

Submission
No 25

INQUIRY INTO WATER AUGMENTATION

Organisation: Riverina and Murray Regional Organisation of Councils
(RAMROC)

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The Director,
General Purpose Standing Committee No.5
Legislative Council,
Parliament House,
Macquarie Street,
Sydney NSW 2000

Attention: Standing Committee Secretariat

Re:- Inquiry into Water Augmentation in rural and regional New South Wales

Background

The Riverina and Murray Regional Organisation of Councils (RAMROC) represents the interests of fourteen Member Councils in south west New South Wales, embracing the Murray, Murrumbidgee and Lachlan River valleys and covers an area of 126,595 sq km with a population of some 166,000 persons

RAMROC Councils welcome the opportunity to make a submission to this current Inquiry by the NSW Standing Committee, following on from our previous submission in July 2012 to the Standing Committee Inquiry into the Adequacy of Water Storages in NSW chaired by the Hon Rick Colless MP. It is pleasing that he is now a member of this current Standing Committee.

In November 2012, the RAMROC Chairman Cr Terry Hogan AM and I made a verbal presentation to that Standing Committee and it is worthwhile to reflect on the opening comments made by Cr Hogan at that time as follows, because they are still very relevant today:-

- 1. Water is the lifeblood and a major economic driver for the RAMROC region – for industries, for agriculture, for jobs and for our towns and communities;*
- 2. The RAMROC agricultural region includes the Murray, Murrumbidgee and Coleambally Irrigation Areas, as well as a large number of smaller irrigation entities and private diverters;*
- 3. Agricultural production in the RAMROC region is worth over \$2 billion at the farm gate and many more times value added. Agriculture employs 30,000 directly, with a further 17,000 jobs in processing and other industry related businesses;*
- 4. In northern Australia, 500,000 gigalitres of annual rainfall is largely unused and flows into the sea. Only an average of around 22,000 GL flows into the Murray Darling Basin, of which only some 50% is used for irrigated agriculture;*
- 5. Over a hundred years ago, our political leaders had the foresight that in order for Australia to grow and prosper west of the Great Dividing Range, that effective water conservation was essential. Before that time, history clearly shows that the inland rivers often ran dry and were sometimes no more than a series of salty and muddy pools of water;*

6. *The commencement of Burrinjuck Dam in 1907 began an era of nation building water conservation projects and irrigated agriculture. Since then, construction of storages such as Blowering, Wyangala, Hume, Dartmouth and of course the Snowy Mountains Hydro Electric Scheme have provided our nation with magnificent benefits in terms of:-*
 - *Production of food, fibre and wine and associated industries*
 - *Electricity generation*
 - *Regular and well managed environmental flows and asset protection*
 - *Healthy rivers and sound ecological systems*
 - *Reliability of water availability for urban and rural water supplies, industries, recreation, tourism*
 - *Security of water for the urban and agricultural needs of South Australia and Adelaide's urban supply*
 - *Flood management and drought relief strategies as required*

7. *These great benefits and advantages have diminished over the past 35 years. The construction of additional water storages has come to a virtual halt, mostly due to unfounded and often extremist environmental representations coupled with a lack of political strength and nation building leadership;*

10. *The Proposed Murray Darling Basin Plan is intended by the Federal Government to remove some 4,000 GL of water from irrigated food and fibre production and divert it for use as increased environmental watering. This absolutely over emphasis on the environment will prove to be disastrous, not only for its impacts on Australia's economy and food production and long term food security, but it will also decimate many rural towns and communities, particularly in terms of investor confidence, property values, loss of processing, warehousing and transport industries, downturn in local businesses and services, and adverse impacts on economic and social wellbeing;*

11. *The time has come for water solutions to be found – Australia can no longer afford to continue to stagnate – water is the key to our future and the current situation of the Murray Darling Basin Plan must now be the catalyst for far greater harnessing and storage of our precious water resources, be that by way of new water storages and/or diversion schemes from northern Australia, and /or coastal river systems, and by innovation, technology, research and development and the ongoing development of effective river and irrigation management systems;*

