CONSERVATION COUNCIL OF SOUTH AUSTRALIA

Water in a Changing Climate

Keynote Address to the Water Policy Summit

12th June 2008

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Introduction

Let me start by saying that my home is in Adelaide- in fact it's in the Adelaide Hills and has been so since my wife Karen and I moved to this wonderful part of the world in the 1980s.

I have also had a long association with the Conservation Council over the past decades and have always been impressed by the dedication of the people in and those supporting the Council over many years.

So in my address today I want to talk to you, not just as the Director of the Wentworth Group of Concerned Scientists, but also as a fellow South Australian and as someone who as spent much of their processional career fighting for a healthy Murray River system.

I want to open this summit with a rather brutal message about the magnitude of the problem we face, not only our immediate problem, but the longer term prospects for water in the face of climate change.

I also want to use this opportunity to cast for you, some insights into the politics of water reform as it stands in Australia today- because it's the politics of denial and self interest that stand in the way of water reform – not money, not technology and certainly not good ideas.

We, as South Australian's need to confront this issue head on.

The mere fact that so many of you have come today, either under the Conservation Council banner, or as a South Australian wanting to make a contribution to the Conservation Council's water policy development, already makes you a preselected group of people.

But I have to be honest: the truth is, I am totally bewildered by the silence in Adelaide - the silence, the denial, the inactivity, the lack of protest - in effect, the acceptance of catastrophe.

What bewilders me most is why a society with such a proud history of social reform and activism like South Australia has remained so compliant on this issue.

I have no doubt that South Australia can force a rapid resolution to this crisis if that is what it chooses to do. Our history is littered with such fine examples in our past.

It is my great hope that out of today that we can galvanise South Australia out of its sleepy complacency and go and do something about it.

But before I do this, I want to set the context for today - the prospects for water in the immediate future and the longer term implications of climate change.

I'd them like to return to the issue of water politics and offer some suggestions for how South Australia can turn around this debate and shame the rest of Australia into action.

Praying for Rain

The signs are all around us of a drying landscape.

This autumn is the 4th driest on record, with an average of 40mm falling across the Murray Darling Basin, well below the 130mm average.

Once again the irrigation season along the Murray opens in July with a zero allocation.

We go into the winter with dam levels at historic lows – the lower lakes are half a metre below sea level when they should be 0.75m above, and with prospects of them falling even lower next summer, exposing acid sulphate soils.

We go into the winter of 2008 with migratory bird numbers in freefall and where the Southern Lagoon of the Coorong – the international wetland at the very bottom of the Murray Darling Basin so hyper saline, that organisms can't live in it. Today the Southern Lagoon provides no fish for fish-eating birds, so they have all but disappeared.

The Southern Lagoon is on the brink of total ecological collapse and there is no chance of us saving it with fresh water from the Murray.

And I haven't even begun to mention the human tragedy that is in play right up and down the length of the river. That adds a whole new dimension to this debate.

Yet time and time again, we persist on trying to manage this catastrophe on a month by month basis, putting all hope in the one, hopelessly misguided solution – that it will rain.

Well, as my recently departed friend Peter Cullen once said praying for rain is hardly a good substitute for good policy.

And that's what today is about – good policy.

Climate Change

So what are the long term prospects.

We have seen this type of rainfall event in our past records, but what is different this time is that whilst the rainfall has been low in the past, the inflows into dams and rivers have never been as low as they have been in the past decade.

Rising temperatures brought on by climate change are increasing evaporation, meaning that average rainfall no longer results in average inflows and may never do so again.

Chris Mitchell from the Centre for Australian Weather and Climate Research puts it quite bluntly - we need to adapt to a drier climate – we need to manage the system on the assumption the downturn will continue.

Climate change is no longer a theory, it has already begun.

Yet the warming we are experiencing now is nothing compared to what we can expect with run away climate change.

The world's climate scientists estimate that by the end of this century, our world could warm between 1.8 degrees, even if we act now, and by 4 degrees if we do nothing[i]. This doesn't sound much, but they are terrifying numbers.

The world has gone through many climate shifts in the past.

Ice cores in Antarctica dating back 800,000 years show these cycles, and the science on why they occurred is well understood.

For example, 120,000 years ago the earth's average temperature was about the same as it is today, but 20,000 years ago it was about 4 degrees cooler[ii].

