

**Submission  
No 60**

## **INQUIRY INTO WATER AUGMENTATION**

**Organisation:** AWEC  
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General Purpose Standing Committee No. 5  
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**Inquiry into the Augmentation of Water Supply for Rural and Regional NSW.**

**A submission to the Standing Committee by Australian Water Exploration Co. (AWEC)**

**1. Background and the Likely Scenario for Agriculture and Water in 2050.**

**Who is AWEC?**

Australian Water Exploration Company (AWEC ) is an organisation dedicated to researching Australian water projects to meet the challenges of a dry continent. AWEC holds a firm belief that Water is Australia's most precious, renewable resource and the management of this resource is critical to our future prosperity.

The committee consists of a group of concerned Australian citizens, who between them have spent many months prior to 2005 visiting every Australian State, inspecting many sites of possible water projects, to evaluate their beneficial worth. This research necessitated travelling to many parts of Australia, including the remote areas of Queensland, Northern Territory and Western Australia. During these visits, opportunity was found to meet with a number of senior well informed government, community and business personnel.

Almost every possible dam site has been investigated, along with further water possibilities. Since this early research, team members have continued to study possible water projects that have national and state significance. Team members have made a number of visits to the USA to closely study water projects in Arizona, California, Colorado and the Mexican border districts, which face similar water and climatic conditions to us. Some of these visits required FBI clearance to gain access to their key water infrastructure sites.

This submission by the AWEC to the Committee expresses grave fears that the role of the Murray Darling Basin (MDB) as Australia's major food bowl will be significantly eroded over the next 30 years or more, unless some radical adjustment is made. The combination of government policy changes, along with any transformation in climate conditions, will have severe impacts on both water availability and land productivity, at the same time when world population will grow by about 30% and food demand will increase between 30 and 50%.

Some areas in the MDB have lost 30% of farm irrigation water during the past 10 years. This is having hard hitting negative impacts including, farm foreclosures, Rice Mills closing, large job losses, selling out of some industries, many local shops closing, school cut backs and rising suicide. The population of some rural centres has declined by 17%, with whole families leaving the area.

International and domestic studies on the future of agriculture and water all highlight the dire need of rapidly expanding food and fibre across the developing world, along with the need of a big increase in water availability to power this expansion. These studies come from such highly recognised groups such as *FAO (United Nations Food and Agriculture Organisation)*, Australian Academy of Science ('*Australia 2050 Project*'), Commonwealth Government, 2010 (*Intergenerational Report*), the *NSW Intergenerational Report 2011-12*, and ABARES ('*Food Demand to 2050: Opportunities for Australian Agriculture*').

The clear message from these reports is that world demand for food will greatly increase over the next 30 or more years. It will be mostly spread across both the poor developing countries and the expanding economies of China and India.

This presents huge economic opportunities for Australia. Currently, Government policies are reducing available water for production throughout the MDB just at a time when more water is needed to capitalise on these emerging export market opportunities. There is an urgent and immediate need to explore new options and schemes to increase Australian water supplies.

The broad, long term picture for increased water availability in inland NSW seems patently clear but AWEC would encourage an immediate escalation of relevant water planning and studies exploring options as to how these water needs may be met over the next 30 to 50 years. For NSW, AWEC would support whichever government department is responsible for '*water resources planning and management*', undertaking applicable scenario assessments, and also consulting widely with communities about benefits and impacts. While this is not happening, it would appear that there is a breach in the long term water planning for NSW.

## **2. Objectives and Solutions**

AWEC submits that the validity of the present MDB plan is in question. Short of returning Lake Alexandrina to the way nature made it, and thus restoring approximately 1,500,000 ML of water back into the system, (or the reversal of some other measures), AWEC have identified schemes to bring **NEW WATER** from outside of the MDB instead, to alleviate the shortages.

AWEC further submits that science is needed to test the legitimacy of the enormous environmental demands currently being demanded by scientists. The Commonwealth Environmental Water Holder (CEWH) currently holds 750,000 ML in NSW dams; can this volume of reserved environment water be justified in addition to 2,750,000 ML being demanded for the environment? Along with this storage volume, a further storage capacity is being demanded to allow 'air space' in the NSW dams in case of a 'heavy rain event'! Both these amounts added together dramatically reduce the volume of water available for irrigation.

