



House of Representatives
Standing Committee on Agriculture, Fisheries and Forestry
Parliament House
Canberra ACT 2600

INQUIRY INTO FUTURE WATER SUPPLIES FOR AUSTRALIA'S RURAL INDUSTRIES AND COMMUNITIES

Thank you for your letter of 27 June 2002 and the opportunity to make a submission on behalf of the Western Australian Government to the House of Representatives Standing Committee's inquiry.

I would offer comments in respect of the Committee's Terms of Reference as follows:

- **The role of the Commonwealth in ensuring adequate and sustainable supply of water in rural and regional Australia**

Water Resources Investigations

The groundwater and surface water resources in most areas of Western Australia have not been developed or investigated to the same degree as the water resources in the other Australian States. Due to the large distances involved, and the varied hydrogeology and hydrology found throughout the State, considerable resources are required to properly investigate water resources and determine their suitability and sufficiency in meeting the needs of towns and rural industry while protecting environmental values.

There are opportunities for the Commonwealth Government to work with State water management agencies and regional community groups to undertake water resource investigations – for example, of undeveloped groundwater sources in the eastern Goldfields, the Mid West or the South West Yarragadee aquifer – particularly where additional information will help meet community, environmental, social and economic objectives.

Rural Water Resources Planning

Several factors predispose Western Australia's rural water resources to increasing pressures and risks, including:

- climate variability and climate change in the southwest of Western Australia has resulted in decreased rainfall and resulting lesser runoff and groundwater recharge. This trend is likely to continue in the future;
- most affected will be dryland farms, located outside the sedimentary basins, which rely on small farm dams, as there is limited access to good quality groundwater, or a piped water supply;
- the seasonal pattern of water collection in winter and water use in summer requires the storage of significant volumes of water which results in increased evaporation losses, up to two metres in some cases; and
- water sources supporting piped water supplies serving some regional areas are under increasing pressure as the demand for water is stretching the ability to supply water and is tending to decrease the reliability of supply.

The Commonwealth Government can assist with water resources planning by encouraging programs that develop and improve water planning skills, particularly where those skills are adding to the local capacity building process. Linkages between State programs such as the Western Australian Rural Water Plan, land use planning and regional planning initiatives and Commonwealth planning programs should be encouraged.

- **Commonwealth policies and programs, in rural and regional Australia that could underpin stability of storage and supply of water for domestic consumption and other purposes**

Farmland and Isolated Towns Supply

Water supply schemes providing services to rural communities range from very small isolated systems with minimal infrastructure to large integrated systems serving both population centres and farmland. The largest of these schemes supplies water to a vast agricultural area stretching from north east to south west of Perth, as well as the Kalgoorlie-Goldfields region, and is integrated with Perth's water supply scheme.

A number of towns in the outer wheatbelt area of the State are not connected to reticulated scheme water and a significant proportion of the wheatbelt farming community is vulnerable to water shortages during widespread and persistent drought conditions, conditions which are currently facing Western Australian farmers.

Western Australia's groundwater and surface water resources have not been developed to the same degree as the water resources in Australia's eastern States. Therefore, Western Australia is in the fortunate position of being able to reserve groundwater sources for future use, including supplies for rural towns.

The Water and Rivers Commission is preparing a draft Discussion Paper to provide a basis for scheme water supply planning in WA. The Paper deals primarily with the provision of public water supply with a focus on high quality groundwater resources and includes some hydrogeological constraints in reserving water for the future.

Community and local government initiatives that encourage the development of secure water supplies and water reserves should be supported. Water improvements and the security of water supplies should be identified as a component in all regional plans.

The Commonwealth can encourage and support the exchange of information between the water resource management agencies of Australia by funding and facilitating regular workshops.

Irrigation Industry

The irrigation industry is the dominant water user in Western Australia. The efficiency of use is variable on account of the broad range of systems and some reluctance to adopt best management practice in many areas.

The Commonwealth is supporting research into irrigation methods through the National Program for Sustainable Irrigation. This program should be continued and broadened to also focus on the practical applications of new irrigation technology and practices that will result in irrigation efficiency improvements.

There are significant potential savings through increased efficiency measures in the irrigation industry and the Commonwealth can play a role in assisting irrigators to adopt efficiency measures.

- **The effect of Commonwealth policies and programs on current and future use in rural Australia**

Health and the Environment

There needs to be adequate funding to investigate and properly manage the environmental issues in Australia. Funding for environmental programs needs to be a central part of national and state budgets and be recognised along side key areas such as education and health. Linkages between health and environmental management should be encouraged and strengthened with particular regard to the well being that is afforded society when environmental values are integrated with social and economic values.

The Commonwealth can support greater information exchange between natural resource management agencies across Australia.

- **Commonwealth policies and programs addressing and balancing demands on water resources**

Water Resources Management Committees

Western Australia is in the process of establishing Water Resource Management Committees throughout the State that will assist and advise the State's water resource management agency on how to address water allocation and water use issues.

The Commonwealth can assist this process by encouraging the sharing of information, policies and experience between the water resource management agencies across Australia. It could also give consideration to funding assistance to research into areas such as water saving devices and techniques especially for irrigation, reuse of treated wastewater and recharge of groundwater aquifers etc. To achieve maximum efficiency and effectiveness in the management of water resources across the nation, it would be desirable to encourage the sharing of research findings and knowledge systems that foster adaptive approaches to climate affected industries. This could be achieved by exchange of personnel in water resource management agencies across Australia, joint research programs, such as the Indian Ocean Climate Initiative, with national groups such as the Bureau of Meteorology Research Centre and CSIRO, and linkages across State based programs.

- **The adequacy of scientific research on the approaches required for adaptation to climate variability and better weather prediction, including the reliability of forecasting systems and capacity to provide specialist forecasts**

Research by the Inter-Governmental Panel on Climate Change (IPCC) and the Indian Ocean Climate Initiative (IOCI) indicate that the south west of Australia has experienced a significant climate shift over the last 25 years and is likely to continue to experience climate change.

Reduced rainfall will put additional pressure on water resources and water resources management. Less runoff and a lower reliability of supply will impact surface water resources. Groundwater resources will receive less recharge and the soaking rains that replenish aquifers will become less frequent. Many ecosystems are vulnerable to the changing state of water resources and some systems have limited scope for adaptation.

The outcomes of this research are expected to be valuable in assessing water source capacity and planning future source developments. The Commonwealth could play a role in contributing to research to provide similar coverage for the remainder of Western Australia and into other potentially valuable climate related projects.

Research should also look at programs that not only predict climate but opportunities to access water resources which are available, but undeveloped. As fresh water becomes an increasingly valuable resource, strategies for ensuring full availability of that resource and its conservation become essential.

Sufficient funding would be required from Commonwealth sources to supplement the resources of the State to generate information that improves the understanding of climate on a regional basis, accurately forecasts future climate variability and determines strategies to address impacts of this variability on rural and regional communities.

The Commonwealth could also contribute to research into finding innovative solutions to environmental problems that provide a positive water supply outcome, such as the cost-effective desalination of saline groundwater in rural areas.

Western Australia, however, does not believe the Commonwealth Government should be involved in climate modification programs such as cloud seeding as this approach is at best of marginal value and appears to be treating a symptom rather than addressing the challenge of adaptation and better planning under greater uncertainty.



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