BBIC



Biosafety and Biosecurity International Conference Casablanca, Morocco 1-4 April 2009



International Council for the Life Sciences



The stage is set for the 2nd Biosafety and Biosecurity International Conference, held in Casablanca, Morocco 2-3 April 2009. The theme of the conference was "Healthier and more secure communities in the Middle East and North Africa Region".

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Executive Summary

Biosafety and Biosecurity International Conference 2009

Casablanca, Morocco 1-4 April 2009

The conference was a great success. It was attended by 107 participants from 26 countries and 7 international organizations. The organizers' objectives were completely achieved and exceeded.

Participants endorsed a Framework Document as the roadmap for developing national and regional biosafety and biosecurity strategies. Commitments were made to establish three regional biosafety and biosecurity training centres in the UAE, Jordan and Morocco. Meeting location (Jordan) and dates were agreed for the next biennial conference in May 2011, and the first meetings of the Steering Committee and the Regional Training Centre Committee (both June 2009). Press coverage was extensive both in terms of media and geography – wire, radio, TV, newspapers and magazines in Morocco, regionally and internationally.

In addition, Morocco offered to host a regional biosafety association, the UAE and COMSTECH committed to continued financial support for the BBIC process, and the WHO/EU announced a major project to create a detailed national biosafety programme in one country in the region and thereafter to port it to one or two other countries. Furthermore, Pakistan offered to host a meeting on biosafety and biosecurity curricula and to make training materials from its national curricula available to regional training centres in the Middle East and North Africa.

Most remarkable, however, was the enthusiasm of the regional participants for the BBIC process. Participants came from the following countries: Morocco, Algeria, Tunisia, Libya, Egypt, Sudan, Lebanon, Palestine, Jordan, Kuwait, Bahrain, Saudi Arabia, the United Arab Emirates, Oman, Yemen, Iran, Pakistan, Brazil, the US, Canada, the UK, France, Sweden, Norway, Switzerland, and Japan. Only 3 of the region's 21 countries (Qatar, Syria and Mauritania) remain unengaged. Efforts will continue to be made to ensure the involvement of all MENA countries in future BBIC activities.

This enthusiasm needs to be turned into commitment and action. The work starts now.



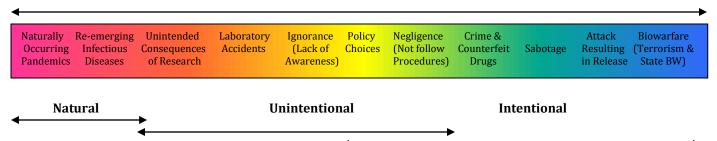
The Conference is opened on behalf of HE Ahmed Akhchichine, Moroccan Minister of Education, Higher Education, Training and Scientific Research by His Excellency Omar Fassi Fehri, Permanent Secretary of the Hassan II Academy of Science and Technology and former Moroccan Minister of Research.

Biosafety and Biosecurity International Conference 2009: Healthier and More Secure Communities in the MENA region

Purpose and Background

The purpose of the conference was to promote the development of biosafety and biosecurity strategies in the Middle East and North Africa¹. The need for such strategies arises from the extraordinary and rapid advances being made in biotechnology. While these advances have brought enormous benefits to medicine, public health, nutrition, agriculture and industry, they also pose a real risk to public safety and security through the possibilities of accidents, sabotage or their misuse. Furthermore, in addition to man-made biological risks, humans continue to face natural biological risks such as the threat of pandemics of new and re-emerging infectious diseases. These risks are best understood as a spectrum:

SPECTRUM OF BIOLOGICAL RISKS



In order for the full humanitarian and economic benefits of biotechnological advances to be realized, it is essential that these risks are properly identified, understood and mitigated through effective risk management in the form of comprehensive biosafety and biosecurity strategies, supported with a full complement of legislative, regulatory, human and physical infrastructure.

The conference built on the work of the first Biosafety and Biosecurity International Conference, held in Abu Dhabi 12-14 November 2007, and the work of the 'Core Group'. The first conference examined the range of potential biological threats to which the region is exposed and addressed, in broad terms, how these might be mitigated through comprehensive biosafety and biosecurity strategies. The Core Group met in Abu Dhabi, financed by the Environment Agency of Abu Dhabi, in May 2008 to examine further the issue of how to develop and implement these strategies and produced a Framework Document entitled 'Developing Biosafety and Biosecurity Strategies for the MENA Region'. This document (version as amended by BBIC09 at Appendix I), prepared in English as the official version, was translated into and printed in Arabic and French versions prior to the conference so that all regional participants could read it in their preferred language. The Framework Document formed the basis of much of the discussion of this conference, and the main behind the scenes effort focused on ensuring that the Framework was accepted by regional participants as a Plan of Action for the countries of the region.

^{1.} For the purposes of this process, MENA is considered to include the following countries: Mauritania, Morocco, Algeria, Tunisia, Libya, Egypt, Sudan, Palestine, Jordan, Lebanon, Syria, Iran, Iraq, Saudi Arabia, Kuwait, Qatar, Bahrain, the United Arab Emirates, Oman, Yemen and Pakistan.

Organizers, Donors, and Finances

The conference was organized by the hosts, the Moroccan Ministry of Education, Higher Education, Training and Scientific Research together with the International Council for the Life Sciences. The Environment Agency of Abu Dhabi and the Royal Scientific Society of Jordan were co-sponsors.

