



## Arctic Science: From Knowledge to Action?

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## Arctic Science: From Knowledge to Action?

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The pace of Arctic change is outrunning the process of conducting scientific assessments. However, the demand and need for timely, accurate, relevant, and credible information is greater than ever. Scientific assessments synthesize, document and supply critical information to decision-makers on key issues. They continue to be the principal means for harnessing and communicating scientific knowledge, but the mechanisms of this process are unfamiliar to many early-career researchers.

To address this need, the Association of Polar Early Career Researchers (APECS), the International Arctic Science Committee (IASC) and the Arctic Monitoring and Assessment Programme (AMAP) hosted a one-day workshop about scientific assessments on 24 April 2017 in conjunction with the International Conference on Arctic Science: Bringing Knowledge to Action. The workshop was attended by two dozen early-career and mid-career researchers and professionals from a range of countries and disciplines. Thirteen panellists, including assessment creators, contributors, communicators and end-users, discussed how assessments are produced, how scientific knowledge is translated and communicated, and how scientists can leverage assessments in their own outreach. Many valuable lessons and practical skills were discussed, as well as challenges and opportunities for the future of scientific assessments in the Arctic.

### Co-production

Co-production is generally described as a process of collaboration between researchers and decision-makers to refine or develop new research for use in decision-making. The panellists described how co-production holds significant promise for improving the utility of scientific assessments, but also cautioned that the quality of the process and utility of the outcomes can vary greatly depending on the diversity of the participants, transparency of the process and the clarity of the assumptions for all parties involved.

### Communication

The communication environment is noisier than ever before, which requires increased attention to audience needs and strategy on the part of communicators. To promote, publicise and inform their audiences effectively and efficiently, the assessment community must build capacity in this area of expertise and must create networks and strategic partnerships with trusted messengers and experts in science communication that can help achieve this goal.

### Communities

Assessments gain their authority through peer review and through being the voice of a scientific community. In addition, assessments can amplify individual and community voices. Unfortunately, while Arctic assessments may contain a wealth of interesting and authoritative knowledge, they are often not effective in modifying behaviour, bringing about action or effecting change because they fail to consider local or indigenous knowledge and the decision-making context.

### Evaluation

Assessments often struggle to demonstrate their contributions and utility because the process is rarely measured or evaluated. To facilitate this, assessments should provide recommendations

that correspond to the assessment conclusions. Moreover, assessment producers must critically, on a regular basis, and in collaboration with end-users, evaluate their products to document what effects assessments have and how to tailor them to best fit the needs of decision-makers.

## Knowledge to action?

In order to address the aforementioned challenges, the Arctic assessment community needs to shift from a linear model of assessments-as-deliverables towards a circular, iterative model whereby assessments are tools to engage in an ongoing discussion about Arctic issues. The link between knowledge and action has never been a straight line. Instead, assessment teams must begin with action, e.g. by asking questions, forming relationships and working with local communities to identify the range of knowledge that is needed to answer questions, to solve problems and to leverage what is known into concrete measures and recommendations.

With positive feedback regarding the workshop's relevance and timeliness from the panellists and participants, this one-day workshop proved to be a success in introducing new and diverse voices to the assessment process. Future conferences, workshops and community meetings should continue to facilitate conversations about the future of the Arctic assessment process.

We would like to thank the workshop presenters and participants who helped make the event a success. More information available on the APECS website: <https://www.apecs.is/events/past-event-highlights/event-highlights-2017/amap-2017.html>.

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