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Thank you for opportunity to contribute to the NSW Department of Planning, Industry and Environment's 5-year review of the Water NSW Act 2014, with the aim of determining whether the Act is effective, and whether it enables WaterNSW to deliver water in an efficient and safe manner.

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1.0 My background to comment

- My 50 year mainly Engineering/Management career included 27 years in industry and 23 years in Government Departments, including as Head of seven Branches
- I worked for six MPs [REDACTED]
[REDACTED]
- I wrote for Premier [REDACTED]
[REDACTED]
- I know many farmers because I lived [REDACTED]

2.0 Overview Summary

- Regarding (a), Water NSW's objectives and functions, and (c) Regulatory functions, in my view these have been deficient to allow the situations and problems described in 4.1-4.4 and 4.6-4.8 to occur, leading to my recommendations 5.1-5.4 and 5.6-5.8.
- Regarding (b), in section 4.5 I describe how the management of water quality has been hindered by the clumsiness of the POEO Act compared to the old Clean Waters Act.
- Regarding (d) amendments to legislation, my recommendations in 5.2-5.4 and 5.6 and 5.7 may require amendments to the Water NSW Act 2014. (5.9 is a commonwealth issue)
- Water has been badly mis-managed by State and federal governments (both sides of politics) e.g. no major dam has been built since 1983, and section 4.8 shows a mis-management example. My recommendations are in section 5.1 – 5.12
- Governments' mismanaging may have been due to (a) pandering to 'green' ideology, and (b) token lip-service to 'decentralisation'. Consequently, rural areas have suffered economic and population losses, with capital cities growing disproportionately
- Therefore Governments need to recognise that there are huge economic benefits in providing dams, irrigated agriculture and more jobs in rural and regional Australia.
- And therefore it is economic to borrow money at current unprecedentedly-low interest rates (1.8% over 30 years) for the purpose of building dams, as listed in section 4.10
- The Water Act 2007 is very flawed as it gives the environment priority over the economy and the community. It needs to be urgently amended to give balance, not priority.
- The Murray-Darling Basin Plan, based on this flawed environmental priority, is so bad that it needs to be scrapped, and start again (e.g see appendix 2).
- Drought-proofing has been badly-handled, and recommendations are made in 4.1-4.3
- Water NSW has been a clumsy and slow bureaucracy – see examples in section 4.1-4.6. It needs to simplify licence application procedures and to support not hinder farmers.

3.0 Introductory comments

3.1 I realise that this review is fairly narrow in its scope, being a review of the Act and its operation by public servants, acting under the policy directions of a Minister for Water.

I note that the Issues Paper states, "Stakeholders are also invited to comment on any other issues ... Paper ... intended to promote discussion."

And key question 20 states, "Are there other issues relevant to the objectives of this review that should be considered?"

I have therefore in this my Submission gone wider than NSW issues to some federal issues, and wider than the NSW Water Act 2014, because granted that I am doing all this work, I may as well collate into one Submission a whole lot of issues and suggestions.

3.2 BASIC PRINCIPLES that need to be kept in mind in all of these deliberations:-

1. Water is our most abundant renewable resource
2. a basic obligation of Government is to ensure that water, our essential sustenance, is available to all. I assert that sometimes this should be done at less than market prices in order to provide for the public good and the national interest; i.e. people and social cohesion matter more than strict 'dry' economics.
3. Unmanaged, water availability in Australia is highly variable.
4. It is this variability that necessitates our obligation to conserve spare water in times of excess, for use by all who need water in dry times.
5. Dams do not destroy rivers or creeks. All that they do is store excess water in times of abundance for release in times of little runoff, and in doing so can also produce electricity for community use and business enterprise reasons.
6. Australia has vast areas of fertile flood plain mostly situated in a Mediterranean climate zone, and these areas are ideal for increased food and fibre production.
7. The resourceful, adaptive and productive people of regional Australia have the capacity to produce much more, and to grow our national prosperity, provided that they can be provided with adequate water, stable over the long-term.