12. *We at RAMROC are not the political or technical experts. We cannot provide the solutions to you and we recognise that a great deal of work needs to be done to achieve the critical outcomes that are required for our nation's future.*

The RAMROC submission in August 2012 made a number of key points that warrant re-visiting and probably reinforcing some 4 years later, these being as follows:-

- *The Murray Darling Basin Plan will substantially cut food production and processing industries in the Southern Murray Darling Basin, which in turn will have serious impacts on rural towns and communities in the RAMROC and other regions and indeed that will further impact on the economy of New South Wales.*

- *Innovative solutions to generate additional water resources into the southern Basin must be found, to ensure the long term future of the region and to sustain our food and fibre production and processing industries and maintain employment levels in the region.*

- *there is a lack of Government vision and strategy for Australia's water management future, with no apparent endeavour or willingness whatsoever to investigate water solution options.*
- *There is no long term National Water Plan and certainly no attempt has been made by the Federal and State Governments to bring together the interrelated issues of water, food and fibre production, food security, sustainable regional and rural communities and a healthy river system and environmental protection.*
- *NSW Government needs to develop a strong working relationship with the Federal Government, so as to thoroughly investigate every potential water generation and storage project.*
- *From any national interest point of view, these are matters that simply can no longer be ignored by the Commonwealth and State Governments. It is unacceptable for Governments to keep relying on the customary excuses that major projects are "too expensive or don't meet the required cost benefit requirements", or that they are "environmentally unacceptable". This is an unfortunate attitude that unless overturned will see Australia continue to fall far behind the rest of the world.*
- *RAMROC is aware that there are realistic project proposals currently before both Federal and State Governments, which potentially can effectively and efficiently divert surplus water resources from the northern states and/or from coastal regions in New South Wales.*
- *Water storage and diversion projects have the potential and capacity to substantially contribute towards the environmental and healthy river requirements of the MDB system, as well as maintaining sufficient water resources for urban requirements and for growth in food production and associated processing and transport industries.*
- *Real solutions require innovation and vision, additional research and development and the development of nation building projects. Australia is fast becoming a net importer of food, our food exports are diminishing and inferior but cheap food imports are increasing at a horrendous rate.*
- *For far too long there has been a total unwillingness to do anything but pander to the interests of extreme environmental groups and to reject potentially worthwhile projects such as additional water storages and/or water diversion schemes.*
- *Governments must urgently put in place long terms actions and strategies which will ensure the ongoing future of our nation's foodbowl regions.*

Since 2013, Australia has made significant progress in the development of Free Trade Agreements across the globe and particularly Asia. These Agreements have opened up huge opportunities for Australia to grow its food, wine and fibre production capacities for export purposes.

However, water security and availability are critical to increased production levels. Governments need to focus on the question of increased agricultural production, processing and transportation capacities and potential, leading to a determination of water infrastructure projects to meet the demand requirements, as well as ensuring that the needs of healthy river systems and environmental protection measures are met.

One concerning trend since the separation of land from water has been the ever increasing trend towards ownership of Australia's land and water resources by major national corporations and international investors. Critically, our national interests must be protected

Addressing the Standing Committee's Terms of Reference – Sections a, b and e

Term of Reference (a) - “investigate the requirement for a water equation (demand and supply out to the middle of this century) for rural and regional New South Wales”

RAMROC Response

The development of a comprehensive water equation analysis is seen as a top priority and a critically important strategic action that will help to identify and prioritise the water infrastructure needs and priority projects for the next fifty years. There is no doubt that is a fundamental base on which the soundest of decisions can be based.

