

Governance for Advances in the Life Sciences

United States Working Paper
BWC/MSP/2020/MX.2/WP.1

Dr. Danielle Lohman

United States Department of State

BWC Webinar: Meeting of Experts on Science and Technology (MX2)

October 29, 2020

Governance in the BWC context

Governance: a suite of tailored measures to reduce the risk that advances in the life sciences will be misused for biological weapons development

Outline

- Governance takes many forms
- Tailoring governance measures
- Governance measures and the BWC

Governance in the BWC context

MX2 Meeting of Experts on Review of developments in the field of science and technology related to the Convention: Biological risk assessment and management

1. What are the S&T advances of concern?
2. How can the biological weapons risk be assessed?
3. What are the options to manage these risks while protecting the benefits?

Governance: *a suite of tailored measures to reduce the risk of bioweapons misuse*

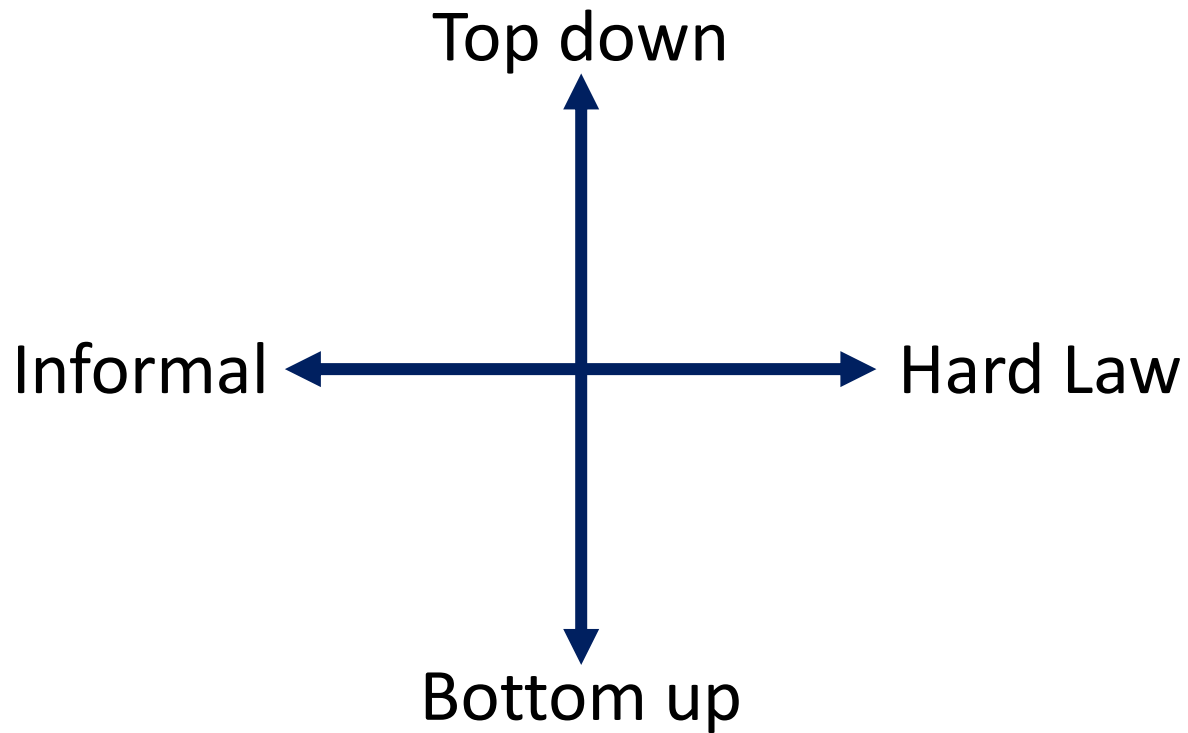
Governance in the BWC context

MX2 Meeting of Experts on Review of developments in the field of science and technology related to the Convention: Biological risk assessment and management

1. What are the S&T advances of concern?
2. How can the biological weapons risk be assessed?
3. What are the options to manage these risks while protecting the benefits?

