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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CONSIDERATIONS, LESSONS, PERSPECTIVES, RECOMMENDATIONS, CONCLUSIONS AND PROPOSALS DRAWN FROM THE PRESENTATIONS, STATEMENTS, WORKING PAPERS AND INTERVENTIONS ON THE TOPICS UNDER DISCUSSION AT THE MEETING

Addendum

(Draft – this document is an addition to BWC/MSP/2008/MX/CRP.1 and contains material submitted up to 12:00 on 22 August)

Agenda Item 5: National, regional and international measures to improve biosafety and biosecurity, including laboratory safety and security of pathogens and toxins.

Delegation	Text	Source
Brazil	Biosafety… is defined… as "the safety condition achieved through a series of actions designed to prevent, control, reduce or eliminate risks inherent to activities that may be hazardous to the health of humans, animals, plants and to the environment"… Biosecurity in public health settings, as defined in the Background Information Document submitted by the ISU to this Meeting of Experts and entitled *Biosafety and Biosecurity*, concerns "the protection of microbiological assets from theft, loss or diversion, which could lead to the inappropriate use of these agents to cause public health harm"… "Laboratory biosecurity" is defined in the Background Information Document entitled *Biosafety and Biosecurity* (submitted by the ISU) as meaning "the protection, control and accountability for valuable biological materials within laboratories, in order to prevent their unauthorized access,	WP.28

Delegation	Text	Source
	loss, theft, misuse, diversion or intentional release"… related to veterinary and agricultural fields (denoting "protecting biological resources from foreign or invasive species"	
United States	'Dual use' potential of certain life sciences research requires consideration of biosecurity measures	Presentation 21/08/2008
France	Specific biological guidelines are necessary to strengthen legal standards	Presentation 21/08/2008
India	Discussions on biosecurity and biosafety as well as oversight, education, awareness raising and adoption and/or development of codes of conduct are welcome with the aim of preventing in the context of advances in bioscience, technology research with the potential use for purposes prohibited by the Convention.	In Room Paper
India	Our discussions should be aimed at helping States Parties improve their national standards in the fields of biosafety and biosecurity and should be implemented on national and voluntary basis	In Room Paper
India	Achieving such standards in the fields of biosafety and biosecurity can be facilitated by international cooperation and strengthening the implementation of Article X of the Convention	In Room Paper
India	Any regulation that is developed in the context of biosafety which has the potential to hamper international collaborative ventures should be carefully debated to ensure that they are not detrimental to the progress of science and the application of the benefits of science to humanity.	In Room Paper
United Kingdom	The security procedures required for individual laboratories depend upon the nature of the organism being handled.	WP.06
United Kingdom	A single regulatory framework (should) govern work with human and animal pathogens	WP.07
Germany	Any person to be entrusted with a security-sensitive activity must undergo prior security vetting	WP.15
China	Organizations and individuals engaged in biological research and development activities which have high risks in biosecurity should be accredited according to the evaluation of their qualifications and capabilities	WP.19
Brazil	Identify and analyze the potential occurrence of any commercial activity that might be considered illegal and/or prohibited under the international mechanisms that regulate transfers (exports or imports) of sensitive products or controlled technologies	WP.28
Brazil	Publish and publicize the lists of sensitive goods	WP.28
Brazil	Help identify any implications of exports or imports in areas of concern	WP.28

Delegation	Text	Source
WHO	Support laboratory infrastructure and capacity building for research	Presentation 21/08/2008
WHO	Facilitate local and regional networking	Presentation 21/08/2008
WHO	Create mechanisms for sharing information on life science research programmes and findings	Presentation 21/08/2008
WHO	Provide tools and support in such a way that they can be tailored to help countries to develop or strengthen research policies and strategies and related laws according to their needs and priorities	Presentation 21/08/2008
Georgia	…all conferences that bring together specialists from countries working in the same field together are very productive for capacity building	Statement 22/08/2008
Pakistan	Capacity building in biosafety and biosecurity is important component of the process	Presentation 22/08/2008
France	A good assessment of risks is essential for a good risks management, as well as the subsequent quality management system (overall traceability and competence of the staff)	Presentation 21/08/2008
France	Without risk assessment and quality management systems, no security for biological field	Presentation 21/08/2008
Cameroon	Risk assessment must guarantee human, vegetal and animal security, as well as the protection of environment	Presentation 21/08/08 AM
Cameroon	Risk assessment must taken into account precaution principle, and guidelines set by international organizations	Presentation 21/08/08 AM
United States	Many laboratories are unsure how to conduct risk assessments and resources and guidance for doing so are limited	WP.1
United Kingdom	Risk assessment should be a key element	WP.7

Agenda Item 6: 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.