The conference was supported by generous financial contributions from:

- ♦ Environment Agency of Abu Dhabi
- **♦** Kingdom of Morocco
- United Kingdom of Great Britain and Northern Ireland
- Alfred P Sloan Foundation of New York
- ♦ Robert and Ardis James Foundation of New York
- ♦ Islamic Educational, Scientific and Cultural Organization, and
- Standing Committee on Scientific and Technological Cooperation of the Organisation of the Islamic Conference (COMSTECH)

In addition, several international organizations supported the conference with the provision of expertise, including the United Nations, the World Health Organization, the Implementation Support Unit of the Biological and Toxin Weapon Convention (ISU), and the World Organisation for Animal Health (OIE). The Nuclear Threat Initiative (NTI) provided in-kind administrative support for the conference, without which the conference itself could not have run so smoothly.

The conference was held within budget.



HRH Princess Sumaya bint El Hassan, President of the Royal Scientific Society of Jordan, addresses the conference, talking about the need to protect and promote human dignity and security.

The conference was opened by Mr. Terence Taylor, President of the International Council for the Life Sciences, and His Excellency Omar Fassi Fehri, Permanent Secretary of the Hassan II Academy of Science and Technology and former Moroccan Minister of Research, on behalf of HE Ahmed Akhchichine, Moroccan Minister of Education, Higher Education, Training and Scientific Research. HE Latifa Tricha, Moroccan Secretary General of the Ministry of Higher Education, also attended the conference.

The conference was also honoured with the presence of HRH Princess Sumaya bint el Hassan, in her role as President of the Royal Scientific Society of Jordan, one of the sponsors of the Biosafety and Biosecurity International Conference process. Her Royal Highness delivered an important speech on the need to protect and promote human dignity and security. The opening session also heard speeches from Mr. Abdulnasser al Shamsi representing the other sponsor, the Environment Agency of Abu Dhabi, and from Dr. Faiq Billal, Director for Science of the Islamic Educational, Scientific and Cultural Organisation (ISESCO).

The conference then proceeded in five sessions:

- Session 1: Defining the Problem and Creating Solutions: Challenges in the MENA and the Need for a Regional Biosafety and Biosecurity Strategy
- Session 2: Building Human Capacity, through Training, Education and Awareness Raising
- Session 3: Building Technical Capacity through Strengthening Infectious Disease Surveillance in the Animal, Plant and Human Health Communities
- Session 4: Strengthening Institutional, Physical and Legal Infrastructure to Manage Biological Risks
- Session 5: Biosafety and Biosecurity National and Regional Strategies

During this last session, four breakout groups formed to address specific facets for the Framework Document prepared by the Core Group. A copy of the conference programme is found as Appendix II.

Upon conclusion of their work, the moderators of the breakout groups reported back to the main conference on each group's discussions, with specific recommendations for amending the Framework Document. Upon conclusion of the reports and recommendations, Mr. Taylor proposed to the conference that Framework Document, as amended by the breakout groups' recommendations, be adopted as the region's road map for the development of national and regional biosafety and biosecurity strategies. This proposal was adopted by acclamation.

The conference was attended by 104 participants representing 25 countries and seven international organizations (UN, WHO, OIE, BTWC, ISESCO, COMSTECH, and NEPAD). 15 of the 20 countries of the MENA region were represented with representatives of Iran and Iraq willing and ready to participate but unable to attend because of visa problems. Only Syria, Qatar and Mauritania were completely unrepresented.

A full list of participants is at Appendix III. Membership of each of the Breakout Groups is at Appendix IV.



Dr Maan al Hakim (UAE) and Dr Eltayeb Ali (Sudan)

Dr Ahmed Bashir (UAE)

Dr Leila Oda (Brazil) and Dr Suleiman al Busaidy (Oman)



Biosafety and Biosecurity International Conference 2009: Healthier and More Secure Communities in the MENA region



Above: Dr Assad Ramlawi makes a point during a panel discussion.

Middle: Dr Heather Sheeley (UK)

Below: (front row) Dr Latifa Tricha, Dr Assad Ramlawi, Ambassador Marcus Grinius (Chairman of the BWC); (second row) Dr Heather Sheeley, Professor Khalid Temsamani and Dr Paula Olsiewski (Sloan Foundation, the leading financial sponsor)



The Core Group

The Core Group was formed during BBIC07 as a drafting committee and thereafter reconvened in Abu Dhabi in May 2008, grace of the generous funding of the Environment Agency of Abu Dhabi, to transform the recommendations of BBIC07 into a framework document for developing national and regional biosafety and biosecurity strategies in the countries of the Middle East and North Africa.

During the conference, the Core Group met twice: on 1 April 2009 in order to discuss the objectives of the conference and how best to promote a successful outcome; and on 4 April 2009 to agree the final statement and press release, discuss the formation of the Steering Committee, set the date and location of the first meeting of the Steering Committee and the Regional Training Centres Committee, and discuss intersessional secretariat support.

The Group agreed that it should become the Steering Committee and to meet in Jordan the week beginning 29 June 2009 in a back to back session with the first meeting of the Regional Training Centres Committee. It was agreed that Morocco should chair the Steering Committee until 30 April 2010, and that thereafter Jordan should chair until 30 April 2012, the principle being that the host of the biennial BBIC should chair the Steering Committee for the year before and after the conference. It further agreed to discuss its rules and procedures, membership criteria, the nature of the BBIC process, and the composition and work schedule of the Working Groups at its first session.

The Group also made suggestions for amendments to the Final Statement and Press Release negotiated between the organizers and approved by the Jordanian Royal Hashemite Court and the Government of the Kingdom of Morocco, and agreed the release as amended.

