

Committee Secretary,  
Senate Standing Committee on Environment, Communications and the Arts,  
PO Box 6100, Parliament House, Canberra ACT 2600.

Hi everybody,

Enclosed please find my submission for the Inquiry into Water Licences and Rights. I note the Environment, Communications and the Arts for enquiry and report.

a. the issuing, and sustainability of water licences under any government draft plans and water resource plans;

My paper shows the best way to overcome the big shortage of water in Oz. No one disputes the need for irrigation for COP in Australia. The pastures established for over 400 years in Italy and the UK, give amazing production. Our focus must be to create new water.

b. the effect of relevant agreements and Commonwealth environment legislation on the issueing of water licences, trading rights or further extraction of water from river systems;

The ideas in my paper if adopted will solve all agreements past, present and future and will give to the Commonwealth the ammunition to enact a new issue of water licences, that will be sustainable, with trading rights and extraction of water able to function more cooperatively.

c. the collection, collation and analysis and dissemination of information about Australia's water resources, and the use of such information in the granting of water rights;

Australia's water resources are not worth much in the Climate Change. CSIRO's climate report going back 1,000 years shows a 30 year drought. We can forget about COP unless we creat adequate new water.

d. the issueing of water rights by the states in the light of Commonwealth purchases of water rights; and

The Commonwealth must use the power it has to adequately manage water; "on just terms." S.51. (xxxi)The states should abandon any role they have had, because there are already too many cooks, who spoil the broth.

e. any other related matters.

Opportunities presented by the introduction of adequate water, are non-polluting hydro power, bushfire protection of lives and property, wildlife protection by adequate feral fencing and bushfire controll, tourism upgrades with house boats on canals and rivers to earn big money for major financing needs. Bush concerts require upmarket venues, but promise huge earnings from people now elevated to middle class in highly populated countries.

Best regards,

Rob Lemon.

Date:28.09.09

Robert A. Lemon,

Committee Secretary  
Senate Standing Committee on Environment, Communications and the Arts  
**PO Box 6100, Parliament House, Canberra ACT 2600.**

Dear Secretary

Thanks to Peter Short, for the brief on this important Senate Water Licence/Rights enquiry.

“Noting the World had no industrial-scale CCS plants, our PM, Kevin Rudd was reported as saying in the Weekend Australian Financial Review, on p.5, 20/21.09.08, that it was time to set up an organisation **“that can actually deliver something for a change instead of just talking about it.”** (“*New seam of bureaucracy tapped in clean coal quest*”)

**Is it time leaders delivered something in the National Interest to restore pride? What is our most important asset? Isn't it the one that pays the most, when it's needed most? “FOOD; concerning everyone; HEALTH, concerning everyone; SOIL, concerning everyone – even if they do not realise it – and it's the history of certain recent scientific research linking these three vital subjects.” Organic concepts; “the nutritional cycle is not merely a transfer of nutrient materials from one form of life to another, but also a circuit of energy. Basic relations between HEALTH, FOOD, SOIL, SCIENCE, concerns the legislator, politician, voter, taxpayer; farmer, gardener, veterinary surgeon, doctor; sanitary inspector, public health authority, school teacher, clergyman, - every citizen.” (E B Balfour in ‘THE LIVING SOIL and THE HAUGHLEY EXPERIMENT.’)**

**WATER, for continuity of production (COP) of vital quality healthy food, by ‘earth systems management/geoengineering’, ensuring reduced health costs. Given the variability of rainfall and it's effect on bush COP, river, eco systems, isn't it time we had a plan to ensure money is spent on “things” that give value? Like investment in infrastructure that will give COP instead of giving money to people to spend at Woolworths, to jack up figures in our “anaemic” economy.**

I applaud the Senate's long-standing commitment in confronting realities and identifying Federal/State political, ethical/moral shortcomings like preventing Courts acting as rubber stamps for Government; articulating political realities and actions required to solve them. Those who masquerade as appreciating our dilemma, display no willingness or aptitude to effect change or unity of purpose to end the farming catch-22; brainwashing of farmers like young Moslems who seek out, kill and destroy our people, both directly/indirectly. Many of these people hold positions of power, where they try to prevent our essential requirements from going forward. Government climate change guru, Ross Garno seems to think farmers should pay extra tax, but not a word from him about **NEW WATER**, by desalination, “Reid or Bradfield schemes”, despite Arabs having the most extensive desalination on the Planet. Talk's cheap, but action speaks louder than words. We need desalination **MODELS**, to assess/recognise the best WATER options, not “know-it-all experts” who have no solutions. We don't even know how to stop young impressionable Moslems, from acting against us!

The massive dust storms of the past week have given Australians a foretaste, instalment, pledge, of what is to come. A political focus is needed on WATER; "the importance of being earnest." Creating low cost large quantities of economically produced new water, smartly distributed, maintained/used, can bring new **HEALTH** to the World, reversing Climate Change (CC) by Geoengineering. "All the world's a stage" but Oz is most adversely affected.

The only sustainable way to reverse CC is to create permanent pristine H<sub>2</sub>O by retrieving sea water from the ocean and desalinating it to grow forests/crops to capture excess greenhouse gasses to restore balance in nature. Most "desal" plants are too small; too expensive for Oz. At least 1,500 M. acre ft of water pa, (1.8 M. Gl) is needed; maybe 25 Solar, Hybrid, Safe 4<sup>th</sup> Gen. Nuclear, Vacuum, Desalination, Hydro Electric Plants. (S/H/S/4<sup>th</sup> G/N/V/D, HEP's)

Oz is designed for unique creation; we need an **UPGRADED SCHEME**, "diverting" 70% of **WASTED WATER**, from Cape York/east Range rivers, S. S. West by Canals, Dams, Pipes, Tunnels through the Great Dividing Range for HEP's/irrigators to South Australia. Combining best desalination technology and Reid/Bradfield schemes is our best solution.

*"THE REID SCHEME is an inspiring proposal, on the scale of the Snowy Mountains Scheme. Designed by Brisbane engineer L.B.S. Reid in the 1940's, flood waters of the Walsh, Tate, Lynd, Einasleigh, Etheridge and Gilbert Rivers, flowing west from the Great Dividing Range, are diverted into the Flinders headwaters, and into the Diamantina."*  
**(Eventually, the Darling River forms part of the upgraded diversion scheme)**

*"To do this, Reid proposed to build a dam at the headwaters of the Walsh River, a tributary of the Mitchell, to link this storage dam with nine other dams on the headwaters of the other westwardly flowing rivers, and thence into the Flinders and Diamantina."*

The majority of water can then be diverted into the Darling, taking advantage of storages available, limited in economies of scale by evaporation constraints. Rainfall variability that effects the Australian eco system and rivers, is why we need desalination of ocean water on a very large scale, to create COP, taken for granted in Europe, such as the Rhine River, that draws it's 2,200 m<sup>3</sup>/s consistent water supply from snow and glacial ice in the Swiss Alps.

We must make the most of our opportunities, by inviting a United Nations Construction task force to Oz, (conditions apply) funded by fresh food, (seven day shelf life food) and by uranium leases, from A COALITION OF THE WILLING. (COW; OZ, CANADA, JAPAN, UK, USA, and FRANCE;) COW's high technology construction of S/H/S/4<sup>th</sup> G/N/V/D, HEP's, modelled on the USA, World War 11, LEND LEASE SCHEME, an outstanding success.

*"As envisioned by Reid, the scheme would include 275 km of canal 84 metres wide by 11 metres deep, 17 km of tunnels, and 216 km of 1.5 metre pipeline. A total of 7.5 million megalitres of water would be stored in reservoirs, most bound by the Gregory Range. Dams were to be constructed wherever the canal crosses a river, with three large dam walls of note: The Einasleigh River Dam would be over 6 km long and 76 m high; (250 ft) the Etheridge River Dam would be about 5 km long and 60 m high; (197 ft) and the dam creating the reservoir bordering the Gregory range would be 19 km long with a height sufficient to create an 80 m head. (263 ft) Volumes of water, could be greatly increased by bringing in the headwaters of the Mitchell, Palmer, Normanby and Laura rivers, but this would mean increasing the size of all canals and tunnels to handle the monsoon rains."*  
A wise precaution would involve, "Clancy of the Overflow;" include overflows in the system.

*“Reid also reviewed and elaborated on the Plans of Dr. J.J.C. Bradfield, proposing to bring the flood waters of the Herbert, Burdekin, Clark, Basalt and Cape Rivers across the Great Dividing Range into the Thompson River.”*

*“THE BRADFIELD SCHEME. At the direction of the Queensland state government, in 1984, four of Australia's best-known hydraulic engineering firms combined to form the Bradfield Study Consortium. Their Bradfield Study Consortium Report, together with an optimistic assessment by the department of Northern Development, was never officially released due to a change of government in Queensland. But in July 1993, all of the relevant Shire Councils of North Queensland and Central Queensland joined together to form the Northern Australian Water development Council, to fight to make Bradfield's dream a reality. The estimated cost of the revised Bradfield Scheme (which called for pumping water over the Great Dividing Range instead of the tunnel originally foreseen by Bradfield, among other changes) was at that time \$2.49 billion. The state of Queensland's Office of Northern Development projected that the scheme would create \$2.02 billion annually in direct output from the cattle industry, agriculture, etc., not to mention the billions saved in drought losses. Vast numbers of jobs would be created, both in the construction and in the follow-on development of this area.”*

*“Since the time Bradfield proposed his scheme, the Burdekin Falls Dam on the Burdekin River was completed in 1987, in the middle catchment of the Burdekin, with a storage of around 1.85 million megalitres. Whether or not the Burdekin is utilised in the revised Bradfield Scheme, Stage 2 of the development of that dam should go ahead, under which the dam wall would be raised (it was built to allow for such expansion), which would allow the storage to increase to 8.5 million megalitres above its current capacity.”* (SA; See “Bradfield / Reid Great Water Projects in The Infrastructure Road to recovery; p.22, New Citizen, Feb, 2002)

The huge S/H/S/4<sup>th</sup> G/N/V/D/P's, sited on northern coasts, “captures” sea water by high tides and gravity feeds it directly into Plants that operate 7/24, pumping fresh desalinated pristine H<sup>2</sup>O, into high dams on the big rivers, for COP. Water travels by gravity through Range tunnels to Canals, Dams, Pipes and Rivers to SA. Ten large HEP's operate on a 100ft head (33.48 Metres) strategically located, generating sufficient power to supply the eastern States with electricity, so the dirty coal fired power stations can be progressively shut down.

The canals/rivers offer tourism opportunities as in Europe; house-boat accommodation for perhaps 100 million people pa, even if each person generates only \$1,000 profit, from their visit, produces a Trillion dollars pa while enjoying unique Oz flora/fauna, with Pubs/Clubs providing meals/social interaction and recharge jaded Tourists to earn a further 10 Trillion.

Opportunities created include new primary production ventures like aquaculture projects for indigenous and other bush people, with for the first time, a bushfire protection system that works. It produces millions of jobs from new bioengineered infrastructure projects, bringing higher permanent wages/salaries for Australians and requires a United Nations Construction workforce which will increase Tourism and Democratisation substantially.

Indigenous people can benefit, especially those in isolated villages/hamlets, particularly those attracted to aquaculture opportunities, made possible by permanent fresh water supplies and fast rail (400 K/h) for City marketing and study opportunities. With millions of extra permanent/temporary jobs available for disadvantaged starving people affected by the destruction, devastation and extensive depredations of war, in ravaged Nations.

Strict conditions need to be applied so only people who will be an asset are invited to Oz. Assisted passage tourists, temporary, permanent or special purpose citizens. Defence Forces can shift civilians from war zones, to prevent the slaughter of innocent people, so terrorists are more vulnerable, perhaps without a need to increase troops to eliminate the dark forces. We can activate our resources, using talents/dedication of guests, turning Climate Change (CC) around, building vital infrastructure and solving terrorist problems. Terrorist areas, bereft of civilians, can be targeted by scorched earth, nuclear options, to end the terrorist war, as with Japan in 1945. People are entitled to Democratisation; to live out their lives.

800 to 1,000 million acre ft of new water would irrigate at least 80 million acres of permanent, quality food production, and earn at least \$25 Trillion pa in new money.

Desalinated sea water combined with rain saved (now wasted) in superior "Bradfield" type, **high** dams on northern rivers is vital. Diverting cyclonic water flows from the high dams, by gravity through big east/west sloping tunnels in the Dividing Range with Ten, 30.48 metre (100 ft) head Hydro plants strategically located from Mt Glenroy to Menindee, will provide the electricity required for our four eastern states. This H<sub>2</sub>O mix, from diverted rain and desalination, will bring COP and constant variable hydro power with no pollution. Australia will initially gain \$25 Trillion of extra wealth pa, by 80 Million acres of additional irrigation. Desalination 24/7, needs another heat source at sun-set. **Nuclear**. Hydro phases out dirty coal power, reducing their pollution gasses by 50%, with **geoengineering requirements** avoiding water buy-back hoaxes, maintaining COP, bushfire control, reasonable major river flows, wildlife and tourism in the National Interest generating "Oil-rich sheikdom wealth."

- Water wins "many important primary products such as beef, dairy, wine, seafood, lamb, wool, horticulture, nuts and timber will benefit immediately once the deal is ratified." (See Hon Warren Truss's 31.03.04 letter on Free Trade Agreement)
- And stock, dried/fresh fruit, vegetable, grain, cotton, other high value production.
- (See, *Senate Committee on Agricultural/Related Industries*, 4.03.09 hearing.) We've had no normal grain harvests for three years; primary industry production has declined. **We need to distinguish between the essentials and the peripherals, and recalibrate our thinking** ("The thief comes only to steal and kill and destroy; I have come that they may have life, and have it to the full. I am the good shepherd. The good shepherd lays down his life for the sheep. The hired hand is not the shepherd who owns the sheep. So when he sees the wolf coming, he abandons the sheep and runs away. Then the wolf attacks the flock and scatters it. The man runs away because he is a hired hand and cares nothing for the sheep." (New International Bible, John, Chapter 10, Verses 10 to 13.)
- Control of Oz bushfires, the fastest, fiercest, worst on Earth and environmental protection during Climate Variation (CV) to ensure wildlife/quality of life survive. (**See Bushfire Royal Commission ignores fuel-reduction burning", Ed., Peter Westmore, NW, 5.09.09**) Our bushfire plan must include:
  - A. Appropriate fuel-reduction burning at levels 1 to 4. (See plan details)
  - B. Fire warning/preparedness with safe guaranteed access to fire proof bunkers.
  - C. Fire proof houses with fun bunker accommodation for extended families.
  - D. Guaranteed roof, dam, steel pipe water storage supply by metal sprinklers.
  - E. Stock grazing in state forests/parks to reduce fuel, with environmental care.

