

## Man with a plan

Published in The Weekend Australian Magazine, May 31- June 1 2003 Not only can environmental scientist Peter Cullen demystify phenomena such as salinity and drought, he has workable solutions - and the ear of the Prime Minister.  
Story: Åsa Wahlquist

After a week of headlines screaming drought, and calls for drought-proofing and turning the rivers inland, Australia's most eminent environmental scientists met in a Sydney hotel. Determined to wrest the agenda back from the shock jocks, to insert the science that was their life's work into the debate, they tossed their ideas back and forward over dinner.

The conversation ranged across the breadth of Australia's settled history: through agriculture, land clearing, salinity, the climate, water use and drought. Dessert eaten, the discussion continued, taking many energetic, if not too disciplined, turnings. The evening was threatening to collapse under the weight of so many fine minds with their many fine ideas.

One of the journalists present banged the table. "What are you going to do about it?" he demanded.

The scientists, thus challenged, adjourned to the next room.

Fifteen minutes later the journalists were invited in to hear a man with a commanding presence read a statement that began: "We are of the view that the problem with Australia's degrading landscapes is not just one of the immediate drought, but it has been 200 years in the making, and we really need to look again at how we live in this landscape.

"You can't drought proof Australia," he read, "we need to learn to live with the landscape, not try to fight against it all the time."

It was a concise yet eloquent statement that not only starkly outlined the problem, but presented a five point solution. It was a statement borne of science, written with deep feeling, hostage to no vested interest or bureaucracy.

The astonished journalists applauded. And so the Wentworth Group was born.

Their statement hit the media like a drought-breaking storm. "We were just flabbergasted by the press response," says Peter Cullen, the reader that night of the Wentworth statement, and the man who pulled it together. "We had a dream run in the media and got so much coverage from it that it just amazed us."

NSW Premier Bob Carr engaged the Wentworth Group to report on landscape conservation, and adopted their model. The Prime Minister takes careful note of what they say. Seven months after that October night, they are still fielding media requests, along with several invitations a week to talk to groups.

For Cullen, arguably Australia's leading environmental scientist, the Wentworth Group is a new phase in his life's work to bring science and the community together. After all, as Cullen points out, nothing in the Wentworth statement is new, to those who understand the environment, "but nobody had put it that way before. Nobody had said 'we can't drought proof Australia, we have to live within our limits'."

But he is also proud of the fact it provides solutions. "I think the community is sick and tired of scientists listing the problems. They want solutions and we think we have got ways forward on these issues. That is the value we are adding."

Cullen is a hard man to miss in a crowd. He is a large - a very large - man who loves to laugh. His untidy sweep of hair and slightly dishevelled appearance render him a friendly sight. But don't be fooled by his air of mild, slightly detached amusement. This is a man of enormous authority, a skilled listener with a penetrating intellect who is prepared to speak the truth exactly as he sees it.

Cullen's gift lies not just in understanding science, its broad sweep and its daunting, even damning, details. It is also lodged in his striving to find first where his listener stands, then talking their language, and, as he puts it, going on the journey together. His fellow travellers include not only NSW's Bob Carr, but the Prime Minister himself, who in 1991 awarded him Environmentalist of the Year.

Cullen first grabbed John Howard's attention in 1998, when he addressed the Prime Minister's Science, Engineering and Innovation Council on salinity.

"When you are in a position like mine you meet a lot of people," Howard explains, "and somebody who can explain a complicated issue in clear language and can provide a cut through mechanism for beginning to tackle it always impresses you.

"The presentation he made at the Science Council really drove home to me what a big challenge it (salinity) was. He brought everything together in a very effective way for the first time. It meant that, in my mind, that we really did have to

do something about it."

When the Federal Government was, to use Howard's words, treading water on salinity, he remembered Cullen, and invited him to chair the committee that developed the National Action Plan on Salinity. That gave rise to one of Cullen's appellations, the 'father' of the action plan.