The Group strongly urged that a BBIC web site hosting discussion for a and a resource library should be established as quickly as possible and that the ICLS should continue to provide secretariat support for the BBIC process, both during meetings and intersessionally. The ICLS agreed to do so within its resources, and reminded Group members that, while the ICLS would continue to fund-raise for the BBIC process, as members of the Steering Committee, the Group's members should also be seeking funding sources themselves.

A list of the Core Group, now the Steering Committee, members is contained at Appendix V.



Participants listen to speakers during the Opening Session. Opposite clockwise from top left: Speakers included Dr. Khalid Temsamani (Morocco), Professor Filali Maltouf (Morocco) Dr. Faiq Billal (ISESCO). Engineer Abeer Sirawan (Lebanon) and Mr. Abdulnasser al Shamsi (representing Conference sponsor, the Environment Agency—Abu Dhabi).

Reports on Progress since BBIC07

Reports to the conference indicated that substantial but uneven progress has been made in biosafety and biosecurity in the MENA region since BBIC07 in Abu Dhabi.

The principal regional development was that the Core Group drafted the Framework Document "Developing Regional and National Biosafety and Biosecurity Strategies in the Middle East and North Africa (MENA)".

BBIC09 heard reports of considerable progress at the national level also. The UAE and Morocco both reported on their efforts to establish national biosafety and biosecurity strategies. Pakistan reported on its national biosafety curricula for undergraduate, graduate and masters levels. Morocco also reported on its development of virtual learning platforms and tools for disseminating best practices.

The Conference also heard of progress in specific areas, such as food, water, animal and plant safety and security, implementation of the International Health Regulations, and the establishment of regional and national disease surveillance networks for infectious, foodborne and animal diseases.

Presentations and speeches made to the conference will be posted on the BBIC web site as they become available.



Conference Outcomes

As a result of this conference, the participants agreed to:

- Adopt the Framework Document "Developing National and Regional Biosafety and Biosecurity Strategies in the Middle East and North Africa" as the road map for the region's efforts to develop such strategies. Certain improvements and additions were made to this document, which will now be updated in English, Arabic and French, reprinted, and circulated to participants;
- ♦ Hold a third Biosafety and Biosecurity International Conference in Amman, Jordan in 2011, under the auspices of the Royal Scientific Society of Jordan;
- Create a Steering Committee to meet regularly and to shepherd the process of building national and regional biosafety and biosecurity strategies. The composition of the Steering Committee was agreed, with the Moroccan Ministry of Education, Higher Education, Training and Scientific Research named as Chairman until 30 April 2010. Thereafter, the Chairmanship will pass to the Hashemite Kingdom of Jordan for the following 2 years. It was agreed that the Chairmanship of the Steering Committee should lie with the organizer of the BBIC for the year before and the year after the conference it hosts. It was agreed to hold the first meeting of the Steering Committee in Amman, Jordan in July 2009. The main purpose of this meeting will be to agree the Committee's mandate, its work schedule, and the schedule of meetings and mandates of each of the four working groups (see below);
- Create four working groups of experts in appropriate fields to address technical issues relating to the creation of these strategies. These working groups will address, respectively:

Human Capital Development Institutional, Physical & Legal Infrastructure National and Regional Prevention & Preparedness Policy-Making

- Create a committee to assess the feasibility of establishing Regional Training Centres in Abu Dhabi, Jordan and Morocco with a common curriculum for training policy-makers, institution directors and safety trainers in issues of biosafety and biosecurity. It was further agreed that this committee should be co-chaired by Morocco and Jordan, and hold its first meeting in Amman, Jordan in July 2009;
- Create a regional biosafety association with the mandate of enhancing the knowledge and understanding of biological safety issues throughout the region, spreading best practices amongst its members, encouraging dialogue and discussion of developing biosafety and biosecurity issues, influencing and supporting emerging legislation and standards in the areas of biological safety, biosecurity, biotechnology, transport and associated activities, and acting as a focal point for the consolidation of views on these issues. Morocco offered to lead efforts to establish, and thereafter host, the association.

Conference Outcomes

- ♦ The participants of the Casablanca Conference reiterated their strong support for continuing the Biosafety and Biosecurity International Conference process. In this regard, the Conference heard that COMSTECH will continue its technical and financial support for its future meetings and work. In addition, Professor Anwar Nasim offered to host a meeting in Pakistan to demonstrate that country's national curricula for teaching biosafety and biosecurity at the undergraduate, graduate and master's levels, and to make training materials from these curricula available to the future regional training centres in the Middle East and North Africa.
- ♦ The representative of the World Health Organization announced a joint WHO-EU Project for the Development of Regional and National Capacity for Biological Risk Management for the Middle East and North Africa. This project will conduct regional outreach and create a one-country model demonstration of a national biological risk management strategy, to include development of national regulations and standards, preparation and implementation of a national preparedness plan, the creation of a National Authority to include representatives of all stakeholders, a national training programme, field exercises and tests, and the creation of networks of experts.



Left: Dr. Ali Mohammadi (WHO)

Below: Prof. Anwar Nasim (COMSTECH, Pakistan)



International Council for the Life Sciences



Dr. Rima Khabbaz (CDC) and Tim Trevan (ICLS) talk with Dr Aouani Mohammed Elarbi (NEPAD)

Dr Mohammed Hassar (Morocco), Dr Bassam Hayek (Jordan) and Dr Tim Brooks (UK) on a Panel on infectious disease surveillance.