4.0 Issues and Discussion

4.1 Drought-proofing.

Drought-proofing is a term bandied about by politicians. I was irritated by PM Morrison boasting of \$x million for drought relief to farmers, when my enquiries to my farmer friends found out that most of the money would be ineffective, or was too complicated to apply for.

Surely the most basic element of drought-proofing is for farmers to have bigger dams on their properties; (this is a separate issue to Water licences and pumping from creeks or aquifers). And so as I listened to the nauseating boasts of our PM about what he was allegedly doing for drought relief, I telephoned some farmers whom I know in western NSW.

I asked them, "*With the announcement of drought aid, and with your dams bone dry empty, how much would it cost for you to dig an existing dam deeper or bigger using your own machinery, or to get in a contractor?*"

The answer was, "*Circa \$15-20,000 for diesel fuel in many cases.*"

I asked, "*Can you apply to get paid out of drought relief to dig your dams?*"

The answer was, "*No, that sort of thing is not included in the government's Drought Relief.*"

One farmer mentioned that a Drought Relief application Form ran to 27 pages, and would take many hours to fill in with the required information – in other words it was impractical, having been designed by some remote Canberra bureaucrat.

(Aside:- I groaned when one politician stated on a radio news item that part of the government's drought aid money was for enlarging or upgrading the swimming pools run by Bourke and Brewarrina Shire Councils. While that would provide a tiny bit of extra local employment for a short while, it DID NOTHING FOR FARMERS suffering in the drought!)

Part of drought-relief funding should be rapid payments to farmers in drought to pay for them to enlarge their dams, so that when rain does eventually come, it will fill up a bigger dam – surely that is commonsense, but obviously not so common that it had been included in government Drought Relief!

Therefore, if a region or district has been drought-declared, and if a farmer has an empty dam, it needs to be made a simple process for him to apply for circa \$20,000 for diesel fuel to dig the dam deeper or bigger in area (or to get a contractor to do it).

This item relates to key question 11, “Does the Act allow for effective management of water supplies and assets during times of drought and flood?”.

4.2 Permits to build Dams.

It is absurd for landowners to need to apply for permission to build dams on their own private land, whether that be to dig a hole on fairly flat land, or to dam a creek; (of course there does need to be a process for applying to build dams across watercourses on public land (or where there are two different owners on each side of the creek),

I affirm that on private land a farmer should not need to apply for permission to either dig a dam on flat land, or to put a dam across an intermittent or ephemeral creek, because when it rains the dam will simply fill up and overflow, thus any interruption to creek flow is only temporary; and in the case of a perennial creek, once the dam has filled, it has no effect on subsequent downstream flows.

Having worked 1977-89 at senior levels (often Branch Head) in every field (air pollution, waste disposal, chemicals, noise control, motor vehicle air pollution, motor vehicle noise pollution) in what is now called the EPA, I was invited back in 2008 by the Head of the Newcastle office to work on an urgent and special project to visit every opencut coalmine in the Hunter Valley and to write a major report on pollution controls.

During that time, although it was not relevant to my project, I was fascinated to talk to other officers of all types of qualifications and scope (e.g. zoologist, botanist, pollution control inspector etc). Of course it was not my role to comment on what other officers did, because they answered to their own managers, and operated according to Departmental/ Governmental laws and policies, crazy though they sometimes were.

I was appalled that one junior officer's work was entirely in prosecuting farmers and other rural landowners for daring to enlarge dams without permits. He, an ex-police officer, was not very bright, and was diligently doing what he was instructed to do, namely to look at historical aerial photographs and compare these with current dam sizes and to engage in prosecutions. He is not to blame for what was in my view a counter-productive and socially-destructive policy. But it is an indictment on the green ideology and mismanagement of what was then called the Department of Environment, Climate Change and Water (DECCW), that they had allocated staff resources to persecuting farmers etc for building or enlarging dams, when such farmers etc should have been congratulated, not prosecuted. But due to DECCW's tardiness, mismanagement and staff turnover, they had no understanding of the huge opencut coalmining industry, and in practical effect they had lost control of it. It comprised over 20 opencut coalmines, exporting then over 100 million tonnes per year.