Delegation	Text	Source
United States	Need to minimize the likelihood that biological research findings will be misused for production and enhancement of biological weapons	Presentation 21/08/2008
United States	Goal: enhance biosecurity protections for life sciences research while ensuring that any impact to the free flow of scientific inquiry is minimized.	Presentation 21/08/2008
WHO	Develop, implement and monitor regulation, legislation, guidelines and standard operating procedures for laboratory biosafety, for laboratory biosecurity, and for assessing and managing the risks of dual use life science research	Presentation 21/08/2008
WHO	Provide adequate financial resources	Presentation 21/08/2008
India	Discussions on… oversight, education, awareness raising and adoption and/or development of codes of conduct are welcome with the aim of preventing in the context of advances in bioscience, technology research with the potential use for purposes prohibited by the Convention.	In Room Paper
Australia	Researchers and others involved in gene technology are advised to “minimise risks of harm or discomfort to humans and animals likely to be adversely affected by gene technology” (Principle 3), “promote equitable access to scientific developments and sharing knowledge, and recognise the value of benefit sharing” (Principle 7), “conduct research in a manner that promotes the benevolent and avoids the malevolent uses of gene technology” (Principle 8), and “conduct gene technology research after appropriate consultation and ensuring transparency and public scrutiny of the processes” (Principle 9).	WP.31
NAS	Misuse of dual use research is a serious potential risk for biological weapons and bioterrorism	Presentation 21/08/2008
NAS	Need a mix of policies that both enhance security and enable continuing scientific advances	Presentation 21/08/2008
NAS	Scientific community has a key role in helping to reduce the risks of misuse	Presentation 21/08/2008
NAS	Need for oversight throughout the life cycle of research – from proposals to publication and dissemination	Presentation 21/08/2008
NAS	Mix of formal, including legal and regulatory, and informal, including self-policing and guidelines	Presentation 21/08/2008
NAS	Preference for self-governance by scientific community and guidelines by governments	Presentation 21/08/2008

Delegation	Text	Source
NAS	Important role for “soft law” – norms, codes of ethics, conduct, and practice	Presentation 21/08/2008
NAS	“ web of prevention” most likely to be effective	Presentation 21/08/2008
NAS	Biosafety and laboratory biosecurity are essential elements; best beginning for many countries	Presentation 21/08/2008
NAS	Importance of advice from scientific community in design and implementation of oversight systems	Presentation 21/08/2008
NAS	Significant role for scientific organizations at all levels in working with policy-makers	Presentation 21/08/2008
NAS	Open databases on biological organisms can be a security risk.	21/08/08 PM
Pakistan	Appropriate national and institutional oversight mechanisms / arrangements as well as Guidelines are essential	Presentation 21/08/2008
Pakistan	Responsibility of oversight needs to be jointly fulfilled by national authorities, scientific programme managers and investigators of life science projects.	Presentation 21/08/2008
Pakistan	National and institutional bodies also need to address issues related to possible misuse or diversion of scientific knowledge, materials or equipment towards biological weapons applications.	Presentation 21/08/2008
Pakistan	National protocols and institutional procedures should be continuously reviewed, updated and properly implemented.	Presentation 21/08/2008
Brazil	The need to prevent malign actions has to take into account the need for life saving advancements.	21/08/2008
Brazil	Our first obligation must be, to ensure that efforts to mitigate risks are proportionate and do not unduly restrict science for peaceful purposes.	21/08/2008
Brazil	When bottom-up approaches results are achieved, they are more flexible and better tailored to the demands of the community, are self-sustaining, more easily harmonized, and can be more comprehensive	21/08/2008
Brazil	Favors a combination of institutional and government control, giving institutions and scientists enough space without exempting the government of its responsibility to support and inform researchers.	21/08/2008
Brazil	Stresses dialogue between public and private sector.	21/08/2008
US	Development of any oversight mechanism must balance the need to minimize the risk of misuse with the need to ensure that science and innovation are encouraged.	Presentation 21/08/2008
US	Development of any oversight mechanism must involve engagement of the synthetic nucleic acid industry, the scientific community, and other stakeholders.	Presentation 21/08/2008
Germany	Necessary to research dangerous pathogens and toxins	Statement