- F. Special wildlife reserves with lakes, cleared fire brakes and sprinkler systems.
- G. Special visitor sport reserves, (VSR's) with cleared fire breaks and sprinklers.
- H. Homes and shops with category one protection, including bunkers/sprinklers.
- I. Stay/go, tiny refugee emergency evacuation to VSR's via tunnels/sprinklers.
- J. Strategic command posts linked to VSR's, bunkers via tunnels and sprinklers.
- K. Water resupply delivery from the new S/H/S/4<sup>th</sup> G/N/V/D, HEP's.
- L. Fire services maintained by DSE; command/responsibility clearly defined.
- M. Decisions based on pre-arranged plans for different threats and variations.

- 1. Human habitation skills by Department of Sustainability/Environment.
- 11. Earth systems management and geoengineering assistance.
- 111. Cleared 2.5 chain buffer sprinkler zones for houses from feral forests.
- 111V. Cleared buffer sprinkler zones at wildlife watering holes in feral forests.
- V. Cleared 2.5 chain buffer sprinkler zones from the bush for community assembly areas at polo, football, swimming, tennis, recreation areas.
- V1. Irrigation by metal pipe, pop-up sprinklers for green areas, with water stored in appropriate dams and storage tanks. (See V11. below)
- V11. "New system saving water" skills. (C. Walker, p.3, Country Leader, 7.09.09)

- Fast Rail ensuring fresh seven day shelf life food crosses state borders and on to our northern ports, in the national interest to land in Singapore in three days.
- Development of "Nuclear Power for Cars/Commercial Ships." See R. M. Adams. **Note the new age USA navy nuclear submarines never need refuelling.**  
[http://www.atomicengines.com/ship\\_paper.html](http://www.atomicengines.com/ship_paper.html)

I believe most Australians expect the Commonwealth to use its power to create and manage 'Earth systems/geoengineering' for water/environmental resources, and **plan** for continuity of production. (COP) To produce healthy nourishing food by 2020, for life quality for an expected 9.5 B. people in a future hungry World, abundant new water must be created.

1. **"Drought Policy Review: Assessment of social impacts of drought and related government non-government social support services". Peter C. Kenny.**

2. "According to Senator Bill Heffernan, growing concerns about Australia's ability to feed itself and a booming world population has prompted an important inquiry into *food production and security*. Sen. Heffernan will head the enquiry."(ACTION, NCC, 08. 2008)

3. "*Poverty not reduced by foreign aid*", by Hristos Doucouliagos, professor of economics at Deakin University school of accounting, economics and finance. "But when the empirical literature on foreign aid is examined, a clear and uncomfortable pattern emerges; after forty years and billions and billions of dollars, the evidence shows that aid has not been effective in alleviating poverty. Development aid programmes, begun in the 1960's were meant to generate development. Instead generated a large body of **academic literature** on foreign aid" **and no water for additional COP.** (p.63, AFR, 3.7.08)

4. **No water results in Oz becoming, "the poor multicultural trash of Asia".** Part of the answer outlined by P.A. Yeoman's, book, "**Water for Every Farm**", is saving the water that falls on farms. The ultimate solution in our Climate Variation is to act on five essentials listed in submissions to Peter C. Kenny, Chair, Expert Social Panel, "*Assessment of the social impacts of drought; government/non-government social support services.*"

Low cost irrigation for COP, using Humphrey Kempe's "*The Astonished Earth*," system is ideal. But, in order to have "**rabbit stew**", one must first catch the rabbit. **WATER!** In 1960, I worked at "Lindsay Point", before the Dartmouth dam was constructed, when almost unlimited low cost water was available; Michael (Humphrey's son) was Manager. With adequate irrigation creating improved fertility, "Lindsay Point's" carrying capacity increased to 15 sheep per acre (2.5 head of cattle) all throughout the year, after seven years of quality ecological farming. When reclamation of this eroded clay soil began, survey pegs were eight inches out of the ground, due to action of hooves of sheep and cattle, and strong **winds blowing top soil away to Melbourne as dust**, to give them a taste of the bush.

**It's elementary, that to survive, we must have adequate water. We need five major central principles to alter Climate Variation effect, to which our leaders must be passionately attached and will not sacrifice under any circumstances.**

*"Around the world, groundwater from deep wells is the main source of water for over three billion people. In addition, a large proportion of the food supply in many countries is based on irrigation from wells. However, almost all the world's wells have falling water levels and declining yield and already, many have run dry." Emeritus Professor Lance Endersbee's wonderful 264-page book "A Voyage of Discovery."*

*"Endersbee argues that we must expect a groundwater crisis soon with today's six million people, without considering the two billion more mouths to feed in prospect by 2050. The populous United States, China and India are among countries at most risk of drawing down on finite groundwater that will not be replenished for that extra two billion to drink and grow food."*

*"Over half a century of massive exploration, far greater than any possible rate of recovery, most of the groundwater basins of the world are close to the limits of the resource."*

*"This exploitation of groundwater is the very reason why we've been able to support six billion people. Groundwater has been drawn down to produce rural food. But it is now unsustainable food production because groundwater is running out. There will just not be enough groundwater for another two billion people to exist using current rural resources."*

Guaranteed provision of pristine water has advantages, beyond the scope of this paper to deal with. However the multi-interest tourism draw-card is one of the most rewarding for the tourists and people serving them. The geological basis of many problems we currently face, fossil energy use and our ultimate destiny as a species are of fundamental interest.

The United Nations' tells how serious the rural water supply is to the world's food security. At present 70% of the world's fresh water is used by rural food production. If that water supply is declining (or is erratic because of climate change) then six billion of current population is in jeopardy. It's unlikely humankind can support eight billion on the planet, unless we invest massively in urban agriculture where water/nutrients can be well recycled.

Thank you for taking the time to read about my concerns.

Kindest regards,

Rob Lemon.

## APPENDIX A.

### **We need five essentials to reduce the world's climate change effect.**

#### **1. STOP WASTING THE WATER.**

**(A)** Divert and store water in dams, by pipe, canals and rivers; 100 million ac ft of water pa, 70% of *average* flow of Queensland's mid-northern, peninsular and gulf rivers, to South Australia, **PRODUCING HYDRO-ELECTRICITY on the way.** Combine saved water with low cost constant S/H/S/4<sup>th</sup> G/N/V/D, HEP's.

**(B)** Transmountain diversion from the Northern Rivers systems and the Clarence Richmond basins (upper Clarence, Nimboida, Macleay Rivers) to the Murray-Darling Basin by an up-graded Bradfield scheme. Annual water flow available compares to the Snowy Mountains (from 3,000 GL in 1930 to over 11,000 GL now; see "Impacts of water Regulation and Storage", Murray Darling Basin Commission, Sustainable Rivers Audit – <http://www.mdbc.gov.au/SRA> River Health Check; and particularly, "Reporting of Interstate Water Transfers under Schedule E & Supporting Protocols)

**(C)** Desalination plants (solar, hybrid, safe fourth generation nuclear, vacuum desalination, hydro power generation plants, S/H/S/4<sup>th</sup> G/N/V/D, HEP's for COP. Fish farms, to quiet negative talk by local folk. (See "National Infrastructure and National Development", Emeritus Professor Lance Endersbee AO, FTSE.)

#### **2. GUARANTEE OF WATER IS ESSENTIAL TO LIVE SUCCESSFUL LIVES.**

S/H/S/4<sup>th</sup> G/N/V/D, HEP's for COP , to produce 1,500 M. ac.ft. (1.85 M. GL) of low cost, (One cent per 100 M<sup>3</sup>, or \$1.00 a GL) **OCEAN DESALINATED WATER, for the four eastern States, and to recharge the Murray Darling river system.** This will maintain COP in droughts, control the worst bushfires in the World, restore dignity to our indigenous people, and allow Australia to feed the Worlds people.

Also, if we lease our enriched uranium (U<sup>308</sup>) to China, India , Russia and the World, a million tons of Canadian / Australian U<sup>308</sup> would earn \$500 billion in 5 years, to pay for a million construction employees, to build our infrastructure.

Countries providing construction employees for infrastructure development would have priority to COW, U<sup>308</sup>, and spent fuel must be returned to Oz for re-constituting in our "Breeder Reactors" at the end of its useful life. It would be stored for reusing and Nuclear waste would be returned to the Nuclear Repositories for fast breeder reprocessing in fast breeder reactors established in Oz, with any mild waste remaining, buried in bore holes established in safe geological areas in Australia.

100 Pebble Bed Nuclear Reactor Desalination/Power Plants in China, would reduce their pollution by 50% and give them adequate quality **WATER PRODUCTION.**

"This technology claims a dramatically higher level of safety and efficiency. Instead of water, it uses pyrolytic graphite as the neutron moderator, and an inert gas such as helium, as the coolant at very high temperature, to drive a turbine directly.

This eliminates complex steam management systems from the design, increasing transfer efficiency (ratio of electrical output) to about 50%. The gases do not dissolve



contaminants or absorb neutrons as water does, so the core has less radioactive fluids and is more economical and safer than light water reactors.”

The helium gas goes through pipes in the solar stills to keep the desalination process going 24/7. After being used by the turbine to produce electricity, the helium gas maintains the Solar Hybrid Nuclear vacuum stills at a temperature of 60-80° to give maximum distillate at low cost (1 cent per 100 M<sup>3</sup>) for quality pristine fresh water.

The Solar Hybrid Safe Nuclear Vacuum Desalination Stills (S/H/S/4<sup>th</sup> G/N/V/D,S's) need to be located where adequate pristine sea water is available, where high tides enable sea water to be “loaded” for gravity supply, to S/H/S/4<sup>th</sup> G/N/V/D,S's.

“The performance of the system (efficiency) depends on meteorological parameters, namely wind velocity, solar radiation, sky temperatures, ambient temperature. Besides the meteorological parameters, it also depends on water parameters, such as salt concentration, algae formation on water, and mineral layers on basin water.”

“The highest useful intensity wavelength is 0.47 microns, the range of visible beams. Intensity of solar radiation reaching the earth's surface ranges from 0 to about 1,050 W/m<sup>2</sup> at the equator. Most of this radiation comes directly from the sun, but about 10% comes as scattered light, even on cloudy days.”

“Efficiency rates for solar plants range from 25/40% in winter and from 30/60% during months of high radiation intensity; real rate depends on design, construction and operation of the plant and on ambient conditions. For example, a distillate flow rate of around 5 kg/m<sup>2</sup> is possible with an assumed water temperature of 80° C and mean radiation intensity of 24.5 mega joules per square metre (MJ/m<sup>2</sup>), conditions typical in the Northern Hemisphere in July; in such circumstances, the Still has a mean efficiency of 50 per cent. Combined with solar energy heating / evaporating water inside solar stills – heat transfer/storage from nuclear, geo-thermal or coal, radically improves productivity/reliability.” (*Desalination in the 21<sup>st</sup> Century*.)

“About 90 per cent of France's electrical power comes from hydro-electricity and nuclear power, which helps explain why France is able to reduce its dependence on imported petroleum and meet its greenhouse gas reduction targets.”

“The contrast with Australia could not be more stark”.

“Australia is heavily dependent on coal-fired power stations which, according to the Australian Coal Association, produce about 85% of Australia's electric power which is used not only for domestic purposes, but also sustains some of Australia's largest industries, including the manufacture of aluminium, most of which is exported.”

“Combustion of coal produces carbon dioxide, and so the electricity generators, which have an outstanding record of producing low-cost energy on which Australia's prosperity is based, are now to be the victims of the new carbon-trading scheme unveiled by Canberra academic, Professor Ross Garnaut.”

“Mr Rudd is hell-bent on introducing an emissions-trading scheme which will be an effective tax on energy, forcing even more of Australia's beleaguered manufacturing industries to shut down or move off-shore.”

“- with the impact of drought/rising fuel prices, it will also signal the death-knell for much of Australia's agriculture, on which “our” prosperity has traditionally rested.”

“The impact of Mr Rudd’s utterly futile policies will be felt by all Australians.”  
Peter Westmore, national president, National Civic Council; NW, p.24, 2.8.2008.

### **3. WE NEED QUALITY TREES TO IMPROVE RAIN AND AIR PURITY.**

A full range of trees is vital to restore reforestation and without water, young trees die; mature trees are lost by “bushfires”, unless sprinkler systems are in fire breaks. We need a sound carbon credit system for positive planning. (See “Making sense of carbon-trading”, Peter Westmore, NW, p.24, 23/6/07, “If Australia was serious, it would forget about emissions trading; invest in biofuel technology instead”; also “Picking winners is a losing proposition”, Brian Toohey, TWAFR, p.63, 24-25.5.08; “Climate change policy is wrongly tilted towards carbon capture and storage (CCS).

“If the goal is to achieve low emissions, it doesn’t really matter whether the energy source is renewable. If a cost-effective way can be found to use coal with few emissions, fine. But the government and Garnaut are fixated on one type of technology, carbon capture/storage that they wrongly regard as synonymous with a different technology called clean coal. It is now highly unlikely that CCS will prove commercially viable for cutting emissions from coal-fired electricity generation”.)

