



# Global Awareness and Education for Biosecurity

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# 1. Article IV of the BTWC

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- “Each State Party to this Convention shall, in accordance with its constitutional processes, take any necessary measures to prohibit **and prevent** the development, production, stockpiling, acquisition or retention of the agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, within the territory of such State...” (emphasis added)



## 2. Final Declaration, 2<sup>nd</sup> Review Conference, 1986

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- Article IV

- “The Conference notes the importance of:
- ....
- inclusion in textbooks and in **medical, scientific** and military **educational programmes** of information dealing with the prohibition...(emphases added)
- and believes that such measures which States might undertake...would strengthen the effectiveness of the Convention.”



# 3. The 2005 BTWC Meeting on Codes of Conduct

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- *Australia* WP. 29

- “Amongst the Australian scientific community, there is **a low level of awareness of the risk of misuse of the biological sciences** to assist in the development of biological or chemical weapons. Many scientists working in ‘dual-use’ areas simply do not consider the possibility that their work could inadvertently assist in a biological or chemical weapons programme...” (emphasis added)



## 4. Some Insights from UK Academia

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- *Bradford Briefing Paper* No. **16**, May 2005
  - “There is little evidence from our seminars that participants:
    - a. regarded bioterrorism or bioweapons as a substantial threat;
    - b. considered that developments in life sciences research contributed to biothreats;
    - c. were aware of the current debates and concerns about dual-use research; or
    - d. were familiar with the BTWC.”



## 5. Biosecurity Education in Europe

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- *Fostering the Biosecurity Norm, 2008*
  - “The research suggests that **only 3 out of 57 universities identified currently offered some form of specific biosecurity module and in all cases this was optional for students**....nearly half of the degree programmes surveyed evidenced some form of bioethics module....27 of the 142 degree courses...contain a specific dedicated biosafety module although several...were optional...” (emphasis added)



## 6. Why the Lack of Biosecurity Education?

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- We asked lecturers and found that:
  - Some were not interested;
    - “Not my cup of tea”
  - Others were interested but they lacked;
    - Knowledge
    - Resources
    - Space on the timetable
  - So what could be done to help?



# 7. The Education Module Resource (EMR)

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- *Structure*

- A. Overview (s1)
- B. The threat of Biological Warfare and Bioterrorism and the International Prohibition Regime (s2-10)
- C. The Dual-Use Dilemma and the Responsibilities of Scientists (s11-18)
- D. National Implementation of the BTWC (s20)
- E. Building a “Web of Prevention” (s21)



## 8. Use of the EMR

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- Given the problems faced by lecturers, we hope that the EMR will be used as a source for material to add to ongoing courses
- We have tested out such use of the EMR with colleagues in Japan and Italy
- We are gradually getting the lecture slides translated into different languages and intend to have, at the least, all UN languages



## 9. Beyond the EMR

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- We have developed a train-the-trainer programme in order that lecturers can further develop their knowledge of the biosecurity/dual-use issue
- Our current aim is to develop a template for 5 country-specific lectures covering: the nature of the perceived threat; involvement in the BTWC; how the responsibility of scientists is handled; national implementation; and the whole “web of prevention” policies in the country



# 10. How do we get the 2008 Agreements enacted in 2011?

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- Ideas valued in 2008 discussions on education included:
  - “Explaining the risks associated with the potential misuse of the biological sciences and biotechnology;
  - Covering the moral and ethical obligations incumbent on those using the biological sciences;
  - Providing guidance on the types of activities which could be contrary to the aims of the Convention and relevant national laws and regulations and international law;
  - Being supported by accessible teaching materials, train-the-trainer programmes, seminars, workshops, publications, and audio-visual materials...”