

A national strategy for science communication in Australia

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Australia has recently reviewed its science communication activities, with the aim of establishing 'a national science communication strategy'.

The exercise was commissioned by the Minister of the Australian Department of Innovation, Industry, Science and Research (DIISR). This Department is one of about 20 portfolio areas in Australia, along with the Departments of Health, Education, Defence, Finance and others.

The aim of the reviewⁱ was to give science communication activities a greater sense of direction. This had been identified as an issue in several previous government reports:

... existing science awareness activity required better coordination and refocusing of objectives, and ... a higher priority needed to be placed on strategic leadership and policy formulation.ⁱⁱ

The report of the review was launched in February 2010. The Chair of the Steering Committee said in the preface that, while she and her colleagues were encouraged by the breadth and diversity of science communication initiatives carried out by many organisations and individuals, they felt:

Australia requires a national strategy that will mobilise and connect such activity, which is largely uncoordinated and fragmented. Many Australians are yet to engage with the sciences in ways that will enable them to participate fully in a society which embraces the Australian Government's innovation agenda.ⁱⁱⁱ

Australia has a large number of science communication activities, some funded by national and regional government, some by the universities or research organisations, and others supported by organisations including not-for-profit organisations, the Academies and industry. Most of these activities will be familiar:

- National science week
- Awards and prizes to recognise outstanding scientists, and create role models
- National campaigns to influence citizen behaviour on water use, the need for a healthy life-style, reducing energy consumption and so on
- Competitions and activities for school children, including extension training for highly talented students
- Events to encourage dialogue between scientists and industry
- Funding for organisations which promote science understanding to politicians

This paper considers the background to the review, the final report and its recommendations. It is divided into three parts.

1. The need for a national science communication strategy
2. The final report, and its recommendations
3. A discussion: what's new, what interesting and what's next

The need for a national science communication strategy

In 2007 Australia had a change of government. With the new Government came a re-arrangement of the responsibilities of the portfolios. Science had been part of the Education portfolio, but the new Government transferred it to the Industry portfolio. So now science communication was viewed through a new lens: not education, but industry.

The program which funded science communication activities is SCOPE. It supported about 16 separate projects, including:

- International Years (Biodiversity, Astronomy)
- Prime Minister's Prize for Science
- National Science Week
- The Australian Science and Mathematics Olympiads
- The National Youth Science Forum
- The Australian Science Festival

There were good reasons to tidy up the SCOPE Program. It had grown over the years to become an untidy collection of activities, funded on *an ad hoc* basis - there was no regular call for proposals, no formal application process, and no transparency in funding decisions. While the individual activities may have been interesting and successful in their own way, the Minister and his Department wanted to align them more closely with DIISR priorities. Some projects were considered to be more about 'education' than 'science', and therefore it was felt they should be funded by Education and not Industry.

So an announcement was made that the SCOPE Program would be closed, and the Minister ordered a review of science communication. He expressed his aims in a media release:

A National Science Communication Strategy will mean that the wonders of science will reach even further into the lounge rooms of Australian households," Senator Carr said.

A coordinated national approach to science communication will see much stronger results from a range of currently fragmented activities around the country."^{iv}

The Review group was instructed to develop a new 'National Science Communication Strategy', a much more ambitious objective than devising a replacement for SCOPE. The terms of reference for the review were set by a Steering Committee appointed by the Minister:

The Committee set the terms of reference for the development of a national science engagement strategy, which are to undertake an analysis of the existing science communication sector, conduct a program of consultations across Australia and develop a five-year plan in response.^v

The final Report, and its recommendations

The final report was released at a national conference of Australian Science Communicators (ASC) in February 2010.

It argues the case for an expanded and coordinated science communication effort, and makes 15 formal recommendations. The Report begins by describing what Australia would be like if it were informed by a national science communication strategy. It would:

- be inspired by and value scientific endeavor
- attract increasing national and international interest in its science
- critically engage with key scientific issues
- encourage young people to pursue scientific studies and careers

The Report nominates four key reasons why Australia should invest in science communication:

to increase appreciation of science in Australian culture, facilitate informed citizen participation in decision making and science policy development, boost confidence in the Australian Government's research investment and ensure a continuing supply of well-qualified science graduates.^{vi}

The Report argues the case for each of the 15 recommendations, citing evidence and illustrating how it might be brought into effect. Dot points flesh out general ideas. For instance, recommendation 13 calling for a 'national framework – local action' model identifies the need for local coordinators, and spells out their role quite specifically in 18 dot points.

The Report identifies the need for leadership and a national framework, and claimed that one of the strongest messages to come from the consultation process was that "no one at the national level was articulating the vision, goals, priorities and desired outcomes for communication across the sciences."^{vii}

Seven appendices list the sources of ideas for the Report - the people who attended meetings; those who made submissions; a summary of the discussions at these meetings; and the national and international reports drawn upon by the review. The document is 104 pages long.

