

**MEETING OF THE STATES PARTIES TO
THE CONVENTION ON THE PROHIBITION
OF THE DEVELOPMENT, PRODUCTION
AND STOCKPILING OF BACTERIOLOGICAL
(BIOLOGICAL) AND TOXIN WEAPONS AND
ON THEIR DESTRUCTION**

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Item 7 of the agenda

**Consideration of oversight, education,
awareness raising, and adoption and/or
development of codes of conduct with the aim
of preventing misuse in the context of advances
in bio-science and bio-technology research with
the potential of use for purposes prohibited by
the Convention**

**PERSPECTIVE ON OVERSIGHT, CODES OF CONDUCT EDUCATION
AND AWARENESS RAISING**

Submitted by Pakistan

Introduction

1. Pakistan fully recognizes the importance of discussions on “biosafety and biosecurity”, and “oversight, education, awareness raising and code of conduct”. The two themes are closely interlinked and the discussion will contribute to our efforts for effective implementation of the Biological and Toxin Weapons Convention (BTWC). This working paper is mainly aimed at highlighting Pakistan’s perspective on awareness raising about BTWC.

Oversight of Scientific Activities

2. Science and technology has the most crucial role to play in the development of conventional, advanced and innovative means for socio-economic uplift of mankind. At the same time, the potential misuse of life sciences represents a serious threat, which warrants a vigilant, critical and consistent oversight of biological research, development and production activities through appropriate and well established national oversight mechanisms and arrangements. The responsibility of oversight must be jointly shared by national authorities, scientific programme managers and investigators of life science projects. In scientific organizations, institutional review bodies should assess the research proposals and consider any risks arising from dual-use nature of work. In order to take into account developments in research direction or emergence of

unexpected results, risk assessment should be undertaken prior to the commencement of projects as well as at regular intervals throughout the execution of research projects and even thereafter.

3. In Pakistan, the oversight mechanism for monitoring of the National Biosafety Guidelines has been built on three tiers as specified in Biosafety Rules-2005 i.e. National Biosafety Committee (NBC), Technical Advisory Committee (TAC) and Institutional Biosafety Committee (IBC). NBC is responsible for overseeing all laboratory work, field trials, commercial release, import, export, sale and purchase of GMOs and their products. Pakistan notified a control list of goods, technologies, materials and equipment which incorporates internationally accepted standard lists, including that of the Australia Group (AG) aspects dealing with biological agents and toxins. A Strategic Export Control Division (SECDIV) has been established at the Ministry of Foreign Affairs, whereas an Oversight Board provides a review function. Joint Working Group of technical experts has also been established for review of the control list to cater for later technological developments.

Code of Conduct

4. Code of conduct is a unique regulatory instrument that should not be mistaken with a treaty, guideline, or other procedures. The aim of code of conduct for the life sciences is to ensure that activities involving microbial or other biological agents or toxins, whatever their origin or method of production may be, is for prophylactic, protective or other peaceful purposes only. Code of conduct for dual-use research is important because it would complement government's efforts to effectively oversee all scientific and experimental activities.

5. It is widely believed that expecting that all scientists the world over, would adhere to a single and universal code of conduct, is highly unlikely. Therefore, instead of developing a universal code for adoption by all countries, a more rational approach would be to encourage states, organizations and/or scientific bodies to develop and adopt their respective codes according to their specific circumstances. It would also be important to establish guidelines at the national level whereby those concerned about possible dual-use applications could seek guidance and report about any concern or suspicious activities. Enhancing awareness of relevant code(s) of conduct amongst the scientific community should also include relevant information about national legislation, important export control regulations, and international regimes governing/regulating the use of materials and equipment which also may have applications relating to misuse of life sciences.

6. Pakistan considers that the development of a 'Standard Code of Conduct' for all life scientists as a difficult option. A broad matrix of codes developed at the local as well as institutional/organizational level appears more practical. It is, therefore, more appropriate that relevant life science entities, the concerned scientists as well as their parent organizations, may develop their own codes of conduct. Coordination for the development, implementation, review and monitoring of the compliance of such codes may be done by professional scientific bodies. This would be logical course to help build confidence and ownership of the codes by the scientists' community. The best characterization of the codes would be formalization or codification of existing standards, best practices and a system for their refinement and improvement. The National Bioethics Committee established under the Ministry of Health

ensures that activities in this area are carried out in conformity with ethical norms. It is an umbrella body linked with the ethical review bodies within large organizations and institutions relating to bio-medical sciences.