The fact is Howard says the \$1.4 billion salinity action plan, a significant part of his commitment to what he describes as bread and butter environmental issues, is hugely important.

"The big difference between environmental politics in Australia now and when I first entered Parliament, (is that) at that time it tended to be a movement on the periphery of politics but now it is very mainstream," Howard says. "You have to tackle issues that you feel comfortable with, and we have tried to tackle these mainstream bread and butter environment issues." It is, he reminds this writer, too soon to talk about his government's legacy, "governments have legacies when they are in the past," but there is no doubt when it comes to these issues, the Prime Minister has his eye on history, with Cullen as one of his guides.

Cullen was born in Melbourne sixty years ago. The formative event of his childhood was when his father, an engineer with the State Rivers and Water Supply Commission, moved the family to Tallangatta, on the Murray River. His job was to relocate the town, which would be flooded when Hume Dam was enlarged.

Although only primary school child, Cullen so loved the country he decided then to break the family tradition of engineering, for the land. He went on to study agriculture at Melbourne University.

He did a masters on irrigation. "Of all the things I could have studied in agriculture that was the one that always just excited me - the power of water to make this country blossom and, as I understood it a bit more, then the damage that the misuse of that water was doing."

In his one year sojourn as a high school teacher, Cullen felt out of place in the authoritarian structure of the school. But there he also found his life's companion, his wife Vicky who was then a French teacher and is now an Anglican priest.

University teaching followed, first at Melbourne, and then Canberra's College of Advanced education. "It was a new institution, an exciting environment and we had a very innovative course in natural resources in those days."

In the late 1980s the Co-operative Research Centre program was launched. CRCs bring together scientists from across the country, backed by industry, for a five year period.

Cullen put together a bid for a CRC in Freshwater Ecology.

Early in the summer of 1991, a massive blue green algal bloom infected over 1,000 kilometres of the Darling River. It made world headlines, but it also exposed the dearth of relevant research here in Australia. "We had some very good aquatic scientists but they were working on the Alpine streams of Tasmania, rather than the lowland dirty rivers of the Murray Darling," Cullen says.

Cullen took a team of scientists to study the bloom. "It was while we were up there having dinner one night that we got the phone message that we had failed to get the CRC. I remember sitting in the pub at Bourke, thinking 'what is going on in this country? Here we have this bloody disaster out here with this bloom that we don't understand, and we can't get governmental support to establish a research centre in freshwater ecology?' That was a shock to me."

Cullen describes the blue-green algal outbreak in the Darling as a focussing event. "Every now and again, politically, we get a focussing event when the ideas of different people all coalesce and you have a chance to change in this country." The next year the CRC for Freshwater Ecology got up, with Cullen running it.

The second focussing event was the 1999 Salinity Audit of the Murray-Darling basin. "The one thing that everyone really understood was that we weren't going to be able to drink the water in Adelaide two days out of five (in the next 50 to 100 years). That was the result of a computer model, not an event like an algal bloom, but it had the same way of grabbing people's attention."

And perhaps the third will turn out to be the 2002 drought, and the debate over drought-proofing.

To use those events, Cullen says scientists must understand "that now is not the time to sit and write an elegant paper. It is the time to get in there and tell people what should be done. In fact they are looking for ideas, and if you have an idea you want to present there is a little period of receptivity there where people are looking for a good idea. If you have got one, that is when you have got to get it there."

By 1999, Cullen had a national profile, and the Prime Minister himself was listening.

"I was the new boy at the Prime Minister's Science Council with all these eminent people all around me," Cullen recalls. "I was almost speechless, sitting with the Prime Minister and half the cabinet." He was then surprised with the request that he lead a review on salinity. "This was the first that I had heard of it. And I thought, 'but I am too busy'. How do you say no to the PM and the cabinet," he laughs, "so I found myself leading this group on dryland salinity."

