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17 December 2010

House of Representatives Standing Committee on Regional Australia

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Dear Committee members,

Further to my previous submission

Strategies for wise water use

Insurance policies and practices are needed now by all whose income depends upon the Murray River

Large-scale strategies and small-scale tactics are both needed now in case water shortages worsen. Should the worst-case not eventuate, nothing is lost. The present economic and social character of towns, businesses and farms that depend upon the Murray must be modified to survive in the worst-case scenarios of prolonged droughts and floods.

The world-wide worst-case scenario for water is increasing problems of shortages of clean water, more droughts, and sudden destructive floods.

The worst-case scenario for water in Australia is continued climate trends of the last twelve years, more rural areas becoming uninhabitable and more reliance on imported food. Much of the continent has followed a long term trend toward dryness, < <http://www.abc.net.au/rn/science/earth/stories/s198245.htm>> over millennia since the lush forests of Gondwanaland. < http://209.85.173.104/search?q=cache:sVtPHo_XIscJ:adt.lib.swin.edu.au/uploads/approved/adt-VSWT20060710.144805/public/02part1.pdf+Mary+White+paleobotanist+after+the+greening&hl=en&ct=clnk&cd=21&gl=au,page 42 ff>

These notes focus on only some of what could be done immediately as insurance for survival. <http://www.onlineopinion.com.au/view.asp?article=8123>

What is needed?

1. First of all, wider public understanding of the issues, so that politicians cannot keep their noses fixed to short-term appeasement of competing interests. The media are mostly ahead of the politicians here.
2. Water problems cannot be solved without stabilizing populations < <http://home.vicnet.net.au/~aespop/pressrelease.htm>> This is an international matter. Australia must share in world leadership, because we cannot preserve any quality of life if millions of economic refugees suffer at our door. Many interests prevent policies that can promote humane stabilization of populations before the anticipated disaster of 9 billion people by 2050, when diminished resources and the whole environment will hardly cope, regardless of what scientific miracles are achieved. Policies that aim at two children as the maximum per couple are both humane and sustainable.

Stabilising Australia's population is essential for sustainability. We are not short of people, and the problems of 'skills shortages' and 'ageing population' are soluble as lesser worries. Water is not a stand-alone issue. Policies for water interact with policies for saving energy and cutting carbon emissions.

3. A prosperous economy for the future requires stopping waste, yet the production of waste fuels the economic growth that is still considered essential. There are economic interests that benefit from increasing logging and clearing land – practices that are

worsening run-offs in water catchments, increase soil salinity, and can affect rainfall. The beneficiaries from continued growth such as increasing property values, must be recognized and countered.

Groundwater <<http://answers.yahoo.com/question/index?qid=20071222101732AAxly2T>> , including artesian water, <http://dictionary.babylon.com/ARTESIAN_WATER>now requires greater conservation, as it may not prove a renewable resource. The Great Artesian Basin <<http://dictionary.babylon.com/Great%20Artesian%20Basin#!ARV6FUJ2JP>> which underlies 23% of the continent of Australia provides the only reliable source of water through much of the inland. It is being recklessly used, but its recharge is uncertain. <<http://209.85.173.104/search?q=cache:IwjyFzCMhIOJ:www.environment.gov.au/water/publications/environmental/rivers/pubs/rec-harge-gab.pdf+Great+Artesian+Basin+depletion&hl=en&ct=clnk&cd=1&gl=au&client=firefox-a>>
>http://dictionary.babylon.com/ARTESIAN_WATER >

In urban areas, private use of groundwater is still lavish, too easily licenced and can even be regarded as beneficial, to lower the water table to enable debatable recharging strategies. <http://209.85.173.104/search?q=cache:_NpdEUI-um8J:www.melbournewater.com.au/content/library/wsud/conferences/melb_1999/water_sensitive_urban_design_-_groundwater_management.pdf+Groundwater+Melbourne+use&hl=en&ct=clnk&cd=3&gl=au&client=firefox-a>

Political and financial priorities need to change. Defence budgets must be regarded as including more than military defence, with which water defence budgets can be compared, for to defend life in Australia.

Water is not a valid source for financial profit. Water bodies cannot and should not be expected to make direct profits; the whole country profits from our vital utilities that are natural monopolies. Public ownership and direction of monopolies should be able to manifest the same attributed virtues as the private sector, and in addition be competitive and accountable, with no muddying of the waters by 'commercial-in-confidence'. Always, whether public or private, the supreme factor is the quality and dedication of the executive management.

Private ownership or management of water bodies may cost taxpayers too much in subsidies and favored contracts. PPP partnerships may force political policies to make a priority for their financial profit-making. This may be suspected, however wrongly, when the Victorian Minister for Water emphasises that higher water prices are not intended to push consumers into using less water, and when he is not keen that they acquire their own rainwater sources to complement their piped supply.

Desalination plants or water corporations must not have guaranteed water sales. This sets a political problem if water-saving measures are really successful. Water pricing should reward low water use. This is also fairer to lower-incomes, who use less water.

