



The turbulent zone where science meets politics

Steve Morton
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Science matters!

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- A major contributor to every big challenge and opportunity facing Australia
- And yet science is almost always just one among many contributors to public affairs...
- How does a scientist know where the appropriate limits might be in contributing to policy and public debate?
- These issues will become increasingly important!

Blueprint for greenhouse gas

Farmers need a say on
future of water.

Murray Flows?
pure politics?

Scientists
ring alarm
On climate

Murray River scientists
caught playing politics

**Scientist
disputes
river claim**



Funding likely to dry up, scientists warn

FARMERS will face a less sympathetic community in the future if radical new farming practices designed to survive droughts are not introduced soon, scientists have warned.

Two or three droughts from now farmers may be asked to repay the community's contributions to supporting their industries.

"The story of drought is a big issue," said CSIRO Sustainable Ecosystems Division chief Steve Morton. "My own perspective is that we have a limited amount of time left because the community is now starting to ask for radical changes.

"People are asking: why are we paying this segment of the community to get through the drought," Dr Morton said.

"It won't be too much longer before the farmers are asked to repay it. Drought assistance is being rorted with no accountability of where the money is going."

Dr Morton added: "This is not an anti-farmer diatribe."

Australia's current youth were not as connected to the land as the older generation, he claimed. "They may not be as sympathetic and willing to

subsidise this sector in the future. It will only be two or three droughts away that the time will come," he said.

The rural sector needed to start developing agricultural systems that are sustainable and able to withstand drought.

Dr Morton is developing new models on sustainability.

"We are looking at research and development into systems that reflect the Australian environment," he said. "I am not being negative about farmers — but we will continue to ignore this issue at our peril."

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Dr Morton added: "This is not an anti-farmer diatribe."



WINDS of change ... a top scientist is calling for a radical reassessment of the way droughts are handled in the future. Picture: Anthony Weate



BLUEPRINT FOR A LIVING CONTINENT

A WAY FORWARD FROM
THE WENTWORTH GROUP
OF CONCERNED SCIENTISTS

1 November 2002

The Wentworth Group is convened by WWF Australia.
Saving Life on Earth

The Wentworth Group: the downside

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- Short-term justification notwithstanding, CSIRO risks its reputation as provider of dispassionate scientific advice to Government and the public
- If too frequently directly linked to lobby groups, CSIRO will become perceived as partisan
- Bureaucrats and politicians rely on CSIRO for scientific and technical advice in difficult areas of policy, and must have confidence in its non-ideological stance

What does it all mean....

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- **“Science”**
Systematic pursuit of knowledge
- **“Policy”**
Decision to commit to a course of action
- **“Politics”**
Bargaining, negotiation and compromise in pursuit of desired ends under contested conditions – who gets what, when and how – who wins, who loses
- **“Values”**
Shared commitment to a particular goal

Roles of information in developing consensus through politics

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- **Evaluating**
(information-driven)
 - Help assess alternatives
 - Comprehensive
 - Rational
 - Enlightenment
 - Technocratic

 - **Science powerfully useful**
- **Rationalising**
(value-driven)
 - Help justify choice
 - Selective
 - Emotional
 - Power
 - Pluralist

 - **Science powerfully useful
BUT at serious risk of
conflation with values**

Different roles for scientists

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Pure scientist	Science arbiter	Issue advocate	Honest broker
Not interested in policy or politics	Helps with information-driven assessment	Pushes evidence in favour of particular policy options	Provides evidence to clarify consequences of policy options
Stays away	Evaluating data only	Rationalising: acts to reduce scope of choice	Rationalising: acts to clarify or expand scope of choice

Roger Pielke, 2007, *The Honest Broker: Making Sense of Science in Policy and Politics*, Cambridge University Press



How do you choose?

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- **Ethos:**
 - what you feel is right
 - what you see as your primary motivation for doing science
- **Your employer:**
 - the roles most commonly played by the institution in which you work

Principal policy roles for individual scientists in different institutions

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Government agency	CSIRO	University
Science arbiter Honest broker	Pure scientist Science arbiter Honest broker	Pure scientist Science arbiter Issue advocate Honest broker

Trade-offs among the institutional roles

Government agency	CSIRO	University
<ul style="list-style-type: none">* Mainline input to policy* Very limited ability to speak about policy in public	<ul style="list-style-type: none">* Speak with CSIRO's authority, and so exert strong influence on policy* Constraint on speaking about policy in public due to complex internal processes	<ul style="list-style-type: none">* Freedom to speak without constraint* Less influence on policy because usually speaking only as an individual

Principal policy roles for different institutions

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My personal approach

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 A pronounced set of value-driven beliefs

 A strong belief in the significance of science and of rigorous thought

 Nevertheless, a sense of science's limits in human affairs

 A consequent belief in the democratic process

My ethos... or, rather, its antithesis

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Our technological civilisation produces a continuing stream of problems of a most complex technical character. Only a small proportion of the population is capable of understanding issues of this sort, even if they were to make the effort. Many elected representatives are in the same situation. The experts must in the end be trusted. To submit such matters to the ballot box, the street demonstration, or the politician who has a divine conviction that he understands technical problems, can only lead to trouble and possible disaster.

Sir Phillip Baxter, December 1975



Why I strive to act as Honest Broker

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-  A pronounced set of value-driven beliefs
-  A strong belief in the significance of science and of rigorous thought
-  Nevertheless, a sense of science's limits in human affairs
-  A consequent belief in the democratic process
-  A compulsion to do the most difficult job (!)
-  ... and a fit between my institution and my desires

- Science will be called upon as never before in the coming decades – so please prepare yourself by considering your own responses to these issues