# Australian Climate Science Capability Review Consultation paper questions

Respondents are requested to address the consultation questions in their submission. Respondents are requested to prepare their response in an MS word document and make their submission online at <http://www.science.org.au/climate-science-review> . Queries may be directed to the Academy’s Senior Policy Officer, Alex St John, at [science.policy@science.org.au](mailto:science.policy@science.org.au) or 02 6201 9465.

Responses are requested by **5 June 2016**

## Basic information

1. Please provide your:
   1. name,
   2. position,
   3. organisation,
   4. phone number
   5. email address.
2. Please indicate if you wish your submission to remain confidential. Y/N
3. Are you: (please select the option that best describes you):
   1. A research student
   2. A technician or research support staff member
   3. An early-career researcher (e.g. postdoc)
   4. A mid-career researcher (e.g. a research fellow)
   5. A senior researcher or group leader
   6. A research manager, overseeing several research units
   7. A departmental manager (e.g. head of school)
   8. A divisional manager (e.g. overseeing several departments)
   9. Organisational executive
   10. Other (please specify)
4. Are you responding on behalf of yourself or a larger research group?

## Information about your climate science research

This section asks about your climate science research, or the research of your research group if you are responding on behalf of a group. In answering these questions, the committee encourages you to consider how your activities might be framed as *climate science capabilities*.

1. Briefly describe the *activities* that you or your research group carry out (200 words max.)

1. What is the particular *expertise* that you or your research group have to undertake this research?

1. Please tell us about the important inputs and infrastructure required for your research. For example, do you rely on data or observations or other information provided by another person or another organisation or do you rely on particular equipment or research infrastructure?

1. Who provides these inputs, and how are they produced?

1. Do you require inputs that you currently cannot obtain? If so, what is it, and why can’t you get access to it?

1. Please tell us your main collaborations, both within Australia and internationally:
   1. Which organisations and/or individuals do you mainly collaborate with?
   2. On which areas of climate science do you collaborate?
   3. Can you describe the nature of your collaboration? For example, do you share information or ideas, exchange data, work on a common climate model, use collaborator’s facilities or infrastructure, co-supervise research students, or something else?

1. Climate science can lead to a number of different outputs that can be used by different people. An important part of the review is to explore how climate science is used in Australia, and who relies upon it  
   1. Which of the following outputs result directly from your work (that is, outputs that you or your group create)?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outputs for academic audiences** | | **Outputs for technical or policy audiences** | | **Outputs for general audiences** | |
| - Journal articles - Book chapters - Data sets for research use - Models for research use - Computer programs/software for research use - Methods for other researchers to use - Instrumentation or other equipment for research use - Other academic outputs |  | - Reports for government - Reports for industry - Reports for other bodies (specify) - Data sets for end-users - Models for end-users - Computer programs or software for end-users - Projections or predictions for end-users - Other technical outputs |  | - Educational resources - Reports or resources for non-technical audiences - Articles in non-academic publications or websites - Workshops, training, seminars for non-academic audiences - Other general outputs |  |
| Please describe any ‘other’ outputs | | | | |  |

* 1. Which type of output mentioned above do you consider to be the most important output?
  2. Do you know who uses the output of your work, and what they do with it? Are your outputs critical to their work?

## Climate science in the national interest

This section asks you to identify the most important climate science capabilities for Australia to maintain or develop. Capabilities could include expertise, infrastructure and culture; strong capabilities would generally combine all these elements.

1. Thinking about the entire climate science effort in Australia, please outline the climate science capabilities that you consider most important for Australia to maintain. How do these capabilities relate to the national interest?

1. Thinking only about your own research (or that of your group), would you consider some or all of your work **critical** to the understanding of Australian and regional climate, for responding to climate change, or otherwise essential to the national interest? If so, why?

1. In terms of climate science activities, what has changed in the last ten years, both in your own research and nationally? Do you focus on different areas of climate science to ten years ago? What factors have driven this change?

## The future of Australian climate science

This section asks about trends in climate science in the next 10-20 years, and whether Australia has the capacity to respond to them. If you believe a capability that will be needed in the future is currently lacking, please be specific about what is needed.

1. Thinking about **climate science generally**, can you identify any trends or developments happening internationally in climate science that Australia will need to respond to? Does Australia currently have the capacity to respond to these trends?

1. Thinking about **the climate itself**, can you identify any trends or developments that Australia will need to respond to in the next 10-20 years? Does Australia have the climate science capacity to respond appropriately to these trends?

1. Thinking about **the global response to climate change**, including institutions and agreements that support it (such as international climate negotiations, IPCC reports, UNFCCC bodies), can you identify any trends or developments that Australia will need to respond to in the next 10-20 years? Does Australia have the climate science capacity to respond appropriately to these trends?

## The climate science research environment

This section asks about how climate science in Australia is supported and workforce issues. A significant part of Australia’s climate science capability relies on intellectual capital and expertise, which makes it important to optimise the arrangements for supporting climate science.

1. Please describe your current employment status – are you:
   1. Full-time/part-time
   2. Ongoing/contract/casual/temporary/research higher degree student
   3. If you are on a fixed-term contract:
      1. Is it a contract for the term of a specific fellowship or grant / other?
      2. What is the length of your contract?
2. Please tell us about the **nature** of the **resourcing** that supports your work (both funding and in-kind support).
   1. How is your work funded – please select all that apply and indicate a percentage in the last 5 years:
      1. Competitive grants – ARC Discovery/Linkage \_\_\_%
      2. Internal university grant scheme \_\_\_%
      3. General university funds \_\_\_%
      4. ARC Fellowship (DECRA/Future/Laureate) \_\_\_%
      5. ARC Centre of Excellence \_\_\_%
      6. Other competitive grant – please specify \_\_\_%
      7. Other grant type or contract – Government \_\_\_%
      8. Other grant type or contract – Defence \_\_\_%
      9. Other grant type or contract – international \_\_\_%
      10. Organisational internal funding \_\_\_%
      11. Private sector funding \_\_\_%
      12. My work is funded by my supervisor \_\_\_%
      13. Philanthropic grant/award \_\_\_%
      14. Other – please specify \_\_\_%
   2. Is your work supported in other ways, such as in-kind support or in-house expertise? If so, please specify.
3. Please tell us about the of the **adequacy of** the **resourcing** that supports your work:
   1. Is the resourcing that supports your research adequate? If not, do you suffer from a lack of a **specific capability**?
   2. If you received 30% less support, what would be the likely impact?
   3. If you received 30% more support, how would this enhance your research?

1. Do you have to reapply for resourcing and/or employment on a regular basis, or is your resourcing generally continuing (or a combination)? Does the level of security of resourcing affect your work, and if so, how?

1. Please tell us about the state of the climate science workforce in Australia.
   1. Is the workforce currently adequately equipped to provide an appropriate level of information to the government and community on climate science and climate change?

* 1. Do you believe that there is a critical mass of scientists for the effective conduct of climate science in Australia? Is Australia significantly below or above that level currently?
  2. Where do you think the major gaps are in current capabilities to maintain an appropriate climate science workforce in Australia? e.g. PhD, postdoc, early or mid career?

## Other matters

1. Are there any other matters that you wish to raise?

The Committee thanks you for your time and effort in replying to this consultation. Your contribution will help draw a complete picture of climate science in Australia.