



Abstracts

The revolution in biotechnology presents unprecedented opportunities and dangers for the health and well being of mankind. Today, one can plausibly imagine the eradication of many historic diseases. One can also envisage the creation of new diseases that would endanger a substantial proportion of the entire human species.

As powerful applications for biotechnology research are identified, appropriate arrangements for managing their extraordinary consequences will inevitably become necessary. This presentation will explore recent efforts to balance science and security policy in the area of advanced biotechnology research. Key developments on the dual-use issue will be discussed, together with a variety of governance options aimed at mitigating the risk from such research.

Key words: Dual-Use, Biological Weapons, Biotechnology Research

19. PAKISTAN'S APPROACH TOWARDS CHEM-BIO ISSUES (9)

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Pakistan ratified the BWC and CWC as a non-possessive state at that time when international environment were fraught with uncertainties about Chem-Bio threat. The geographical location of Pakistan faces a serious multidimensional WMD threat which includes threat from, non-state actors and her neighbours especially after declaration of chemical weapons during process of ratification of CWC. Pakistan never pursued such chem-bio program with the aim to use it as a mean of deterrence in overall context of security policy and always encouraged any move regarding strengthening of national/international institutional efforts to counter potential misuse of chem-bio technology.

Pakistan's position has consistently been positive, pragmatic and supportive. For better implementation of BWC and CWC in Pakistan, comprehensive policies have been formulated and National Authority has been established to work as National point of contact on CWC affairs.

Pakistan CWC Act 2000, Pakistan Bio Safety Rules 2005 and Pakistan Export Control Act 2004 are the evidences of Pakistan's sincerity to the implementation of CWC and BWC. Pakistan has declared 15 industries involved with chemicals, out of which 06 have already been inspected by OPCW Inspectors. Pakistan has declared its national protective program and pursuing all possible measures to enhance the national capacity and potential to guard against chem-bio threats. Pakistan has proved that it is committed to the principles of disarmament, which could serve as confidence building measures and may help reducing distrust and regional tension.

20. THE ENVIRONICS MOBILE CBRN DETECTION SYSTEM (10)

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Environics Oy has developed a novel monitoring system for detection of Chemical, Biological, Radiological and Nuclear compounds. The system is portable and rapidly installed into a monitoring location. It will allow real time monitoring and alarming of:

- Chemical Warfare agents (Nerve, Blister, Blood),
- Toxic industrial chemicals (General toxic-alarm),
- Biological warfare agents (Bacteria, viruses, toxins),
- Radiological agents such as alpha and gamma radiation.

Monitoring Station makes continuously measurements. Sensor data is processed and stored to local database by the Master Module (MM) that is located within the station. The MM sends the data to the Control Centers by using communication network. The Control Center receives and logs the data and shows it in real time on a map interface. The status of each sensor and detector can be seen in real time.

21. INNOVATIVE CONCEPTS AND OPERATIONAL TECHNIQUES FOR THE STRATEGIC NATIONAL STOCKPILE (7)

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This presentation is to discuss the innovative concepts and operational techniques developed by the Center for Disease Control and Prevention's Division of Strategic National Stockpile (DSNS). The primary response model for the SNS is to move from secure strategic storage locations to an area of need within 12 hours to augment local resources. While this 12 hour response is appropriate for most threat scenarios, it clearly cannot meet the needs of first line responders who need to rapidly administer initial dosing of nerve agent antidote. To address the threat of nerve agent poisoning the DSNS developed the CHEMPACK Project which allows centralized SNS management forward placement within hundreds of local jurisdictions.

Another variation from the primary mission of the DSNS is addressing the nation's potential shortfall in non-acute care bed capacity. To address this mission, the Federal Medical Station (FMS) program was created to build surge capability to meet a range of non-acute medical needs following a disaster. The FMS model is a pre-configured 250 bed unit that is deployable throughout the Nation and configured to respond rapidly.



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