



Cabinet

**CAB Min (13) 13/5A
Amended Minute**

Copy No:

Minute of Decision

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Selecting the National Science Challenges

Portfolio: Science and Innovation

On 22 April 2013, following reference from the Cabinet Economic Growth and Infrastructure Committee (EGI), Cabinet:

Background

- 1 **noted** that in August 2012, EGI noted that the National Science Challenges will involve a strategic approach to science investment that will result in greater alignment and coordination of government science investment, with the aim of generating more relevant research that has measurable impact in addressing key New Zealand priorities [EGI Min (12) 18/1];
- 2 **noted** that in January 2013, the Cabinet Business Committee:
 - 2.1 noted that the broad public and science sector engagement on the National Science Challenges had been successful in raising public awareness of the importance of science, and had generated a number of submissions on possible Challenges;
 - 2.2 noted that the submissions would be considered in February/March 2013 by an independent panel of experts (the Panel), chaired by the Prime Minister's Chief Science Advisor, Professor Sir Peter Gluckman, who will recommend a selection of key Challenges for Cabinet's consideration;
 - 2.3 noted that the Minister of Science and Innovation will submit recommendations to Cabinet on the Challenges in April 2013;

[CBC Min (13) 1/6]

The Panel's recommendations

- 3 **noted** that the Panel considered the 361 submissions and 616 ideas and public comments generated from the sector and public engagement campaign from December 2012 to February 2013;
- 4 **noted** that the Panel has proposed 12 National Science Challenges, with themes and research components that are indicative of the major streams of work, based on the following five criteria:

- 4.1 target a high-level goal which, if achieved, would have a major and enduring benefit to New Zealand;
 - 4.2 wide public consensus that the Challenge will address an issue or opportunity of wide public importance to New Zealand;
 - 4.3 scientific research is essential to solving the Challenge;
 - 4.4 New Zealand has the broad scientific capability and capacity to undertake the Challenge successfully;
 - 4.5 sufficient external motivation and linkages for the research results to be successfully implemented to achieve the Challenge goal;
- 5 **noted** that the 12 Challenges proposed by the Panel vary greatly in scale and scope, with three Challenges (*Towards more sustainable primary production* [Challenge 6], *Life in a changing ocean* [Challenge 8] and *The science for technological innovation* [Challenge 10]) in particular covering very substantial areas of research and requiring further work at the implementation stage to ensure they are amenable to the Challenge approach;

Proposed 10 National Science Challenges

- 6 **agreed** to proceed with the following 10 National Science Challenges:
- 6.1 Challenge 1: Ageing well
Harnessing science to sustain health and wellbeing into the later years of life, so that older people can continue to contribute to New Zealand;
 - 6.2 Challenge 2: A better start
Research to improve the potential of young New Zealanders (up to 25 years) to have a healthy and successful life;
 - 6.3 Challenge 3: Healthier lives
Research to reduce the burden of major New Zealand health problems;
 - 6.4 Challenge 4: High value nutrition
Research to develop high value foods with validated health benefits;
 - 6.5 Combined Challenge 5 and Challenge 7: New Zealand's biological heritage, and Enhanced biosecurity
Research to protect and manage our biodiversity, and research to enhance our resilience to potential harm caused by the invasion of organisms that affect the health of animals and plants;
 - 6.6 Challenge 6: Towards more sustainable primary production
Research to enhance primary productivity to meet future demands while protecting water quality and recognising environmental constraints;
 - 6.7 Challenge 8: Life in a changing ocean
Research to understand, exploit and sustain our marine richness;
 - 6.8 Challenge 9: The deep South
Research to understand the role of the Antarctic and Southern Ocean in determining our future environment;

6.9 Challenge 10: Science for technological innovation
Research to enhance the capacity of New Zealand to use physical and engineering sciences for economic growth;

6.10 Challenge 12: Nature's challenges
Research to enhance our resilience to challenges that nature throws at us;

7 **noted** that the Minister of Science and Innovation, in consultation with the Minister for the Environment and the Minister for Primary Industries, may further refine the wording of Challenge 6: Towards more sustainable primary production (*Research to enhance primary productivity to meet future demands while protecting water quality and recognising environmental constraints*) to ensure that all relevant freshwater research is suitable for incorporation into the Challenge framework;

8 **agreed to defer** the adoption of Challenge 11: Building better homes, towns and cities (*Research to develop affordable and better housing and urban environment*), to evaluate whether the current industry research strategy being developed for the built environment is suitable for incorporation into the Challenge framework;

9 **authorised** the Minister of Science and Innovation to make minor editorial amendments to the wording of the Challenges prior to their public release;

Financial implications

10 **noted** that:

10.1 as part of Budget 2013, the Internationally Focussed Growth Package proposes to increase funding by \$73.5 million (over four years) to provide additional support and impetus to assist in the development of the National Science Challenges;

10.2 the corresponding financial recommendations for this increased funding are contained in the Budget Package 2013 Cabinet paper;

Next steps

11 **agreed** that the Panel's report on the National Science Challenges, the paper under EGI (13) 75, and the public and sector submissions, be made publicly available;

12 **noted** that the Minister of Science and Innovation will issue a press statement on the selected Challenges and outline the next stages;

13 **noted** that monitoring and evaluation is a critical component of the National Science Challenge initiative, and that the Ministry of Business, Innovation and Employment will develop a monitoring and evaluation framework, with relevant elements included in contractual arrangements with Challenge leads and participants;

14 **noted** that the National Science Challenges will be implemented progressively, with the Ministry of Business, Innovation and Employment working with members of the Panel, and in consultation with key officials, end-users and sector experts, to:

14.1 inform the scope and scale of the Challenges;

14.2 refine the research themes and programmes of each Challenge;

- 14.3 identify the potential leads and participants in a Challenge;
- 14.4 identify the funding levels and timeframes of the Challenges;
- 15 **noted** that it is expected that three Challenges will be implemented by the end of 2013, a further three early in 2014, and the remaining four Challenges later in 2014;
- 16 **directed** the Ministry of Business, Innovation and Employment to report back to EGI by August 2013:
- 16.1 with advice on the implementation progress, including details on selecting Challenge leads and collaborations;
- 16.2 with advice on timelines for the Challenges, including consideration of Challenge 11 *Building better homes, towns and cities*;
- 16.3 seeking agreement on the funding envelopes for the Challenges to be implemented in 2013;
- 17 **noted** that following Cabinet's consideration of implementation progress and funding, the Minister of Science and Innovation will issue a Gazette notice to enable the Science Board to appoint Challenge leads and fund relevant Challenge research participants within the agreed funding envelopes.

Secretary of the Cabinet

Reference: CAB (13) 211; EGI Min (13) 8/4

Secretary's Note: This minute replaces EGI Min (13) 8/4. Cabinet added a new paragraph 9. This minute has been reissued to clarify the wording of paragraph 8.
