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RE Murray-Darling Basin Commission of Inquiry Bill 2019

Parliament No 46

Dear Sir/Madame,

There have been several inconsistencies reported by both the Senator and the ABC.

The Forward Estimates of \$13billion has not been spent and some transparency is required to identify:

1/. Of the amount currently spent on buy-back, what is high security; what is low or general security and what is overland flow? The current drought conditions only exacerbate those numbers when compared with flows especially in the Northern (Darling) connected system.

2/. The amount committed so far to infrastructure upgrades and the volume of water returned to the environment.

There are a proliferation of intellectually dishonest statements both in print media and TV reports about the lack of auditing on the investment made so far, which investment is still less than 70% of the original commitment.

Additionally the South Australian Government has not put forward any probable measures which relate to the following (as a summary only):

a/. The connection of Lake Albert to the Coorong, achieving lower salinity in Lake Albert permanently to levels similar to adjacent waters in Lake Alexandrina. The pulse flow methods used since the millennium drought took over 7 years to get the salinity levels down and even then not down to Alexandrina levels. Whereas using appropriate infrastructure at the connection to the Coorong Northern Lagoon at the south east end of the lake controlled flow through Lake Albert can achieve the reduction in salinity to Lake Alexandrina levels in 3 months. A 1983 SA Engineering and Water Supply Department report recommended this infrastructure. A recent SA Water commissioned report by SKM (now Jacobs) consulting engineers recommended this connection as well. Yet Minister Ian Hunter opted not to proceed with the EIS on impacts to the Northern Lagoon of the Coorong. The recent CSIRO report on the impact of the diversion of SE Drainage system water to the Southern Lagoon of the Coorong (REFLOWS) has come out very positive. Many of the matters addressed in this report are relevant to the Lake Albert to North Lagoon connection, so there is every reason to support this connection.

b/. A jacked pipe beneath the dunes for connection of the North Lagoon at its southern end also possible an identical pipe at the southern end of the South Lagoon to the Southern Ocean to enable inflows and outflows by gravity feed and pumped when required to manage water quality and salinity levels if and when required by the findings of scientists and those entrusted to manage these water bodies. The exact location of these pipes and the need for only one or two is the subject of further refining of the optimum conditions required for the water bodies eco systems to thrive and be sustained against all future risks.

This needs to be looked at now REFLAWS and its freshwater input is active at Saltwater Creek. This is infrastructure that has always been required. With the hyper salinity killing the South Lagoon 10 years ago, the talk at the time was for a temporary pipe to pump the hyper saline water to the Southern Ocean. Not only did this not happen, but to put in a permanent pipe jacked under the sand hills was little extra cost to give a permanent solution with much less disturbance to the dune area. Any power required for pumping could be effectively provided from renewable wind or solar or both adjacent on the mainland leaving Young Husband Peninsula unscarred. The costs and pipe sizing for this infrastructure was all given in written submissions to the Department of Environment in 2012, where it has laid ever since with little gestation.

In May 2018, Peter Shepherd received a call from a senior project manager in the Department saying “Peter it has taken a long time but they now realise everything you were telling them was right. We are now going to have a summit of all the experts to ascertain what research studies need to be done to determine the further works required towards a long term sustainable solution.” That summit was duly held and recommendations made to Minister Speirs. In November I received a courtesy call from the same officer who advised that Minister Spiers was meeting with the Federal minister, Senator David Littleproud MP re Commonwealth funding to support the studies and some further works. He said that an amount of \$70m had been proposed, that whilst not enough to do all required and what I had been suggesting, it would certainly progress matters. This amount was approved and as I understand it, the studies are being done.

However, on reading of the publically available recommendations of that summit, sadly the scientists have set the Minister(s) up to fail. The recommendations high light the need for reductions in accumulated salinity and nutrient build up causing unwanted, destruction to the current biota. By the scientist own words they state that they do not know how to achieve these reductions. What is more, the methods they propose demonstrate a complete misunderstanding of hydraulics and management of this whole water body and what caused these accumulations compounding since the 1940s, 1950s to the sorry state for the last decade or two. To the undersigned and many learned colleagues who have spent much time, effort, proffered expert advice free of charge to the Government and Departmental officers and “experts” in tow, this is galling indeed. The AI, arrogance with ignorance, and intellectual dishonesty on the journey is disappointing in the extreme and indeed you have the cohorts of the fake it until you make it wasting money and time while the environment declines.

c/. The proper dredging of the Murray Mouth to create a protected opening and safe harbour in the Goolwa Channel, using the latest macro geo-textile container techniques that will utilize all of the sand that has built up since end of the 1956 flood including a major part of Bird Island. This sand build up only exists due to greater energy in flow from the Southern Ocean than the outflows due to the reduction of the tidal compartment by the barrages and not Murray precious freshwater outflows. A comparison of similar situations on both the eastern sea board and several estuaries in the west will show the need for a trained entrance. These sand filled geotextile containers can be used to achieve a train entrance as well as parallel to shore reefs offset either side of the Murray Mouth to dissipate wave energy and storm action energy to greatly reduce any inflow of sand. To refine the optimum design layout for the best sustainable solution, the peers in this field of expertise recommend Rex Nielsen of Worley Parsons. Much detail correspondence on this matter and others discussed in this submission, prepared by the very experienced professional experts has been lodged with the South Australian Department of Environment over the last 10 years at no cost to Government, but generally not acted upon by Departmental Officers or the Government of the day.

d/. Proper engineering design to ensure that the tidal flux can return to that of pre Barrage days, dramatically improving the health of the Coorong Northern Lagoon and a return of the bountiful fishery that Lake Alexandrina was pre-barrages.. A trained entrance is required. The more recent hydraulic modelling was

not properly calibrated against real conditions prevailing. Recent corrections to this modelling have shown training walls are required as we have been saying for around 10 years now. This is also the reason why two dredges have been required most of the time to keep the mouth open, and even then not keeping the width and depth of the mouth and channel leading to the North Lagoon at required minimum dimensions for the optimum long term health of the Coorong.

e/. Allocation of funds to upgrade the Goolwa, Mundoo and Ewe Island Barrages, (but not Tauwitcherie) so as in the final stages of an eventual bifurcation of Lake Alexandrina (refer sketch attached), many of the original conditions to support a healthy environment of the lower lakes, the Coorong and all of the freshwater assets that have been established, both since and prior to the building of the Barrages, can be realised.

The water savings alone through reduced evaporation losses would equate to a minimum of 500 Gigalitres per annum. The increase in water front development, a boon in the boating industry and tourism would regenerate much needed jobs and income into the State's budget.

As this brief submission points out many important aspects for investigation and re-development, the authors would be available to provide backup data and detailed studies to amplify and justify each of the works and measures put forward.

Yours Sincerely,

Mr. Raymond Najar- AMIE Aust.; MSEA; CID; GradCert.

Mr Peter Shepherd - BE(hons); ME; FIE Aust; FAIM; FICDA;FAIM;LGE

Attachment 1 – Basic sketch of Lake Alexandrina bi-fication



Options:- A+B
Bridge Links:- B1-4
Flood mitigation:- III
Fresh water evaporation losses by 550 gls on average.