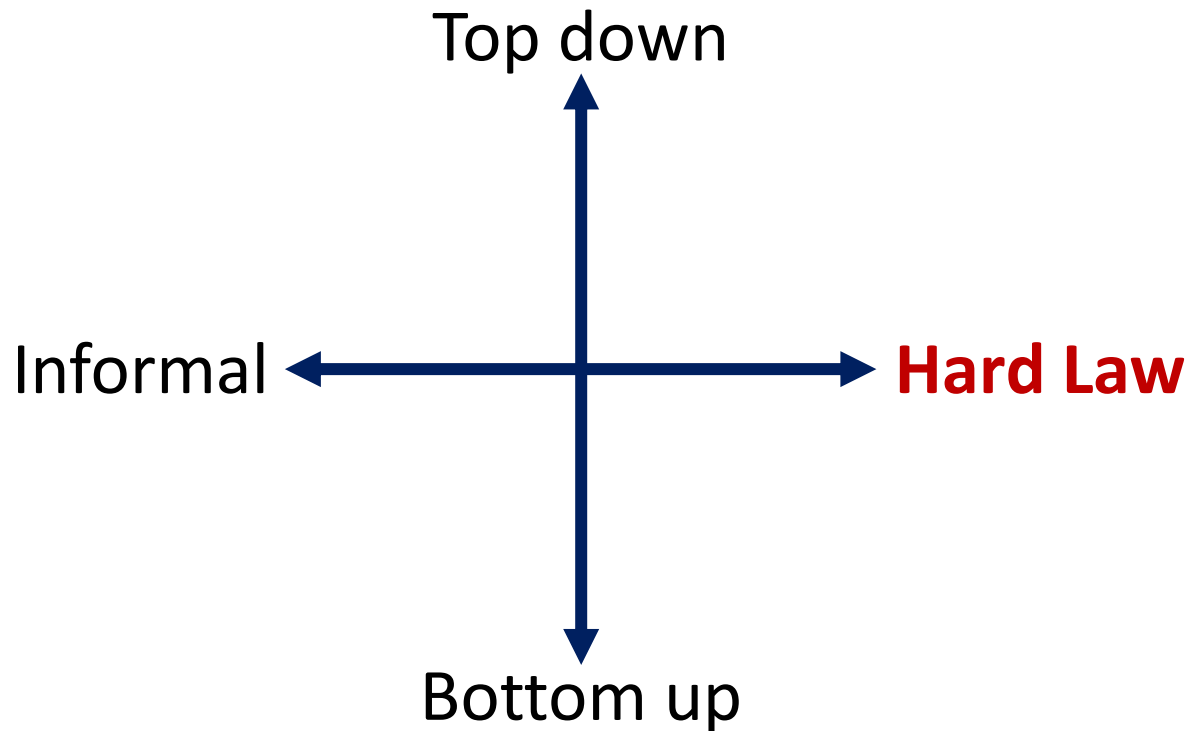
Governance: *a suite of tailored measures to reduce the risk of bioweapons misuse*

Governance takes many forms



Governance: *a suite of tailored measures* to reduce the risk of bioweapons misuse