Term of Reference (b) – “examine the suitability of existing New South Wales storages and any future schemes for augmentation of water supply for New South Wales, including the potential for aquifer recharge

Term of Reference (e) - “examine technologies available to mitigate flood damage, including diversion schemes, and the scope of infrastructure needed to support water augmentation, by diversion, for rural and regional New South Wales”

RAMROC Response

In the southern Murray Darling Basin region, there are five major water catchment areas and storages that supply water to regional and rural areas for urban water supplies, industry and business, paper production, agriculture and horticulture, food, wine and wine production, forestry, rural stock and domestic supplies, tourism and recreation, and for significant environmental purposes , these being:-

- a. Snowy Mountains catchment
- b. Murray River catchment – Upper Murray, Central Murray and Lower Murray sub catchments
- c. Murrumbidgee River catchment
- d. Lachlan River catchment
- e. Darling River catchment

Major water storages comprise the following:-

- a. Snowy Mountains catchment:-
 - Eucumbene Dam – completed in 1958 – storage capacity 4,798 GL
 - Jindabyne Dam – completed in 1967 – storage capacity 688 GL
 - A number of small reservoirs and pondages
- b. Murray River catchment:-
 1. Upper Murray - from Snowy headwaters to Hume Dam
 - Dartmouth Dam – completed in 1979 – storage capacity 3,856 GL
 - Hume Dam – completed in 1936 – storage capacity 3,037 GL
 - Khancoban Pondage, (26 GL), Geehi reservoir (21 GL) and Tooma Reservoir (26 GL)
 2. Central Murray – from Hume Dam to Wentworth
 - Yarrawonga Weir – completed in 1939 – storage capacity 118 GL
 - Torrumbarry Weir – built 1920s and rebuild completed in 1996 – capacity 37 GL
 - Mildura Weir – completed in 1927 – storage capacity 37 GL

3. Lower Murray – from Wentworth to Murray Mouth

- Lake Victoria – naturally occurring freshwater lake – capacity 677 GL

c. Murrumbidgee River catchment

- Burrinjuck Dam – completed in 1928 and upgraded in 1957 and 1994 – storage capacity 1,026 GL
- Blowering Dam – completed in 1968 – storage capacity 1,628 GL
- Talbingo Dam – completed in 1971 – storage capacity 921 GL
- Tantangara Dam – completed in 1960 – storage capacity 254 GL
- Googong Dam – completed in 1979 – storage capacity 125 GL

d. Lachlan River catchment

- Wyangala Dam - completed in 1935 and upgraded in 1971 – storage capacity 1,220 GL
- Lake Brewster – developed in 1950s and now used a regulatory storage – capacity 155 GL
- Lake Cargelligo – natural lake fed by Lachlan River through Lake Curlew – capacity 36 GL
- Carcoar Dam – completed in 1970 – storage capacity 36 GL

e. Darling River catchment

- Menindee Lakes Storages (dam walls, weirs and impoundments) – completed in 1968 – combined storage capacity 1,731 GL

Despite the significant total amount of water storages throughout the southern and western Murray Darling Basin regions set out above, a combination of factors such as agricultural and urban licensed water extractions, environmental watering demands, evaporation losses and recurring drought conditions throughout the Basin means that total water availability is not sufficient to satisfactorily cope with the overall demands placed upon the systems. In turn, this is inhibiting opportunities for substantial increases in irrigated food and fibre production in this region.

This shortfall is particularly reflected in regular low dam storage levels and hence low General Water Security allocations in many years. In particular, the Darling River often runs dry and in many years the Menindee Lakes are at very low storage levels, which impacts dramatically on the urban water supply for the City of Broken Hill and for irrigated agriculture and horticulture along the Darling River system.

The above list of major water storages confirms that Governments have taken no positive developments for some 35 years to build and upgrade dams. There is an abundance of rainfall across the Murray Darling Basin, but the problem is that the rainfall and consequent surplus river flows are not being adequately harnessed and managed. As such our precious water resources largely flow out to sea, provide minimal environmental benefit and are lost.