(Similarly, I was also appalled that the department had prosecuted some Doctors who had trimmed back excessive vegetation near their surgery premises so as to reduce fire hazard for

insurance purposes; but they were then prosecuted for having cut down some allegedly-endangered species of plants, without first applying for permission. This was bureaucracy gone mad! Surely there were thousands of such allegedly-endangered plants elsewhere?! – in which case cutting down those few plants out of ignorance was a trivial offence, not worthy of cluttering the courts with. And if there were not thousands of these plants elsewhere, then why had the Department not instead engaged resources to grow some of these plants in a horticultural nursery for transplanting into secluded National Parks somewhere else?!

4.3 Make better wise use of Flood Waters.

This item relates to key question 11, “Does the Act allow for effective management of water supplies and assets during times of drought and flood?”.

We have recently had the ridiculous situation where local storms out west have put a creek or river into flood or to reach brimful, and the farmers have not been able to pump that water out due to being restricted by the conditions of their Water Licence, such conditions being usually related to the percentage level of say Wyangala Dam, a long way away, and not benefiting from the rainfall local to that farm.

For many days, vast quantities of water have rushed past the bottom of their properties and onwards out to the ocean, being wasted for no economic benefit.

In one case that I know of, the farmer told me that he is not allowed to pump water out of the creek when it is flooding, but later on during a dry time when the creek level is low, and Wyangala Dam has a modest level and does some releases, then he is allowed to pump out of the creek at a time when everybody else is also wanting to pump out of the creek, and there is very little water in there. But he would not need to pump out in that dry time if he would be allowed to pump out while the creek was in flood – in which case he would build some extra dams on his property, and he considers that for \$200,000 he could thereby “drought-proof” his farm, and double its productivity. The resultant economic returns from having more access to water would pay off that expenditure in only 2 to 4 years, i.e. it would be a hugely economic investment, that would benefit food production etc. Also him earning more income would mean that he would pay more tax, which would benefit the country.

Therefore I recommend that we allow farmers to pump from a nearby creek into their own dams when the creek is in flood (or brimful, above specified levels) without requiring them to apply for permission, and to do so in quantities above and beyond their Water licences

4.4 The Concept of water being attached to land needs to be restored.

I find it revolting that there is even a market in existence to trade water. It is counter-productive for farmers, and profits only brokers and speculators, some of whom are overseas. Yes, you need to have licences which limit the quantity of water that can be withdrawn from a creek, river or aquifer, because these are all in the public domain.

But the rain that falls on a private block of land should be the rightful possession of the owner of that block of land, and such water should not be tradeable. But on a temporary basis, a farmer should be able to lease out part of his licensed water, but not to sell it.

4.5 Water Quality management seems to me be worse under the Protection Of the Environment Operations (POEO) Act and WMA Act etc than previously under the Clean Waters Act.

The management of declared catchment areas has in my view been hindered by the clumsiness of the POEO Act compared to the old Clean Waters Act. Under the Clean Waters Act there was good system of classification of waters, which I believe was abandoned when

the POEO Act was adopted in the early 1990s shortly after I left after 12 years in what was then called the State Pollution Control Commission.

On two occasions I have been alarmed at the ineffectiveness of the POEO Act in regards to water quality:

(1) when I was working in the Newcastle Office of the DECCW in 2008, one of the pollution control inspectors was having difficulty with a club discharging inadequately treated sewage to the Hunter River, and we discussed the matter; I was astonished how difficult it was under the POEO Act, whereas it would have been simple to have prosecuted the club under the old Clean Waters Act.

