australia is mostly semi-desert, rainfall per capita is, after Iceland and Russia, the third highest in the world. About half a million gigitalitres of our annual rainfall is largely unused and flows into the sea from northern rivers. Yet only about 22,000 gigitalitres, of which less than half is used for irrigation, flow through the Murray Darling. So 28 per cent of the value of Australian agricultural output is derived from the half a per cent of the continent's land that is irrigated."

Any Other Matter Relating to the Adequacy of Water Storages in NSW.

Although self evident in the bulk of this submission, in summary:

- a) There are many quantifiable, long term benefits that can be derived for the State of NSW from responsibly constructing and managing new water storage and water conservation facilities. The long term benefits to the State outweigh the short term disadvantages.
- b) There is not a shortage of viable technical options to source the future water needs of urban, industrial, mining, agricultural, critical human, recreational, clean energy and environmental sectors. The missing link appears to be a political will to investigate and promote the best selection of options.
- c) Water is one of NSW's most abundant and renewable resources and if harnessed wisely, along with gravity, has the advantage of delivering multiple benefits to all growing sectors and will provide their future requirements for secure, good quality, efficiently costed, and efficiently delivered water and clean energy.
- d) Wisely constructed water storage and conservation works are demonstrably a benefit to native flora and fauna as modern water conservation techniques provide a safe and secure habitat for native wetland species.
- e) There are added, but difficult to quantify, benefits to the State such as water recreational activities and tourism.
- f) MVFFA would encourage this inquiry to stay open ended as new information becomes available and historical information is updated. There is a significant time gap evident in the work that has been done at a state level.
- g) Australia and NSW has fallen behind the rest of the world in this particular field. To stay competitive it would be wise for this State to encourage policy and legislation that supports the upgrade of existing storage facilities and the sourcing of new storage facilities and to support, encourage and participate in national policy regarding the production of food and fibre as Australia's future food bowl for Asia.

APPENDIX TO THE MVFFA SUBMISSION TO THE AWS INQUIRY

A Summary of the benefits for NSW returned by one of the many industries underpinned by securing reliable water storages

The Australian Rice Industry

Rice was first grown in Australia in the early 1920's - near the townships of Leeton and Griffith in the New South Wales Riverina.

Today the rice industry encompasses the Murray Valley of NSW and Victoria and the Murrumbidgee Valley of NSW. Prior to the drought, when water allocations allowed, around 150,000 – 160,000 hectares are sown to rice in October of each year across this region producing an average of around 1.2 million tonnes of rice annually. In the last two seasons, production has returned and around 100,000 hectares were sown in October and harvested in April/May 2012 with a yield of 960,000 tonnes.

Australian rice yields average 10 tonnes per hectare (t/ha) with an average yield of 11 t/ha in 2010. According to the United Nations Conference on Trade and Development (UNCTAD), Australia is classified as the most efficient producer of rice in the world.

The Australian rice industry is also a world leader in water usage at 12 megalitres per hectare (ML/ha) with the world average being 15 – 20 ML/ha with some countries using upward of 50 ML/ha.

The industry has a farm gate value of around \$250 million and total value (export earnings, value-added) of over \$1 billion. Including flow-on effects, it is estimated that the industry generates over \$4 billion annually to regional communities in New South Wales and to the broader Australian economy.

Rice growers have individually invested over \$2.5 billion in land, water, plant and equipment and collectively invested around \$400 million in mill storage and infrastructure through Ricegrowers' Limited (SunRice) and the Rice Marketing Board of NSW (RMB). The industry is the backbone for our regional communities and, prior to the drought, generated around 21% of total regional income and 18% of total regional employment.

The Australian industry, while small by world standards, is a competitive supplier of quality packed and branded rice products into world markets. It has achieved this through the vertically integrated marketing arrangements owned and managed by the rice growers' company, SunRice.

The International Trading Environment for Rice

Rice is the world's most important basic food staple. Although there is significant world rice production at around 464 million tonnes, less than 7% of the volume produced is traded as most rice is consumed within the country of origin. Due to its importance to food security, many countries classify rice as "sensitive". Rice continues to be the highest protected commodity with continuing high tariff rates.

