I would like to make it abundantly clear that in our endeavours to get a share of fresh water to save our environment no one from this area wish any harm or hardships to upper Murray-Darling communities nor do I wish to tell you how to run your business or what you should plant.

However as locals we can see before our eyes this great wilderness dying slowly at first but now rapidly.

It is our duty to look after this ancient beautiful fragile land.

The Lakes and Coorong ladies and gentlemen is a magnificent wilderness and I do not believe that any Australian would want to see this extraordinary Ramsar listed site devastated.

Let there be no doubt in your minds that Lake Alexandrina and Lake Albert have always been fresh water lakes.

Jump up and down, yell, scream, do what you want, but if you wish to be honest with yourself you will admit that these lakes have always been fresh.

CSIRO algae diatom readings, history collected and documented right back to Sturt's voyage down the Murray, Ngarrindjeri mittens with fresh water mussel shells and six generations of commercial fishers will all confirm that the lakes were fresh water 99% of the time.

Tides pushed seawater only to Point Sturt before they changed and drained back through the Mouth.

Sure marine fish swam into the fresh water just like salmon in Canada, because that is what estuary fish do.

They feed on fresh water species, in particular bony bream, and the fresh water rids them of marine parasites.

For some of the species it is part of their life cycle and induces them to breed.

This is why fish passage was installed so that marine fish can swim into fresh water like they have been doing for 30 million years.

My family has been involved in inland water commercial fishing for 6 generations.

I started my career in 1960 and at that time the Lakes and Coorong were truly places of abundance.

The famous wetland was home to hundreds of varieties of birds and the waters supported many species of fish.

In those early days the sky was black as birds rose before my boat on every fishing trip.

Every year Darling and Murray water flowed into the lakes and out the mouth so excess salt and nutrients was extruded regularly from the system. The fresh water diluted the seawater from 35 parts per million down to 15-25 parts per million.

This natural phenomenon that has been happening for millions of years develops the estuary that ignites all livings things into a busy, bustling hive of activity.

This is what makes estuaries the most productive places on earth.

Fish, invertebrates, macro invertebrates, birds; aquatic plants all have the urge to breed.

Mother Nature provided the tools for the animals to regenerate and maintain sustainability.

This was the pattern every year until April of 1981 when the Murray Mouth closed for the first time in 8,000 years probably longer.

From this time every year is now a drought in the Lakes and Coorong.

She was trying to tell us something.

"Hang on" she was saying, "your have gone too far, you are taking out too much water".

No one was listening because since April of 1981 water extraction has increased 300% and I don't think anyone can tell you if the increase has yet been halted – caps or no caps.

Unfortunately for the environment our legislation seems to be too loose. And is aimed to cover the social and financial impacts with the environment running a distant third.

Since that infamous day in 1981 we have dredges working seven-day s a week to keep the Mouth open and if they stopped the dredging the Mouth would close within a month.

Look, I don't have to tell you that the whole Murray-Darling Basin – all the way from Queensland drains to the Murray Mouth, it is the only place we can flush our system.

There are many environmental reasons why the mouth should be kept open but none more important than to keep the kidneys functioning.

It is plain to me who lives at the bottom that if we do not flush the system then the death, destruction and decay may start at the bottom but like a cancer it will eat its way upstream.

Next we lost 2/3rds of the Coorong that through lack of fresh water has become hyper saline 220parts per million or the same salt consistency as the Dead Sea.

It's a desert, but still no one was listening.

This dead two thirds of the 140kilometre Coorong used to be the main breeding grounds for flounder, black bream, mullet and a myriad of small non consumptive fish and invertebrates that provided feed for the native and migratory birds and fish.

The area is completely dead- all in 30 years.

30 years – that is just a blink in the life of the Coorong.

We don't have the right to do that ladies and gentlemen, to hell with critical human needs. We don't have the right to do that.

The one third that is being kept alive by the dredges and seawater tides is changing from estuarine to marine.

Dozens of different animals that have never been in the Coorong are now calling it home.

Sharks, stingrays, seals, black lipped mussels, flathead, garfish and barnacles to name a few.

These new inhabitants are having a major impact on the Coorong native animals.

For instance the barnacles are growing on the native myrtle sand crabs killing the crabs that are a major food source for birds and fish.

In the Lakes some areas are becoming so saline that saltwater tubeworms are growing on fresh water turtles eventually killing the turtles unless they can be cleaned and taken upstream.