(2) I used to manage 2010-2012 the waste disposal depots of Cabonne Shire Council. On visiting the Cumnock depot a few years later, I was astonished to see that my good work in creating separation of stormwater from leachate had been ruined, and that they had in fact filled in and destroyed the 'leachate holding and treatment pond' that I had built. I found leachate flowing directly and without interruption from the uncovered garbage (which included wastes from the hospital) down into the creek (a distance of a few hundred metres). I arranged to meet officers from the Bathurst office of the EPA onsite at Cumnock and I showed them this disgraceful state of affairs that would have been SO easy to prosecute under the old Clean Waters Act, but these officers gave me excuses and did not prosecute.

4.6 There are too many separate bits of legislation, with overlapping responsibilities, and the Water NSW bureaucracy has been clumsy, with too much 'red tape' and 'green tape'.

One farmer (whom I have known for 30 years) told me that it had taken him FIVE years and over 20 pages of paperwork to finally get approval for a modest licence to pump water from the creek at the bottom of his property. He said, "*There is far too much bureaucracy.. The whole system is flawed, wasting time and energy of farmers, while providing employment for bureaucrats who do not understand much.*"

One farmer got a Form to fill in that was 15 pages long, and it was so difficult to fill in (requiring a lot of hard work) that he telephoned Water NSW, and an officer said to him that 90% of that Form is not relevant to him, so do not bother to fill in those bits. What a waste of productivity if the farmer had spent a lot of time and effort to fill in 100% of the Form!

I am disgusted at the Water Management Act 2000 (WMA) obviously written by greenies with little appreciation of the economics that allows production, productivity and jobs that pay the taxes that allow for environmental improvements etc. The objects in section 3 of the WMA include typical leftwing terms:- ecologically sustainable development, biological diversity, culture, benefits to Aboriginal people, equitable sharing etc but there is NO mention of the Basic Principles of economics, productivity and national interest etc, which I enunciate in section 3.2 above.

(n.b. I am not against the environment or Aboriginals; I am passionately for both.

E.g. When I was a senior manager in the Roads and Traffic Authority's western region, I liaised with Aboriginal communities, and argued for the creation of two new job positions, the very first Aboriginal Road Safety Officer positions in Australia. I employed them and supervised them, with spinoff benefits beyond road safety in assisting Aboriginals to get their driving licences, so as to get jobs. Also when I was at University (1969-1972) I coached Aboriginal High School students for free under the Abschol scheme. But leftwingers use Aboriginal issues for their own self-aggrandisement and virtue-signalling, achieving NO measurable improvements in outcomes for Aboriginal communities, many of which I have visited personally over the last 32 years.)

4.7 The principal objectives of WaterNSW under the Act are deficient in that they do not specifically mention the stimulation to jobs and the Economy achieved by development of water infrastructure for irrigation, flood control etc, along the lines of what I mention above in section 3.2.

4.8 The particular case of the insanity in the operations of Warragamba Dam. For many years I owned properties at Kurmond or Grose Vale, living there some of the time, and so I became familiar with the all-too frequent and often unnecessary flooding of the road bridge at North Richmond, which had damaging effects on jobs and the economy.

This flooding occurred because the agency in charge of operating Warragamba Dam (the Water Board, then it changed its name) had the insane policy of operating this dam for only one objective, namely urban water supply.

All dams should operate for multi-objectives and not solely for one objective. The multiple objectives include:- urban water supply, flood control for downstream areas, hydro-electricity generation, irrigation for agriculture, tourism and recreation.

What the Water Board et al should have done is that when Warragamba Dam was close to full (say above 80%) and if substantial rain was predicted during the next week or so, then they should have released as much water as possible from the dam in the days before the rain arrived. This would make room in the dam to receive the expected rainfall, would scour the river channel of some obstacles and sandbanks before the rain arrived, would reduce the risk of the dam overtopping, and would reduce the number of occasions on which the North Richmond bridge went under.

Rarely is the hydro-electric generating station at Warragamba put into operation, but it should be operated a lot more when the dam level is above (say) 80%.