Education and Awareness Enhancement

7. Life sciences cut across numerous sectors such as public health, science, technology, law enforcement, and public/ private industries. Therefore, greater cross-communication amongst such diverse stakeholders is essential to promote awareness of concerns and other major issues. Laboratory biosafety and biosecurity requires proper education and training of workers on all aspects of safety and security i.e. knowledge of bio-containment levels, safe handling of pathogens and toxins, protection, securing and accounting of materials and security of facilities and literature and other records and information, etc.

8. National protocols and institutional procedures should be continuously reviewed, updated and properly implemented. Education and training should also include ethical considerations. Such training should not be a one-time event, but should be conducted regularly and recurrently to improve, update and refresh the knowledge and technical capabilities of workers and staff. Interactive courses are required to share knowledge, practices, procedures, lessons learned and should include personal as well as institutional experiences.

9. Promoting awareness amongst research institutions and biotechnology and other scientific institutions, is also necessary to apprise all about implications of research work and ensuing obligations under relevant international conventions/treaties and national legislation. Establishment of national and local bodies also need due consideration to address issues related to possible misuse or diversion of scientific knowledge, materials or equipment towards biological weapons applications. Educational institutions should be encouraged to include topics on the ethical dimension in scientific study programmes.

10. Working group of life scientists from universities/institutions was established under National Core Group in Life Sciences (NCGLS) in Nov 2007, with a mandate of capacity building, develop Biosafety and Biosecurity syllabi for post-graduate and undergraduate levels. Presently NCGLS is in process of evaluation of proposals of the working group. Finally, these suggestions would be reviewed by the relevant ministries and departments.

11. For awareness-raising about the GMOs and the risk involved for human health and environment, public notices, workshops and seminars are arranged countrywide at the federal as well as provincial level. Series of seminars and workshops were organized in major cities of Pakistan in 2007, in which prominent international bio-safety experts also shared their experiences relevant to bio-safety. During the current year(2008), National Biosafety Centre of Environment Protection Agency have undertaken several initiatives for enhancing awareness and capacity building of relevant stakeholders with regard to bio-safety with particular attention to GMOs. Some of the initiatives include a seminar on “*GMOs, Application and Implication*” and Training workshop for the *head of Institutional Biosafety Committees (IBCs)*. Public Notices are released in the media regarding regulation of GMOs activities under Bio-safety Rules. A sub-committee of experts has been constituted to monitor the field trial of GMO crops.

12. Some of the significant activities in 2007-08 held at national level and participation of our relevant experts in activities organized at international level are given as:-

- (i) International Conference on 'Molecular Biotechnology for Better Health, Environment, and Agriculture' organized in March 2007 at Islamabad
- (ii) Asia conference on Lab Biosafety and Security, Bangkok, Thailand, April 2007, 21 Pakistan experts participated
- (iii) In June 2007, three seminars on Laboratory Biosafety and Biosecurity organized, each in Islamabad, Rawalpindi and Karachi in collaboration with experts from USA
- (iv) Biosecurity Workshop, Dec 07, Bangkok, Thailand
- (v) Seminar on "Biosafety and Biosecurity issues, risks and management strategies" at Quaid-e-Azam University
- (vi) Workshop on Bioethics in Islamabad, organized by Sind Institute of Urology and Transplant (SIUT) in May 2008
- (vii) Interactive Session 'Biosafety in Pakistan' under National Core Group in Life Sciences in July 2008
- (viii) Seminar on National implementation of BWC organized by National Focal Point (DG Disarmament Ministry of Foreign Affairs) on Dec 2007 to overview Implementation Measures relating to BWC

13. For awareness raising, Pakistan considers that activities planned at national level preferably should include awareness about obligations of states parties under both CWC and BTWC, therefore our National Focal Point for CWC and BWC organized national level seminars. Two Days Seminar '*National Commitment towards Obligations of Chem-Bio Aspects*' was organized in Jan 2008, where relevant officials from Ministry of Foreign Affairs apprised about international perspectives on BWC and CWC; The seminar focused on:-

- (i) Implementation of BWC obligations
- (ii) Overview of awareness raising activities
- (iii) Existing measures to ensure implementation of biosafety rules and guidelines
- (iv) Regulation of biotechnology related human health and disease prevention

14. In the first quarter of 2009, two Days National Seminar on "*National Implementation of BWC and CWC*" being organized by Ministry of Foreign Affairs with participation of experts from academic institutions, industry and relevant public & private organizations.
