Framing Biosecurity as Part of Responsible Science: Lessons from the NAS Experience

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The views presented here are derived from work by the NAS and its international partners, but are those of the author alone and do not necessarily represent their official positions.

Characteristics of the Biosecurity Landscape

- Wide and varied array of stakeholders
  - Relative lack of awareness of biosecurity
  - Continuing controversies over threats and remedies
- Weak regime though a strong international norm
  - Multiple organizations relevant to addressing biorisks

What's Needed

- A way to frame biosecurity that can engage many stakeholders and fit within mandates of relevant international organizations
- Proposal: Use "Responsible Science"

- Draws on 10+ years of experience from NAS and its international partners
  - General engagement activities with scientific community
  - Education Institutes to build networks of faculty

Message #1

Emphasis on Responsible Science provides important opportunities:

- To build upon existing culture of responsibility in the life sciences (and science more generally)
- To take advantage of increasing international emphasis on Responsible Conduct of Science/Research Integrity

Existing Culture of Responsibility

- Traditions of self-governance in the life sciences
  - Sometimes independent initiatives (e.g., some of the continuing efforts related to dual use issues)
  - Often in conjunction with government guidelines, other “soft law” measures
- Biosafety norms and practices
- Codes of ethics and conduct (and practice in industry)
- Norms of science in service to humanity

Growing International Attention

- Reflects increasingly global nature of life sciences research and capacity
  - Building common standards and practices to facilitate collaboration
  - Need to respond to ethical lapses
  - Genuinely international
- Grounded in social responsibility of science – with freedom comes responsibility
- Projects and statements from many sources; some address security issues

Examples

- 2005 IAP (Global Network of Science Academies) Statement on Biosecurity
  - Principles for science bodies preparing codes of conduct
- 2012 IAP/InterAcademy Council report, *Responsible Conduct in the Global Research Enterprise*
  - "Researchers should bear in mind the possible consequences of their work, including harmful consequences, in planning research projects"
  - Education handbook coming out in late 2014
- 2014 IAP *Statement on Realising Global Potential in Synthetic Biology: Scientific Opportunities and Good Governance*
  - "Maintaining biosecurity brings challenges beyond those of biosafety: for biosecurity the core defence rests on the responsibility of the scientific community."

Message #2

Emphasis on responsible science makes scientists part of the solution, not part of the problem

- Scientists and scientific organizations hold important keys to building and sustaining a biosecurity culture
- Scientists and scientific organizations are already contributing to extending the existing culture of responsibility to include biosecurity

Message #3

Framing as Responsible Science:

- Facilitates reaching widest range of scientists (e.g., in academia, industry, public health)
- Is compatible with more security-focused activities for specialized, more directly affected audiences
- Can complement the existing legal and regulatory structure and provide a basis for discussing additional measures or changes in practices

Some Signs of Acceptance

- “Reduce proliferation risks through the advancement and promotion of safe and responsible conduct in the biological sciences.” One of five deliverables for Biological Security sub Working Group of the Global Partnership
- “Responsible Science” was the theme for October 2013 GPP meeting
- “In order to further efforts on education and awareness-raising about risks and benefits of life sciences and biotechnology, States Parties agreed on the value of using science responsibly as an overarching theme to enable parallel outreach efforts across inter-related scientific disciplines…” Report of 2013 BWC Meeting of States Parties

- “Our aim is to contribute to efforts towards fostering a culture of responsible science. This will ensure that current and future generations of scientists understand – and respect – the impact that their work can have on security.” 2013 Nobel Peace Prize Lecture, Ahmet Üzümcü, OPCW Director-General

THANK YOU!

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Note: All NAS reports are available free as pdfs at www.nap.edu

Resource Materials on Responsible Science from International Science Organizations

- IAP/IAC (2012). *Responsible Conduct in the Global Research Enterprise*. http://www.interacademycouncil.net/24026/28250.aspx.
- World Science Forum (2011). *Declaration of the Budapest World Science Forum 2011 on a New Era of Global Science. http://www.sciforum.hu/cms/upload/docs/programme/WSF_2011_Declaration_adopted.pdf.*
- ICSU (2011). Amendment to *Statute 5: The Principle of Universality (Freedom and Responsibility) of Science*. http://www.icsu.org/about-icsu/structure/committees/freedom-responsibility/?icsudocid=statute-5.
- 2nd World Conference on Research Integrity (2010). *Singapore Statement.* http://www.singaporestatement.org/.
- World Economic Forum (2008). *Annual Meeting of New Champions of the World Economic Forum: Tianjin Statement by the IAP Young Scientists*. 2008.http://www.interacademies.net/Activities/Projects/IAPYoungScientistsProgramme/13840.aspx
- ICSU Committee on Freedom and Responsibility in the Conduct of Science (2008). Freedom, Responsibility and Universality of Science. http://www.icsu.org/publications/cfrs/freedom-responsibility-booklet/ICSU-CFRS-booklet.pdf. (formerly the ICSU Committee on Freedom in the Conduct of Science).
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 1999. Declaration on Science and the Use of Scientific Knowledge. World Conference on Science, Budapest, Hungary, June 26–July 1. http://www.unesco.org/science/wcs/eng/declaration_e.htm.