Due to drought conditions since 2002-3, Australia's position in the world rice industry has varied. In more favourable conditions of water availability, Australia contributes about 0.2% of global rice production. World paddy production from 2011/12 is shown below:

World paddy production 2011-12

Country	Million paddy tonnes produced	% of World production
China	140.7	30.3%
India	103.4	22.3%
Indonesia	36.32	7.8%
Bangladesh	34.0	7.3%
Viet Nam	26.7	5.8%
Thailand	27.6	6.0%
Myanmar	10.8	2.3%
Philippines	10.6	2.3%
Japan	7.6	1.6%
United States	5.9	1.3%
Australia	0.7	0.2%
Other	59.6	12.8%
Total	463.9	

However, with less than 7% of global production exported, compared with up to 80% for Australia, the picture changes somewhat if only traded rice figures are considered.

World traded rice, 2011

Country	Million milled tonnes rice	% of World production
Thailand	10.6	29.4%
India	4.6	12.7%
Viet Nam	7.0	19.4%
United States	3.2	8.9%
Pakistan	3.4	9.4%
China	0.5	1.4%
Australia	0.3	0.8%
Other	6.5	18.0%
Total	36.1	

Australian rice is recognised worldwide for its high quality and is demanded by the higher priced international markets. The Australian rice industry is the most efficient in the world, operating without any production or export subsidies — unlike most of

its major competitors. Australian rice competes in international markets, against subsidised product.

With its registered office in Leeton in the Riverina and operations across Australia and around the world, SunRice employs 1,149 highly skilled and qualified people in Australia and an additional 953 overseas. More than 81% of SunRice's Australian workforce is based in New South Wales (936 employees).

SunRice is a fully vertically integrated company, taking a "Paddock-to-Plate" approach which sees it steering New South Wales rice from the farm gate through milling, packing, conversion to value added products, and delivery to customers around the world. Group sales revenue exceeds \$1 billion and SunRice markets close to 500,000 tonnes of branded rice annually to supermarket shelves in around 60 countries.

The experience of SunRice in competing in the global rice market during the drought, without significant New South Wales crops, has reinforced the importance of the competitive advantage of clean, high quality New South Wales grown rice.

Australian grown rice delivers a price premium over its global competitors due to two major reasons:

- Australian grown rice has very favourable perceptions amongst consumers in several key markets. This is due to the favourable perceptions of Australia as a good country for growing food as well as the quality of Australian rice, driven by our varietal development and processing infrastructure.
- Branding of New South Wales rice by SunRice has added considerable value to the exports. SunRice's brands have very strong recognition in key markets and can achieve a premium over competitor product. This has allowed SunRice to maintain some premium in markets over the last few years despite competing with traded rice from competitor countries.

The average price premium which was achieved for the 2010/11 crop was \$37 million. This reflects the return of a larger Australian rice crop, with the majority of SunRice's sales into export markets coming from New South Wales rice.

Higher yield returns from more productive and quicker maturing varieties are improving grower returns and reducing water usage, benefiting both New South Wales rice growers and the environment.

Benefits to the Region

Through its employment of over 936 skilled and qualified people in NSW, SunRice helps sustain the industry and regional communities across the Riverina.

Further, a substantial part of the income generated by SunRice from overseas markets is paid as paddy price or dividends on the growers and shareholders in the Riverina, which is in turn spent or invested in the region.

For example, SunRice's activities in 2011/12 led to the employment of more than 200 new employees, significant local infrastructure upgrades and the re-establishment of regional supply relationships. Including the 2011/12 dividend and paddy payments, this represented an injection of approximately \$300 million into the regional communities that the rice industry supports.

SunRice also directly supports regional communities in many ways including:

- Providing employment and training to employees from local communities or those who are willing to live in these communities
- Providing opportunities to smaller local business that supply goods and services to SunRice
- Sponsoring community groups, social programs and events, for example, the Leeton SunRice Festival is a bi-annual event and raises awareness of the rice industry and its impact on the local and regional community, as well as supporting charitable fundraising through the SunRice Ambassador event
- Funding research into rice and agriculture in the region.

In 2011/12, SunRice provided assistance to a range of community programs and events, including the Leeton SunRice Festival, the Murrumbidgee Centenary of Irrigation, the Ricegrowers' Association of Australia Annual Conference, Deniliquin Ute Muster and a range of education, sporting and community associations.

This deep involvement in the community means that the company has strong ties in regional Australia and the people who live in the Riverina.

SunRice also contributes to charities across Australia via its sponsorship of Foodbank Australia, and contributes important food aid in the US and across the Pacific in times of crisis via its global network.

The Australian rice industry is almost wholly encompassed within NSW. It supports the major regional communities of Griffith, Leeton and Deniliquin, as well as many smaller, but no less important communities, like Coleambally, Finley, Hay and Wakool.