Cullen had in fact never worked in dryland salinity. But his years at the CRC, developing his skills as what he describes as a knowledge broker - bringing together the science, integrating it, synthesising it and packaging it so it could be understood by the layperson - were about to be put to good use. "People can produce knowledge which is like producing beautiful bits of a jigsaw but someone has to put the jigsaw together," he explains.

The problem was that every one could see bits of the salinity problem, but no-one was seeing it as a national issue. Cullen's main recommendation, was he admits, the most cheeky. "I said, 'well the first step here is we have to acknowledge that this is a big national issue and the best person to do that is the Prime Minister'. And he did. The bureaucrats weren't very happy with us telling the Prime Minister what he should say, but my view is we are not there to be politically correct, we are there to say what we think should be done."

Cullen retired from the CRC last year, and although his health is poor, his diary is full. "I am doing things that I feel passionate about and that I think are important." He is on the boards of Landcare Australia, the research and development corporation Land and Water Australia, and the new CRC for irrigation futures, and has a ten year commitment to Lake Eyre. He recently conducted a science review on the lower Balonne, for Queensland Premier Beattie.

And then there is the Wentworth Group. "I've become pretty heavily engaged with the Wentworth group as a way of delivering our knowledge in a way that is understandable to the community and to governments."

The next challenge is a water policy. "We think a number of politicians would very much like to find ways forward, and we don't have great faith that the bureaucracies are going to come up with ways that will resolve the problem."

Ready recipients of the Wentworth Group's water policy will include Bob Carr and John Howard. They might be in for some surprises.

Take some of Cullen's past statements. Amongst other things, he would like the Federal Government to challenge the State's hold over land and water management; a National Rivers Corporation run by private-sector appointments, to take over water management; a National Heritage system to protect Australia's undamaged water courses; the end to broad-scale land clearing of remnant native vegetation; and 20 per cent of the flow of the Murray-Darling allocated to environmental flows, to the health of the river itself.

He argues dredging the mouth of the Murray "is another example of investing to treat symptoms rather than address the cause of a problem". And he says much of Australia's agriculture "is highly marginal and depends on ongoing cash subsidy (for droughts, floods and poor markets) and on acceptance of high levels of natural resource degradation (our rivers, wetlands, estuaries and coastal waters including the Great Barrier Reef)."

For Cullen, environmentalists are dealing with the biggest issues in society. Debates over the direction of water policy, he argues, "are really debates about the sort of society and the sort of environment we want to live in."

The stakes Cullen deals with are high. A recent series audits spell out the sorry tale. Approximately 5.7 million hectares are at risk of dryland salinity, rising to 17 million in 50 years time. Up to 20,000 km of streams could be significantly salt-affected by 2050, and too much water is being taken from 26 per cent of Australia's rivers and 34 per cent of Australia's groundwater. Nearly 1600 species of native plants and animals are in danger of extinction and 2900 ecosystems are under threat.

Cullen says we can never go back to a pristine situation. "What we can do is make sure that these ecosystems function effectively and still give us the freshwater and the air and the services we want from them."

Cullen admits he is disappointed with erstwhile child, the salinity plan. Arguments between the States and the Commonwealth, which jointly fund the salinity plan, mean that, after two and a half years, only about \$160 million has been approved, and \$70 million released. "I'm disappointed with the implementation," he says. "It has taken a long time and there has been so much arguing between State and Federal governments. I think we have not been effective at delivering the best mechanism. That seems to me a wasted opportunity."

But Cullen is steadfast in his belief that Australians want to go forward, that they do want solutions to their environmental problems. "I think the community and their politicians would like to be able to do something about them. The question is, they are not exactly sure what." Cullen sees it as his challenge to provide answers to that question.

The problems might seem overwhelming, Cullen is a man of great faith in the human spirit, and the human mind. "I have always felt that knowledge was better than ignorance, and we should try knowledge in this country because ignorance hasn't got us very far."

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