#### **IN OTHER WORDS, CCS IS A HOAX.**

“Geothermal and wave sources will prove cheaper than clean coal, with solar thermal and wind power playing a role. CSIRO technologist Louis Wibberley argues it would be much better to put a sizeable slice of available R&D dollars into finding ways to turn waste CO<sub>2</sub> into something of commercial value or greatly improving efficiency of coal use by developing carbon fuel cells.(See TWAFR, 15-16.12.2007)”

### **4. WE MUST TOP UP OUR LAKES SO EVAPORATION BRINGS RAIN.**

Creating 100,000 sq miles of Permanent Fresh Water Lakes (PFWL) for Australia, needs 384 million acre ft of water p.a. if evaporation *averages* six feet p.a. Salt-water lakes, can be re-supplied by gravity-fed seawater; aquaculture created by Japanese tuna/whale farming. (North America has 95,000 sq miles of PFWL.)

- 5. GEOTHERMAL.** Beneath our feet, is a massive source of efficient, emission-free 24/7; **THERMAL POWER TO PRODUCE ELECTRICITY**, if wind / rivers stop, to **SHUT DOWN THE DIRTY COAL FIRED POWER STATIONS BY 2020.** Dirty coal conversion by Underground Coal Gasification (UCG) Gas-to-Liquid (GTL) Coal-to-liquid (CTL) or by the Toffler process, to produce ultra clean, low cost diesel / petrol, with Bio-fuels and “*Hydrogen*” production, ASAP.

(See “The future looks green and very hot”, Stephen Wisenthai, p.52, AFR,17.1.08, and “UH-OH; WE PICKED THE WRONG CURE FOR COAL”, B.Toohy, WAFR, 15-16.12. 07; Louis Wibberley’s paper, CSIRO energy technologist, on direct carbon fuel cells, using electrochemical process to generate electricity directly from carbon; and “Miners warm to federal liquid fuel plan”, D. Crowe, p.13, AFR, 27.02.08. Also, “Foolish to waste nuclear opportunity” Anthony Bergin, p.55, A.F.R., 24/1/07; “Nuclear Desalination”, UIC Nuclear Issues Briefing Paper # 74, Oct. 2006.)

<http://www.uic.com.au/nip74.htm> [http://en.wikipedia.org/wiki/Pebble\\_bed\\_reactor](http://en.wikipedia.org/wiki/Pebble_bed_reactor)

## Appendix B.

Robert A. Lemon

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**BRISBANE**, Qld. 4120.

To all who love Oz, and understand the key needs for happy secure lives, as in Tony Blair's *Faith Foundation*; ample water, for continuity of production, fuel reduction in forest reserve burn-offs, for bushfire control, fire brakes with fire control sprinklers. Climate Change, (CC) Global Warming (GW) reduction by a 2020, 50% pollution fall. Aware that, "The worlds ground-water being mined to exhaustion and hydrologists' promise that it can be replaced by seasonal rain is fatally flawed. -- widespread thirst and famine, displacement of many millions of water refugees. Increase in CO<sup>2</sup> may be relatively unimportant compared to the health effects caused by particles, chemical pollution, and the great increase in water vapour over cities." Prof. Swans REVIEW; Prof. Endersbee on an expanding Earth, in A VOYAGE OF DISCOVERY. Reduced permanent tax rates, aimed where most jobs can be created; "a different approach to Australia's savings and investment modelled on Singapore's Central Provident Fund. (Can Australia avoid an economic depression?" Patrick J Byrne, NW, p.7, 7.2.9.)

This paper gives an alternate choice to Mr Rudd's essay, Feb. 09, *Monthly* magazine. (Aust. Politics, Society & Culture) Major party speakers supported the failed radical free-trade ideology, on ABC's Q/A TV show, 19.02.09. Swan and Hockey adopted the economic protectionist stance for free trade, which sadly, brings into question, the quality of advice given them in pointing the way forward. (\* See "EXPERT FAILURE" Roger Mendelson, TWAFFR, p.63, 21-22.2.9) Spin doctors, give undefined, indefinite, unfixed, imprecise, vague and uncertain options, for the only governments on Earth, that prevent **nuclear** power water creation; CC/GW reduction, for **sustainability**, lucrative farms, **drought and bushfire** control as **Dorothea Mackellar wanted**. Money spent for little gain, in the **Global Financial Crisis (GFC)** has to be repaid.

### **Why is practical advice from qualified people, not being used effectively?**

(\* "Sadly, the government is being fed inept advice"; Roger Mendelson) Rudd's essay is academic, to gain ascendancy over political opponents. See "*The Price of Freedom*, a statement of ideas applied to Oz/ international questions." **B. A. SANTAMARIA**.

Mr Rudd tries to justify bureaucratic intervention "but fails to acknowledge, either in his stimulus package policies or his big essay on the financial crisis, **a fundamental cause of the current crisis is the huge trade imbalance created by the now failed, radical free-trade ideology**. Mr Rudd says the solution requires financial regulation, application of social democratic principles but neither can solve the crisis. (Can Rudd save Australia from the global slump?" P7, NW, 21.2.09, Patrick J. Byrne)

Note how our Life Assurance/Superannuation was deregulated by changing the rules every six weeks, so people lost confidence and would not buy it; GFC repeats history. Deregulation by Keating, put 14,000 "Financial Planners/Insurance Consultants" on the scrap-heap. We now see how the folly of few savings, has exacerbated the global financial crisis to enter a "**new and dangerous phase**." Had we raised savings and invested here in the 80's, "we could have avoided 20% interest rates and perhaps 'the recession we had to have.'" Many people were ruined by Keating, including Liberal and National Party leaders, a master plan for the ascendancy of Labor at all State levels. (See "**Economically efficient super**", Gruen, p.54, 2.12.08, AFR.)

They foil farmers superannuation subdivisions, on the pretext it's contrary to Council planning schemes; "land has to be protected for rural purposes." But, to add insult to injury, they provide no water, for continuity of production. (TWA, Editorial, 7-8.1.6, "Awful Authorities"; Local government needs civil, not social engineering and "Housing bans shed land value", Matthew Cranston, p.57, AFR, 23.6.08; "decisions by the Macedon Ranges Shire Council/Victorian Civil and Administrative Tribunal.")

The **development history** of Australia is remarkable; see The Weekend Australian, p.22, 7-8.1.1995, B. A. Santamaria; 1. Food markets, 2. Water resources, 3. Australian unemployed, and 4. some of the 20 million unemployed in Western Europe. See also, the "provision of interest-free loans, to construction authorities to **finance the necessary infrastructure authority** for this proposal."

- "1912 – 1917 intercontinental rail, financed by the issue of interest-free credits through the Commonwealth Bank. (Established in 1911)"
- "1914. £350 million bank credit to finance Australia's expenditure in World war 1. (L.C. Jauncey, Australia's Government Bank, 1933, page 275.)"
- "1937, the Royal Commission on Banking; the central bank could 'lend to the Government', or 'to others in a variety of ways' and it can, 'even make money available to Government or others, free of any charge'. (Report, p. 196.) You cannot develop the north by paying 10% on borrowed money. And, **if you do not develop the north, you will ultimately lose the country.**"

**We need greater accountability and transparency in government.** A return to the Westminster system of Ministerial accountability for decency, respect, rule of Law and profitable venture security to stay. Or else, **"we will loose our country."**

Our politicians don't have the psychological mechanisms to adequately protect and help "the working poor" to raise poverty levels. "We give 32 cents out of \$100 earned, to overseas aid". (Pro. Peter Singer, Margaret Throsby ABC Radio, 10.20am, 5.02.09)

Mr Turnbull's advice to bring forward tax reductions is good; permanent Tax cuts in domestic manufacturing are best, for new long term **real economic value jobs**. (Colin Teese, p.5, NW 20.12.08, "Unlocking the riddle of the global financial crisis.")

Colin Teese quote begins. "Meanwhile, we should re-direct the focus of our priorities from the financial sector towards what *really* matters - \* **the real economy**, and especially \* **the domestic manufacturing sector**."

The Rudd Government believes it has taken decisive action by encouraging spending. But \* **that is no solution**. The way our economy is structured means that more spending will simply suck in more imports.

We need to recognise that the financial crisis is reshaping the economy. There is no alternative for us but to make the necessary adjustments. It is no longer reasonable to believe we will be able to continue buying most of the manufacturing goods we want with money borrowed offshore and not worry about **\*how it gets paid back.**"

"Like it or not, we will be forced to make a far greater proportion of the manufacturing goods we consume, even if it costs more to do so. We once did so, and can do it again.

Rebuilding our diminished domestic manufacturing production won't be easy, but it can be done. We should start by forgetting about globalisation and free trade. Restarting our manufacturing industries will deliver us the best results.

World output (GDP) is about US\$60 trillion; world exports are about US\$10 trillion. Dollar for dollar, expanding domestic manufacturing gives us six times the benefits of exports – and we can decide how best to target it.

Our focus should be to rebuild our manufacturing sector on the back of much neglected infrastructure development --- notably, \* **in the fields of health (1), education (2), transport (3) and water (4).**"

To do this properly, we will almost certainly need some kind of government-funded investment bank. And we must ensure that \* **as much as possible of manufacturing for any projects is done here.** (See B.A. Santamaria's article on German re-unification, creation of their low interest bank. [www.newsweekly.com.au](http://www.newsweekly.com.au))

In that way, \* **we will save on foreign exchange outlays and create a very large number of long-term, well-paid jobs for Australian workers, both skilled/unskilled.\* The necessary rise in spending will follow, and this time it will be based on jobs created here in Australia.**" (End of Teese quote)

We need to create infrastructure to protect us from **bushfires and drought**, now GW and CV have worsened; and new trade by goods exchange, cash flow and barter. We do not have the people to build a fast recovery, and need a million construction workers here (as in our Snowy scheme) to "**achieve satisfactory solutions.**" We need to restore our federal budget to surplus within three/five years. How quickly we do, depends on Mr Rudd's proven diplomatic skills in dealing with the key players.

This plan to restore our budget to surplus, will bring much needed quality people to Oz. (conditions apply) We could solve the **Palestine crisis** with **Tony Blair's** help, and restore trade imbalance, by construction of essential infrastructure with no direct cost to us, effectively overcoming our looming and bleak taxation deficit.

The U<sup>308</sup> fuel provides pollution free, power, water, **bushfire control**, and continuity of production for our agricultural industry, at 1 cent a 100 M<sup>3</sup>. (1\$ per Gl) U<sup>308</sup> exports can also earn man-power to build our infrastructure. A "coalition of willing", (COW; USA, Canada, Australia, France, UK) gives a 50% pollution reduction by 2020; achievable by cooperation. A "**shift in societal values is needed in order to maintain a habitable planet and extreme weather events highlight the risks of inaction.**" (Ian Dunlop)  
COW should have just one Commissioner, to manage the scheme, but responsible to COW.

"Most Liberal and National politicians, have missed the key point, instead of playing up the inconsistency in Labor's policy of permitting the expansion of uranium mining, but opposing the development of a nuclear power industry."

(See "**Labor on uranium:** when "yes" means "no", Peter Westmore, NW,12.05.07)

**We need ample water to farm profitably, to feed a future World's 9.5 B. people, control the worst bushfires in the world, by sprinkler fire breaks to protect lives/property; water storage, bunkers, interconnected pipes, aquaculture and shifts in political erroneous zones.(See Landline 22.2.9)**

Fast breeder reactors, have distinct advantages in their siting, product transport, and waste management, and by reprocessing used fuel can earn millions of extra dollars. Leasing U<sup>308</sup> fuel, for safe, solar, hybrid, nuclear, 4<sup>th</sup> generation vacuum desalination, power generation plants; for Indonesia 10, China 100, India 100, Oz 25 and 15 other World sites, can reduce CV or Global Warming, and pollution by 50% in ten years.

### **A strategy to produce adequate, but low 1% pa carbon tax, for Australia.**

The water and energy the world needs can be gained by lease of our processed (U<sup>308</sup>). With 200 ton of U<sup>308</sup> per plant, @ \$10,000 ton, can earn \$2 M, + 800 Construction Workers (CW's) per plant. 250 plants need 50,000 tons of U<sup>308</sup> and earn \$500 billion yearly. 2,500 plants, earn \$5,000 billion pa, or \$25,000 billion over five years.

If we use a lease/release covenant on the fuel, with each plant earning the above, we have 4 CW's per ton of U<sup>308</sup> pa for infrastructure construction in Australia. Lessee's provide a leasehold reversion for accommodation and meals for CW's; earnings per plant pa are \$2 million, plus 800 CW's per plant, or 200,000 CW's from 250 plants. 2 M. CW's from 2,500 plants, and \$25,000 B. from 500,000 Tons of U<sup>308</sup> in 5 years.

When a five year lease ends, the spent U<sup>308</sup> is reprocessed, and exchanged for fresh U<sup>308</sup>, and another five year lease signed to earn the ruling market value at that time. Future U<sup>308</sup> values, may escalate by a factor of ten. Now, 250 plants give \$500 B. pa, plus 200,000 CW's per year; \$2,500 billion earned in five years, and 384 billion CW man-hours pa, based on 40 hours per week and 48 weeks per year per plant.

Additional regular income of about \$200 million pa, may be earned by reprocessing spent fuel in our fast breeder reactors, depending on how much fuel is reprocessed. These COW nuclear repositories (NR) based here (advocated by Bob Hawk) may earn much more. Reprocessing and re-lease of U<sup>308</sup> fuel at the end of it's 1<sup>st</sup> life stage, by 4<sup>th</sup> generation fast breeder reactors, will earn foreign exchange money and create a very large number of long-term, well paid jobs for Oz workers, both skilled/unskilled, with only very small quantities of mild waste remaining at the end of this process.

\$637 billion pa, can be earned, by the provision of adequate water, guaranteed by our new technology to produce quality food production, which when properly processed, and marketed, has a seven day shelf life; aquaculture, dairy products, fresh fruit and vegetables, pork, beef, fat lamb and poultry, etc, directed to our northern neighbours. Quality Oz food, produced by best continuity of production process, by adequate water, from stream flows similar to the Rhine River. We can have guaranteed food supply exports, long lead times, for 20 northern countries, with 3.5 billion people.

