



Dr John C Radcliffe AM, FTSE
11 Rutland Avenue
UNLEY PARK,
South Australia 5061
john.radcliffe@csiro.au

January 7 2003

The Committee Secretary,
 Inquiry into Future Water Supplies for Australia's Rural Industries and Communities
 Standing Committee on Agriculture, Fisheries and Forestry, House of Representatives,
 Parliament House
 CANBERRA, ACT 2600

Dear Sir,

PHYSICAL EFFICIENCY OF AUSTRALIA'S WATER SUPPLY
INFRASTRUCTURE

I should like to draw to the attention of your Inquiry, a concern about whether the current CoAG Water Reform Agenda is leading to sufficient attention being given to the physical efficiency of Australia's water supply infrastructure.

I offer these comments with a background as a former Director-General of Agriculture (South Australia), member of the SA Water Resources Council, Murray Darling Basin Commissioner for SA, and later Deputy Chief Executive of CSIRO, from which I retired in 1999. In 2001-2, I prepared the final report of the National Land and Water Resources Audit. I retain a continuing interest in water issues as a member of the SA Arid Areas Catchment Water Management Board. Currently, I am undertaking a review *Water Reuse in Australia* for the Academy of Technological Sciences and Engineering.

My concern initially derived from a reading of the June 2001 National Competition Council Assessment of progress being made in Competition Reform, particularly the section relating to water.

I was struck by the fact although that the NCC assessment considered in detail the issues of institutional structures and their commercial efficiency, property rights, trading mechanisms, water quality and water for the environment, the document was bereft of any consideration of the physical efficiency with which water is provided and used.

We know from the National Land and Water Resources Audit that on average, only 77% of water reaches growers' boundaries, and in some schemes, it is as low as 45%. Waste is high. An impression could be perceived that in some of the older schemes, there is a risk of economic efficiency in the cost of water delivery being achieved by minimizing capital investment in currently wasteful and deteriorated infrastructure that might otherwise be worth investment in pursuit of increased physical efficiency. Irrespective of whether this is correct, I believe that the NCC Assessment (or one carried out by some other appropriate body) should be presenting complementary information to that presented in terms of economic efficiency to establish that Australia is moving towards using its limited water resources with greater physical efficiency.

The problem of over-allocation will have to be addressed, and the only feasible way of responding to the necessity of lower allocations is by increasing the efficiency with which the reduced allocation is used. While market forces will certainly contribute as water moves to higher value end uses, the water reform process should also give evidence of improved physical efficiency outputs as well as improved economic efficiency. This appears not to be adequately addressed in the published NCC reviews.

I raised this concern with the Deputy Prime Minister during questions following his presentation to the 2002 National Agricultural Outlook Conference, and at his suggestion, in subsequent correspondence to him. In due course, he suggested this issue would be a matter of interest to your inquiry.

In the meantime, the 2001-2 NCC Assessment has now been published, and it does take a much broader focus of issues under its review, particularly in matters of allocation for the environment, the integration of water resource management and quality, water entitlements of rural customers, water-trading principles etc. In a section entitled "Future development", it is noted, "*Fortunately, ... individuals, businesses and governments are actively pursuing water conservation and efficiency measures.*" The example is given of the planned Wimmera-Mallee pipeline, which would "*save 93 000ML of the 120 000ML currently used by that system. The envisaged capital cost (\$300 million) or around \$3200 per megalitre, however, is considerable.*"

However, the 2002 NCP Assessment Framework, also listed in the 2001-2 report, defines, on pages 3.58-3.59, its future assessment issues and progress report issues, neither sets of which can be interpreted to suggest that there is much incentive to address the issues of water infrastructure efficiency with any urgency.

I might also note from my preliminary observations of the current moves in Australia towards encouraging water reuse, that there appears to be considerable variation between jurisdictions and also between individual water businesses in the extent of adoption of opportunities for reusing water.

I commend to the attention of your Inquiry the importance of ensuring Australia moves towards a more effective evaluation of the physical efficiency as well as the economic efficiency with which its water infrastructure operates, including also the extent to which water is being treated to allow safe reuse.

Should you wish to discuss the matter further, I can be contacted c/- CSIRO, Urrbrae, South Australia (Private Mail Bag 2, Glen Osmond, South Australia 5064), telephone 83038580.

Yours sincerely



Dr John C Radcliffe, AM FTSE