The past 10,000 years or so, the time when humans created agriculture, developed our cities, built the industrial revolution, the earth has experienced a peak of relatively warm weather.

Ok, so the world has been 2, 3 or 4 degrees cooler several times over the past million years, but when was it 2, 3 or 4 degrees warmer? The answer is astounding.

The last time our earth was just one degree warmer than today was about 300,000 years ago, but that pales into insignificance when you discover that the last time our world was 4 degrees warmer than today is not measured in thousands of years or even hundreds of thousands of years.

The last time it was 4 degrees warmer was 40 million years ago. That's right, 40 million years[iii].

If we don't take action to address climate change now, climate scientists are telling us that our civilisation could be faced with levels of warming in the next 100 years that our planet has not experienced for 40 million years.

But even if the world agrees to cut global greenhouse gas emissions by the 70 percent we need to by 2050, we have already set in train major changes to the world's climate system.

In Australia, CSIRO have estimated that global warming could result in a decline in rainfall in the southern Murray Darling Basin by up to 10 percent[iv] within the next 25 years, and a consequential fall in runoff into our river systems of up to 40 percent[v]. These worst case projections have immense implications for South Australia's water supplies, for irrigation, for farming and for our biodiversity.

Our continent is getting hotter, and rainfall patterns have changed significantly.

This change in climate may be part of a natural cycle or it might be caused by climate change or it might be a combination of both.

If the pre-1950s rainfall patterns continue, Australia is going to have to get by with a lot less water, a whole lot sooner than we thought.

If we now apply current extraction levels to the pre-1950s weather patterns and don't address expected losses to the system from forestry plantations, increased groundwater extraction, new farm dams and losses to the river from on-farm water efficiency, the impact on the Murray will be catastrophic.

Water Policy for SA

Today is not just about the Murray, it is broader than that – it's about long term water policy reform for South Australia.

There are 2 issues: water security for Adelaide and the health of the River Murray system.

To be frank there is nothing new I can say to you today that has not already been said.

So instead of trying to craft new words to describe an old problem, let me instead repeat the message of Peter Cullen, Adelaide's 2003 Thinker in Residence, and fellow Member of the Wentworth Group.

Let me repeat the message he gave late last year to mere polite applause at the Schultz Oration at the University of Adelaide, starting with actions to secure Adelaide's water.

Actions to Secure Adelaide's Water

This is what Peter said. Some may wish to challenge with some of the detail and that's healthy – that's what today is for – but this message is important:

"I support the Governments announced plans to increase the size of Mt Lofty storages, allowing more water to be pumped from the Murray when its quality is acceptable, and allowing the city to carry over water for the low flow periods when it is saline. This is a sensible medium term strategy, but will not help in the current extreme circumstances.

"I also support the proposed desalination plant. I am aware of the negative aspects in terms of mixing in the gulf and the greenhouse gas aspects, but it at least provides a source of water that is independent of rainfall. This could be a critical water source for the city if current conditions continue and I would urge that this project be fast tracked.

"I also believe South Australia needs to put more resources and possibly fast track its water planning in the hills catchments and on the Adelaide plains. Both have now been proclaimed, so there is a moratorium on further extraction, but more effort is needed to understand the resource and be aware of the sustainable levels of extraction from each. Each source needs to be protected from activities that take water and from contamination.

"South Australia has long been a supporter of improved management of the MDB. The appointment of an Independent Commissioner to the MDBC was I believe a great step and a help to the Commission. I wish other jurisdictions had followed this leadership…. Given your future dependence on the water market, I suggest you join forces with an upstream State and have a common water registry and transfer system with one or preferably both States.

"South Australia is proud of its efforts in recycling, but this needs to change. Supplying recycled water for market gardens is useful, but the critical need now is to take pressure off drinking water supplies. Some of your recycling is taking pressure off groundwater, but should be accompanied by a clawback in entitlements. You may not be ready to recycle directly back into drinking water, but some other communities have already moved in this direction. Using reclaimed water for open space and commercial uses is an important first step, but does involve investment in duplicating pipe systems to deliver the water.

"Adelaide has already pioneered the use of storing stormwater in aquifers for later use and this program could be expanded. This should be done in conjunction with tight controls and strong management of the entire groundwater resource.

