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The Secretary
House of Representatives Standing Committee on Regional Australia
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SUBMISSION RE SUSTAINABLE WATER SUPPLY IN THE MURRAY DARLING BASIN, AUSTRALIA.

Australia, an island continent the size of Europe, less Russia, is resource rich with one exception, water. It is the driest continent on earth, consisting of an archipelago of urban development surrounding an arid desert. It is the second biggest and second driest desert on earth.

This lack of water is due to the mainland being set centrally on the torrid zone of the southern hemisphere and the continent's principal mountain range being along the eastern coast. The northern latitudes extend into the tropical zone while the southern fringe verges on the southern temperate zone. If the annual average rainfall was spread over the continent, it would be 4cm deep – just 76cm less than the same exercise on the Northern American Continent.

Given these circumstances WATER is absolutely vital to the health and economical well being of Australians. The limited quantity available is rainfall in the north and the eastern states. The largest river system, the Murray/Darling, has the outfall to the ocean in the central state of South Australia.

Since the rain falls in the tropical and temperate zones we need to reticulate some of this water to the other areas where it is required. The Murray Darling Basin Commission (MDBC) indicate that at least 3000 gigalitres (gl) of water flow for the environmental health is needed for the river system.

It is submitted that feasibility studies by groups of qualified members with appropriate skills following Parliamentary stipulated criteria, be set up to:

- Ascertain the feasibility of impounding water on appropriately geographically located short rivers on the east coast of Queensland and northern New South Wales, and diverting an appropriate percentage to MDB rivers. There are 84,000 gl flowing to sea in the short eastern rivers on the coast of Queensland and northern New South Wales in an average monsoonal wet season. There may be some locations where properly assessed infrastructure would allow diversion to a laid down criteria regarding percentages. This needs to include a reserved allocation, an environmental amount for the small river, and any amount required for urban use on the eastern seaboard.

  It needs to be noted that our monsoonal rain belt forms a distorted pattern due to the archipelago of the Indonesian Island chain and the mountain range in the north east of continent running from NW to SE along Eastern coastline.

- Ascertain the feasibility of pipeline reticulation of a substantial percentage of the water used by the Hydro Electric Commission (HEC) of Tasmania, to generate electricity, which passes through the Gordon Dam generators and currently flows to the sea via the Franklin River. This water could be purchased from Tasmania, piped ideally by gravity flow to purpose built dams on the mainland, and utilized for southern Victoria and south eastern South Australia, including the capital cities.

  Such a scheme should also assess the need to reticulate some of the water for Tasmania and King Island use where required. A Melbourne Engineering firm actually proposed in

September 2009, a scheme to run four pipelines across Bass Strait with the first two pipes to be functional in 2010 and 2012 respectively. Such a supply could remove the need to purloin Goulburn water for Melbourne.

- Ascertain the catchment of areas in which cloud seeding of suitable cloud, which is already starting to precipitate. HEC Tasmania increase rainfall by 15% by cloud seeding over catchment areas. The aircraft required for this seeding program could also be utilized for fire fighting in summer.

- Study the infrastructural needs in the major flood plains, which would allow flooding at suitable times to:
    - Provide necessary environmental flooding for native flora, and especially for the red gum forests.
    - Maintain wetlands necessary for water bird and other aquatic life such as frogs and shrimps to breed.

  Short term river flood water could be retained in flood plains, or wetlands after river levels fall, and then released by River Management Authorities when breeding cycles are complete, with selected wetlands still being maintained. Topping up water levels in wetlands could be maintained be either pumping, or by released water from irrigation systems, according to management criteria, by the River Management Authority, if suitable infrastructure is established. This would reduce the amount of water required to maintain flora and fauna health, as high river flood levels would not be required to be held for long periods, for flood plain health. Indeed in some cases it may be possible to maintain flood plain and wetlands without a river flood.

- Investigate the feasibility of a desalination plant to maintain the lakes at the mouth of the Murray River during dry and drought periods. Such a plant should be ideally designed to use renewable energy electricity, and not coal generated. The alternative could be water from a Bass Strait pipe from Tasmania.

I commend the above proactive response to the MDB needs.

It may be feasible to provide special fund to help finance the schemes by utilizing the World War 2 bond type scheme. In 1940's people purchased 1 shilling (10 cents) stamps and stuck them on the bond card. When all sixteen stamp spots were filled, the Post Master stamped and authenticated the card. It was redeemed for one pound ($2) in four years time. (16 shillings = $1.60 and the card holder earned 40 cents). A similar scheme, with modern appropriate cash amounts, may well be suitable. Families could buy the stamps for each child, and cash them in to assist the child's educational expenses at secondary school, or at tertiary education. Indeed a modern scheme would use a system of bar coded card with which regular payments could be made at either banks and /or post offices.

In conclusion, like the Snowy Mountain Scheme, the suggested programs would take a decade or more to substantially complete, and would involve ongoing financing. Accordingly it would require multi political party support, or at the very least Bi-Party support.

Leslie B Earl