'High technology' and 'simple technology' in water management

'High technology' is essential to cope with climate changes and water shortages, but with caution in enthusiasm for untested gung-ho solutions as in climate-engineering, and in reliance on power-hungry desalination, when possibly enormous consequences cannot all be foreseen.

'High technology' to develop includes revising our sewerage systems. Current systems were designed with assumptions of plentiful water. Now there are possibilities and advantages in eco-toilets and where feasible, local salvage of liquid human sewage that uses it as fertilizer locally, and cuts the enormous amount of water used for flushing. Salvage of liquid human waste can use cheap 'low technology', and the remaining sewage disposal the 'high technology'

Rain-water tanks are claimed to be five times more energy efficient than desalination plants <<http://www.abc.net.au/news/newsitems/200704/s1897777.htm>> and they cut problems of storm-water and drainage. Water-tanks for everyday use are more expensive when they are connected to plumbing systems, and so some reports have calculated them to be not worth their financial costs. Long-term, I would disagree. But capture of water on-site can also use 'low technology' that is inexpensive and effective. 'Low technology' strategies suitable for many if not most households include roof-water diverters (DIY for about \$10, \$40 for a commercial product.) <http://home.vicnet.net.au/~ozideas/water.htm>) for hosing gardens and filling pools, and water tanks < <http://www.urbanwater.info/engineering/BuiltEnvironment/RainwaterTanks.cfm> that are not connected to plumbing. Even a 4000 litre water tank can cost \$1000 or less. These operate with gravity, hoses and buckets.

The cheapest and lowest water technology is buckets. These should not be disregarded or viewed with horror. We have an emerging generation short on exercise and lacking arm-strength. A safe and cheap alternative to gyms for practicing weight-lifting are half-filled buckets, to use with tanks and to save grey-water and the first running of hot water. (Recommended set: three standard and two oblong plastic buckets. For outdoors, plaster buckets discarded from building sites. How's that for modern technology!)

Modern life-style and water use can adapt for insurance against severe water shortages. Small also matters.

Water-hungry businesses can re-design how they operate, so that they can continue problem free. For example, hairdressing requires innovation in fashions and techniques; car-wash firms can turn to revolutionary but minimum-chemical methods of cleaning. Households can re-use many products rather than recycling, which requires more water to salvage their components.

Most sports grounds can operate with tougher grasses. Lawns need not be abolished. 'Australian-style' lawns, rather than manicured 'English-style', can remain unwatered except during establishment. They are brown during drought, revived with rain, and most can be mowed with improved 'exercise' hand-mowers, not power mowers.

Gardens have public as well as private value for fresh air, amenity, beauty and potential local produce. They should have water priority over private spas and pools. Sustainable gardens are more possible than is often believed. For example, 'drought gardens' can flourish with tough exotics like roses, as well as tough natives. Many trees, perennials and even annuals can be trained to survive on capillary action from groundwater, with minimum or even no surface water.

Cleansing. Even up to the 1960s, the smell of the unwashed could be thick in some poorer school classrooms by Friday, the day before the weekly bath and fresh clothes. We should never go back to that, we hope, but the other extreme can be cut back. Routine daily clothes-changing whether needed or not is very recent. 'As needed', including 'freshening', instead, reduces full-scale laundering, and our large automatic washing machines can be supplemented with more economical 'low technology' machines that may be more appropriate most of the time for small households. Routine daily showering, also very recent, can be changed for showers when actually needed, whether twice a week or twice a day, plus daily spongeing. Daily hair-shampoos are rarely really necessary; the more washing, the more is needed. How shocking this can seem shows how easily we have come to take for granted the way we do things.

Personal changes in life-style, to conserve precious water but still maintain good quality of life and health, also have a secondary value, because they alert people to other changes required in how our economy functions.

Already so much is known about water-responsible farming and water-distribution, that is still to be implemented. The time may be soon when expensive populist circus-value events and other unnecessary water-wasting public expenditure will not be tolerated by taxpayers themselves. They will prefer to see investment in their survival and quality of life, and enjoy other forms of culture, pleasure and entertainment. The north-south pipeline in Victoria to divert precious Goulburn water from the desperate Murray and struggling farmers, to supply Melbourne so that it need not reduce its consumption, is a fit topic for Gulliver's Travels.

So much innovation and research remains to be done. So many people need eco-tourism to see what is going on beyond the big cities. As an old rhyme almost goes,

"If all the land is dry as bones, And all the rivers stink, And water cant be squeezed from stones, What will we have to drink?"

Surely not! It is worth insuring against it, even if the future turns out to be floods. At the present we want to use as much as we can, greedily, regardless of the health of the river, which determines our lives tomorrow.

Our use of the River Murray cannot be 'balanced' against its health. Our use must be within the limits required for its health, even if the taxpayer must pay the compensation needed for those whose enterprises must be curbed for the sake of Water.

Yours sincerely

Dr Valerie Yule

Daughter of Sir Ronald East, for 30 years Chairman of the State Rivers and Water Supply Commission of Victoria.