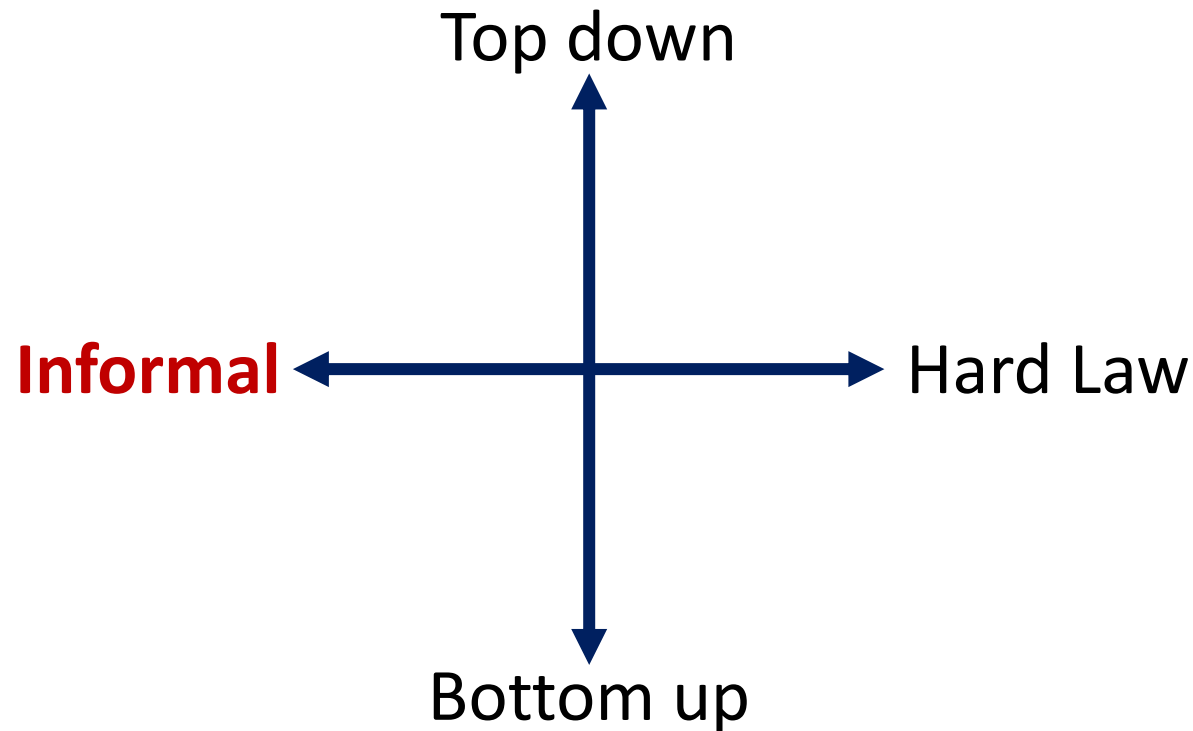
Governance takes many forms: Hard law



- Biological and Toxins Weapons Convention
- National laws and regulations (example: pathogen possession regulations and criminal penalties)

Governance: *a suite of tailored measures* to reduce the risk of bioweapons misuse

Governance takes many forms: Informal measures

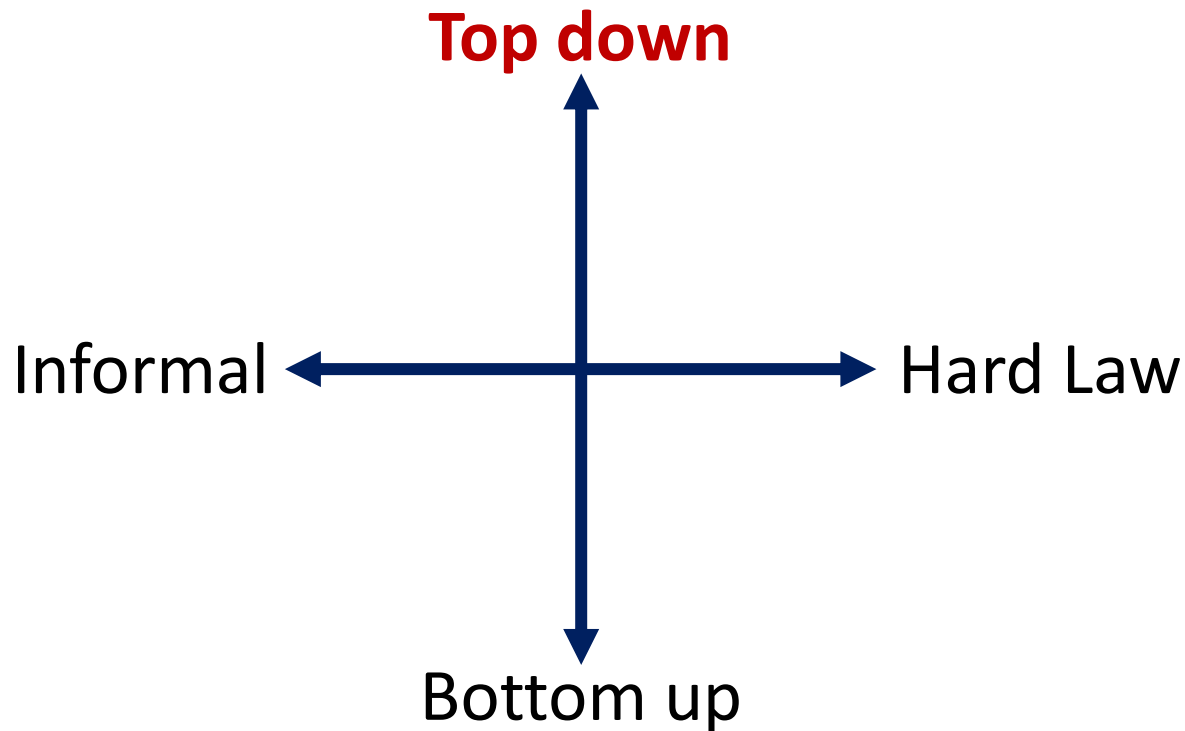


American Society for Microbiology: Ethical code:

“ASM members are obligated to discourage any use of microbiology contrary to the welfare of humankind, including the use of microbes as biological weapons. Bioterrorism violates the fundamental principles upon which the society was founded and is abhorrent to the ASM and its members. ASM members will call to the attention of the public or the appropriate authorities misuses of microbiology or of information derived from microbiology”