Delegation	Text	Source
	and for peer review recommendations	21/08/2008
Germany	Articles should be published freely within the rules of respective journals	Statement 21/08/2008
Germany	Research findings should be shared at home and abroad	Statement 21/08/2008
France	Leglisation should improve the rules and the transparency in the relationship between researchers, between researcher and their employers and for bioethical purposes.	Statement 21/08/2008
United States	The development of any oversight mechanism must balance the need to minimize the risk of misuse with the need to ensure that science, innovation, and trade are encouraged. The process for identifying options for any oversight mechanism must involve engaging the synthetic nucleic acid industry, the scientific community, and other stakeholders	WP.4
United Kingdom	A key issue is the early consideration of a wide range of policy, social and ethical issues in the development of strategies for the control, oversight and governance of emerging technologies and their applications	WP.11
United Kingdom	Reviewing the regulatory framework would be one way of ensuring appropriate oversight and control mechanisms for activities that are of more immediate relevance to the risk of misuse under the BTWC	WP.11
WHO	Raise awareness among all stakeholders	Presentation 21/08/2008
WHO	Promote information exchange and laboratory networks and foster dialogue among stakeholders in different sectors and agencies at country level (agriculture, industry, environment, defense, etc)	Presentation 21/08/2008
IUPAC	Education projects for the life sciences should remind those engaged in the life sciences of the choices they face, that the life sciences can have multiple effects, and that decisions about how they are used, including not to be used as biological weapons, is the responsibility of each individual engaged in the life sciences	21/08/2008
Brazil	Inform businessmen on existing government controls in the area of non-proliferation of weapons of mass destruction, and to stress the importance of working with the Government at a national level	WP.28
Australia	Raising awareness of the Treaty's prohibitions among scientific and technical communities is important, given their exposure to emergent biotechnologies with potential dual-use applications such as gene technology.	WP.31
Switzerland	Appropriate measures should be taken to make scientists aware that their research and development activities have	21/08/2008

Delegation	Text	Source
	wider ramifications.	
Switzerland	Researchers should be aware of the possible adverse social, environmental, health and security consequences of their work, and that they have both legal and ethical responsibilities in this regard.	21/08/2008
Switzerland	Both governmental institutions and individual researchers should collaborate extensively to set up a system that encourages awareness-raising among the scientific community and that creates a framework of accountability for researchers.	21/08/2008
Switzerland	Governments should not only target individual scientists but also academic institutions and associations, regulators and, private and commercial institutions.	21/08/2008
Switzerland	Research institutions and professional association should assist the process by formulating policies, rules, guidelines, and standard operating procedures for those involved in dual-use research.	21/08/2008
US	Highlights the potential danger of Synthetic biology, which is a dual use technology: while it has provided significant scientific, health, and economic benefits, it is a potentially enabling technology for the de novo reconstruction of dangerous pathogens, either in part or in whole.	Presentation 21/08/2008
UNSC 1540	The next step after raising awareness will be implementation for States… However, awareness raising is still needed for parliamentarians and politicians in a position to allocate resources for implementation.	Presentation 21/08/2008
NAS	Continuing need for awareness raising and education	Presentation 21/08/2008
Brazil	Advocates that the government should be primarily involved in education and awareness raising programs. The need for the protection of resources and scientific supervision must therefore be part of the education of our scientists, making institutional conscience the best path towards effective implementation of the BWC.	21/08/2008
IUPAC	Codes of conduct should be to ensure that activities in the life sciences cause no harm and are thus form part of a comprehensive integrated approach to ensuring compliance with international treaties, national laws and regulations such as those relating to life sciences, illicit drugs, chemical and biological weapons, banned and severely restricted chemicals, etc.	21/08/2008
IUPAC	Codes of conduct should emphasis the importance that activities are both in compliance and perceived to be in compliance with the Convention and national implementing legislation	21/08/2008