Biosafety and Biosecurity International Conference 2009: Healthier and More Secure Communities in the MENA region



Press Activities

Prior to the conference, the organizers prepared a background document on biosafety and biosecurity and a press release about the upcoming conference. This package, along with an invitation to a press breakfast, was sent to some 50 media organizations (wire, radio, television, and French and Arabic language daily, weekly and monthly newspapers and news magazines).

The resultant press breakfast was attended by 15 news organizations. Presentations to the press were made by His Excellency Dr. Zayer el Majid, Director of Technology at the Moroccan Ministry of Education, Higher Education, Training and Scientific Research, Mr. Terence Taylor, President of the International Council for the Life Sciences, Dr. Khalid Temsamani, National Coordinator at the Moroccan Ministry of Education, Higher Education, Training and Scientific Research, and Mr. Tim Trevan, Member, Board of Directors, International Council for the Life Sciences.

Immediately after the press breakfast, the presenters gave numerous radio and TV interviews in French and Arabic, including to al Jazeera TV.

The Press returned in force for the Opening Session of the conference, and further one on one interviews were granted to numerous reporters, including one from Reuters who travelled from Rabat to Casablanca specifically to cover the conference. This last resulted in a long wire story sent out internationally which was picked up and provoked blog discussions as far away as the USA.

Upon conclusion of the conference and the Core Group meeting on April 4, 2009, a final press release was issued by the Core Group, which had previously been cleared with the Royal Hashemite Court and the Government of the Kingdom of Morocco. The text of this release is at Appendix VI.



At the Gala Dinner, HRH Sumaya bint el Hassan talks with ICLS President, Terry Taylor, and Eva Busza from the UN Secretary-General's Executive Office.

Key follow up actions which need to be funded are:

Meetings

The Steering Committee, the Working Groups and the next conference in Amman, Jordan (BBIC11) all need to be organized and funded. ICLS intends to continue its established practice of paying for participants' travel, accommodations and working session meals, but no incidentals, attendance/ speaking fees or per diems. In addition, funds are needed for program support, translation services, printed materials, media relations and overhead.

While this does not all need to be funded up front, there is an urgent need for funding for the June/ July meeting of the Steering Committee and the December meetings of the Working Groups and the Steering Committee.

Regional Training Centres

The first step in establishing the training centres is to hold a meeting of officials from the UAE, Jordan and Morocco with experts on training facility design and biosafety and biosecurity training curricula in order to assess what should be taught and what facilities are needed to teach the curricula successfully. This meeting is scheduled for the last week of June, 2009 in Amman, Jordan.

The intention is to follow up this initial meeting with a visit of the regional officials to an existing training facility in the US, and with two further regional meetings to develop the common training curricula for laboratory directors, biotechnology professionals, and policy-makers. Additional funds are required for program support, translation services, printed materials and overhead.

Web site

Participants in the Conference and the Core Group/Steering Committee stressed the need for a means of sharing relevant resources and maintaining contact between sessions of the conference and the working groups. To this end, there was strong support for establishing a web site with private discussion for a and a library of biosafety and biosecurity resources.

This will require the design and construction of a new web site tailored to the needs of BBIC. Thereafter, it will require maintenance of the content and coding to ensure that it functions smoothly enough to facilitate information sharing in the region and intersessional communications. Funding will also be required to translation of content into English, Arabic and French.

MENABSA

Participants in the Conference also stressed the need to establish a regional biosafety association. Morocco offered to host the Middle East and North Africa Biosafety Association (MENABSA).

Conclusion/Overall Assessment of the BBIC Process

In short, the conference was a far greater success than the organizers had hoped for. Going into the conference, the aims, which we considered very ambitious, were to:

- Obtain commitment to another conference and an offer of a venue
- ♦ Adopt the Framework Document as a Plan of Action for the region
- Transform the Core Group into the Steering Committee
- Reiterate the commitment of the UAE and Jordan to set up Regional Training Centres and obtain agreement on the formation of a Feasibility Committee
- Agree a place and date for the first meetings of the Steering and Feasibility Committees

All of these objectives were met and more. In addition, the Chairmanship of the Steering Committee was established until May 2012, offers of continued financial support were received, Morocco offered to host both a further, francophone Regional Training Centre and a Middle East and North Africa Biosafety Association, and the WHO announced a major project with the EU to develop a detailed national biosafety and biosecurity strategy in one country in the region and then to port it to one or two others. Furthermore, Pakistan offered to host a meeting on biosafety and biosecurity curricula and to make training materials from its national curricula available to regional training centres in the Middle East and North Africa.

But, perhaps far more important than these accomplishments was the enthusiasm of the regional participants for the process. As one of the international participants observed:

"Abu Dhabi (BBIC-07) generated interest and started awareness-raising. This conference showed that this has been transformed into enthusiasm. We now need to turn that enthusiasm into commitment and action."



To capitalize on that enthusiasm and ensure that it is indeed turned into commitment and action, we need to maintain the momentum generated by BBIC09. That, in turn, requires us to raise funds quickly to continue the program of meetings and activities so that there is no hiatus which might allow the enthusiasm to dissipate.

Left: Bassam Hayek and Bassam al Hijawi (Jordan) enjoying one of the session breaks.

Right top: HRH Princess Sumaya bint el Hassan arrives for the opening session with HE Latifa Tricha, Secretary-General of the Moroccan Ministry of Higher Education. They are greeted by Professor Khalid Temsamani and ICLS President Terry Taylor.

Right bottom: Senior members of the Moroccan delegation (left to right) HE Zayer el Majid, HE Latifa Tricha, HE Omar Fassi Fehri, Professor Khalid Temsamani.