Governance: *a suite of tailored measures* to reduce the risk of bioweapons misuse

Governance takes many forms: Top down

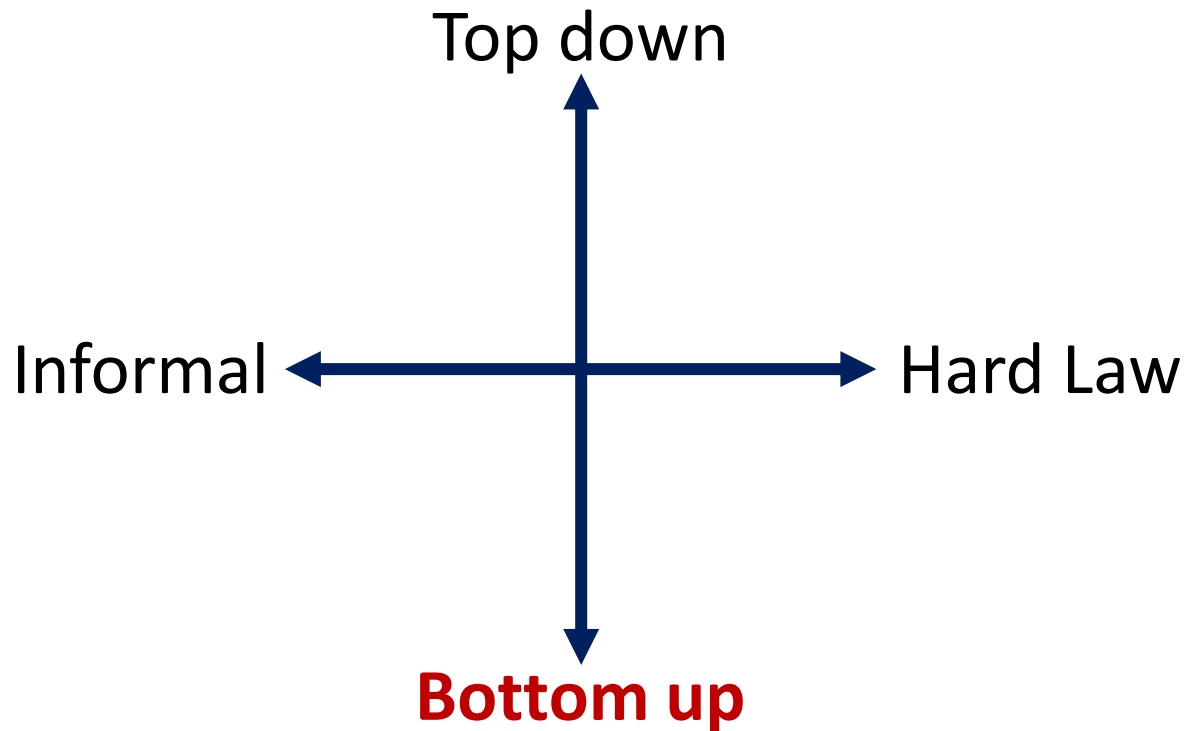


Example: National polices surrounding dual use research of concern



Governance: *a suite of tailored measures* to reduce the risk of bioweapons misuse

Governance takes many forms: Bottom up



- International Genetically Engineered Machine (iGEM) competition
- International Gene Synthesis Consortium

Governance: *a suite of tailored measures to reduce the risk of bioweapons misuse*

Tailoring governance measures

Determining a suite of governance measures for a particular concern depends on a number of factors.

Factors for consideration:

- Risk involved compared to the likely benefits
 - The type of risk
 - Risk tolerance
- Rate of advances

Tailoring governance measures: Dealing with rapid changes

Scientific and technological advances evolve at a **rapid pace**.

Agile, flexible & iterative governance measures are especially important.

Tailoring governance measures: Benefits

Determining a suite of governance measures for a particular concern depends also on consideration of **benefits**.

Goal: To optimize governance measures that minimize risks while maximizing benefits



Governance measures and the BWC

Governance measures are a key element for effective
national implementation of the BWC

Through BWC Experts' discussion, States Parties can:

- Provide information on national approaches to governance
- Compare notes, exchange best practices, & lessons learned
- Discuss opportunities for harmonizing governance measures to promote beneficial use of science, to minimize potential risks of misuse, and to promote exchange and cooperation

Key elements of Working paper

Governance is a suite of measures that are tailored to a specific concern

Deciding on appropriate governance measures depends on many factors, including taking into account the promotion of benefits

The BWC is one unique setting where countries have an opportunity to share experiences and explore ways to harmonize governance measures