Australia has lost its competitiveness advantage of reliable water security and electricity prices. Our nation is not short of water and there is great potential for substantially increased water conservation and hydro power generation on most river systems.

What Australia has lost is its vision and foresight and its willingness to address the challenges being posed by extreme environmentalists who oppose dams and other conservation measures without foundation and common sense. In reality, dams, weirs, irrigation structures and crops provide an outstanding habitat for all types of fauna and flora, as well as maintaining healthy river systems and ensuring that the environment is optimised.

The following chart provides an enlightening overview of use of the world's total rainfall:-

Water: the big picture

World rainfall	110,000	cubic kilometres
Evaporation from landscape	62,000	cu kms
Transpiration from rainfed agriculture	5,000	cu kms
Water use by irrigated agriculture	2,700	cu kms
Losses from storages	1,500	cu kms
Used by cities and industry	1,200	cu kms
Runs into sea	38,000	cu kms

Source: IWMI
International Water Management Institute

Under the Commonwealth Water Act 2007 and the Murray Darling Basin Plan, Commonwealth and State Governments have invested substantial sums of money into water entitlement purchases, on-farm and off-farm irrigation infrastructure and water saving projects. However, it can be argued that most of these low hanging water efficiency measures have now been sourced.

The harnessing and re-distribution of surplus flows can be achieved by the establishment of new and / or upgraded water storages and diversion schemes. There is a substantial list of suggested dam projects, with quite a few mooted for the Murray, Murrumbidgee and Lachlan valleys and brought to the attention of the previous Upper House Inquiry in to the Adequacy of Water Storages in New South Wales.

For example, in submissions to that Inquiry reference was made to many potential additional storages, including for example:-

Murray River

- Gateway Dam near Corryong on the Upper Murray 1,500 GL
 - Dam on lower reaches of the Kiewa River 700 GL
 - A downsized Chowilla Dam 3,000 GL
 - Dam on Billabong Creek 50 GL
- Total extra storage Murray **5,250 GL**

Murrumbidgee River

- New dam east of Wagga Wagga 750 GL
 - Downstream dam east of Narrandera 250 GL
 - Dams on Jugiong, Hillas, Tarcutta and Kyeamba Cks 210 GL
- Total extra storage Murrumbidgee **1,210 GL**

Lachlan River

- New dam on Belubula River 60 GL
 - New dam on Mandagery Creek 40 GL
 - Raise Wyangala Dam wall – increase capacity 25% 300 GL
- Total extra storage Lachlan **400 GL**

Overall potential storage capacity 6,860 GL

Potential projects that would divert surplus flows from northern Queensland and / or NSW coastal rivers into the Murray Darling Basin system have been mooted for many years and are again being re-visited and mooted as realistic water and power projects that could be privately funded and which would provide substantial financial returns to State Governments. For example, these projects might include:-

1. Sourcing surplus flows from the Burdekin Falls Dam south of Townsville and diverting the flows by pipeline and rivers into the Darling River system – potential to source some 600 GL per year
2. Sourcing surplus flows from the Wivenhoe Dam west of Brisbane by rivers into the Darling River system – potential to source 500-600 GL per year
3. A Clarence River / Copeton Dam Scheme has potential to source surplus flows of some 200 GL per year for irrigation in the Clarence Valley and up to a further 1,000 GL per year westward into the Darling and Murray River systems
4. Sourcing surplus flows from the Shoalhaven River's Tallowa Dam by pipeline in to the Murrumbidgee Valley and potentially also to the west – potential to source 200 GL per year.

Associated with these diversion schemes would be the potential for aquifer storage and recharge, as well as the potential for development of renewable energy sources such as solar power to reduce pumping costs.

All of the above projects, both additional water storages and river diversion schemes, have the added benefit of flood mitigation and prevention of associated property and personal damage.

The RAMROC Executive Committee would be very pleased to address the Standing Committee in relation to these issues.

Yours faithfully,

Ray Stubbs

RAMROC Executive Officer