International Council for the Life Sciences

Appendix I

Framework Document

Developing Regional and National Biosafety and Biosecurity Strategies for the Middle East and North Africa (MENA)

Preface

More than 100 participants from around the world convened in Abu Dhabi, UAE from 12-14 November 2007 for **Biosafety and Biosecurity International Conference 2007 (BBIC 2007):** *A Seminar for the Life Sciences and Policy Communities in the Gulf and MENA Region.*

Conference participants explored biosafety, biosecurity, environmental health and infectious disease issues specific to the Middle East and North Africa region (MENA¹) and interacted with experts from other parts of the world.

The conference's recommendations can be grouped under five main themes:

- Building human resources;
- Building national and regional legal, institutional and physical infrastructure;
- Developing national and regional capacity for prevention and preparedness;
- Improving opportunities for scientists and industry to participate in policy-making;
- Monitoring and reporting on implementation of recommendations.

In order to carry out these recommendations, a core group of participants worked together to agree an action plan to carry out the conference outcomes, including the development of a framework for a regional biosafety and biosecurity strategy, and to begin planning BBIC 2009, hosted in Casablanca, Morocco from April 2-4, 2009.

The Casablanca conference featured the following themes:

- Developing and Implementing Strategies for Biosafety and Biosecurity at the National and Regional level
- Confronting Biological Risks
- Strengthening Infectious Disease Surveillance
- Regional Training Centers for Biosafety, Biosecurity and Infectious Disease
- Institutional, Physical and Legal Infrastructures to Manage Biological Risks

The framework served as the basis for discussion and was the particular focus of breakout sessions on the four proposed working groups. As a result of those discussions, some amendments to the framework were suggested and the conference adopted the amended framework by acclamation.

¹ For the purposes of this process, MENA is defined as the following countries: Mauritania, Morocco, Algeria, Tunisia, Libya, Egypt, Sudan, the Palestinian Authority, Jordan, Lebanon, Syria, Iraq, Iran, Pakistan, Saudi Arabia, Yemen, Oman, the United Arab Emirates, Qatar, Bahrain and Kuwait.

Who we are

The International Council for the Life Sciences is a non-profit organization dedicated to enhancing global biological security and safety and reducing the risks of the misuse of the life sciences through the promotion of international standards and the sharing of best practices. The ICLS identifies the most urgent biological risks and promotes global standards for ICLS members to adopt and promote. www.iclscharter.org

The Environment Agency of Abu Dhabi (EAD) is a governmental agency that was established in 1996 with the overall function of protecting and conserving the environment as well as promoting sustainable development in the Emirate of Abu Dhabi, the capital of the United Arab Emirates. www.ead.ae/en/ EAD partnered with the ICLS for both BBIC 2007 and BBIC 09. The Biosafety and Biosecurity International Conference 2007 website can be found at www.biosafetyandbiosecurity-2007.org

The Jordanian Royal Scientific Society (RSS) is the largest applied research institution, consultation and technical service provider in Jordan. RSS was established in 1970 as an independent, not-for-profit non-governmental Organization (NGO), containing 7 technical centers that house 38 laboratories that are nationally and internationally accredited, and employing more than 600 members and staff; they will host BBIC 11 in May 2011. www.rss.gov.jo

The Moroccan Ministry of Education, Higher Education, Training and Scientific Research is in charge of implementing the national policy for Education and scientific research. Inside this frame and aware of the extreme importance of Biosafety and Biosecurity to overcome dual use of scientific research findings, the Ministry has decided to put in place regulations and codes of conducts for scientists including life sciences. The Ministry is an ICLS partner and hosted BBIC09 in Casablanca, Morocco from April 2-4, 2009. www.enssup.gov.ma

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Introduction

Extraordinary advances in biotechnology have brought enormous benefits to medicine, public health, the food industry, agriculture, and industrial processes. However, technological advances also bring with them risks to public safety and security through the possibility of their misuse. Furthermore, in addition to man-made biological risks, humans continue to face natural biological risks such as the threat of pandemics of new and re-emerging infectious diseases.

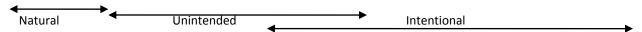
These risks are best represented as a spectrum, ranging from emerging and re-emerging infectious disease through accident and misadventure to deliberate misuse.

SPECTRUM OF BIOLOGICAL RISKS

Non-residual Risk is addressed pre-event by prevention, mitigation, resilience & preparedness (& avoidance)



Residual Risk is addressed post-event by Emergency Response (detection, containment, treatment, recovery)



In order for the full humanitarian and economic benefits of biotechnology advances to be realized, it is essential that these risks are properly identified, understood, and effectively managed.

For this purpose, the Biosafety and Biosecurity International Conference 2007 was held in Abu Dhabi, UAE November 12-14, 2007. The conference specifically addressed how the risk spectrum applied to the Middle East and North Africa (MENA) region, and assessed what actions would be required by the countries of the region to be fully prepared to manage and mitigate risks across the spectrum.

The conference made many recommendations for how the issues of biosafety and bio-security for the MENA region could be advanced. This paper seeks to provide a framework for how the recommendations of the conference can be implemented.

General Conference Overview

The conference concluded that biosafety and biosecurity are becoming increasingly important strategic issues for all countries in the world. However, they are becoming especially so for countries of the MENA region for the following reasons:

- 1. With land, fresh water and ocean resources coming under increasing stress as the human population continues to grow, biotechnology will become ever more important to humankind;
- 2. With greater human population density, pandemics of new or re-emerging diseases become ever greater threats;
- 3. With greater human dependency on biotechnology, the danger posed at each point on the biological risk spectrum increases;
- 4. Thus humankind needs a holistic approach to bio-safety and bio-security to manage and mitigate risks across the entire breadth of the biological risk spectrum;
- 5. This is especially so in the MENA region where water and food security are so vulnerable; Furthermore, the constant massive traffic of people, animals, food and goods between countries of the region and between MENA and other parts of the globe further raises the bio-threats to the area².

