



Biosecurity in the Netherlands: Policy in an International Perspective

Dr. Koos van der Bruggen

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What is a biological weapon?

- **Microorganisms** that infect and grow in the target host producing a clinical disease that kills or incapacitates the targeted host. Such microbes may be natural, wild-type strains or may be the result of genetically engineered organisms.
- **Biologically Derived Bioactive Substances (BDBS)** products of metabolism (usually, but not always, of microbial origin) that kill or incapacitate the targeted host. These include biological toxins, as well as substances that interfere with normal behavior, such as hormones, neuropeptides and cytokines.
- **Artificially Designed Biological-Mimicking Substances:** It is now possible to design and manufacture substances that mimic the action of biologics. For example, we already make nerve gases and their close relatives, pesticides, that act by binding specifically to receptors of targeted organisms.



The Netherlands and biological weapons

- No biological weapons programs in the past
- State party in 1925 Geneva Protocol
- State party in BTWC from the beginning
- Intended seat of OPBW in The Hague (legal capital of the world)



Broadening the scope: a brief history

- Not only B, but N and C as well
- Lessons learned from the past
- URENCO and dr. Khan
- Van Anraat, Iraq and mustard gas



Early warnings

- Letter of Ministers of Defence and Science in 1997
- Report Minister of Defence 1997
- Report of Dutch Health Council (spring 2001)



Health Council on biosecurity (1)

- Responsibility lies with professional organisations for making physicians more aware
- To identify unknown or rare pathogens a well-organised network of national and international experts in microbiology is indispensable
- Existing protocols relating to several high priority agents should be expanded and elaborated





Health Council on biosecurity (2)

- Produce a separate set of instructions concerning bioterrorism as part of the proposed contingency plan covering NBC attacks.
- Once a plan covering bioterrorism is available, it is imperative that defence measures involved be subject to prior rehearsal and practice.
- Closer international cooperation in the development and production of specific vaccines, antibiotics, and antiviral agents.



Initiatives after 911 (1)

Update of report Health Council

- Expertise in the field of infectious diseases must be increased.
- Improvement in the way existing knowledge is exchanged. Certain experts should get access to military intelligence.
- The corresponding knowledge infrastructure needs to be reinforced.
- It is necessary to decide exactly who would be in charge of defence measures in the various scenarios.



Initiatives after 911 (2)

Renewed attention for BTWC

- Failure to agree on OPBW
- More ambitious intersessional program
- Expert meetings on codes of conduct
- Initiatives in numerous countries



Biosecurity in the USA

National Scientific Advisory Board on Biosecurity (NSABB)

- 25 members/ non-voting ex-officio members
- Four main issues:
 - * What is dual use?
 - * New developments: Synthetic Biology
 - * Code of Conduct
 - * Publicity



Declaration of the Inter Academy Panel


1. Awareness
2. Safety and Security
3. Education and Information
4. Accountability
5. Oversight



Royal Netherlands Academy of Arts and Sciences



- Active role in preparing and disseminating IAP-declaration
- Preparing a code of conduct on biosecurity for the Netherlands





Goal Biosecurity project


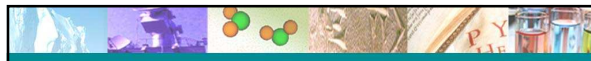
- Producing a code of conduct on biosecurity for scientists and related professionals as well as organisations involved in “dual-use” research.
The code will be published in the spring of 2007

What is a code of conduct?


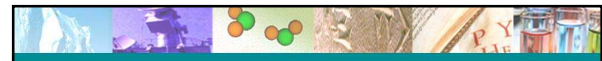
Codes: between practical instructions and laws

- Ethical codes (Hippocratic oath for physicians)
- Codes of conduct (general guidelines for physicians)
- Practical codes (guidelines for on-line contacts between physicians and patients)



A suggested Typology (by dr. Brian Rappert)

Type	Name	Main Aims
<i>Aspirational codes</i>	Code of ethics	Alert; set realistic or idealistic standards
<i>Educational/ Advisory codes</i>	Code of conduct	Provide guidelines, raise awareness & debate; foster moral agents
<i>Enforceable codes</i>	Code of practice	Prescribing or proscribing certain acts



Why a code of conduct on biosecurity?

- A code of conduct can make good people better, but probably has negligible impact on intentionally malicious behaviour (NSABB)
- A code of conduct does not replace existing rules and laws


Content and process

- The content should link up to relevant scientific, social and political developments and last but not least to the practice of the persons and organisations involved.
- That is why codes of conduct have to be developed in an intensive dialogue with persons and organisations directly and indirectly involved, and not in an ivory tower.

Activities and Planning

- Advisory groups, feedback sessions, workshops and international contacts
- Writing a code of conduct with explanation
- Confirming the text by the board of the KNAW
- Presenting the code of conduct to the Minister of Education, Science and Culture and other scientific, political and social actors





Follow-up!?

- No words but deeds! Not only a beautiful text but a change of attitude and action.
- Follow-up still optional but very desirable: dissemination code of conduct in relevant research laboratories within universities and industries.
- International coordination and cooperation