Delegation	Text	Source
IUPAC	Codes of conduct should emphasize that those engaged in the life sciences will not knowingly engage in activities prohibited by the Convention or national legislation	21/08/2008
Germany	Seminars at universities and informal settings should be promoted	Statement 21/08/2008
Switzerland	Raising awareness about the provisions of the Biological Weapons Convention is a central part of preventing the misuse of dual-use technologies, and thus in making researchers sensitive to the risks involved in their field of experience.	Statement 21/08/2008
Pakistan	Awareness raising and greater cross-communication amongst diverse stakeholders of life sciences is essential to promote and strengthen BWC regime	Presentation 22/08/2008
Pakistan	Interactive sessions are required to share knowledge, practices, procedures, lessons learnt through personal as well as institutional experiences	Presentation 22/08/2008
Pakistan	Promoting awareness amongst research institutions is also necessary to apprise all stakeholders about obligations under relevant international conventions/treaties and national legislation	Presentation 22/08/2008
Pakistan	Education and awareness raising about BTWC is an ongoing process – continuing professional education	Presentation 22/08/2008
Pakistan	Capacity building in biosafety and biosecurity is important component of the process	Presentation 22/08/2008
Brazil	Areas of interest and research, levels of investment and many aspects related to biotechnology vary greatly from country to country, demanding different responses from training programmes and codes	Statement 22/08/2008
United Kingdom	Training for personnel on ethical issues – not just in secondary and tertiary education - should be on-going and not limited to a single component in a degree course	WP.10
United Kingdom	Accessible materials which address the BTWC and dual-use issues are needed for teachers	WP.10
Japan	Targets of education must include students (both in universities and secondary schools), researchers at universities, research institutions and private companies, health care workers, etc., who are/will be involved in science now and in the future	WP.21
Japan	It is essential to secure personnel with appropriate qualifications. In this light, it is also important to examine what qualifications are required and how to train personnel as education practitioners	WP.21
India	Given the varying level of economic development of States Parties, education and awareness raising could be facilitated by strengthening international cooperation under Article X of the Convention	In Room Paper
Australia	Codes of Conduct serve to assist practitioners apply	WP.31

Delegation	Text	Source
	sound judgment in assessing the impact of their activities on broader ethical, safety and security issues.	
Germany	Recommends that seminars should be organized more at universities	Presentation 21/08/2008
Germany	Best practice should be developed	Presentation 21/08/2008
France	Information which could be used by terrorists should not be published or shared	Presentation 21/08/2008
France	Early education in biosecurity … increase the level of student consciousness on their future scientific responsibilities regarding dual use of technologies and armament proliferation	Presentation 21/08/2008
France	Oaths and symbols have their own strengths – "Hippocratic oath for scientists" (has) a strong moral and ethical individual value to deter misuse of science	Statement 21/08/2008
Pakistan	Code of conduct for dual-use research is important because it complements Government's efforts to effectively oversee all scientific activities. A rational approach is required to encourage organizations and/or scientific bodies to develop and adopt their respective codes according to their specific circumstances and requirements	21/08/2008
India	Outcome: creating a culture of responsibility and accountability; educating current and future scientific community; raising awareness of their professional, ethical and social responsibility; foster an institutional culture of ethos and responsibility	Presentation 22/08/2008
India	Codes of conduct have to strike a delicate balance and look at both sides of scientific research	Presentation 22/08/2008
India	Encourage research and development on one hand and at the same time keep an eye on its misuse	Presentation 22/08/2008
India	Codes would weave a safety net to promote best practices in the conduct of research	Presentation 22/08/2008
Netherlands	A code of conduct does not replace existing rules and laws	Presentation 22/08/2008
Netherlands	A code of conduct contributes to raising awareness	Presentation 22/08/2008
Netherlands	The contents of a code of conduct have to be linked up with relevant scientific, social and political developments and… with daily practice of persons and organizations involved	Presentation 22/08/2008
Netherlands	Code of conduct should be developed in an intensive dialogue with stakeholders and not in the ivory towers of science or politics	Presentation 22/08/2008
Netherlands	Target groups: researchers and other professionals in life sciences; organizations, institutions and companies where life sciences research takes place; organizations,	Presentation 22/08/2008