The conference noted that many of the biological threats facing the world require concerted global or regional action. National action, while absolutely necessary, cannot always be sufficient to contain or manage biological risks. The need for effective concerted supranational efforts means that cooperating countries need to have a common understanding of the global and regional risks which in turn requires a common risk assessment methodology and common prevention activities. While biological risks do vary from region to region and country to country, without a common methodology for assessing risks and formulating appropriate policies and practices to manage and mitigate these risks, any international effort will be neither concerted nor effective.

The conference noted that a holistic approach to the entire spectrum of biological threats requires that:

- a. governments nationally and regionally are structured and prepared for preventing, identifying and dealing with biological crises;
- b. countries of the region have the physical, institutional and legal infrastructure in place to benefit from biotechnology while protecting against biological risks;
- c. countries of the region have the trained and equipped human resources required to manage and mitigate biological risks; and
- d. scientists and policymakers regularly interact.

A core group of individuals who attended BBIC 2007 met in Abu Dhabi from May 11-13, 2008 to discuss a framework for national biosafety and biosecurity strategies and a regional strategy for the MENA.

²MENA has constant mass flow of people between countries of the region (e.g. labour from Egypt and Sudan travelling to other countries of the region for work, pilgrims travelling to Holy Places) and between the region and other parts of the globe (e.g. labour from South Asia and Southeast Asia seeking work in MENA countries, illegal immigration from Sub-Saharan Africa, citizens of the MENA area travelling the globe for business and pleasure, the airports of the region as major hubs for travel between Europe and Africa/Asia). Likewise, food and goods are shipped from all around the world into the MENA region. These flows of people, animal and foods each bring with them the possibility of disease being spread.

Framework for National Strategies and a Regional Strategy

A strategy should underpin two strategic objectives:

- Biological Risk Control
- Bio Preparedness (including Detection and Response)

Based on a comprehensive risk analysis (including risk assessment, risk management and risk communication), the strategy should also include the following strategic elements:

- Human and Laboratory Capacity building
- Legislation, regulation (international and national)
- Scientific responsibility, ethics-based codes
- Coordination
- Awareness
- Partnership and collaboration
- Border Control
- Surveillance
- Emergency response
- Diagnostics
- Monitoring
- Reporting and reviews.

The proposed biosafety and biosecurity strategy requires the establishment of a steering committee at both the regional and national levels to take responsibility for strategic leadership for the development, implementation and oversight of an effective biosafety and biosecurity system in countries and the region as a whole.

Principal Elements of Strategy

Human Capacity

Human skills in all areas – scientific, technical, policy, risk assessment – are necessary for countering broad spectrum biological risks in the human population, plant, animal and environmental sectors. This ability should be built by:

A survey of existing human resource capacity and related educational and training programs; Identifying and prioritize vulnerabilities (lack of training, curricula, etc.);

Making a plan for closing the gaps; and

Oversight, monitoring and accreditation.

Laboratory and Infrastructure Capability

A need for cross-region ability to meet identified needs in countering broad spectrum biological risks in the human population, plant, animal and environmental sectors. This ability should be built by:

A survey of existing laboratory and other related infrastructure and biosafety standards for handling various classes of micro-organisms across all sectors;

Identifying and prioritize vulnerabilities (lack of training, equipment, protocols, facilities etc.);

Making a plan for closing the gaps; and

Oversight, monitoring and accreditation.

Legislation, Regulation and Standards (International, Regional and National)

It is necessary to ensure that regional and national strategies appropriately take account of national and international obligations and best practices. In order to achieve this:

- Existing legislation, regulations, guidelines and standards should be reviewed and gaps identified;
- Identification of key organizations and empowered individuals to form a national authority to act as policy makers and coordinators for all biosafety and biosecurity issues;
- Enhance the participation of academia and industry in policy making;
- Increase the adherence to biosafety and biosecurity standards for handling various classes of micro-organisms and establish regional standards as necessary;
- Establish legislation and protocols for cross-border cooperation; and Establish legislation and protocols for emergency situations.

Scientific Responsibility and Ethics-Based Codes

There needs to be a system to ensure individual and collective responsibilities are understood and effectively exercised to promote the safe and secure use of the life sciences. This could be done through ethically based codes, charters or other governance mechanisms. This may include the creation of National Committees for Science Ethics, Bioethics or Biosecurity.

Coordination (Regional and National)

To successfully develop and implement the national and MENA regional biosecurity and biosafety strategy it is vital to engage in interdepartmental, cross-sector and cross border collaboration (as needed). It is suggested that each country's identified national competent authority be the focal point for the coordination of the regional strategy. A small secretariat may be needed to provide assistance.

Awareness

There is a need to raise awareness of the importance of dealing with biological risks and the necessary steps to counter them. Steps that need to be taken include:

- Developing an outreach and communications strategy for raising awareness for:
- o Policy officials
- o Life science and related non-life science professionals from government, academia and the private sector
- o Front line workers
- o Students at all levels in the education system
- o General Public; and
- o Media
- o Legislative and regulatory promotion
- o Web-based database for sharing best practices and other information

The creation of relevant associations, such as a MENA biosafety and biosecurity association and associations at the national level. Linkages should be established with biosafety and biosecurity associations operating in other regions of the world to help further a global network.