10% of our northern neighbours is 350 Million (M) people; food at an average 0.5 Kg, a person a day @ \$10 Kg is 175 M. Kg, or 175,000 Tons a day; 18, **Fast Cat Ferries** (FCF's) earn \$1.75 Billion (B) a day or \$637 B. pa, by transporting 63.88 M. ton pa.

We need 72 fast 240 Kh trains per day, carrying 2,500 tons per train, with four trains to fill just one of our **10,000 ton FCF's**, which with 18 FCF's departing per day, shifts 175,000 to 180,000 tons per day, of seven day shelf life food from our northern ports. With four trains per FCF, careful design of dock loading facilities can position the trains on both sides of the FCF's, and multi loading provisions need to be applied.

10,000 ton FCF's, hold max. 200, 50 ton aluminium refrigerated containers. (ARC's) From our northern ports to Singapore and return, in five days.  $18 \times 5 = 90$  ferries required for non-stop operation, with 10 spares to total 100 ferries. So 18 ferries shift 180,000 tons per day; each ferry is loaded in one hour by 10 fork lifts unloading and loading 400 containers per hour, (one empty and one full, for a 3 minute load turn around time), with 10 fork lifts unloading 200 empty ARC's and loading 200 full ARC's, in one hour. The FCF strategy has our food in Singapore in under three days.

Because of trip time variation, caused by bad weather etc, we must allow for multi loading facilities. Two ferries loading simultaneously need 20 fork lifts, and 18 dual loading ferries need nine hours to finish loading; remember the empty ARC's have to be unloaded first. It may be possible to unload each ARC, from the FCF to the train, and then pick up a full container from the train back to the FCF. 100 FCF's holding 200 ARC's per one FCF, is 20,000 ARC's, with perhaps another 20,000 being filled and emptied at dispatch and pick up points. The project may require more than 40,000 ARC's. Fast rail feeders need a maximum of 16 hours to turn round, for travel, loading/unloading from the Darling Downs (DD) and Murray Darling Basin (MDB) with Echuca on the Murray the maximum travel distance to northern ports.

We must have systems/technologies for new stable jobs. Our Lord Jesus Christ said: "I came, that you may have life, and have it more abundantly." If we use the brains given to us, and rise to the occasion, we can make the most of our opportunities.

National, international financial regulation between Commonwealth, States and global financial markets, need effective national and global **cooperation**. Properly constituted Law is essential, for projects directed to conclude for the common good, upholding **individual freedom and fairness**, designed for many, not just the few.

Case 1.: The Australian Financial Review (AFR) p. 63, 3.7.08, said "*Poverty [is] not reduced by foreign aid*", Hristos Doucouliagos, professor of economics, Deakin University school of accounting, economics and finance. "**But when the empirical literature on foreign aid is examined, a clear and uncomfortable pattern emerges; after forty years and billions and billions of dollars, -- evidence shows that aid has not been effective in alleviating poverty**". Development aid programmes, begun in the 60's were meant to generate development. **Instead they have generated a large body of foreign aid academic literature**".

**We have little water, as Mr Rudd is surrounded by "academic literature."**

Case 2: "Peter C. Kenny's drought policy review" created no water. **Why? Where is our low cost water or cooperation? "Government, properly constituted, -properly directed is for the common good embracing both individual freedom and fairness, -- designed for the many, not just the few."** Rudd.

(See "Legal action threatens Murray-Darling rescue", AFR, p.3, 10.02.09. "The basis of Mr Shears's claim is that under a federal-state agreement, groundwater licences have not been acquired under the "just terms" the constitution requires for any state acquisition of private property. The NSW government was offering 55 irrigators,- one 24<sup>th</sup> the open market rate for water trading in lower Lachlan." 4%, as 1.Ml is \$1,200.)

To solve GFC/CV, new smart ideas, initiative and vision are needed, for profitability.

Before the full misery hits, "our economy, - badly weakened, a consequence of greed and irresponsibility on the part of some, but also our collective failure to make hard choices and prepare the nation for a new age."(line 23, President Barack Obama's inaugural address)

"Ziggy Switkowski, chair- of A.N.S.T.O., recently quoted US president-elect Obama as saying 'it is unlikely that we can meet our aggressive climate change goals if we eliminate nuclear power as an option.' Who's right: Obama or Rudd?" (ALP hypo. hurts India, Michael Baume, Australian Financial Review, (AFR) about ? 12.12.08)

"The Rudd government's fear of voter desertions means it is repeating the mantra that it will not export (U<sup>308</sup>) to India - as it refuses to sign the Nuclear Non-proliferation treaty. A combination of environmental hypocrisy/potentially damaging trade/diplomatic consequences of India's fiasco underlines the basic absurdity of labour's uranium policy."

*"Nuclear fission energy is as inexhaustible as those energies usually termed 'renewable', such as hydro, wind, solar, and biomass. But, unlike the sum of these energies, nuclear fission energy has sufficient capacity to replace fossil fuels as they become scarce.*

*Replacement of the current thermal variety of nuclear fission reactors with nuclear fission fast reactors, which are 100 times more fuel efficient, can dramatically extend nuclear fuel reserves. The contribution of uranium price to the cost of electricity generated by fast reactors, even if its price were the same as that of gold at US\$14,000/kg, would be US\$0.003/kWh of electricity generated. At that price, economically viable uranium reserves would be, for all practical purposes, inexhaustible.*

*Uranium could power the world as far into the future as we are today from the dawn of civilization – more than 10,000 years ago. Fast reactors have distinct advantages in the siting of plants, product transport and management of waste."*<sup>1</sup> ("Nuclear fission Fuel is Inexhaustible", Lightfoot, H.D., Manheimer, W., Meneley, D.A., Pendergast, D., Stanford, G.S., Global Environment Climate Change Centre, McGill University, EIC Climate Change Technology Con., 2006 IEEE, Ottawa, ON, Canada, May 06, ISBN: 1-4244-0218-2, pp. 1-8.)

[http://www.computare.org/Support%20documents/Fora%20input/CCC2006/Nuclear%20Paper%2006\\_05.htm](http://www.computare.org/Support%20documents/Fora%20input/CCC2006/Nuclear%20Paper%2006_05.htm)

**(See also "The Living Soil and Haughley Experiment", E B Balfour.) "My subject is food, which concerns everyone; it is the soil, which concerns everyone – even if they do not realize it – and it is the history of certain recent scientific research linking these three vital subjects."**

**"The Text.** -- *In 1939 the Local Medical and Panel Committee of the County of Cheshire, representing some six hundred general practitioners, issued a 'Medical Testament'. This testament, in our considered opinion, ranks as an historic document. It declared forthrightly that, whilst good progress had been made towards the second objective of the National Health Insurance Act of 1911, in so far as postponement of death could be regarded as evidence of the cure of sickness, no such progress could be observed in the*

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<sup>1</sup> **Note particularly:** At 3.0, p.4, Thermal and fast nuclear reactors, At 3.1, p.6, Thermal reactors and 3.2 Fast reactors, At 3.3, p.6, Thermal reactors versus fast reactors, and at p.7, para.2, line 7, "The reactors could be multipurpose --- for process heat and desalination, as well as generating electricity" (Manheimer, 1999, Wade, 2000, Feiveson, 2001)



*attainment of the first objective – presumably of at least equal importance – prevention of sickness. It affirmed that the basis of such prevention was essentially nutritional, its signatories stating that their daily work brought them repeatedly to the same point:*

***“This illness results from a lifetime of wrong nutrition.” E. B. Balfour.***

**Health, whether of soil, plant, animal or man, are one and indivisible; it is not a state but a dynamic process, and any study concerning it must therefore be qualitative, not quantitative. Basic relations exist for health, food, soil and science. Lady Eve Balfour**

***“Plants are the key to remove carbon from the air” Landline, ABC,15.2.9***  
see, “Carbon Accreditation Scheme”, Dr Christine Jones, Chicago Futures Exchange.

(See also, Cooperation, p.295, SCRIPS PEOPLE LIVE, Claude M. Steiner)

*“About three thousand years ago, Moses descended from Mt. Sinai with the Ten Commandments. One of these Commandments was “Thou Shalt Not Kill.”*

*At the time it was a novel thought that one was not free to kill one's fellow human beings. To confirm to it people had to believe that it was a command from God Himself.*

*Today we may be coming to a point in history where sanctioned killing will not only be permissible but it may actually come to a virtual end. When killing torture are no longer allowed in the affairs of people, the next step may be to get rid of lying and deception. And eventually, perhaps, the misuse of psychological power – power plays – will be given up by people as well.*

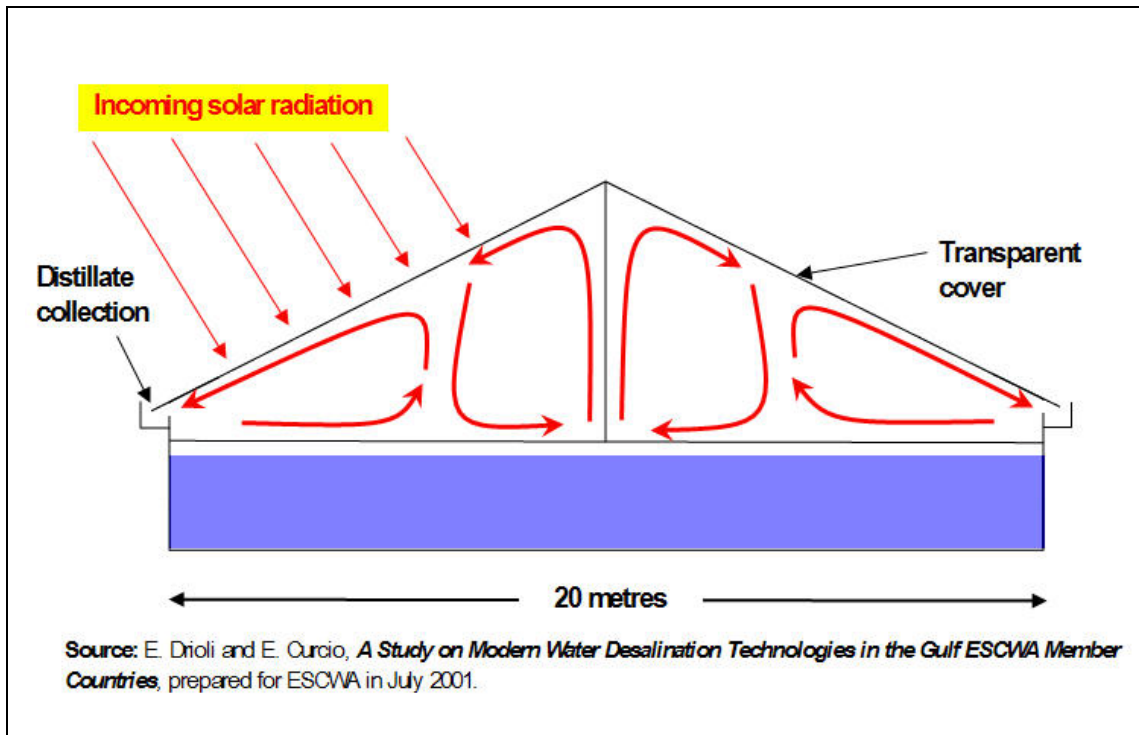
*Perhaps people can come to believe everyone is born equal, and equality will not only be talked about, but be reflected in feelings and actions of most people. Cooperation between autonomous, independent powerful human beings can then be the rule rather than an exception.”*

We need **adequate water** for the four eastern states, the Murray/Darling and lakes, to beat **droughts/bushfires** now catastrophic because of CV; If 1,500 M. ac.ft. pa (1.8 M. Gl's) of new water cost one cent/100M<sup>3</sup>, (\$1/Gl) and 25 Plants, each produce 60 M. ac.ft. pa, each with 100 sq miles of **SAFE, SOLAR/HYBRID 4<sup>th</sup> GENERATION NUCLEAR VACUUM DESALINATION POWER STILLS**, we survive.

We face real challenges as our leaders spend money for no return; “that while the orthodox system can find plentiful supplies of money to finance ‘opportunities for investment’, such as currency speculation, property booms, the building of casinos, sporting stadiums, grand prix events and so on, credit cannot be found to rescue Australia's farmers from a clearly looming crisis. This is a measure of the intellectual and moral irresponsibility in which this country is drowning.” (“Bleak forecast for our farmers”, BA Santamaria, TWA, 6/7.09.97)

We spend money like a drunken sailor, go into debt for no sure result and have little security from our leaders. Mr Turnbull should “wake up Australia”, to reduce world debt; find alternative sources of wealth, to the old farm/quarry mentality, subject to commodity price vagaries, tourist destination and imprudent property speculators.

## Appendix C. WATER DESALINATION; S/H/S/4<sup>th</sup> G/N/V/D,S's.



**Figure 1:** When the salt in the sea water being distilled in the still has reached 7%, i.e. twice the salt content of normal sea water (3.5%) it is discharged to the ocean, without any ill effect to sea grass or sea-animals. However if this percentage proves unsatisfactory, it can be varied by timing, to give either an increase or decrease of salt content. Present indications suggest that the used sea water salt content should not exceed twice the normal range, when released back to the ocean, to avoid any ecological problems. The whole process is automatic, with the still water containing the high content salt returned to the ocean, and the fresh sea water fed into the still at the same constant rate, from large reservoirs replenished by the tides. Normal distillation commences at 80° C; vacuum distillation at 60° C, for better production.

The pipes which go through the still basins, bring the heated helium gas from the power turbine to heat the water in the stills, for constant water desalination production 24/7.

“The greenhouse-type flat solar still is simple to build and operate (see figures 6.14 and 6.15). The still consists of an airtight space in which evaporation and condensation occur simultaneously. Solar radiation penetrates this space through a tilted transparent cover and is partially absorbed by the water in the basin below. The bottom of the basin is lined in black to promote absorption. The water is heated to a temperature higher than that of the transparent cover but lower than the water's boiling point (normally 50° to 80° C). Convection currents are formed and the air-vapour mixture moves upward, where it comes in contact with the cover and cools, becomes saturated, partly condenses, and drips back into the water being treated. Distillate forms a thin film along the inside of the transparent cover and is collected in gutters.”<sup>2</sup>

<sup>2</sup> L. Rizzuti et al (eds.), *Solar Desalination for the 21<sup>st</sup> Century*, 207-214.C 2007 Springer, p. 128.

