



SCIENCE ADVICE: “A MATTER OF URGENCY”

In an era of complex, high-priority challenges, scientists can provide valuable advice to policymakers. At the IAP Conference and a parallel workshop in South Africa, science leaders explored the best approach.

 by Edward W. Lempinen

On issues ranging from Ebola and energy to climate change, natural disasters and synthetic biology, scientific expertise is essential for effective government policy. But providing that advice is not as simple as it seems. Science and policy are two different cultures, with different values and different languages. Scientists often don't know how best to communicate with policymakers, and policymakers might not understand science. Sometimes, they don't want to hear from scientists at all.

But when the issues are urgent, when lives are at stake, scientists must find a way to connect. During four days of discussion and exercises at the Conference of the InterAcademy Partnership (IAP) and a related training workshop, some of the world's leading figures in the field of scientific advice explored how to bring these cultures together.

“Science is no longer in an ivory tower,” said Sir Peter Gluckman, chief science adviser to the prime minister of New Zealand. “But that raises a question about how scientists relate to society and to governments.... The way science engages with both society and the policy process, and the way these both engage with science, will shape our progress as nations and as a global society.”

Throughout the two events, the lesson was clear: There's a time and place for scientists to be “issue advocates” who press for specific



policies or new funding. But when policymakers ask for scientific expertise, researchers should be “honest brokers” who provide reliable information and insight. It's crucial to build trust with policymakers – and that requires a measure of humility.

Gluckman is chair of the International Network for Government Science Advice (INGSA), which organised the training workshop with the Academy of Science of South Africa (ASSAF). Support also came from South Africa's Department of Science and Technology; the New Zealand Ministry of Foreign Affairs and Trade; the Wellcome Trust; and the Royal Society.

Focused on science advice for African

▲ Sergio Pastrana, foreign secretary and executive director, Cuban Academy of Sciences, speaks during the IAP Conference. Behind him, IAP co-chairs Mohamed Hassan and Volker ter Meulen [right] listen.

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governments, the workshop on 26–27 February brought together some 40 participants from 12 nations for high-level presentations and high-intensity exercises. Discussions ranged beyond the conventional issues of policy advice to explore the importance of gender balance, social science and communication.

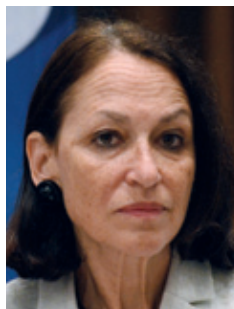
But the core focus was on science advice for Africa. Thiambi Netshiluvhi, director of policy analysis and advice at South Africa’s National Advisory Council on Innovation, cited a 2013 study to explain the need for more robust advice in science, technology and innovation [STI].

“The overall findings suggest that Africa in general has inadequate capacity for STI policy analysis and formulation,” Netshiluvhi wrote in a paper prepared for the workshop. “In order for our STI policies to be credible, Africa must work hard to ensure the capacity in policy analysis and formulation is obtained or enhanced as a matter of urgency.”

The IAP Conference on “Science Advice”, held 28 February–1 March and also hosted by ASSAf, affirmed the need to strengthen scientist–policymaker links.

“Science advice is acknowledged as an area of science capacity development that has the potential to make a significant contribution to developing research and innovation in Africa,” said Naledi Pandor, South Africa’s minister of science and technology, in her opening remarks.

Nearly 80 academies of science and medicine were represented at the event, making it the largest-ever gathering of science academies, according to IAP co-chair Mohamed Hassan of Sudan. Among the speakers were Flavia Schlegel, UNESCO assistant director-general for natural sciences; Margaret Hamburg, former commissioner of the U.S. Food and Drug



▲ From top: Peter Gluckman, Flavia Schlegel, Margaret Hamburg



◀ From left: Jacqueline McGlade, Karine Ndjoko Ioset

Administration; Jos van der Meer, president of the European Academies Science Advisory Council; Daya Reddy, president of ASSAf; and former or current top officials from the science academies of Australia, Benin, Germany and the Global Young Academy.

Discussions focused on the ecosystem for science advice and the degree to which countries are ready to incorporate science advice into policymaking; other sessions were more focused, assessing advice during natural disasters and for the emerging field of synthetic biology.

The need for effective communication to connect scientists and policymakers was a central theme – and initiatives undertaken by the United Nations Environment Programme [UNEP] are remarkable for their ambition. UNEP Chief Scientist Jacqueline McGlade described efforts to collect vast amounts of data and to make it available, using the latest technology, to policymakers. Such data will be crucial to achieve the UN Sustainable Development Goals, McGlade said.

For many participants, the INGSA workshop and the IAP Conference were important steps for building the culture of science advice. Among them was Karine Ndjoko Ioset, a professor at the University of Lubumbashi in the Democratic Republic of the Congo and general manager of the Excellence Scholarship Program BEBUC at the University of Würzburg in Germany.

“As scientists, we have to be modest...and really also work to build trust.” *Karine Ndjoko Ioset*

“As a scientist,” she said, “I know we have to balance our knowledge with the challenges the politicians are facing. There is always criticism from African scientists about politics, but we are not doing politics, we are doing science. As scientists, we have to be modest...and really also work to build trust.”

“We want to change things, and we can do it together.”