Partnership and Collaboration

To successfully develop and implement a biosecurity and biosafety strategy it is vital to engage in interdepartmental, cross-sector, cross border and regional partnerships, both private and public, in order to maximize available resources and to share capabilities, expertise and information.

Border Control

In order to reduce the risks to public health, safety, security and the environment it is essential that measures, facilities and trained personnel are in place at border crossings, ports and airfields that take account of the regulations that relate to international trade and traffic. This includes:

Training and equipment;

Licenses, permits and permissions; and

Protocols.

Surveillance

It is essential to put in place measures to enable early detection, identification of biological risks (including confirmation of area freedom/zero status) and effective responses in all sectors in accordance with regional and international agreements and legal obligations.

Emergency Response

There must be effective and tested measures and plans in place to deal with major emergencies. Including:

- Training of first responders and key workers;
- Equipment, including pre-positioned stockpiles, and facilities;
- Surge capacity;
- Biological alert/alarm system and emergency network for coordination;

Diagnostics

There must adequate measures developed for timely, front line diagnostics and referral system (an inter-connected network that is comprehensive enough for the needs of the region). This includes:

- Common protocols;
- Biosafety standards for handling various classes of micro-organisms;
- Test equipment;
- Trained staff; and

Safe and secure transport of samples.

Monitoring and Review

It is necessary to set up an effective national system for monitoring the development and implementation of the national biosafety and biosecurity strategy, including compliance with legislation and regulations. This system should also analyze the effectiveness of all aspects of biosafety and biosecurity management and enable its continuing suitability in a changing environment.

Reporting

A system should be established to ensure national governments' international and regional reporting responsibilities are properly conducted and their domestic reporting requirements are complied with. Reporting will take various forms.

Recommendations from BBIC 2007 in Abu Dhabi, UAE and BBIC 2009 in Casablanca, Morocco

BBIC 2007's recommendations to strengthen biological safety and security fell under five main themes:

- **→** Building human resources;
- **♦** Building national and regional legal, institutional and physical infrastructure;
- **→** Developing national and regional capacity for prevention and preparedness;
- → Improving opportunities for scientists and industry to participate in policy-making; and Monitoring and reporting on implementation of recommendations.

In addition, it was recommended to establish a Standing Committee to assess the feasibility of one or more Regional Training Centers (RTC).

It is thus proposed by the Core Group to establish four thematic ad hoc Working Groups to address the first four themes, a Steering Committee on implementation, and a temporary Standing Committee to address the feasibility of Regional Training Centre(s).

BBIC 2009, with a few additions and amendments, endorsed the recommendations of BBIC 2007 and the Core Group as contained in the Framework document circulated to participants in BBIC

1 The Steering Committee on Implementation

2009. The conference also suggested that the ICLS should provide secretariat support pending the development of a standing regional secretariat.

Purpose: The purpose of this committee would be to:

Provide a mechanism for reporting gaps analyses to governments:

Contribute to the development of biosafety and biosecurity strategies at national and regional levels;

Assist in the planning and organization of Biennial Conferences:

Report on implementation to the Biennial Conference;

Select materials to be posted on a dedicated website to support implementation of the Action Plan. Such materials might include conference, working group and Committee presentations and papers, action plans, resource and contact lists;

Maintain smooth, regular communications among conference participants between annual conferences; and

Establish a funding mechanism.

Membership: To be effective, membership of the Steering Committee should include each of the Chairs of the four thematic committees and of the RTC Standing Committee along with members of the Secretariat and representatives of appropriate international and regional organizations. In addition, regional representatives from government (scientists and policy-makers), industry and academia, and international industry associations would all be able to benefit the work of this committee.

2 Ad Hoc Working Group I: Human Capital Development

Purpose: The purpose of this Working Group would be to review existing materials from other regions and nations and to develop tailored regional and national materials as follows:

Curricula for teaching bio-safety, bio-security and bio-ethics to biotechnology professionals, frontline workers, policy officials and students at all levels, and to improve awareness of these issues in general;

Curriculum for training the trainers;

Best Practices for industry and other relevant laboratories;

A Code of Bioethics for all scientists and professionals in the biotechnology sector; and

Methodologies to assess existing human bio-safety/security capabilities and to identify training needs.

In addition, this Working Group would encourage the dissemination of ideas and scientific knowledge between scientists and policy-makers nationally, regionally and internationally by:

Encouraging scientists', policy-makers' and other stakeholders' participation in national, regional and international conferences on biosafety and biosecurity and infectious disease;

Facilitating and arranging exchanges of scientists, policy-makers and other stakeholders and between scientific institutions at the international, regional and national levels:

Developing national and regional non-governmental networks of interested parties, e.g. through industry, scientific and professional associations, including establishing a Middle East and North Africa Biosafety Association; and

Creating a website and biosafety and biosecurity digital library for the MENA Region for networking, information exchange and dissemination of information amongst the MENA biosafety and biosecurity community.

Membership: This Working Group should include regional representatives from the health, agricultural, environmental and fisheries sectors, academia and industry, along with a few select international experts with relevant experience.

