



**Asia-Pacific  
Economic Cooperation**



## Fifth meeting of the APEC Chief Science Advisors and Equivalents

25-26 October 2018, Brisbane, Australia

### CSAE paragraph proposed for inclusion in APEC Leaders' statement

We recognise the importance of science, technology and innovation in enabling inclusive, sustainable economic growth for the region as it develops its shared vision and goals beyond 2020. We affirm our commitment to seek advice from the APEC Chief Science Advisors and Equivalents (CSAE).

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## Meeting summary

### Introduction

1. We, Chief Science Advisors and Equivalents of the Asia-Pacific Economic Cooperation member economies: Australia; Chile; China; Japan; the Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea (PNG); the Philippines; Chinese Taipei; Thailand; the United States; Indonesia; and endorsed guests, attended the 5th APEC Chief Science Advisors and Equivalents (CSAE) meeting in Brisbane, Australia on 25-26 October 2018.
2. The meeting was co-chaired by Professor Lohi Matainaho, Chairman of the Papua New Guinea Research Science and Technology Council and Dr Alan Finkel AO, Australia's Chief Scientist, with Dr Mario Hamuy Wackenhut, Presidente del Consejo of the Comisión Nacional de Investigación Científica y Tecnológica, Chile, as Vice-Chair.
3. We gather under the overarching theme of APEC PNG 2018 "Harnessing Inclusive Opportunities, Embracing the Digital Future" that draws focus on the new digital frontier and encouraging more digitally driven and inclusive trade and growth in the APEC region.
4. Under the 2018 APEC theme, we recognise the significance of science, technology and innovation in enabling sustainable and inclusive economic growth and productivity, job creation, skills enhancement and gender equity. We acknowledge the work of the APEC Vision Group and note our support for the inclusion of a science, technology and innovation pillar in APEC's post 2020 goals.
5. We acknowledge the 2017 APEC Leaders' Statement and its commitment in particular to (i) promoting innovative growth, inclusion and sustainable employment; (ii) creating new drivers for regional economic integration; and (iii) strengthening the capacity and innovation of Micro, Small and Medium Enterprises.



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6. We meet to advance these commitments shared with the Policy Partnership on Science Technology and Innovation, Human Resource Development Working Group, Health Working Group, among others. Science, technology and innovation has the potential to support many of the objectives of APEC as a whole by promoting economic growth and reducing economic losses through innovative technology solutions and commercialisation, and more specifically, through contributing to the evidence base to inform the policies of many of the APEC working groups.
7. We recognise that the role of CSAE is to assist economies to use scientific evidence to inform government policy formulation. The 2015 CSAE Independent Review recommended that the CSAE will function best when responding to requests from the Economic Leaders, Ministers, Senior Officials and other parts of the APEC system, including the Policy Partnership on Science, Technology and Innovation. Members recommend that:
  - a. The existing CSAE Terms of Reference be updated out of session, to enable the CSAE to meet at the request of APEC Leaders or Ministers, advised through Senior Officials, to provide strategic scientific advice.
  - b. Meetings of the CSAE align where possible to maximise participation by Chief Scientists or Equivalents by hosting meetings in conjunction with conferences, projects, APEC Workshops or events that reinforce the strategic aims directed by Economic Leaders.
  - c. Continuity of leadership within the CSAE is supported by establishing new Chairing arrangements, consisting of a Chair (taken from the current APEC Host Economy), one Vice Chair (from the previous APEC Host Economy) and another Vice Chair from the incoming (Host Economy).
  - d. the definition of a CSAE Member be updated to constitute either, the Scientific Advisor to the Science Minister or Member Economy Leader, or, an equivalent direct report to the Science Minister or Member Economy Leader.
8. A number of APEC science, technology and innovation based projects have been supported in recent times through other APEC funding priorities. The CSAE encourages cross-fora communication and collaboration of APEC funded projects to ensure the best scientific advice is provided.

**Inclusive, sustainable, economic growth**

9. We emphasise as our key overarching theme the importance of inclusive science, technology and innovation collaboration to enable economies to develop and promote economic growth and stability across the region.