**Appendix D. "LEADERS REFUSING HYBRID SOLAR / NUCLEAR / VACUUM DESALINATION/POWER GENERATION, WILL MAKE LIFE HELL ON EARTH".**

**AUSTRALIA** needs to act on good advice, for best options for low cost power/water, to be up with the competitive World leaders. If Uranium sells @ US\$100 pound, US\$224,000 ton, A\$70 pound, A\$156,800 ton. (70% A.\$ to U.S.\$) Our lease earns **A\$31,360 ton pa** paid in advance on a 5 year lease; A\$156,800 ton in 4 years. A 200 ton plant of U<sup>308</sup> @ A\$6.272 m. per year is A\$31.36 million in 4 years, on a 5 year lease. We may barter or lease 200 tons of U<sup>308</sup>, for 200 construction workers, (CW's) @ \$31,360 pa, or @ \$50,000 pa for 125 CW's.

Spent fuel must be returned to the Australian Nuclear Authority, (ANA) and re-processed by Australia's Nuclear Repository Authority (NRA) incorporated within ANA. NRA's "fast breeder reactors", reduce waste to negligible proportions and keep control of a dangerous product. Only very small quantities of mild waste remain at the end of this process. ANA must be set-up with one Commissioner (like the Snowy) with adequate power to succeed.

100 plants using 20,000 tonnes of U<sup>308</sup> leased to China, for Solar / Hybrid / 4<sup>th</sup>gen. Nuclear / Vacuum / Desalination / Electricity Power Plants (each using 200 tonnes of U<sup>308</sup>) earns A\$627.2 m. pa, A\$3.136 billion in four years, on a five year lease, to produce nine million megawatt hours (MWh) of electricity and 1,000 Giga Litres of Desalinated Water pa. Saving 910m. tonnes of atmospheric CO<sup>2</sup> pollution relative to coal on current technology. (CT) 100 plants can provide 20,000 CW's pa @ \$31.360 pa, or 12,544 CW's @ \$50,000 pa.

1,000 plants using 200,000 tons of U<sup>308</sup> in a five year lease, provides \$6.272 billion pa, to pay 200,000 CW's. @ \$31,360 pa, or 125,440 CW's @ \$50,000 pa. In four years the five year lease of 200,000 tons of U<sup>308</sup> provide \$6.32 Billion in 4 years, for 200,000 CW's , subsidising the cost of each by \$31,360 pa to get our show on the road.

A million tonnes of U<sup>308</sup>, on 5 year lease, is \$156.8 billion in 4 years; 5,000 plants to employ a million construction workers in the International Interest. It provides guaranteed water for continuity of production, bushfire control, funds new rail systems, fixes gridlocked traffic and embraces "Fresh ideas for Australia's Future"; Health, Education, Transport and Water. China paid \$804 m. in 06, for 60 x 240 Km trains. 60 x 340 K/h trains are \$909 million.

A million tonnes of U<sup>308</sup> over 5 years, provides 45 Gw hours of electricity and 50,000 Gl of water pa, saving 45.5 Giga Tonnes of atmospheric CO<sup>2</sup> pollution, relative to using coal on CT.

Coal 2010 exports estimate: - \$1240 million will be invested in rail/port infrastructure in 2 years to 2007/08, to supply coal. By 2010, 234.9 million Tonne of Qld. coal worth \$29.24 billion will put 646 Giga tonne of CO<sup>2</sup> into the atmosphere. 1 ton of black coal emits 2.75 tonnes of CO<sup>2</sup>; 22 tonnes of Uranium saves 1 million tonnes of CO<sup>2</sup>. 1 million tonnes of U<sup>308</sup> earns \$31.36 B. pa, \$156.8 B over 5 years; after mining, puts zero CO<sup>2</sup> into the atmosphere.

Qld Gov. advertisements on p.42, 9-10/6/07 CM, signed by Peter Beattie, Premier, forecast a 260% increase in Qld coal exports in 14 years. No details of coal type were given, or mention made of so called "clean coal technology", **WHICH IS A HOAX**. Coal can be converted to super-clean petrol/diesel by Toffler's process; waste buried. See NCC pamphlet Ethanol @ 10% petrol, 15% diesel uses 90% of Qld sugarcane to mirror the USA corn revolution.

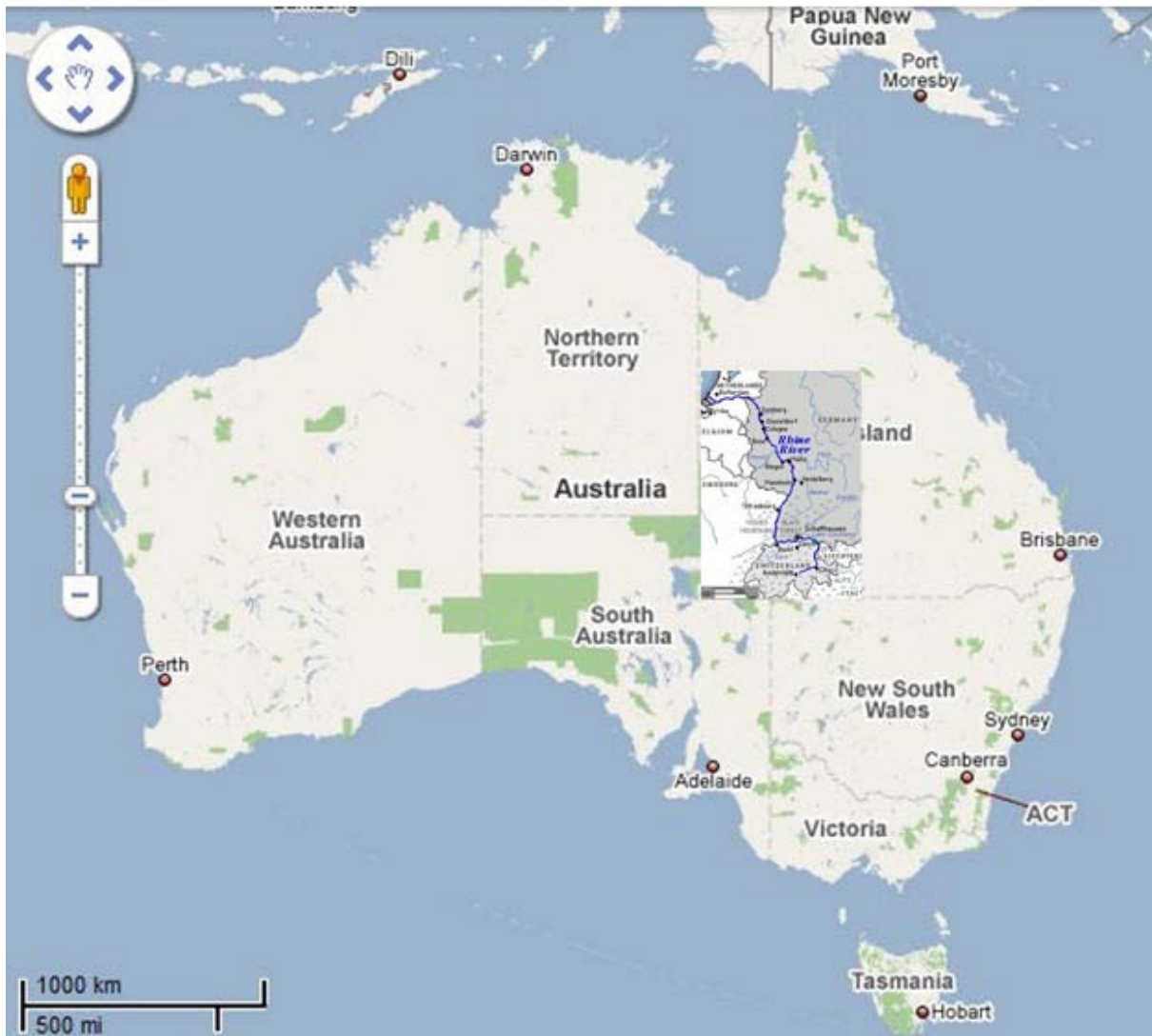
## Appendix E:



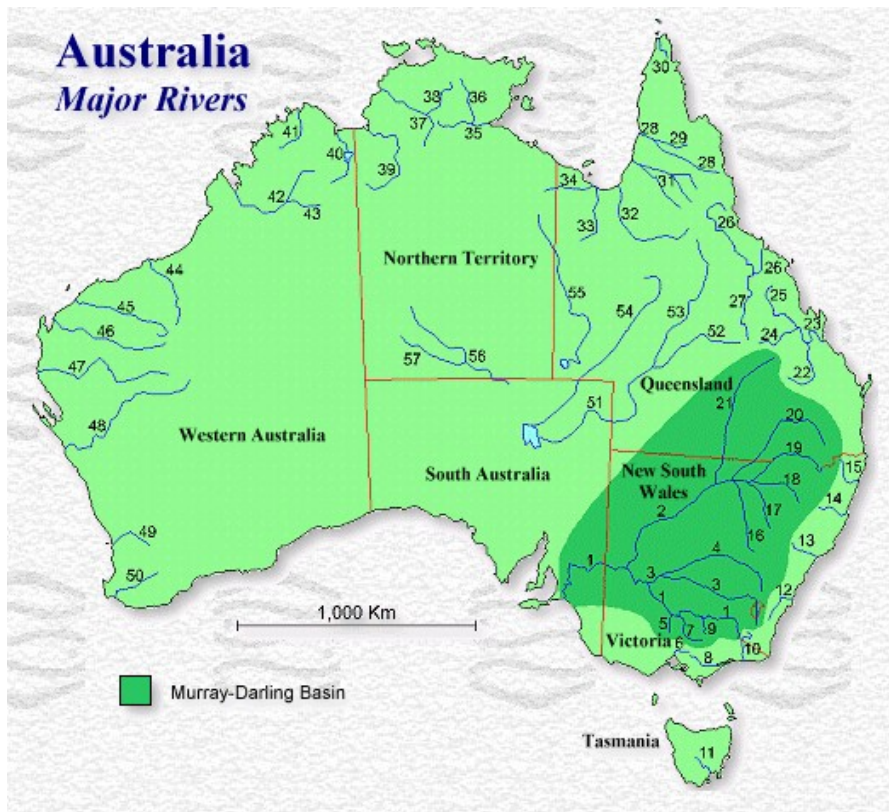
Map 1:



Map 2:



Map 3:



**Map 4:** See key below for names of the rivers.

Source: <http://www.nativefish.asn.au/ozrivers.html>

- |              |              |                  |
|--------------|--------------|------------------|
| 1 Murray     | 2 Darling    | 3 Murrumbidgee   |
| 4 Lachlan    | 5 Campaspe   | 6 Yarra          |
| 7 Goulburn   | 8 Latrobe    | 9 Ovens          |
| 10 Snowy     | 11 Derwent   | 12 Shoalhaven    |
| 13 Hunter    | 14 Macleay   | 15 Clarence      |
| 16 Bogan     | 17 Macquarie | 18 Namoi         |
| 19 Barwon    | 20 Condamine | 21 Warrego       |
| 22 Dawson    | 23 Fitzroy   | 24 Mackenzie     |
| 25 Isaac     | 26 Burdekin  | 27 Suttor        |
| 28 Mitchell  | 29 Alice     | 30 Jardine       |
| 31 Staaten   | 32 Flinders  | 33 Leichhardt    |
| 34 Nicholson | 35 Roper     | 36 Wilton        |
| 37 Daly      | 38 Katherine | 39 Victoria      |
| 40 Ord       | 41 Drysdale  | 42 Fitzroy       |
| 43 Margaret  | 44 De Grey   | 45 Fortescue     |
| 46 Ashburton | 47 Gascoyne  | 48 Murchison     |
| 49 Swan/Avon | 50 Blackwood | 51 Coopers Creek |
| 52 Barcoo    | 53 Thompson  | 54 Diamantina    |
| 55 Georgina  | 56 Finke     | 57 Palmer        |

## **Appendix F:**

# **What's not made in China?**

Is it possible to get through the day without Chinese-made imports? We give it a try

Sunday, November 11, 2007

By Cristina Rouvalis, Pittsburgh Post-Gazette

Source: <http://www.post-gazette.com/pg/07315/832952-85.stm>

Spend just one day free of anything made in China.

No problem, I figure. How rough could it be?

My answer comes even before I am fully awake. For starters, I yank my head off my made-in-China pillowcase, dump coffee out of my made-in-China mug, and eat bread without browning it in my made-in-China toaster.

The first two jackets I grab out of my closet are made in China, too, so I reach for a vintage one, made in the 1940s before America outsourced much of its manufacturing.

My social experiment is even more disorienting when it comes time to dress my 6-year-old daughter for school. She wails in protest as I veto her favourite three skirts, all-made-in-China bargains. Her Disney princess backpack and lunch box also are from China, but I look the other way to avoid a made-in-America meltdown.

"Why is everything made in China?" she grouches.

It's a question I ask myself this day when I decide to see how hooked I and other bargain-crazed American shoppers are on overseas products.

What has me rooting out made-in-China labels -- as opposed to common household products made in sweatshops in Sri Lanka or Vietnam or Indonesia -- are a rash of problems associated with Chinese imports. Some 21 million Chinese toys have been recalled because of lead contamination and other safety hazards, while tainted pet food caused widespread illness among cats and dogs earlier this year, prompting the Food and Drug Administration to restrict some pet-food ingredients from China.

In Palm Bay, Fla., worries over Barbie dolls, Thomas and Friends trains and other staples of childhood have led the mayor to call for a ban of all made-in-China products.

So what would happen if we banned all products imported from China, estimated at \$20 billion a month?

My one-day experiment suggests that our materialistic lives as we know them would change rather drastically.