"Adelaide has been slower than most other cities to embark on demand management and have managed to reduce per capita usage from the incredible 500 litres/person /day to 410 litres in 2004-5. There has been a good uptake of rebates for installing rainwater tanks and a range of other rebates are now available to householders installing water efficient appliances. While South Australians find themselves in the unusual situation of having water restrictions, Qld has now moved to level 6 restrictions requiring water to be trucked in for refilling pools and there will be drastic cuts in commercial users and other large users. This is needed even though per capita usage has dropped to 129 litres/ person/ day down from an average of 296 in May 2005.

"It is apparent that the Waterproofing Adelaide, completed only a couple of years ago did not achieve its aim, and further augmentations of supply have been needed following the dramatic change in availability of water from the Murray I believe water planning in uncertain times needs to be more pro active and sophisticated and that Adelaide should identify its next 3 or 4 augmentations and should proceed with planning, design and all necessary approvals,

and for each identify a trigger point when construction must start given the construction lead times and the forecasts of water availability."

Futures for the Murray-Darling Basin

Now let me turn to Professor Cullen's comments on the Murray:

"Not only is Adelaide's future tied to the future of the MDB, but so are many rural communities dependent on the river for domestic water supply and for water for irrigation.

"We now face a horrible readjustment in rural Australia, similar to that faced in Goyders time where 3-4 wet years led to unrealistic expectations; now we have had 40 years of unusually wet conditions in the MDB from 1950-1990, and the last 15 years the Basin has been drying. Our refusal to recognize this meant we have allowed the major storages to empty, and they will not refill again without a run of wet years.

"The lack of water is already having a devastating impact on irrigators and their communities as we have already had the death of some permanent plantings in the Basin, and more can be expected from both lack of water and from salinisation of water.

"The Federal Government has committed $10 billion to improved management of the MDB. This gives us an incredible opportunity to build a foundation for wealth creation, but it gives special interests the chance to make sure we squander this money without giving us the outcomes taxpayers expect.

"I believe Australians want to see a healthy MDB that provides good quality for water for towns along the river including Adelaide. I believe they expect to see the Coorong and Lower Lakes as healthy and productive ecosystems – not the Australian version of the Dead Sea. I believe they want to see an irrigation sector that produces food and fibre to meet our needs and to create wealth for rural communities. I believe they want to see an irrigation sector that can create enough wealth to pay its way without expecting $10 billion handouts every so often because they will not pay to maintain infrastructure.

"With the increasing competition for water and the climate change we are experiencing I believe irrigators will have to get used to half the water they have been accustomed to last century. Water will in future be less reliable than in the past. We will have a better idea of this once the CSIRO yields study is complete…, but we still have to address the river health problem and the declining security of supply which puts at risk investments in irrigation.

"Irrigation landscapes will change. I expect a reduction in the area of permanent plantings and perhaps more emphasis on annual crops that can be planted once water availability for the season is known. Irrigation properties may become larger to cope with a mix of perennial and annual plants and more opportunistic irrigation. There will be an overall contraction in the area irrigated, leading to issues of stranded assets and increasing operating costs to those remaining.

"There will be ongoing downward pressure on prices, especially in export markets, and with the value of water increasing due to scarcity and pressures for cost-reflective pricing there will be opportunities to leave farming. There will be strong pressures to improve water use efficiency, and in some enterprises such as dairy there is room for this, whereas many efficiency improvements have already been made in rice and cotton enterprises. We may see dairy farms leave irrigation areas and become purchasers of fodder from irrigators and other sources. New irrigation technologies like sub surface tape may see crops move from heavier to lighter soils.

"A critical issue for irrigation is whether to spend funds refurbishing old irrigation districts, where properties may be too small, and irrigation layouts inappropriate for current irrigation technologies, or to allow water to trade out and develop new irrigation enterprises on

greenfield sites. This has been happening over the last decade, and will probably continue. This will lead to the closure of some parts of existing irrigation systems.

"This is an important issue for the Federal Government who have some $3 billion to purchase water entitlements and nearly $6 billion to refurbish irrigation systems. It is important to enter the market and purchase the water before developing infrastructure, or there is every chance expensive pipes and channels will go to areas where irrigation may be contracting. Refurbishing last century's infrastructure may be silly when whole regions must be reconfigured with bigger farms and different irrigation layouts. What is the relative role for publicly provided infrastructure and that of the landholder?

