

Science Advice to Governments Conference

Auckland, New Zealand (28 - 29 August 2014)

Responding to the increasingly global nature of societal challenges, practitioners of science advice to governments formed a global network to share practice and strengthen their ties, at the first global conference on science advice to governments, which was held in New Zealand in August 2014.

Convened by the International Council for Science (ICSU) and hosted by New Zealand's Chief Science Advisor, Sir Peter Gluckman, this historic summit marked a turning point in the global awareness that robust and credible science has an important place in public policy making. The conference brought together some 200 participants including science advisors, senior officials, representatives of national academies, experts and scholars from more than 40 countries across Africa, the Asia-Pacific region, Europe, the United States, Canada and Latin America. The Queensland Chief Scientist, Dr Geoff Garrett, was one of the attendees.

Following are some of Dr Garrett's notes from the conference.

Key themes/learnings through "quotable quotes"

THE WAY IN

The knowledge economy is everyone's goal, from Rwanda to the USA, but "is there an ignorance economy?"

ON COMMUNICATION EXCELLENCE

- "A critical role of the Chief Scientific Adviser (CSA) is translation. Making information accessible" (And see Appendix 1)
- "There isn't a supply-side problem (information overload); there is a demand-side problem (making it understandable and usable)"
- "You have to be honest about what you know and what you don't know"
- "If we communicate well the public can be a great advocate for science"
- "We need to be much better at listening. And doing a lot more of it."
- "Repetition is important!"
- "The science literacy goal is urgent and important - at all levels of society."
(Note particular problems in developing countries especially in Africa.)

Re: CSAs, Scientists and the Media...

- "Scientists as a whole should be much more public in the media but it's dangerous - it gets personal – you need to be courageous."
- "You can't blame the politicians that there are so few scientists in politics - we need to put our hands up more"

ON PROVIDING ADVICE

Re science for policy 'versus' policy for science?

- "Are you a custodian and transmitter of knowledge/evidence OR an advocate for particular policy position (and therefore a lobby group?)"

But...

- "Perceived conflicts-of-interest can be offset by transparency, and honesty"

On time with decision-makers....

- "On day-to-day operational issues of course; but you also need time for periodic, forward thinking/beyond the horizon/anticipating conversations"

On getting advice from inside or outside (of government)?...

- "It's both! As long as it's of the highest quality"
- "It is important to note the difference - and differentiation - between the need for frank and independent advice in government and the bureaucracy."
- "Clarity of advice is key, eg spelling out: What is known? What is partially known? What is unknown? Where are the uncertainties?"

On timing...

- "Often the science is brought in too late"
- On networks....
- "There is too much wheel reinventing. There is a wealth of information and expertise around to tap into"

When advice is not taken up....

- "It is because it's too late; or it is not answering the question; or it's not sufficiently broad - i.e. it's not covering the social implications. Or the trust isn't there."

ON RELATIONSHIPS, AND ENGAGEMENT

- "It is a catastrophe to battle your government in public"

Re informal versus formal advice?

- "If there is no informal and relationship-based advice, providing just formal inputs (papers, briefings etc) is a waste of time."
- "If the personal linkages are not there the job becomes impossible. Trust and relationships are key"
- "Advice to CSAs - infiltrate the government!"

The importance of empathy and listening....

- "Seek first to understand..."
- "It's very important to understand that Politics is hard – the problems are typically wicked ones, complex and messy, and you can't walk away as you can in business (close it down, or move companies) or in academia (change institutions)"
- "Understand your stakeholders – Remember the Three Rules of Politics....1. Get re-elected 2. Get your party re-elected 3. See Rule 1"

- "CSAs should be engaged at every stage in the process of policy formulation, AND implementation.....from early ideas brainstorming through to seeing it through to implementation - engaging policymakers from day one is very important"

DECISION MAKING

- "Quality policy decision-making is getting worse - busy lives, frenetic pace, media cycle reaction times. And Google is not a great source of sage advice. Plus there is an increasing dependence on under-qualified assistants/minders and an explosion in their numbers."
- "International science advisory systems are fragmented."