I am no techie, but I do need a phone and computer as a reporter. I can't use my home phone because the battery is made in China. My home computer and work computer are unusable because of the

Rob Lemon's new water plan to Senate Standing Committee on Environment, Communications and the Arts.

made-in-China mouse. And the Post-Gazette laptops, IBM Think Pad T61, are made in China. So my only option is to scribble out my story by hand on a made-in-the-USA legal pad.

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### **Are consumers changing their plans?**

Are Americans consumers planning to change their spending patterns in the wake of headlines over recalled products made in China? Yes and no, according to a survey of 4,000 shoppers by TNS Retail Forward in Columbus, Ohio. Shoppers were asked to pick the statement that best described their behaviour regarding products made in China:

- **I avoid buying products from China when I can:** 29 percent
- **I'm selectively not buying certain products from China for now:** 17 percent
- **I haven't changed my shopping behaviour:** 15 percent
- **I'm actively boycotting buying products from China until I know they are safe:** 5 percent
- **I won't buy products from China again:** 6 percent
- **None of the above:** 30 percent

Source: TNS Retail Forward Shopper Scape, September 2007.

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Nah. So I decided to shop -- err, I mean, do research -- for my story.

I head to Target, my favourite place for cheap chic, where a sign on the wall proclaims "Fabu-less." No wonder -- all the clothes I like are made in Vietnam, Indonesia (including a sporty black Isaac Mizrahi jacket) and, primarily, it seemed, China.

My mission is to find tights for my daughter. Amid a sea of Chinese-made Circo brand tights, I track down a pair of black Xhilation tights made in the USA for only \$4.99.

I am so excited that I thrust them in the air triumphantly, holding back the urge to scream out, "USA! USA!" like a spectator at the Olympics.

So what if they are toeless tights? The ordeal of finding socks is left for another day. I start grabbing one in every colour until I realize an identical brown pair at the same price is made in China.

### **Whose fault is this?**

OK, so am I going crazy here?

A trip to the toy department for some early Christmas shopping is even more maddening. All my daughter's favourites -- My Little Pony, Little Pet Shop, many crafts -- are made in China. I find a fairy jigsaw puzzle for about \$5 that was made in the USA. An identical puzzle in a sturdier metal container is even better, but alas, it is the same price and made in China. Go figure. The puzzle with the chintzier box goes into my cart.

But of course, a discount store is brimming with overseas labels. What do I expect? Cheap chic without cheap labour?



Rob Lemon's new water plan to Senate Standing Committee on Environment, Communications and the Arts.

So am I part of the problem as a member of the want-more-stuff-for-practically-nothing masses? (A recent study did say Americans, even the upper crust, are more bargain-conscious than other nationalities.)

After all, I have that annoying habit of answering a compliment on an article of clothing with a boast such as "Only \$20 at Marshalls." I stick to the \$10-rule for most of my daughter's clothes, something I had thought of as a virtue.

"I do think American people are culpable for always seeking the cheapest products without stopping to think about it and imagining the conditions" in overseas sweatshops, says Charles Kernaghan, director of the National Labor Committee, a New-York based human rights advocacy group. He says young Chinese women often work 14 days in steaming hot factories and are screamed at by bosses who cheat them out of wages.

But he doesn't come down that hard on me. He slams companies such as Mattel for what he calls protecting the Barbie doll from trademark infringement, but not the worker making the doll. He also criticizes political leaders for the lack of regulations and religious leaders for the lack of outrage.

Plus, Mr. Kernaghan sympathizes with people looking high and low for made-in-USA labels. He wears old Hathaway shirts because the new ones are made overseas, and recently bought a pair of made-in-USA pants for \$150.

It's not just clearance-bin bottom feeders such as me who are snatching up overseas products.

A side trip to Saks Fifth Avenue shows that shoppers can pay dearly for a made-in-China label. A hip, patterned dress by Diane von Furstenberg costs \$345, even though it is made in China. As is an elegant gray Robert Rodriguez coat for \$649, which was just reduced, but still too rich for me. (But the store also stocks many chic made-in-the-USA clothes including an adorable Nanette Lepore jacket.)

Despite the cheap stigma, many high quality clothes are coming out of China, says Howard Davidowitz, a New York retail consultant.

"I sit there in meetings with merchandisers and they are showing me products made in China. Forget the fact if they were made in America, they would cost 50 percent more, but they are showing the quality is better. You are not just getting shoddy merchandise. American shoppers are pretty smart. They are not going to buy a piece of junk."

The made-in-China garments I am drooling over in Saks are anything but junk. They are beautiful fabrics and great cuts. But looking at labels kills the joy of shopping.

So I go home to do something totally un-materialistic -- exercise. It sounds simple enough, except I cannot use my new Nike running shoes, which are made in China. Even my flat, very comfy Aerosoles come from China. In fact, the only shoes I can put on my feet are an old pair of Arche shoes made in France, which are very comfortable, but have two-inch heels. Great for the office, but I can't run in these babies. So I try pedalling the exercise bike in bare feet.

Instead of an endorphin high, I get sore feet -- a trivial complaint compared to the leg numbness that sweatshop workers endure. But it's enough to convince me to bag it.

Rob Lemon's new water plan to Senate Standing Committee on Environment, Communications and the Arts.

So I pick up my daughter at an after-school program and find out that despite my best efforts, she has just done spin art on a made-in-China machine.

Making dinner is the easiest part of the day as made-in-Italy tortellini (no surprises here) are boiled in a Farberware pot that was so old that I couldn't tell where it was made. They are arranged on Pier 1 plates, made in Italy, but my daughter's animal plate and Franklin cup are both made-in-China nos. "We can't do anything," she says.

The evening craft hour is even worse. All her favourites -- Colour Wonder Mess Free Paint, Alex Finger Paints, Chicken Soup beads -- are made in China. No. No. No.

"Can't we just not tell your boss?" she pleads. "He's not here."

No, sweetie. That would be cheating.

But she is delighted to grab some foam clay stored in a plastic bag, the box long gone, all signs of country of origin long destroyed.

I let her play with it in the sweatshop equivalent of "I don't know and I don't want to know."

Everywhere I look is another label, taunting me. I become so label-crazed that I grab my husband's fleece jacket by the back collar. He gets a pass because it says made-in-Indonesia, not China.

"You are losing your mind," he says, waving me away.

He's right. So I have a glass of made-in-America merlot and pet my born-in-Pittsburgh cat before putting my head on an uncovered pillow, calling it a very strange day.

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## Appendix G:

# How Germany handles interest rates

By B.A. Santamaria

3 May 1997

Source: [http://www.newsweekly.com.au/articles/1997may03\\_germany.html](http://www.newsweekly.com.au/articles/1997may03_germany.html)

**The Howard Government is obviously under considerable pressure particularly in country electorates. Superficially the most pressing challenge arises from the turmoil occasioned by the High Court's 4-3 verdict in the Wik Case, which has resulted in the first credible threat by the National Party to terminate the coalition.**

The real problem, however, goes far deeper. The disillusionment of rural voters arises from the visible disintegration of rural communities throughout the nation, as a result of the closing down of Commonwealth and State services, of hospitals and health facilities, of banks, schools and shops in all country districts. Within the past two decades, rural Australia has lost 40% of its population. This physical disintegration of families and rural communities exacerbates the factors leading to the loss of social and moral cohesion throughout Australia.

The present Government is as much a party to this disintegration as was its predecessor. Reduced to 100,000 rural holdings, compared with over 200,000 in the 1960s; with a massive rural debt of approximately \$17 billion; interest rates at around 15% p.a.; both coalition parties are losing the sympathy and support of the very country people who voted so overwhelmingly against the Keating Government in the last election. There are many other contributing factors, but the most important is the rural interest rate, which makes it impossible to recover from climatic factors like drought, or sudden market failures like wool.

What a serious Government, with a serious interest in governing, can do is illustrated by the German Government. As a result of the transfer of many of the plants of some of the largest German companies to the low wage countries of Eastern Europe, Germany's has risen to almost five million. But without the provision of low interest funds to create new firms and to strengthen those which already exist by Germany's long-term development bank, the situation would have deteriorated even more rapidly.

This bank is the Kreditanstalt für Weideraufbau (KfW). The KfW's task is to supply financial support for small and medium size enterprises, both industrial and agricultural, together with the financing of public works programs. Backed by the Government, it enjoys an AAA credit rating. As well as providing funds for infrastructure improvements, environmental protection and housing modernisation, the KfW supports banks in Central and Eastern Europe.

The bank's capital is 1 billion deutschmarks or \$A770 million. (Further figures will be expressed in \$As). 80% of this capital is held by the Federal Government and the remainder by the Lander (States). It is thus a Government bank, as the Commonwealth Bank once was in Australia before it was "degutted" and finally sold. At the end of 1995, the KfW's capital and reserves - in Australian dollars - amounted to over \$6.8 billion. Its balance sheet tops \$A192 billion making it one of Germany's larger banks.

## "EQUALISER" FOR SMALL FIRMS

Among its other roles the KfW acts as an "equaliser" in providing cheap credit for smaller businesses whose sole credit option is the local branch of a major bank.

The KfW acts as an intermediary, using its gold-plated credit rating to get cheap funds which it then channels to small enterprises. Cheap money and the generous loan conditions which are attached, means that German business has a great advantage over competitors in other countries.

At a press conference on January 30, 1997, KfW management provided details of the bank's operations in 1996.

The KfW committed loans, grants and guarantees of \$A39 billion, an increase of 20 percent on the previous year. It lent \$A14.3 billion to industry, \$A7.7 billion for housing and \$A3.2 billion for "community infrastructure" These loans supported an investment volume of \$A54 billion which created or secured the jobs of 1.2 million Germans (250,000 of which are in the former East Germany).

According to the bank, its "Program for Small and Medium-sized Business" serves the long-term financing of investments at a favourable interest rate. The special advantage for the borrower is that its loans are long-term and that the interest rate is fixed for the entire term and thus constitutes a reliable basis for his calculations.

On February 7, 1997, the interest rate for investments in West Germany, fixed for the entire term (usually up to 10 years) was 4.75% The rate in the new Lander (what was East Germany) was a little less, 4.5%. Such loans carry a two-year grace period before capital or interest payments have to be made.

For investments in real estate and construction, a 20-year loan (with 3 grace years) is available with an interest rate of 5.25 percent in the old states and 5 percent in the new.

The impact of the KfW on the small and medium-sized business sector has been and remains enormous.

Germany, for instance, dominates the world's precision tooling trade; and the German precision tool industry is dominated by family firms. It is difficult to see how they could have succeeded without their ability to access cheap funds to start up and later to expand.

Whether one looks at Germany, Japan, Singapore or Taiwan, the ability to finance infrastructure, housing, small business and agriculture at 5% or less is the key factor in explaining their success and Australia's failure. The most recent figures released by the Bureau of Statistics show that employment in Australia fell by 34,000 between February and March, of which the greater part were full-time jobs.

It ought to be perfectly clear that unless - as far as the availability and cost of credit is concerned - Australia can place itself in a similar situation to Germany's, no recovery is possible.

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R. A. Lemon. 19.02.09. †

## **APPENDIX : H.**      **TIME TO REPLACE LYING STOOGES WITH TRUTHFUL LEADERS.**

### **“Confronting the lies about agriculture.**

Free market lies about agriculture have led to policies that seriously damage our rural industries. For over two decades, farmers and the public have been told:

**LIE # 1: The primary market for rural product is the export market. Hence, farmers have to accept the National Competition Policy agenda to deregulate agricultural industries, tariffs, irrigation water, etc, to make farmers become more efficient, to compete better on world markets.**

In reality, the primary market for most of Australian agriculture is the domestic market. As Dr Mark McGovern, an economist with the Queensland University of Technology, has shown, we don't export 80 per cent and consume 20 per cent of rural product. WE export around 30 per cent and consume about 70 per cent.

Even for most commodity export industries – like meat, wheat, sugar and dairy – their biggest single market is the domestic market.

**LIE # 2: If only Australia can lead the way for the rest of the World to cut subsidies to farmers and adopt free-trade policies, the rest of the world will follow and our farmers will benefit from a huge boom in exports.**

Hence, in the late 1980s, Australia led a group of developing nations to form the Cairns Group, to pursue the abolition of all subsidies and promote free trade in world agriculture. This was done in the run-up to the evolution of the General Agreement on Tariffs and Trade (the GATT) into the World Trade Organization. (WTO)

This campaign failed because both the GATT (1947) and the WTO (1994) treated agriculture as separate from all other forms of production and trade. They recognized that farmers had no market power over the price of their inputs or their outputs, leaving them vulnerable to exploitation, particularly by processors and powerful supermarkets. The WTO Agreement on Agriculture (1995) confirmed five areas in which governments could assist farmers.

Today, Australia is still pursuing free trade in world agriculture, when the US, EU and Japan say they want to expand production and protect their farmers. It's not going to happen.

**LIE # 3: Australian farmers must become more efficient and competitive to succeed on the world market and compete with cheap imports.**

Yet *Agricultural Policies in OECD Countries Monitoring and Evaluation, Highlight a 2003* report in the developed world, that Australian farmers receive the lowest subsidies and the lowest farm-gate price, and our consumers enjoy the cheapest food.

In fact, farmers in other developed nations have a farm-gate price 32 per cent higher than Australian farmers, and their consumers pay 37 per cent more for their food than Australians.

**LIE # 4: Quarantine cannot provide absolute security against imported diseases; if we want other countries to buy our food, we have to accept their imports or they will challenge our quarantine rules in the WTO.**

Yet the WTO states that Australia can have its quarantine bar as high as it chooses. It says, "... with Australia heavily dependent on agriculture and a major exporter of agricultural commodities and agricultural food products, which receive relatively little government assistance and are sold at world market prices, these [quarantine] measures are believed to be necessary to ensure that Australia's reputation as a reliable exporter of high-quality agricultural products is not jeopardised by pests and diseases."(WTO press release, September 25, 2002.)

**LIE # 5: Australia has to accept the closing of more and more of its fishing and timber industries for the sake of the environment.**

As more of Australia's managed, sustainable timber and fishing industries are closed down, we are importing from countries where unmanaged exploitation of forests and reefs is causing major environmental destruction.