"We have a tremendous opportunity to build an irrigation sector that can double the wealth obtained from around half the water. Do we have the foresight and the political systems that will let us achieve this?"

Water Policy, Politics and the Role of Civil Society

One thing we can be sure of and that is the SA government is not going to let Adelaide run out of water.

They are now putting in contingency plans for a desal plant, there is renewed debate about aquifer recharge, and I am reliably told that there are worst case contingency plans if the worst imaginable outcome happens in the next 2 years – that Murray River water becomes undrinkable.

Even under the worst possible scenario, no government is going to let Adelaide run out of water.

But to me this is not the issue. What is at stake here is how history will judge our generation in our custodianship of the environment.

Will we uphold the proud traditions of the free settlers, of Colonel Light, of Thomas Playford, of Don Dunstan – in creating one of the most wealthy and successful societies of our civilisation, or will the legacy of our generation be a string of desal plans strung up and down the Spencer Gulf because we turned our back on Australia's great river system – the Murray Darling Basin.

Will South Australia's future tourism industry be built on eco-tourism and a sustainably managed Coorong fishery, or will people travel around the world to see how a wealthy society managed to destroy one of the world's great wetlands – the Coorong and Lower Lakes – because we didn't do what we knew we had to do?

Will South Australia's clean green food industries wither on the vine because we couldn't create a water trading system that allowed water to be traded to more and more productive uses, because we were not prepared to help rural communities transition into a more sustainable future?

I tell you what, the odds are shortening.

Yes of course South Australia is at the bottom end of the great public policy failure of water management. And yes of course the management of water resources in the upstream states over the past generation has been a catastrophe.

But all I ever see in the Adelaide media is story after story blaming someone else.

And all I ever see behind the scenes is a game between state government agencies as to who can outwit who and get the best deal.

This has been a catastrophic strategy for South Australia, because the upstream states see through these games and they come to what they see as a reasonable conclusion that we don't care about the health of the River Murray at all – all South Australia is after is more water.

When South Australia has been calling for NSW to tighten its belt, Sydney has been on tougher water restrictions than Adelaide. Put yourselves in their shoes, you're hardly going to take someone seriously when they are seen to be making less an effort than you.

The only way South Australia can win is by taking decisive actions ourselves – by doing what we tell others they should do – and then shaming them into action.

Surely in the driest state on the driest inhabited continent on earth, we of all people should be the model of water efficiency and environmental stewardship.

Get angry, do something and shame others into action

I honestly don't understand. Why the silence, why isn't South Australia angry?

Where is the political activism of the Dunstan era or the Vietnam war?

Where are the stirrings like that of the early settlers under the Wakefield scheme? Where is the fight?

What am I talking about? I am referring to the decades of inaction and impotence of the people of this State while the Murray system dies.

Fifteen years ago I was a wide eyed town planner and enthusiastic public servant in the Premier's Department under the then Premier Dean Brown.

I worked on two major projects: the Spencer Gulf Resource Processing Strategy, built on the aero-magnetic surveys of South Australia that was commissioned by a visionary head of the Mines Department – Ross Fardon – a visionary initiative that now looks like underpinning the economic future of South Australia for probably half a century.

And the other was the river Murray – supporting Dean Browns 2001 Centenary of Federation initiative.

Guess what? We failed.

I was then invited to join the staff of the first South Australian to become Australian Environment Minister, Senator Robert Hill, where I was once again in the middle of the fight for the Murray Darling Basin.

We locked in the Cap, but not nearly enough on other outcomes.

Then in 2002, I accepted a consultancy with WWF Australia and we formed the Wentworth Group and again fought for the Murray Darling Basin.

In 2004 we had another COAG and another plan – but this time "finally" a really good one – arguably the best water plan in the world.

But guess what? Everybody signed but nothing happened.

So then I moved the Wentworth Group out of WWF and created a self sufficient organisation. Mike Young and Peter Cullen lead from the front. For two years we pushed and prodded, just trying to get the National Water Initiative implemented.

We have now had another COAG and another plan – another 'historic' deal.

Was there protest? No, there was silence.

And so here we are, a river that is below empty, lakes are dying and turning acid, and we are now talking about which wetlands we save and which we let go whilst we sit by and let rural communities along the river fall to pieces.