Delegation	Text	Source
	institutions and companies that offer education in the life sciences; organizations and institutions that offer licenses for life science research and that fund, facilitate, inspect or evaluate research; scientific and professional unions, organizations of employers and of employees in the field of life sciences; organizations, institutions and companies where dual use biological agents or toxins are stockpiled or transported; actors, editors and publishers of life science publications and administrators of life science websites	
Netherlands	Contents of the Code of Conduct: raising awareness; research and publication policy; accountability and oversight; internal and external communication; accessibility; shipment and transport.	Presentation 22/08/2008
United States	Government cannot oversee all scientists and investigations across the nation	Presentation 22/08/2008
United States	Offers the greatest opportunity for improving the security of research at the level of the individual scientist: increases understanding of biosecurity concerns and issues; persistent reminder of moral and ethical responsibilities; creates a "culture of responsibility and accountability"	Presentation 22/08/2008
United States	Sets universal professional standards that may have legal implications	Presentation 22/08/2008
United States	Provides behavioral guideposts for people who want to do the right thing	Presentation 22/08/2008
United States	May have negligible impact on intentionally malicious behavior	Presentation 22/08/2008
United States	Implementation is predicated on clear criteria to identify this type of research	Presentation 22/08/2008
United States	Participation by the research community during the development of a code is key to broad acceptance	Presentation 22/08/2008
United States	Scientific societies and professional associations are encouraged to: adapt elements as appropriate to their memberships and research-related activities; discuss a code on dual use research at annual membership meetings at part of its development and adoption - enhances awareness of the issue - promotes general acceptance of the code; use the document for formal educational and training purposes	Presentation 22/08/2008
United States	At any stage of life sciences research, individuals are ethically obligated to avoid or minimize the risks and harm that could result from malevolent use of research outcomes. Towards that end, scientists should: assess their own research efforts for dual use potential and report as appropriate; seek to stay informed of literature, guidance, and requirements related to dual use research;	Presentation 22/08/2008

Delegation	Text	Source
	train others to identify dual use research of concern and manage it appropriately and communicate it responsibly; serve as role models of responsible behavior, especially when involved in research that meets the criteria for dual use research of concern; and be alert to potential misuse of research.	
United States	Defines specific standards of responsible conduct for the following phases and elements of the research process: proposal development; research administration and oversight; scientific and editorial review; conducting experimentation; collaboration; communicating results; educating and mentoring.	Presentation 22/08/2008
United States	Target audiences: life sciences societies and associations; research institutions; industry; research leadership; individual life scientists; technicians, students, and others involved in the research process; funding agencies; journal editors, reviewers, and publishers	Presentation 22/08/2008
Bulgaria	Codes are very difficult to be implemented via administrative way as they are dealing mainly with ethic and moral categories and to agree with them and to follow them strongly depends on the personal characteristics of one scientist, his education, professional qualification, social and political orientation, his moral standards and criteris,etc.	Statement 22/08/2008
Bulgaria	We need all national institutions, organizations, universities companies etc. involved in life science research and manufacturing activities, supported by the government and using the international experience as well to combine their efforts and to elaborate for all people working in this field an acceptable and applicable code of conduct	Statement 22/08/2008
Ukraine	Code must provide guidance to relations within scientific community and between scientists and the public	Statement 22/08/2008
Ukraine	The code establishes basic principles for scientists' evaluation of ethical aspects in their research and the research of their colleagues.	Statement 22/08/2008
Brazil	Codes are to be developed nationally, tailored according to the reality of each country	Statement 22/08/2008
Brazil	Areas of interest and research, levels of investment and many aspects related to biotechnology vary greatly from country to country, demanding different responses from training programmes and codes	Statement 22/08/2008
Brazil	Stress that our discussion on this and other topics brought up during this Meeting of Experts should always be taken into consideration Article X of the BWC.	Statement 22/08/2008
Brazil	Codes of conduct should in no way come in the way of technology transfer for peaceful purposes.	Statement 22/08/2008

Delegation	Text	Source
Republic of Korea	The COC element can serve as a guideline for scientists to deter scientists from the misuse of biotechnology.	Statement
United Kingdom	There needs to be clear leadership from senior personnel across organizations. Employers have a clear responsibility here; there needs to be commitment and a sustained vision. However, individuals have a personal responsibility to act ethically. There needs to be a shared value system	WP.10
United Kingdom	Provide some general overarching principles on awareness, safety and security, education and information, accountability and oversight and leave it to national bodies and individual institutions to take it forward in their own particular scientific areas	WP.10
India	Codes of conduct cannot be substitute for legally binding measures to ensure strict implementation and compliance with the provisions of the Convention. However, an exchange of views to draw up best practices so as to increase awareness, especially with regard to the multifaceted nature of dual use material and technology can be benefit of all	In Room Paper

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