**LIE # 6: Farmers are only 3 per cent of the economy; that is why they have no political voice.**

Yet the Australian Farm Institute report, *Australia's Farm-Dependent Economy* (1995), showed that the farm-dependent economy – inputs, agriculture and output sectors – make up 12.2 per cent (\$72.4 billion) of the Australian economy and 17.2 per cent of the workforce. And how many times have farmers been told:

**LIE # 7: Why should taxpayers subsidise farmers?**

The question should be reversed. Why should farmers have to carry unrepeatable debts, get a second job, send their wives to work, use their children as unpaid labourers, and live on very low incomes to subsidise Australian consumers with the cheapest, safest food in the world? For 20 years, farmers have been told:

**LIE # 8: Farmers should diversify their production; get niche industries.**

But niche industries are by definition small with limited markets. They cannot replace large, commodity industries.

Australian farmers can produce anything. What they cannot get is a fair price for the products into the domestic market.

**LIE # 9: Australia needs only 25% the number of farmers we have today.**

Yet they now hear politicians saying that, if something isn't done soon, we will have a serious shortage of farmers in a few years time.

**This amended article originated from Pat Byrne. N.W. p.9, 16/7/2005"**

APPENDIX I. 30.03.09 Reprinted 28,09.09

Senator Heffernan, Chairman  
Senate Select Committee on  
Agricultural and Related Industries  
GPO Box 6100, CANBERRA ACT 2600.

Dear Senator Heffernan

Further to my submissions, may I offer additional evidence, for climate variation reversal by five essentials and provision for new low cost water in Oz? (See Appendix A re 5 essentials)

“The warnings of BA Santamaria, the NCC (& writer) over 25 years have proved dead right. Corporate, globalised capitalism has failed. It has led to an enormous concentration of economic power that have in turn manipulated governments into fatally flawed economic policies. These policies have led to the creation of huge national savings pools that have been leveraged to create massively inflated financial markets, which are now imploding.”

“The NCC's solutions are based on the principle of subsidiarity, of savings rather than debt based economies, of restoring balances into world trade through rebuilding domestic industries using specialist banking and trade policies.”

“Communism fell overnight, now economic globalisation is crumbling. This is the time for a new economic architecture, one rooted in the tradition of Christian social principles imbedded in the idea of Christian Democracy.” (Solving the economic crisis: what will replace the ideology of globalism? Patrick J Byrne, NCC National Vice-President.)

You raised the costs issue, in regard to my submission, but didn't give estimates or numbers of “real” farmers/graziers, who have no water for continuity of production (**COP**) in eastern states. (Qld, NSW, Vic, SA.) Indeed, lack of water and requirements for *average COP* in the Murray Darling Basin (**MDB**) and the lakes, is subject to debate, as is the *average* water “run off” in Australia. I indicated I find it hard to do mental conversion calculations, from Ac ft to Ml, etc; to “right”, wrong flawed statistics, if no one knows what the needs are is impossible and unviable. (See the INTRODUCTION, of “HOW I CAME TO WRITE THIS BOOK,” p.1 to 33, “Liberal-leaning but independent thinking,” p.2, High & Dry, Guy Pearse)

To know how many Australian farmers/graziers are required to make a real contribution to the world's future food/health needs, for 9.5 Billion people? Professor Lance Endersbee's “A VOYAGE OF DISCOVERY” give clues to realize. Humphrey Kempe's “The Astonished Earth”, gives a practical guide on how to achieve it. (Ken Yeomans, “Water for Every Farm”, Keyline; Peter Andrews “Australian Story”, ABC TV 13.07.09, are basic {Included 14.07.09})

If 4 m. ac.ft of water (4,934 Gl) supplies 32,000 farms with 500 acres for one 3in irrigation; for **COP**, if 23% is supplied by rain and 77% by irrigation, carrying capacity (**productivity**) is 7,500 sheep or 1,250 head of cattle pa, on **500 acres of irrigated pasture. (AIP)** If 1 ac.ft of water irrigates 4 acres a week for 40 weeks, (77% of the year) 10 ac.ft./acre/year is needed. If 16 m. acres are irrigated (32,000 x 500 ac) 160 m. ac.ft. pa, 10.67% of a planned 1,500 m. ac.ft (1.85 m. Gl.) is needed. If 55% of our planned desalinated water is allocated to 160,000 farms, each with **500 AIP**, or 80,000 farms each with **1,000 AIP**, 45% for the MDB lakes, bushfire protection, seepage, evaporation, aquaculture benefits for aboriginal enterprise to value add 60,000 years of environmental management experience.

A Bradfield scheme may give *average* water of 2,000 Gl; other east/west water redirection by the G. D. Range, a further *average* of 2,027 Gl. pa. (*Possibilities for inland Diversions of NSW Coastal Streams*, NSW Water Resources Commission, 1981. Then the most favourable five, high-yielding dams added 16% more water to the MDB's average flow.)

1. Voters want strategies for less pollution to implement fast climate change reversal. Five essentials; 1. Stop wasting water; 2. Solar, Hybrid, safe 4<sup>th</sup> Generation Nuclear, Vacuum Desalination, Hydro Electricity Plants 3. Reafforestation; 4. Top up our lakes so evaporation brings extra rain; 5. Geothermal Electricity generation, no pollution; **this means low, adequate carbon tax (ACT) of 1%. (Conditions apply) Reducing ACT from 5% to 1% to save 4% of business costs, keeping Australian business employment and production strong in the World.**
2. The Farming /Grazing community expect governments to supply **adequate water**, for **continuity of production (COP)** to provide a reasonable standard of living.
3. Australia is the driest inhabited continent on Earth with **the most variable climate**, and is more adversely affected by climate change, than any other Nation.
4. "Should the drought continue, the system will dry out with a **huge loss of wild life**. Prior to human intervention, this regular feast and famine occurred naturally on a far more regular basis than today. These rivers are not like European river systems, which have high constant flows from regular reliable rainfall. Rather, the MDB rivers form an extensive desert river system with large variations in annual flows."  
**"For example, where the Rhine River in Switzerland has a maximum flow (2,200 M<sup>3</sup>/S) that is only twice the minimum flow, the Murray River has a maximum flow 15.5 times its minimum flow and the Darling River 4,700 times its minimum flow"**. (Comment, National Civic Council, Dec. 2009.)
5. CSIRO's 1,000 year climate report, shows many droughts, one of 30 years.
6. **In drought constant desalination flows can make our Nation viable.**
7. **Permanent water will make a difference for "people of the Inland".**
8. **Australia's potential is almost unlimited if we can get government cooperation to do what must be done. With adequate water, we can earn \$637.827B.pa, plus 4% saved by ACT, and \$100B.pa in tourism by 2020:**
  - (a) **\$627.2 million pa from lease of 20,000 tons of U<sup>308</sup> @\$31,360 per ton pa, (enough for 100 plants) or \$156.8 million pa plus 15,000 Construction Workers (CW's) at \$31,360 pa for \$470.4 million to total \$627.2 million pa.**
  - (b) **\$200 m. by reprocessing 20,000 tons of U<sup>308</sup> @ \$20,000 a ton, now worth \$30,000 ton and suitable for another five year life span in a similar plant. The \$10,000 a ton extra funds go to fund the "coalition of the willing", (COW) run by the Australian Nuclear Authority, (ANA) incorporating the Nuclear Repository Authority plants, (NRA) estimated @ \$200 m. on a reprocessing volume of 20,000 tons pa.**



**(c) \$637 b. pa from sale of 63.88 million tons of seven day shelf life food to 10% of our northern neighbours, at half a Kg per day @ \$10 Kg for 350 million people, pa.**

**(d) 4% saved out of the Nations productivity, by ACT.**

**(e) \$100B.pa extra in tourism linked education, health services.**

8. (a) Mine uranium, using the private sector, such as Rio Tinto Ltd.

Grant miners generous tax benefits for U<sup>308</sup> supplied in the National interest. A ton of five year life U<sup>308</sup> fuel, now costed at \$31,360 when new, with higher values for reconstituted fast breeder reactor, ten year life fuel. Plants using 200 ton of U<sup>308</sup> now cost \$6.272 M. for five year fuel, \$1.2544 M. pa. 100 cost \$125.440 M. pa for 20,000 tons of five year U<sup>308</sup> fuel. We need 25 plants with **start up costs (SUC's) @ \$1 M pa per plant**, or less if we own our mines.

(b) Create new Uranium mines; start at \$500 m. investment for hot prospects.

(c) Build fast 240 to 400 K/h trains in Australia. 60 may cost one billion dollars.

(d) Fast trains from Echuca, built by UN teams by U<sup>308</sup> barter cost less; with heavy gauge high speed freight/passenger trains, of 240 to 400 Kilometres/hour.

(e) 40,000 x 50 ton Al. Ref. Containers (ARC's) cost \$25,000 each, or \$1 billion.

(f) 100 Fast Tri-marine Ferries est. by Austal Ships @ \$263M. each for \$26.3 B.

(g) Provide surplus funds for food and water security.

(h) Provide surplus funds for an AusBank. (See German KfW bank details)

(i) Provide surplus funds for rights of children.

(j) Provide surplus funds for Internet Filtering.

(k) Provide surplus funds for Carbon Trading at 1% tax; ACT.

(l) Provide funds to defend freedom of religion, family stability, to limit abortion and anti humanity crimes. To make the most of opportunities, act smart, use our brains, to create contented, happy, productive, wealthy and wise people.

(m) Provide for large Cooperatives for farmers, so business is conducted fairly. Ethanol production, to give sugar farmers and the nation opportunities. New sugar cane juice marketing given assistance. (See "Landline", 15.03.09)

**\$30B. SUC's creates 2M jobs and \$1T earnings, to lead the oil rich sheikdoms.**

Thank you for your extra work on Australia's Agricultural and Related Industries enquiry.

Kindest regards, Rob Lemon

## **APPENDIX J. Australia – Agriculture**

“Australia is an important producer and exporter of agricultural products and a major world supplier of cereals, sugar, and fruit. Arable land in 1998 comprised about 53.1 million ha (**131.2 million acres**), representing about **6.9% of total land area**. However, approximately 90% of the utilized land area is in its natural state or capable of only limited improvement and is used largely for rough grazing. Droughts, fires, and floods are common hazards. The area actively cultivated for crops is 6.9% of all land area.

**Lack of water the principal limiting factor, but unsuitable soil and topography are also important determinants. As of 1998, some 2,700,000 ha (6,672,000 acres) of land were irrigated**”. (Probably a mix of permanent irrigation, temporary irrigation; using perhaps 40.5 M ac ft [50,000 Gl] of water yearly.) “Agriculture has declined from 20% of GDP in the 1950s to about 3% in 2001. Agricultural exports, which accounted for 60% of Australia's exports in the 1960s, now account for 25%. Gross farm product in 1999/2000 was A\$28.5 billion. NSW, Qld account for half the total crop value”.

“Grain crops have been cultivated since the first year of European settlement. In November 1790, plantings around Sydney of wheat, barley, and corn totalled 34 ha (84 acres). Today, winter cereals are cultivated in all states. Three cereals are often grown on one farm for grain, green fodder, and hay for livestock. Most wheat, barley and about half the oats are grown for grain. The estimated wheat area sown for grain increased from 11,135,000 ha (27,515,000 acres) in 1986/87 to 12,200,000 ha (30,150,000 acres) in 1999/2000. Production of wheat in 1999/2000 was an estimated 24.8 million tons. Western Australia and New South Wales are the chief wheat-producing states. In 1999, Australia produced 4,360,000 tons of barley, 1,503,000 tons of oats, and 1,410,000 tons of rice. In 1999/2000, 1.2 million tons of potatoes were produced”.

“Sugarcane is grown along a 2,000 km (1,200 miles) stretch of coastal land in New South Wales and Queensland. About 95% of sugar production comes from Queensland. A normal crushing season is from June to December. The estimated 1999 harvest from 415,000 ha (1,025,000 acres), yielded about 36.9 million tons of sugar cane. The industry faces problems of excessive supply and price elasticity; sugar is sold primarily to Japan, the United States, Canada, South Korea, Malaysia, China, and Singapore. Although tobacco growing is a relatively small industry, it is important in some areas. In 1999, some 3,000 ha (7,400 acres) were planted with tobacco, and about 7,000 tons were produced”.

“Cotton has been grown in the coastal river valleys of Qld. for more than a century but on a limited scale, and it has provided only a small percentage of Australia's lint requirements. In the 1980s, successful development of cotton-growing areas in NSW and WA has resulted in spectacular production increases. In 1985/86, 685,000 tons of cotton were produced (almost triple the amount in 1979/80); in 1999, production amounted to 716,000 tons”.

“Australia's wide climate differences permit the cultivation of a range of fruits, from pineapples in the tropical zone to berry fruits in the cooler areas of temperate zones. Orchard fruit trees included orange, 7.8 million; apple, 9.7 million; pear, 1.5 million; and peach, one million. About 12.2 million ha (30.1 million acres) are cultivated for bananas and 4.8 million ha (11.9 million acres) for pineapples. Production of fruit in 1999 included (in thousands of tons): oranges, 470; bananas, 230; pineapples, 123; pears, 165; peaches, 90;

tangerines, 61; lemons and limes, 31; apricots, 20; grapefruit, 18; mangoes, 37; and plums, 27. Australia's wine industry is also growing; viticulture engaged 99,000 ha (245,000 acres) produced 1,112,000 tons of grapes for and winemaking, drying, and other uses in 1999."