Ladies and gentlemen if you could see kids of all ages from the Milang school up to their waists in mud collecting these suffering turtle you may have a different view on white mans management of or water.

Lake Alexandrina is over a metre below seawater and that is an extremely dangerous position to be in.

It should never happen and must be prevented from happening ever again.

The wetlands around the lakes are dry.

These wetlands should support the whole ecosystem.

This is the engine room that manufactures exact bite size pieces of food for juveniles and adults of all species of animals.

This is the factory that keeps the whole area alive.

This is why the large lakes wetland is so important.

It is home to the environment.

These wetlands are now dry and exposed and so the environment is homeless.

This white man induced disconnection of the areas has a major impact on the Coorong.

The Coorong relies on the vast wetlands of the Lakes for food and drinking water for birds.

You may think that is all pretty serious - well throw into the mix that because the Lake is so low acid soils have been exposed.

Unless we can find some fresh water to cover up these soils then there is a possibility of complete environmental collapse.

There is no doubt that the drought is making it very hard to recover from this serious position, but until Australia addresses the over allocation this magnificent wilderness has little chance of lasting recovery.

Rivers in southern Australia will never again be natural or pristine.

We have no illusions that it will return to what it was prior to white man but there are many areas that we can achieve great results with less water.

For example we could run the lakes at less than the normal pool level of .75AHD.

At .35 - .4AHD fresh water will still flow at these levels and then we could micro manage the water to simulate a flood.

That would be a savings of well over 200 gigalitres.

The science has already been established where small amounts of water can be micromanaged to simulate flood events.

You will find that the vast majority of people from the lower lakes believe that there is only the fresh water option to save the Lakes and Coorong.

The Murray Darling Basin Conference at Murray Bridge and rallies in Adelaide and Goolwa strongly told Australia that fresh water was the only option.

Engineering solutions have been suggested

- Building a weir
- Letting in salt water
- Twin lakes

All of these just push the problem further down stream.

Each one of these engineering solutions warrants being opposed by a paper of it's own.

In this talk I will just touch on them.

You need to be local to understand that where the temporary weir is proposed to be built is the lungs of the whole ecosystem.

Take the lungs out of anything and it will surely die.

Westerly winds blow a metre of water up stream and easterlies blow it back and it all happens right where this temporary pile of rocks are proposed.

This temporary pile of rock is 2.7 kilometres long has no fish passage or navigation locks and consists of 7000,000 tonnes of rocks.

These metre wind tides oxygenate the lakes and the river, distributes food and is a major player in the distribution of genetics.

If the weir is built and the drought continues and with further evaporation the lakes

- Would go hyper saline
- Would lock in 2 million tonnes of salt in Wellington to Lock 1 reach CSIRO research reveals 2 million tonnes of salt enter the lakes each year.
- Animals would have no escape valve and would be trapped in a dying lake.

Let there be no doubt if the weir is built and the drought continues every animal in the lakes will die.

## Option 2.

Letting in salt water would kill the whole fresh water ecosystem.

We are talking millions of turtles, 1000s of tonnes of fish. Which politician is going to put their hand up and say "I am responsible for this".

We have proof beyond doubt that it has always been a fresh water ecosystem.

Just get it in your head that allowing in salt water would mean alive one minute – dead the next.

Liken it to an atomic bomb being dropped.

Everything would die and the environment would have to start from scratch.

The salt-water option will have irreversible implications to every sector, The Mouth – The Coorong – and the Lakes.

And it would shift the Coorong.

Yes it would also shift the Coorong to where the fresh water would meet the seawater, which just happens to be an open lake, no place for a nursery.

• It would create on the western side of the lake another dead hyper saline area.

## Ladies and gentlemen

The evaporation of fresh water is one thing but the evaporation of salt water is entirely another subject with much more serious consequences.

You are making a commercial salt factory.

- The example is there for all to see in the two thirds dead Coorong -5 times saltier than the sea.
- Of course this option it does not finish there.
- More weirs are planned for the tributaries to stop salt from entering fresh water ecosystems.
- We have learnt nothing from 150 years of mismanagement except to build more weirs.

## Option 3.

Twin Lakes and look alike projects are ill devised plans that fly in the face of Mother Nature and would be of no benefit to the environment which is pretty typical of most engineering solutions.

The main beneficiary of these projects would be the engineers super fund because they would create many more problems than solutions.