It would not be difficult to develop a computer model to work out rainfalls and runoffs etc and to run this model on historical data in order to determine whether the trigger levels for releases or hydro-electric generation should be 80% or whatever.

4.9 The Commonwealth Water Act 2007 needs urgent amendment because it lays a deficient and damaging foundation. At present in this Act, the Economy and the Australian community are “*subject to*” the Environment (refer to Appendix 1).

This is absurd.

The Act should state that these three factors should be balanced, rather than have one factor reign supreme over the other two factors.

The Economy and the Community can be described in quantitative terms (e.g. GDP, bushels of yield per hectare, tonnes of rice per year, population and its age distribution etc), but not so with “the Environment”.

I was one of the co-authors of the very first “State of the Environment” report produced by the NSW State Pollution Control Commission circa year 1984, and there are indeed some aspects of ‘the environment’ that can be quantitatively measured, and research in that regard is a good idea. However it must be scientifically accurate.

The research that I observed being conducted by the botanists/zoologists to whom I spoke in the Newcastle office of DECCW in 2008 was shoddy, and in my view the results of it and other research (e.g. re River Red Gums along the Murray, re soil salinity, re the Coorong etc) should be taken with more than a grain of salt (pardon the pun). But unfortunately all too

often, authoritative pronouncements are made in regards to endangered species of flora or fauna etc based on shoddy and unreliable research.

“The Environment” is a subjective term, at best only vaguely defined, and it has different meanings to different people, including among those bureaucrats who formulate and administer the Murray-Darling Basin Plan.

4.10 Build more Major Dams

Paragraph one on page 12 of the Issues Paper states that WaterNSW “... when required, constructs water storages and infrastructure ...”).

WHEN REQUIRED !! ??

In my view more water storages were desperately required decades ago, and it has been negligent and incompetent of both sides of politics that there has been no major dam built in this dry continent for the last 37 years, i.e. since 1983.

And at the moment there are very few projects actually commencing – I mean ‘shovel in ground’ actual work, not politicians’ hot-air announcements of feasibility studies etc. Does WaterNSW have a prioritised, costed list of dams that are recommended to be built, subject to finance?

4.10.1 Sydney’s water supply

Options are discussed on pages 21 to 26 of Appendix 3, and on page 21 of appendix 2. At Warragamba please do not raise the dam wall!

There are three better options:-

- build the Welcome Reef dam on the upper Shoalhaven river, with a pipeline to Prospect Reservoir
- dam the Colo River near Lower Colo
- a secondary dam on the Wollondilly River, which flows into Warragamba dam.

4.10.2 Divert plentiful coastal water inland into the Murray-Darling basin.

Over the years many projects have been proposed, including the Bradfield scheme suggested over 100 years ago by the designer of the Sydney Harbour Bridge.

Neville Wran’s Labor State government in 1981/82 investigated about 40 projects, and the best one was considered to be the Newton Boyd-Gwydir project, which is described on pages 28 to 34 of Appendix 3. There are many benefits including reduction of flooding of Grafton – page 30 of appendix 3 mentions that in the 2012 flood the waters got as high as 20mm underneath the breakthrough point to flow over and erode the levee banks. Previous floods have devastated Grafton, and it is only a matter of time till the next ‘big one’ does it again.

4.10.3 other useful and possible dams in NSW

Fourteen other possible dams in NSW are listed on pages 35 to 40 of Appendix 3.

4.10.4 Issues of Funding and economic assessments are on pages 83 to 89 of Appendix 3.

It is claimed that often the prevention of flood damage to towns would mean a payoff time for a new dam of about 20 years, without even adding in the huge benefits of irrigated agricultural produce, the multiplier effects, hydro-electricity etc.

The long-term interest rates in the USA are 0.7% for a 10-year loan and 1.5% for a 30-year loan, and the respective figures for Australia are 0.87% and 1.79%.

