

Engaging Scientists to Address Implications of Advances in S&T

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Scientists and the Challenges for Policy

- A challenge to governments both to track S&T trends and to understand their implications
 - Especially difficult for governments to track trends, to appreciate what is real and what is promise
 - Need the help of the scientific community, of those doing the research
 - Scientists inside and outside government needed to help assess the implications of scientific advances
- Governments, internationally/collaboratively and individually will decide how to address the implications
 - But scientists can have a role in helping to assess potential risks and benefits – and trade-offs – to inform decisions
 - And once a decision is made, scientists can have a role in implementation

Key Messages

Scientists can contribute *as scientists* to nonproliferation and disarmament

Scientists become part of the *solution*, not part of the problem

Meeting the Challenges -- Background

- Scientists engaged with BWC from the beginning – a treaty grounded in science, affected by its developments
- Much of the engagement came via NGOs
- Introduction of intersessional process and creation of ISU provided new opportunities for engagement
- Also provided structure that helped other organizations --
– academies and professional societies – trying to engage scientists in security issues

Meeting the Challenges – The IAP Example

- InterAcademy Partnership (IAP) – network of 130+ academies of science and medicine, with regional networks
 - A Biosecurity Working Group since 2004
 - Current membership -- the national academies of Australia, China, Cuba, Egypt, India, Nigeria, Pakistan, Poland, Russia, United States, and the United Kingdom
- Draws on work of member academies and regional networks, as well as IAP-sponsored activities
- Focus primarily on (1) trends in S&T and (2) education and awareness raising

Meeting the Challenges – Means & Methods

- During MSP and MXP
 - Statements as part of NGO time in plenary and side events highlighting relevant work of IAP and member academies
 - Presentations as “guests of the chair”
- Workshops held in advance of BWC meetings, with results reported there
- Workshops held just prior to BWC meetings, with results reported there

Recent Example – Going to the Regions

- EU provides support for various BWC activities
- Current support (EU Council Decision (CFSP) 2016/51, 2016-2019) includes project to
 - “enhance the interaction between the BWC process and non-governmental stakeholders, such as the scientific community and industry, through the organisation of regional workshops on scientific and technological issues and on biosafety and biosecurity.”
 - “This project furthermore directly engages scientists and biosafety professionals in developing countries in order to raise awareness of the BWC, to develop capacities for more effective implementation of the BWC and to facilitate international cooperation for peaceful purposes.”

Recent Example – Going to the Regions

- 5 Regional Workshops
 - Eastern Europe/FSU – Ukraine, September 2017
 - Latin America and the Caribbean – Mexico, April 2018
 - MENA – Jordan, July 2018
 - SubSaharan Africa – South Africa, July 2018
 - South/Southeast Asia – Philippines, November 2018
- BWC staff asked IAP/NAS for assistance with the workshops
 - Sent additional scientists/technical experts to take part
 - For 3 workshops, commissioned background paper on trends in S&T in the region to facilitate workshop discussions
- Workshop materials being posted on BWC website at [https://www.unog.ch/80256EE600585943/\(httpPages\)/F5CE37B03894C50EC125809E0057420F?OpenDocument](https://www.unog.ch/80256EE600585943/(httpPages)/F5CE37B03894C50EC125809E0057420F?OpenDocument)

Meeting the Challenges – Engagement over Time

Over the years created an informal “scientific advisory network” for biological and chemical risks

- Via IAP, life sciences unions, and national academies, workshops on S&T for 6th, 7th, and 8th BWC review conferences
- Via International Union of Pure and Applied Chemistry (IUPAC), workshops on trends in S&T for all four CWC review conferences via its Scientific Advisory Board
- Engaged with both BWC and CWC – and hence able to address areas of increasing overlap between biology and chemistry

Lessons and Issues for Discussion

The “Translation” Challenge

- Dissemination methods geared to the audience
 - Scientists vs. “science communicators”
- Role of intermediaries in translation to policy-makers and diplomats
 - For monitoring/horizon scanning, ask scientists to talk about their science
 - Then draw out implications through discussion with other technical experts – from government, NGOs, private sector, etc – and tech-savvy policy experts who can communicate the results
 - NAS report, *Biodefense in the Age of Synthetic Biology*, offers example of a framework for structured, qualitative assessment (<https://www.nap.edu/catalog/24890/biodefense-in-the-age-of-synthetic-biology>)

THANK YOU!

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NOTE: IAP reports and other information may be found at
<http://www.interacademies.org/>

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