**Carrying capacity varies enormously, because we have the driest inhabited continent on Earth, the most variable climate and are more adversely affected by the climate change. Maintaining and increasing Oz farm production is vital. If Australia maintains COP, by regular adequate irrigation, we win the race.**

**The RACE, is examined in Guy Pearce's book "High & Dry"; ( [highanddry.com.au](http://highanddry.com.au) )**

**"Guy Pearce's revelations about Australia's 'greenhouse mafia' made headlines. In *High & Dry* this Liberal Party insider shows why John Howard's climate change policy is reckless, how it came about, and who is behind it."**

**"AUSTRALIA'S CLIMATE IS CHANGING. WATER SHORTAGE is chronic and irreversible, (unless we act) temperatures are rising, extreme weather events are more frequent, species are dying on land and at sea.**

**The world's scientists agree that to avoid the worst environmental damage we must cut at least 60 per cent of global emissions by 2050. Instead, Australia is on tract to increase emissions by 70 per cent over this period. Why is the Howard government acting so conspicuously against the world's interests, and against Australia's own future?**

**In this damning account, Liberal Party member, lobbyist and former Howard-government advisor Guy Pearce takes us behind the rhetoric he once helped write. He reveals that the government has no plans whatsoever to reduce Australia's emissions, and explains why this is bad for Australia's real interests – a man who has allowed climate change policy to be dictated by a small group of Australia's biggest polluters and the lobbyists they fund.**

**Just as Tim Flannery's *The Weather Makers* explained the science of climate change, *High & Dry* explains the politics. You cannot understand the future of Australia without reading this book."**

Excluding coastal grown sugarcane, tobacco, cotton, orchard fruit trees, grapes etc. and concentrating on a "farming for profit strategy", as Corporate Agricultural Investment, (CAI) does, (the best returns are in livestock) we clearly have enormous potential for increased grain and livestock production, when it embraces consistent irrigation for COP.

The present 30 M. acres in wheat production, up to now mostly in WA and NSW, has great potential for increased production by using irrigation, both for human/livestock use. Fertile soils, may give a 200% increase in quality grain yield, with average farm income up 300%. Farms with water for COP, can plan crops strategically to give greater harvest certainty, to reap higher prices for top quality grain, unspoilt by wet weather price downgrading.

Qld's Darling Downs, Granite Belt and Goondiwindi districts can move for a huge increase of guaranteed production. If **COP**, by supplementary irrigation is available of an extra 61% of the 131 M. acres of arable land, comprising 6.95% of the total land area, development of 80 M. acres of permanent irrigation (61% of 131.2 M. acres) is possible in the eastern states. 80 M. acres may need 800 M. ac ft pa of supplementary irrigation, so requirements are, 800 M. ac ft for grain/pasture + 384 M. ac ft for 100,000 sq miles of lakes if evaporation is six ft pa, + 316 M. ac ft pa for aboriginal bushfire, aquaculture and reforestation control. Note particularly Humphrey Kemp's book, "The Astonished Earth", which describes how "Lindsay Point" was started in a desert, which received nine inches of rain pa, with most of the top soil eroded by the action of the hooves of sheep and cattle, and the wind blowing the soil away to Melbourne to give them a taste of the bush. Converted to an oasis, by adequate irrigation over seven years, "Lindsay Point" ran 15 sheep per acre, all year round.

Water:- rain 23% irrigate 77%; rain 16% irrigate 84%; rain 10% irrigate 90%.

|     |               |                |               |                |             |              |
|-----|---------------|----------------|---------------|----------------|-------------|--------------|
| pa. | 4.6 M. ac.ft. | 15.4 M. ac.ft. | 3.2 M. ac.ft. | 16.8 M. ac.ft. | 2 M. ac.ft. | 18 M. ac.ft. |
|     | 156 in/pa.    | 36 in/pa.      | 120 in/pa.    | 25 in/pa.      | 131 in/pa.  | 15.6 in/pa.  |
|     |               |                |               |                |             | 140.4 in/pa. |

|                                       |             |             |             |             |
|---------------------------------------|-------------|-------------|-------------|-------------|
| Suppose:-                             | 20 M. acres | 20 M. acres | 20 M. acres | 20 M. acres |
| Have soil Fertility of:-              | high        | good        | fair        | poor        |
| In production for:-                   | 8 years     | 6 years     | 4 years     | 2 years     |
| Carrying capacity is Sheep per acre:- | 15 sheep    | 10 sheep    | 6 sheep     | 2 sheep     |
| Cattle per acre:-                     | 2.5 head    | 1.67 head   | 1 head      | .33 head    |
| Total carrying capacity, sheep:-      | 300 M. pa.  | 200 M.pa.   | 120 M. pa.  | 40 M. pa.   |
| Total carrying capacity, cattle:-     | 50 M. pa.   | 33.4 M.pa.  | 20 M. pa.   | 6.6 M. pa.  |

|                |                                                                                                                                                                                                                                                        |                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Value adding:- | Cattle:- Based on 90% calving pa, with each male calf being worth \$1,000 at 24 months, and female progeny being joined at 24 month That is \$1,000 x 90% = \$900 divide by 2 years = \$450 divide by half for females retained = \$225 x 50 million = | \$11,250,000,000                 |
|                | Plus \$225 x 33.4 M. =                                                                                                                                                                                                                                 | \$7,515,000,000                  |
|                | Plus \$225 x 20 M. =                                                                                                                                                                                                                                   | \$4,500,000,000                  |
|                | Plus \$225 x 6.6 M. =                                                                                                                                                                                                                                  | \$1,485,000,000                  |
|                | Total =                                                                                                                                                                                                                                                | \$24,750,000,000 pa.             |
|                | Plus sale of aged females at @ \$700 each =                                                                                                                                                                                                            | \$53,900,000 pa.                 |
|                |                                                                                                                                                                                                                                                        | <hr/> \$24,803,900,000 pa. <hr/> |

To achieve this we have to provide 800 M. ac ft of pristine water per year, out of a total 1,500 M. ac ft. A World lack of water crisis, requires Climate Change Variation to replace:-  
 “The rapid decline of groundwater resources in China and India has led to the governments of those countries moving to construct huge projects for water transfer to their cities and farms. (Page, 16, line, 17, “A VOYAGE OF DISCOVERY”, Professor Lance Endersbee AO.)

The Planet has run out of fresh water, and we must create a new “agricultural way of life, from scarcity to plenty” by ocean water desalination; Solar, Hybrid, Safe, 4<sup>th</sup> Generation Nuclear Vacuum Desalination, Helium Turbine Electricity Generation and Hydro backup.

**The only viable source available is sea water conversion to fresh pristine water. Arsenic groundwater poisoning is endemic in many countries like Bangladesh.**

FORMULA CALCULATION FOR SOLAR, HYBRID, NUCLEAR DESALINATION STILL.

“As in all thermal systems, we can talk about efficiency and performance of solar stills. The thermal instantaneous efficiency of a solar still is defined (Tiwari, 2002) as

$$Ni = \frac{q_{ew} \cdot h_{ew} (T_w - T_g)}{I(t)} = \frac{\dots}{I(t)} \quad (1)$$

Which is the ratio of the evaporative heat transfer rate ( $q_{ev}$ ) from water surface to glass cover in W/m<sup>2</sup> to the instantaneous solar radiation intensity ( $I(t)$  in W/m<sup>2</sup>) In the Eq.1,  $h_{ew}$  is the average water temperature, and the average glass temperature, respectively.

The performance of a solar still system can be defined as the ratio of desired output to the required input. Here the desired output is the amount of distilled water, and the required input is of course the solar energy collected, plus the heat transfer from the U<sup>308</sup>. We can define this concept as the production rate performance (PRP) of absorber plate, as  
 10tai Solar Energy absorbed within w 1 mm (2)

The instantaneous condensation rate is  $m_i$  (kg/s) per square metre of absorber plate.

Then, the production rate performance within  $\Delta t$  is written as

$$PRP = \frac{\text{TOTAL DISTILLED WATER WITHIN TIME INTERVAL}}{\text{TOTAL NUCLEAR / SOLAR ENERGY ABSORBED WITHIN TIME INTERVAL}} = \frac{\Delta Mi \cdot \Delta t}{\dots}$$

$$PRP = \frac{\dots}{\Delta I \cdot \Delta t} \text{ (kg of distilled water per m}^2\text{/kj solar energy per m}^2\text{)} \quad (3)$$

Where  $\Delta t$  is the time interval over which the solar radiation intensity ( $I(t)$  in W/m<sup>2</sup>) and the condensation rate ( $m_i$  (kg/s)) are measured.

Of course, the performance (or efficiency of the system) depends on meteorological parameters, namely wind velocity, solar radiation, sky temperature, ambient temperature.

Besides the meteorological parameters, it also depends on the water parameters, such as salt concentration, algae formation on water, and mineral layer on basin liner.”

Calculations are based on an assumption of 24 hours per day/365 days a year productivity.

## Conclusion

“The Solar still is the simplest device to get potable / fresh distilled water from impure water using solar energy as fuel. The basin type single-solar still can be classified as a conventional solar still system. There are many different designs of solar still system.

Researchers have modified the conventional solar still system to get better performance, such as multi-basin, multi-slop solar systems, and coupled with solar collector to increase the water temperature. Especially, solar stills look like the best choice to obtain fresh drinkable water in remote areas usage. When safe 4<sup>th</sup> Generation Pebble Reactor Nuclear / Solar desalination are combined, the production results are likely to improve by as much as 250%, for well designed vacuum plants, because the unit may be run at full production for the whole day, and cloudy or rainy days do not reduce the output.”

(References: - Refer to Solar Desalination for the 21<sup>st</sup> Century.)

.....  
**“Pebble bed reactor (PBR) or pebble bed modular reactor (PBMR), advanced nuclear reactor design.”** <http://en.wikipedia.org/wiki/Pebble>

“This technology claims a dramatically higher level of safety and efficiency. Instead of water, it uses pyrolytic graphite as the neutron moderator, and an inert or semi-inert gas such as helium, nitrogen or carbon dioxide as the coolant, at very high temperature, to drive a turbine directly. This eliminates the complex steam management system from the design and increases transfer efficiency (ratio of electrical output) to about 50%. Also, the gases do not dissolve contaminants or absorb neutrons as water does, so the core has less in the way of radioactive fluids and is much more economical than the old light water reactors.”

**“Combined with direct use of solar energy in heating/evaporating water inside solar stills, -- the heat storage, -- would improve productivity and reliability, --”**

“The highest useful intensity wavelength is 0.47 microns, which is the range of visible beams. The intensity of solar radiation reaching the earth’s surface ranges from 0 to about 1,050 watts per square metre (W/m<sup>2</sup>) at the equator. Most of this radiation comes directly from the sun, but about 10% comes as scattered light, even on cloudy days.”

“Efficiency rates for solar plants range from 25 to 40 per cent in the winter and from 30 to 60 per cent during months with high radiation intensity; the actual rate depends on the design, construction and operation of the plant and on the ambient conditions. For example, **a distillate flow rate of around 5 kg/m<sup>2</sup> is possible with an assumed water temperature of 80° C and mean radiation intensity of 24.5 mega joules per square metre (MJ/m<sup>2</sup>), conditions typical in the Northern hemisphere in July; under such circumstances, the still has a mean daily efficiency of 50%.**”

152 E. Delyannis and V. Belessiotis, “Solar desalination: Is it effective? Part 1: conventional solar distillation”, *Desalination & water*.

To produce 1,500 M. ac. ft. (1.85 M. Gl) of new pristine desalinated water, from 25 plants, each on 164,384 ac. ft. per day for 60 M. ac. ft. of water pa, the plants need 640,000, 20 M<sup>2</sup> stills, (10 per acre) spread over 100 sq miles (64,000 acres) of safe S/H/N/V/D/P/G stills.

**We need to do our own research on solar still designs, to find the best for Oz.**

The Figure 1 still, which I have used as an example, in using a single still, may desalinate fresh pristine water at the rate of 0.81 gallons/second, 48.6gallons/minute, 2,916 gallons/hour, 69,984 gallons/day, 25,544,160 gallons/year. (94.14 ac. ft. 0.12 Gl) Therefore one plant with 640,000 of these stills, would generate about 60 M. ac ft pa. (74,009 Gl) And 25 plants would generate 1,500 M ac ft pa. (1.85 M. Gl)

If we can increase the distillate production to 1 gallon per second per still, we would generate about 1,856 M. ac ft pa (2.289 M. Gl) from 25 plants, using the same design.

The area of glass in the 30° degree F.1 still example is 234 M<sup>2</sup>, but a 60° equilateral triangle (ET) glass still, with four equal sided 20 M. glass pieces, increases the glass area to 692.8 M<sup>2</sup>, per still, a 296% increase, in glass area. At the moment, I don't know what production benefits or increased distillate production, can be gained from alternative arrangements.

### **We need functioning alternative stills to find the best success of science. (SOS)**

The 60° design may not need hail cover, but the flatter 30° glass stills would. Good support by aluminium frames of heavy duty glass, with special underside, (inside still) laminated glass protection in the ET design, may not need hail wrap. Quality designs, built in special factories, may last hundreds of years, if carefully transported to sites, perhaps by Airship.

Economic production of very large quantities of special glass, need factories close to sites, so production and transport of glass and aluminium framed stills, is expedited by speedy, safe Airships to sites where the Solar, Hybrid, Safe, Nuclear, Vacuum Desalination, Hydro Electric, Power Generation Plants are to be built. (S/H/S/N/V D/H E/P/G, Plants)

My submission could be helped by Senate Select Committee feedback. (SSC) For example:-

1. Does the SSC believe Australia's water shortage can be fixed by desalinating sea water, to create adequate fresh pristine water, outlined above at adequate low cost?
2. Does the SSC believe the workforce required to build our essential infrastructure can be provided by funding a United Nations type labour force, by sale, goods exchange, or barter of uranium and seven day shelf life food to fast track what is required? As Australian jobs are now "off-shore", government must provide a strategy to secure jobs for Australians in the future, such as power/water technology the world needs.
3. Does the SSC believe Oz can create/manage some of the workforce the rest of the world needs to design/construct new non-polluting power/water infrastructure?
4. Does the SSC believe it can convince the parliament of the Commonwealth of Australia, the State Parliaments and our people of the necessity of such a plan?
5. Does the SSC believe Paul Johnson's "Five keys to democratic statesmanship", can assist in helping people understand, that the nuclear option, is the only solution?

(See Appendix PJ.)