ON COMPLEXITY, RISK AND UNCERTAINTY

On risk/hazard/uncertainty/vulnerability /exposure...

- "Politics applies the precautionary principle"
- "You have to explain that, generally, we in science don't work with certainties, but probabilities."

On planning for Emergencies...

- "Set up for emergencies; and rehearse them; particularly noting the importance of reaction speed and cross boundary integration"
- For example, see the UK government's SAGE Committee - the Science Advisory Group on Emergencies (eg floods, foot and mouth, Ebola, cyber security, etc.)

On boundary crossing...

- "Issues and problems generally don't come in department sized boxes."

ON BUILDING CAPACITY, AND MOBILITY

- "Getting more scientists into the bureaucracy and fast tracking them can be very beneficial" (A good example being the UK's model of 3 month Fellowships)

ON GOVERNANCE, AND ORGANISING ARRANGEMENTS

- "Frank and fearless independence is a *sine qua non* for effective CSAs"
- SIAC type mechanisms work.
- "How do you measure your effectiveness as a CSA? It's all about Trust, and value addition with close links to, and quality relationships with the top decision makers"

The challenge of restructuring...

"Multiple changes in Prime Ministers, Premiers, Ministers, DGs etc. always creates turbulence....

Beware the MOG!"

(See also [Appendix 2](#))

ON INNOVATION, TAKE UP AND IMPACT

- "I've given more talks on innovation than anything else"... And remember Robin Batterham's point around the President of China and his recent speech on 'innovation, innovation, innovation'
- "The impact agenda is increasingly dominating the agenda ... it's all about uptake, recognition, celebration"

Lost in translation...

- "Implementation is now the rate-limiting step. Previously the pace of discovery was controlling. And implementation is so often done badly"
- "The 'Lost in translation' challenge is alive and well"

THE WAY FORWARD?

- "The pace of change is only gonna accelerate."
(See also [Appendix 3](#))
- "There's a lot of 'heavy traffic' out there... problems that are massive, urgent, complex, daunting... climate change and energy supply, pandemic threats, food security, cyber security, water security, soil degradation, and so it goes on"
- "The major challenges are inextricably linked - energy and climate, with food and water, with energy supply... One needs integrated/interdisciplinary/international approaches ... but no easy task!"

*Dr Geoff Garrett AO
Queensland Chief Scientist*

Appendix 1

“The dominant incentives in the world of the intellect have tended for hundreds, if not thousands, of years to encourage intelligent people to complicate their communications. When any intellectual argument seems abstract and difficult to comprehend, it is customary in the academic milieu to presume that its exponent must necessarily be brilliant. On the other hand, when an intellectual argument seems simple and understood, it is usually assumed to be facile. This is why intellectual authors tend to write books that nobody will understand and why intellectual readers tend to read books that nobody enjoys reading.”

“Critical Mass”, Duronimus Karloff (2013)

Appendix 2

“We trained hard...but it seemed that every time we were beginning to form up into teams, we would be reorganised. I was to learn later in life that we tend to meet any situation by reorganising; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralisation.”

Petronius Arbiter (27-66 AD)

Appendix 3

“Today is different—because we are in the “second half of the chessboard.” The phrase comes from the story told by Ray Kurzweil, futurist and director of engineering at Google, about the inventor of chess and the Chinese emperor. The inventor asked to be paid in rice: a single grain on the first square, two on the second square, four on the third, and so on. For the first half of the chessboard, the inventor was given spoons of rice, then bowls, and then barrels. The situation changed dramatically from there. According to one version of the story, the cost of the second half of the chessboard bankrupted the emperor as the continued doublings ultimately required 18 million-trillion grains of rice, enough to cover twice the surface area of the Earth. Similarly, the continuation of Moore’s law means that the next 18 months or so will bring a doubling of all the advances in computational power and speed we’ve experienced from the birth of the transistor until today. And then it will happen again.”

McKinsey Quarterly, September 2014