The economic productivity of dam projects is far in excess of 1.79% per annum, and it seems foolish for Australian governments (federal and State) to not be borrowing money at that sort of rate for the dam projects, which like the Snowy River scheme, would yield massive benefits for our economy and community.

5 Recommendations

1. Allow drought-relief funding to enable farmers to dig bigger or deeper dams.
If a region or district has been drought-declared, and if a farmer has an empty dam, it needs to be made a simple process to apply for circa \$20,000 for diesel fuel to dig the dam.
2. Allow farmers and other rural property owners to excavate dams on their own private land without requiring any government permission.
While there needs to be a process of course for building dams across watercourses on public land (or where there are two different owners on each side of a creek), I affirm that on private land a farmer should not need to apply for permission to either dig a dam on flat land, or to dam a creek on that private land, because once such a dam is full, it overflows, therefore any interruption to creek flow is only temporary.
3. Allow farmers to pump from a nearby creek/river into their own dams when the creek/river is in flood (or close brimful, i.e. above specified levels) without requiring them to apply for permission, and to pump quantities above and beyond their Water licences.
4. I find it revolting that there is even a market in existence to trade water, and I urge that the Concept of water rights being attached to land needs to be restored.
5. Water Quality management needs to be improved. It seems to me be worse under the POEO Act and WMA Act than previously under the Clean Waters Act.
6. There are too many separate bits of legislation, with overlapping responsibilities, and this results in excessive burdens on farmers and other producers. We need less “red tape” and less “green tape”.
7. The principal objectives of WaterNSW under the Act are deficient in that they do not specifically mention the stimulation to jobs and the Economy achieved by development of water infrastructure.
8. Change the insane policy of operating Warragamba Dam dam for only one objective, namely urban water supply, and develop a computer model to allow releases of water in the days before rain arrives (so as to reduce the frequency of the N Richmond road bridge going underwater) and to allow hydro-electricity generation more often than has occurred.
9. The Commonwealth Water Act 2007 needs urgent amendment because it lays a deficient and damaging foundation, because, in it, the Economy and the Australian community are “*subject to*” the Environment, instead of there being a balance between the 3 factors.
10. BUILD MORE DAMS - Provide secure water supply for the Sydney region - hurry up and start construction on the Welcome Reef dam with a pipeline to Prospect Reservoir
11. BUILD MORE DAMS - the Tallowa dam would provide water for the Hunter region
12. BUILD MORE DAMS - The Newton Boyd-Gwydir project would divert water from NSW coastal rivers into the inland areas, yielding massive agricultural and economic benefits.

Yours sincerely

Lex Stewart, [REDACTED]

Index of Appendices:

Appendix 1 – is an extract cut and pasted from the (commonwealth) Water Act 2007, showing that the Environment takes priority over the economy and the community, which are both “*subject to*” environmental issues.

Appendix 2 – this document is mainly about the **Murray-Darling Basin** and proposes an alternative to the current MDB Plan. This document of 39 pages is essentially identical to the powerpoint presentation (43 pages, 10.2 megabytes in size) given by its author, Ron Pike to federal MPs for Cowper and Lyne in September 2020. I edited it down from 10.2 to 9.57 megabytes because 10 is often a limit for email transmission.

And an earlier version of it, titled **A Plan for All**, was given by me to my local State MP, Melinda Pavey in February 2020.

Being 9.57 megabytes in size, Appendix 2 is emailed separately to this document.

Appendix 3 – this 96-page document “**Vast projects meet the challenge of a Dry Land**” was given by its co-author Ron Pike to Prime Minister Tony Abbott in year 2014, and he was enthusiastic about it.

But it was buried during the term of PM Turnbull, and it has likely been forgotten.

Therefore PM Scott Morrison and Premier Berejiklian and their Ministers are likely unaware of these visionary ideas, which would yield substantial benefits for the national economy. Being 5.6 megabytes in size, Appendix 3 is emailed separately to this document.