The 15 recommendations can be summarised as follows:

*Australia needs a new broader strategy, that is
Articulated and prioritised by Government, and
Led by Questacon (the organisation that wrote the Report), with
Everyone meeting together at a summit to reach an agreed vision and priorities, but
The Prime Minister's Science Prize should continue.
It should promote Australian science to both local and international audiences, with
An annual Science and Society forum to set community priorities on what science should be
done, but
National Science Week should continue.
Research organisations should jointly brief Parliamentarians and other leaders, with*

*Media coverage to be increased by training scientists and developing Australian science media content, and
Students should be encouraged to consider careers in science, especially
Students living in remote areas or disadvantaged communities.
All this to be done through a 'National framework – local action' model, using
A national web (and new media) to increase visibility of science, with
Support for communication research to identify where to spend the money, and evaluation to
know if it has all worked.*

A discussion: what's new, what interesting and what's next

Developing a five-year plan was one of the three terms of reference set by the Committee overseeing the review^{viii}. The Report as presented does not contain a cohesive plan, but is instead a cornucopia of ideas, a catalogue of issues and suggested solutions.

The 15 recommendations are a mixture: the practical, the specific, the aspirational. They come across as uneven, probably because the review group was working on two tasks at the same time:

1. devising guidelines for a replacement program for SCOPE; and
2. the much grander task of trying to construct a new 'National Strategy for Science Communication' involving many participants, some well outside DIISR's sphere of influence

The issues will be familiar to those involved in the field. Some recommendations are quite specific: retain the Prime Minister's Prize for Science, maintain funding for National Science Week. Others are less well-defined: recommendation 7, for instance, calls for an annual science and society forum to allow citizen input into decision-making and informing policy developments.

It is hard to begin to see how this might work. Who would be invited? What would they discuss, and what effect would the forum's decisions have on the priorities of bodies like CSIRO (Australia's national research organisation) or the Australian Research Council?

One interesting recommendation calls for "a strategic research and evaluation capability to design, target and review effective science engagement activities". Australia is good at devising innovative solutions to practical problems, but has shown less interest in developing the theory which should inform good practice. As in many countries, there is not a strong evidence base to support science communication activities.

The recommendation will help accelerate a change already in evidence: universities are offering new courses and more graduate students are undertaking research in science communication. A network linking researchers together has been brokered by Australian Science Communicators (ASC). SCERN – the Science Communication Education and Research Network – could provide a basis for this research capability. It could lead to the formation of a body like China's Research Institute for Science Popularisation (CRISP).^{ix}

It was disappointing that the Report was so lukewarm about ASC. Since it was founded 16 years ago, ASC has provided a platform for science communicators and been copied by

other countries. It is a non-government association which organises local and national events, hosts international conferences, and provides an electronic discussion forum. In essence, ASC is the basic connective tissue which allows communicators to plan and organise other events.

The National Strategy aimed to address issues like better connection, coordination, and an end to fragmentation, but the authors of the Report failed to recognise either the contribution or the potential of ASC. They chose to consign ASC to a minor role: “improving quality and professional standards in the area”.^x It is an irony that the Minister chose to launch the Report at a national conference of ASC.

There is welcome recognition that the humanities and social sciences have a part to play in science communication, and can contribute to finding solutions and making them work. There are significant barriers to the two sides (humanities and social sciences; and the natural sciences) working together in Australia: issues of funding, culture and institutional structures all work against this. (See *Collaborating across the sectors*^{xi} for a discussion.)

The future of the Report is not yet clear. If it is to make a substantial difference, the Government must allocate substantial funds to science communication activities. For a start, the SCOPE Program needs to be replaced. But the Report went a long way beyond the limited boundaries of SCOPE. It proposed a whole-of-government response to science communication.

To be successful in this, its recommendations will need the support of the Government as a whole – and that will be a demanding hurdle to conquer.

ⁱ Inspiring Australia report
www.science.gov.au/scienceGov/Framework/Documents/InspiringAustraliaReport.rtf

ⁱⁱ Ibid P. vii

ⁱⁱⁱ Ibid. In the covering letter to the Report, p. iii

^{iv} Media release “National Innovation Principles Adopted” 4 December 2009
<http://minister.innovation.gov.au/Carr/Pages/NATIONALINNOVATIONPRINCIPLESADOPTED-.aspx>.
Downloaded 7 June 2010.

^v Inspiring Australia op.cit. P vii

^{vi} Ibid. op.cit. p4.

^{vii} Ibid. P15.

^{viii} Ibid. pvii

^{ix} CRISP. www.crsp.org.cn/en/index.htm Downloaded 10 June 2010

^x Inspiring Australia op.cit. p18.

^{xi} *Collaborating across the sectors*: The relationships between the humanities, arts and social sciences (HASS) and science, technology, engineering and medicine (STEM) sectors. Jenni Metcalfe, Michelle Riedlinger, Anne Pisarski and John Gardner
CHASS. 9 November 2006. <http://www.chass.org.au/papers/PAP20061101EA.php> (Downloaded 10 June 2010)