**Workforce Capability**

10. We recognise the Leaders' commitment in 2016 to strengthen efforts to ensure decent work and work life quality for all, especially in the context of increasing automation and digital disruption. We recognise the major structural changes currently underway, and the positive impacts this could have on economic output, productivity and quality of life. In order to



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benefit from these structural changes, we must develop a workforce that is agile to the changing dynamics of the workplace.

11. Noting the APEC Framework on Human Resources Development in the Digital Age, we acknowledge the importance of science, technology, engineering and mathematics (STEM) education in preparing the workforce in the face of rapid technological change. A STEM-trained workforce will position the Asia Pacific region to take full advantage of the opportunities presented by digital technologies and natural resources. Additionally, we support the commitment to the development of STEM skills, particularly for women and disadvantaged communities, to limit the emergence of new digital divides and inequality. We recommend that:
  - a. The outcomes of the APEC Policy Partnership on Science Technology and Innovation's (PPSTI) Women in STEM Workshop and the related High-level Industry Roundtable, held in the margins of the CSAE Meeting, be widely distributed and distilled to inform concrete responses for economies to pursue.

**Public understanding of science**

12. We recognise the importance of the public understanding of science, responding to new opportunities for economic growth and development, and in addressing concerns, fears and misconceptions associated with science and technological advancement. We commit to strengthening engagement with the public to develop an increased understanding of science, technology and innovation. Promoting scientific inquiry and research in new areas will have a lasting positive impact on societies across the region. We recommend that:
  - a. The PPSTI consider coordinating an APEC-wide study to inform and benchmark the public's understanding of science, with a focus on removing respondent bias and highlighting demonstrable respondent action.

**Tropical medicine and health**

13. We recognise the Healthy Asia Pacific 2020 Initiative that was endorsed in 2014 and the work of the APEC Health Working Group and APEC Life Sciences Innovation Forum in implementing the Initiative. We encourage economies to consider the role of science, technology and innovation in the development of public health policy and tropical medicines. We commit to:
  - a. Highlighting the importance of accessibility to affordable and improved diagnostic processes, instrumentation and new technologies to improve the effectiveness, treatment and development of products to prevent and treat tropical diseases, especially for applications in rural and remote areas.



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#### Agritech

14. We acknowledge the Food Security and Climate Change Multi-Year Action Plan 2018-2020 in promoting a more coordinated regional effort in addressing the linked challenges of food security, development and climate change. We note the Plan's focus on integrating new practises for APEC economies to improve their ability to combat food insecurity and climate change. We note the role of science, technology and innovation in sharing knowledge, open data related to climate and agriculture, fisheries, and aquaculture, applications of artificial intelligence in agriculture including gene technology, and the importance of greater collaboration with the private sector. We acknowledge:
- a. The challenge that ageing populations within agricultural communicates can have on the productivity of farms and crop yields, and support a renewed focus on technologies for smarter farming practices.
  - b. The role that Earth observation and global navigation satellite systems technologies have in improving and empowering farmers, governments and academia to make informed decisions.
  - c. The value of Earth observation capability beyond Agriculture, to applications in mapping, evaluating and responding to the risks of infectious disease vectors.
  - d. The importance of providing free and open data to develop tools to encourage industry collaborations between member economies and multilateral Earth observation forums to improve access to quality information.
  - e. The challenges and differences in better collaboration on new genetic technologies as regulatory controls are developed to suit local regulatory and legal frameworks.

#### Bogor goals and the role of science in the vision for APEC post-2020

15. We unanimously agree on the increasingly important role of science, technology and innovation in enabling sustainable and inclusive economic growth and productivity. The establishment of a Vision Group, under the 2017 APEC Leaders' Declaration provides an opportunity to shape the future direction of APEC. We encourage all APEC working groups with engagement in science, technology and innovation issues to directly engage with the Vision Group process and consider the inclusion of future goals directly related to science, technology and innovation. We support elevating the profile of science, technology and innovation within APEC.

#### Future Arrangements

16. The CSAE will convene as needed in line with its updated Terms of Reference. The CSAE will focus on bringing scientific expertise to work that Leaders deem a priority.