The Murray-Darling Basin has been engineered to death and we have reached a time where much of that engineering has to be re evaluated.

It intrigues me that these plans are always thought of by people far from the coalface.

We are told there are 4,000 registered weirs and 20,000 unregistered in the Murray-Darling Basin.

**Evaporation** is constantly used by some people with the assumption that these natural fresh lakes should go.

Recently I heard Wendy Craik quote that over a 1,000 gigilitres is lost by evaporation of the lakes.

Nobody disputed her. She must know what she is talking about; after all she is the Executive Officer of the Murray Darling Basin Commission.

Is Wendy saying that water does not evaporate when held in storage up river?

Look we like to talk about water balance in the lakes which takes into account evaporation less what we naturally put back -114.5 gigalitres through the tributaries -330 gigalitres rainfall which means the net losses are about 700 gigalitres.

However there are two independent scientists working on evaporation from the lakes who believe the water balance to be 400 gigalitres.

The work is finished and is being peer reviewed at this moment and unless it is wrong then I am sure it will be published.

The study was from 1970 - 2006 and is just for the lakes.

We are rightfully concerned about the human critical needs which should include food from irrigators and fishermen but if you do not take into account the critical needs of the environment then humans are on a slippery slide to oblivion.

We will have no future; we will be just passing through, similar to every irrigating nation throughout history.

Australia cannot escape the blame for the carnage it has caused.

Glossy pamphlets from the Murray Darling Basin Commission cannot hide the fact that-

- 2/3<sup>rd</sup> of the Coorong Dead.
- Turtles Dead.
- Crabs Dead.
- Water rats Dead.
- Fresh water mussels Dead
- Species lost Dead.
- Murray Cod, catfish, silver perch in the lakes, All Dead.
- Bird numbers down to less than 10% Dead.

How in the hell can we point the accusing finger at other countries?

Japan must be laughing in their sake when we point the finger at them about whales but we completely disregard 3 international migratory bird treaties.

Look I do not know what allocation you people are going to finish up with and I am sure it won't be enough, but I have watched for the last 7 years and our environment gets nothing but crumbs.

When the water is allocated they say that there is not enough water to make a difference to the environment and so we will give its share to someone else.

If they keep saying that it will never recover.

We are in this horrific position where our greatest river has stopped flowing because they keep saying there is not enough water for the environment.

Where's the equity?

Where's the balance?

The environment has to be taken seriously.

Any discussion about water has to include sustainability and the environment.

It's got to be an equal player or it has no future.

We have no future -- it is that serious.

The good news is our lakes are making a minor recovery through local rainfall and tributary flows.

We have had a wet July and August and so the 350 gigalitres that we thought necessary to cover the acid sulphate soils is now considerably less.

However don't forget the Lake is a metre below seawater and our main aim must be to get it above so our river can flow again.

The consequences of a river not flowing to sea are just mind blowing.

Don't be smug and think it is only our problem at the bottom. The consequences are not far away from affecting you.

Ladies and Gentlemen

This area has evolved over millions of years.

Mother Nature has developed an intricate plan that cannot be replaced by engineering solutions.

Each part, the large lakes, the Coorong, the Murray Mouth are important to the survival of each other and in fact essential to the well being of the WHOLE MURRAY DARLING BASIN.

We must maintain its connectivity otherwise we will lose one area after the other.

I honestly believe that we are at the crossroads.

The time has past for imposing engineering solutions to a natural system.

Engineering solutions that inevitably create more environmental problems than they solve.

I am a primary producer just like you people but I find it outrages that when the environment is on it knees governments of all levels still have their sole priority as returns to share holders.

My view is that it can only work if we have a whole of basin approach.

Our basin must be placed under one independent federal authority from tributaries to main rivers.

From headwaters to the ocean.

The only way it will work is to take out the parochial interference of our four states.

South Australia needs Australia's help to fix the Coorong.

It is not too late, it can be saved.

We know there is very little water in the Basin to be shared by many.

But in the short term we need Senator Penny Wong to purchase lease water of which some could be carry over water that we know is available.

We need this water to cover acid sulphate soils and to stop the threat of an environmental collapse.

It would also stop the need for the Wellington weir.

The amount to be purchased by the Commonwealth would be determined depending on the self-recovery of the lakes.

In the long term we need Senator Wong to address over allocation, as I am sure she is planning to do.

For too long we have been making decisions for ourselves.

It is time to make decisions for the river.

Henry Jones