Why? Because South Australians have been managed. We've been conned into convincing ourselves that is always somebody else's problem, always somebody else's fault, somebody else upstream - anybody but us.

At what point will South Australia fight?

I tell you when you should fight.

You should fight now – today – because if you don't history will record our generation as the lazy, selfish generation – the generation that stood as silent witness to the destruction of Australia's and South Australia's greatest river system.

So where to from here

So how do we fight? Quite simple. We shame Australia by deeds not words.

We start at the bottom of the Murray Darling Basin and develop our own solution for the Coorong and Lower Lakes – one that saves water (from evaporation) and one that does not rely on its success on more water coming down the river - it can't, the dams are empty.

The Coorong is our great wetland of international significance is South Australia. It is an icon of Australia and a powerful symbol of our management of the Murray Darling Basin and we should use this symbolism to mercilessly shame Australia into action.

We do it together, we set a common goal, we bring in the experts, including those people with local knowledge, we work with local communities and we come up with an answer before October.

Lets use clever engineering solutions to help us manage the lakes, lets pipe water around to the communities who have historically relied on the lake for water, lets bank the water savings and let that pay for the new infrastructure, and lets use what water is left over to restore our other degraded wetlands along the river.

I can't for a moment imagine how any one could think that a healthy managed estuary, teaming with native fish, 10 times the size of the Coorong, would not be a better environmental outcome that a large storage basin full of carp.

Why October? I'll get to that.

We do the same for our struggling communities along the river, not just the irrigators but the towns whose livelihood is built around the river. We follow Peter Cullen's advice, we help those who are not viable to leave the industry with dignity and we help those who want to stay to modernise to use more water to create more wealth.

But we do it together, because you know and I know that one of the great success stories of our society in South Australia has been our ability, generation after generation for different interest groups to work together in the State interest.

On the national water reform front, South Australia has again drawn a trump card with the appointment of Senator Wong as Minister for Climate change and Water. Don't waste this opportunity.

But my message to you today is that no matter how capable or how committed the Federal Minister is, she cannot deliver on the reforms you need at the speed they are needed without a practical plan and a plan backed by a strong community base of support.

We know how to fix the problem – if fact we all agreed to a world class reform package in 2004. We have $10 billion of Commonwealth money alone to lever the necessary change, so we can't blame the lack on money either.

The problem we all face is a political problem - the pace of these reforms is too slow. We are destroying the environment and we destroying people.

South Australia needs to shame the nation into action – by taking action in our own backyard.

Three things:

Adelaide: Firstly, let's sort out water management in Adelaide and make it truly world's best practice. And world's best practice doesn't mean a dry parched city. It means the clever use of a scare resource.

Communities along the Murray: Secondly, lets get in and help the rural communities dependent on the Murray at a time when they need our help.

The Coorong: And thirdly my passion, lets go and fix the Coorong – lets do it ourselves – lets bank the water savings, and use them to restore the other wetlands in the SA system.

Why October?

Oh, and why do we need to find a solution for the Coorong by October? Because, once again, we have allowed ourselves to be managed.

How many of you are aware of this statement by the M D B MinCo in March this year: It's headed:

Potential acidification

Council discussed the grave potential for acidification of the water and sediments of the Murray River downstream of Blanchetown and in particular in the Lower Lakes. In principle support was given for the MDBC to provide $6 million in emergency measures to reduce the risk of environmental damage to Lake Albert.

And this is the key sentence:

The MDBC will … develop a range of medium and long term risk management strategies for the Coorong and Lower Lakes that capture the best available science, hydrological modelling and climate change analysis and strike a balance between the environmental, economic and social values of the sites.

The MDBC will report outcomes to Council by October 2008.

Risk management strategies! Risk management strategies. That's like asking a pilot to write up a risk management strategy when they're about to fly into a mountain.

The time has long past for temporary fixes – like the dredge at the mouth that has been there for years, like the $6 million pumps moving bad water from Lake Alexandrina into Lake Albert in a desparate bid to stop it going acid. What's the next short term solution if Alexandrina goes dry too?

We need a long term solution for the lower lakes and we need it before this summer. South Australia should not wait while someone else, yet again, decides for us another expensive and most likely temporary fix.

Conclusion

There is no "they", there is only us.

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