For example, the combined effect on available irrigation water means that today, a volume of water nearly equal to the capacity of the Burrinjuck Dam is totally negatively impacted. This dam was the first major dam that our forefathers built for irrigation in NSW; construction began before World War I. Burrinjuck Dam helped drive the economic development of the Riverina as a major food producing region. The dam previously supported agriculture across the 660,000 square kilometres of the Murrumbidgee Irrigation Area, centred around the towns of Griffith and Leeton. It also supplied stock and household needs for landholders and towns along the Murrumbidgee River, environmental flows, flood mitigation and hydro-electricity. The large lake has also become a popular sport and recreation destination.

In July, 2016 some dams were over 80% full and rising. Irrigation farmers are getting ready to sow food crops in September and October; however they are being informed that general security water will be less than 50% of their earlier water allocation.

This muddle highlights the need of necessity of CEWH being moved into the Agricultural department under the responsibility of one Federal Government agency and one Minister.

It is necessary to also draw attention to the huge volume of ground water that is stored, but effectively locked up, in underground aquifers. For example, there is some 2,800,000,000 ML of water stored in the ground-water aquifer between Wagga and Hay that is suitable for human use, yet this water is being kept at arm's length from our farmers. Why?

AWEC have expended substantial financial resources on exploring, evaluating and now recommending the opportunities to utilise a balanced amount of water from the Macleay Basin, the Manning Basin and/or the Clarence Basin to provide sustainable water for both sides of the Great Dividing Range and at the same time facilitate cooperation with existing partners and stakeholders.

Importantly, as a result there will be realistic advantages in both the MDB and the Coastal Basin areas for; <https://support.cessna.com/docs/custsupt/cessnasupport/IPCFiles/P497-12.pdf>

1. The Fisheries Industry
2. Flood mitigation and savings in potential Insurance payouts

3. Drought mitigation and a reliable water supply in the three Basins
4. Hydropower generation as opposed to coal generation
5. Environmental **improvement** and support
6. Agricultural and Aquaculture production
7. Regional investment, development and growth including employment
8. Additional aquatic recreational areas providing State revenue
9. Adding to the Gross Domestic Product.

### **Solutions outside the MDB (New Water)**

1. AWEC proposes an East-West Diversion diverting water from the Clarence Basin to the Gwydir River/Copeton Dam (see attachment)
2. David Coffey proposal to divert water from the Clarence Basin to the Border rivers. (see attachment)
3. Hells Gate and Burdekin Falls Dam water diversion to the Warrego River, reaching the MDB

### **Solutions inside the MDB** (This does not add extra available water but helps in supply regulation.)

1. Lake Coolah / Mejum water storage proposal
2. Cranky Rock Dam (or other secondary dam site) on the Lachlan River.

AWEC has attempted to somewhat address the MDB predicament by expending considerable financial resources on exploring, evaluating and proposing a potential 'East-West Water Project' concept, the upper Clarence tributary rivers western division to Gwydir River/Copeton Dam. This concept would release over 1,400,000 ML into inland catchments annually and also provide excellent **Flood Mitigation** for the Clarence River Basin including the cities of Grafton, Maclean and Yamba.

Australia has adequate water resources but this water must be stored, transported and distributed to provide secure supplies for urban, industrial, agricultural and environmental use.

AWEC support the suggestion of the need for a panel of water experts who could expedite these possibilities.

### **3. The AWEC Submission – The East-West Water Project concept.**

The broad benefits and impacts of the 'East-West Diversion Concept' are attached to this submission. Other attachments cover background research and findings relating to NSW water availability, and to the constraints that now exist, due to restrictive National and State Water Policies, and to the lack of forward-looking water resource planning.

The basic East-West water transfer concept was first mooted circa 1928, by engineer Professor Bradfield, of Sydney Harbour Bridge fame; turning water inland. The Fraser Government authorised commencement of a \$4 million feasibility study of diverting eastern flowing rivers westward in 1983 with both the State and Federal governments acknowledging the necessity of it. However, the following government cancelled the prior government's authorised study.

AWEC's proposed concept is a variation of an earlier scheme proposed by the NSW Water Conservation and Irrigation Commission, proposing to harvest fresh water that would otherwise, wastefully flow out into the ocean. Currently, only 1% of the annual runoff of 5,000,000 ML is being used to satisfy urban, industrial, irrigation, recreation and environmental needs.

The concept has been examined by retired NSW Water Commissioner, Peter Millington who agrees that the development is practical and should be commenced.

AWEC respectfully makes this submission to Government and would be happy to meet with the Senate Enquiry at its convenience to elaborate on any of the above concepts and proposals. The water needs of a growing population are great and time is of the essence.