Appendix 4 - Objectives of Water NSW (as per Section 6 of the Water Act 2014)

Appendix 5 - Section 6(2) of the PoEA Act 1991

Appendix 6 - Functions of Water NSW (as per Section 7 of the Water Act 2014)

Appendix 1 – here is an extract cut-and-pasted from the Water Act 2007, showing that the Environment takes priority over the economy and the community, which are thus both “subject to” environmental issues.

Section 3 Objects

The objects of this Act are:

- (a) to enable the Commonwealth ... to manage the Basin water resources ...
- (b) to give effect to relevant international agreements (c) etc
- (d) without limiting paragraph (b) or (c):
 - (i) to **ensure the return to environmentally sustainable** levels of extraction for water resources that are overallocated or overused; and
 - (ii) to protect, restore and **provide for the ecological values** and ecosystem services of the Murray-Darling Basin (taking into account, in particular, the impact that the taking of water has on the watercourses, lakes, wetlands, ground water and water-dependent ecosystems that are part of the Basin water resources and on associated biodiversity); and
 - (iii) **subject to subparagraphs (i) and (ii)**—to maximise the net economic returns to the Australian community from the use and management of the Basin water resources; and
- (e) to improve water security ...

Appendix 2 – refer to a separate email

Appendix 3 – refer to a separate email

Appendix 4 – Objectives of Water NSW (as per Section 6 of the Water Act 2014)

- (1) The principal objectives of Water NSW are:
 - (a) to capture, store and release water in an efficient, effective, safe and financially responsible manner, and
 - (b) to supply water in compliance with appropriate standards of quality, and
 - (c) to ensure that declared catchment areas and water management works in such areas are managed and protected so as to promote water quality, the protection of public health and public safety, and the protection of the environment, and
 - (d) to provide for the planning, design, modelling and construction of water storages and other water management works, and
 - (e) to maintain and operate the works of Water NSW efficiently and economically and in accordance with sound commercial principles.
- (2) The other objectives of Water NSW are as follows:
 - (a) to be a successful business and, to that end:
 - (i) to operate at least as efficiently as any comparable business, and
 - (ii) to maximise the net worth of the State’s investment in Water NSW,
 - (b) to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates,
 - (c) to exhibit a sense of responsibility towards regional development and decentralisation in the way in which it operates,
 - (d) where its activities affect the environment, to conduct its operations in compliance with the principles of ecologically sustainable development contained in section 6 (2) of the *Protection of the Environment Administration Act 1991*.

Appendix 5 -- Section 6(2) of the PoEA Act 1991 states:-

ecologically sustainable development requires the effective integration of social, economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
 - (ii) an assessment of the risk-weighted consequences of various options,
- (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,
 - (c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
 - (d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:
 - (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
 - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
 - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems

Appendix 6 – **Functions of Water NSW (as per Section 7 of the NSW Water Act)**

- (1) For the purposes of this Act, the *listed functions* of Water NSW are as follows:
 - (a) to capture and store water and to release water:
 - (i) to persons entitled to take the water, including release to regional towns, and
 - (ii) for any other lawful purpose, including the release of environmental water,
 - (b) to supply water to the Sydney Water Corporation,
 - (c) to supply water to water supply authorities and to local councils or county councils prescribed by the regulations,
 - (d) to supply water to licensed network operators or licensed retail suppliers within the meaning of the *Water Industry Competition Act 2006*,
 - (e) to supply water to other persons and bodies, but under terms and conditions that prevent the person or body concerned from supplying the water for consumption by others within the State unless the person or body is authorised to do so by or under an Act,
 - (f) to construct, maintain and operate water management works (including providing or constructing systems or services for supplying water),
 - (g) to protect and enhance the quality and quantity of water in declared catchment areas,
 - (h) to manage and protect declared catchment areas and water management works vested in or under the control of Water NSW that are used within or for the purposes of such areas,
 - (i) to undertake flood mitigation and management,
 - (j) to undertake research on catchments generally, and in particular on the health of declared catchment areas,
 - (k) to undertake an educative role within the community.