Ad Hoc Working Group II: Institutional, Physical and Legal Infrastructure

Purpose: The purpose of this Working Group would be to review existing infrastructure in the region, to identify needs for further development, and to develop action plans to address these needs. Specific areas to address could include:

Development of common systems and methods;

Identification, where already established, of the National Authority within each government to act as the principal national policy-making and focal point on all issues pertaining to biosecurity and biosafety, and, where these do not exist, encouragements of national governments to form them;

Creation of a database of existing legislation and resources, establishment of incountry points of contact, and identification of national points of contacts within the region;

Assessing national and regional infrastructure needs at the institutional, legal and physical levels and development of action plans to address these needs;

Creation of a national committee of experts, designation of centres of expertise in each area of biosafety and biosecurity, and creation of national contact lists for these experts and centres;

Identification of existing diagnostic and analytical capabilities, and of needs in this area:

Evaluation of existing capabilities vis-à-vis IT tools for biosafety and biosecurity; Evaluation of capabilities to turn actionable data into timely and appropriate action at national and regional levels, and of needs in this area;

Identification and review of existing standards, accreditation and monitoring systems;

Evaluation of existing regulations, practices and capabilities, and of needs for transport of pathogens and other related biological material; and

Evaluation of national and regional implementation of the relevant provisions of existing international and regional obligations, such as the International Health Regulations, the Biological and Toxin Weapons Convention, UN Security Council Resolution 1540, and IMO and ICAO regulations.

Membership: This Working Group should include regional representatives from the law and order (Ministry of Interior/Defense), health, agricultural, environmental and fisheries sectors, academia and industry, along with a few select international experts with relevant experience.

4 Ad Hoc Working Group III: National and Regional Prevention and Preparedness

Purpose: The purpose of this Working Group would be to:

Develop and share tools and methodologies for national and regional bio-risk assessment;

Identify the biosafety and biosecurity and disease outbreak scenarios of most concern nationally and regionally and to develop preparedness plans for dealing with each scenario;

Test the developed preparedness plans using appropriate methods, such as field and table top exercises, and amend them as necessary;

Share the tested preparedness plans with other countries of the region;

Identify existing public health surveillance capabilities and future needs, including disease surveillance for humans, animal and plant disease. Surveillance should be simple, flexible, accurate, representative, complete, affordable and timely. For national surveillance:

Create relevant check lists;

Undertake situation analyses and needs assessments;

Identify weak points;

Develop a plan of action to improve surveillance through:

Involvement of all health providers and other stakeholders;

Improvement of laboratory diagnostics and the establishment of national referral laboratories;

Activating public health laws in each country concerning reporting and notification;

Developing guidelines and protocols accredited by WHO;

Training relevant staff; and

Raising awareness within the medical and public communities;

Identify existing diagnostic capacity and outbreak reporting procedures and future needs; and

Identify border control issues of relevance to national and regional biosafety and biosecurity strategies and future needs to develop these, including in relation to:

Cooperation;

Exchanges of experience and medical samples for confirmation leading eventually to an established quality assurance system so that all laboratory results will be accepted by others;

Develop a regional plan:

Implementing the International Health Regulations (IHR); and

Screening at the borders of humans, animals and food, with due regard to human rights and dignity.

Membership: This Working Group should include regional representatives from the law and order (Ministry of Interior/Defense), health, agricultural, environmental and fisheries sectors, academia and industry, along with a few select international experts with relevant experience.

5 Ad Hoc Working Group IV: Policy-Making

Purpose: The purpose of this Working Group would be to:

Identify international/regional gaps on biosafety and biosecurity issues, and propose mechanisms to create needed policies, standards and regulations at the international/regional levels;

Identify and propose ways to encourage stakeholders' awareness of all key issues in the biosafety and biosecurity area, through greater interaction between policy-makers on the one hand and scientists, academics and industry on the other; Identify and propose ways to broaden scientists', academia's and industry's participation in and input into policy-making on issues relating to biosafety and biosecurity and infectious disease surveillance; and

Identify needs and propose ideas for national and regional communications plans in the event of major biological crises.

Membership: This Working Group should include regional representatives from the law and order (Ministry of Interior/Defence), health, agricultural, environmental and fisheries sectors, academia and industry, along with a few select international experts with relevant experience. **Purpose:** The purpose of this committee would be to:

6 Standing Committee to Assess the Feasibility of Regional Training Centre(s)

Analyze the region's needs for training in the biosafety and biosecurity area; Assess the feasibility of establishing one or more Regional Training Centres; Assess the requisite resources to establish Regional Training Centre(s) to meet the MENA area needs;

Identify suppliers of and funding sources for the requisite resources; Make recommendations to the next Annual Conference; and As far as possible, use existing training curricula and facilities.

Membership: This committee should include representatives from each of the countries/ institutions interested in hosting a Regional Training Centre, health, agricultural, environmental and fisheries sectors, academia and industry, along with a few select international experts with relevant experience.

Timing

The revised framework will be distributed to the scientific and policy communities in the MENA region in accordance with plans approved by the Steering Committee.

The revised framework document will serve as a roadmap for the creation of national and regional biosafety and biosecurity strategies in the MENA region.

Resources

The following organizations, non-profits, government entities have agreed to work together to help develop and implement biosafety and biosecurity strategies at the national and regional level.

Environment Agency of Abu Dhabi (EAD)

International Council for the Life Sciences (ICLS)

Ministry of Education, Higher Education, Training and Scientific Research for the Kingdom of Morocco

Royal Scientific Society of Jordan (RSS)

Steering Committee

Chair: Dr Abdulhafid Debbagh

Dr. Sabah Al Momin

Dr. Rana Amini

Dr. Ahmed K. Bashir

Dr. Ruth Berkelman

Dr. Suleiman al Busaidy

Dr. Eltayeb Ali

Dr. Bassam Hayek

Dr. Bassam al Hijawi

Dr. Rima Khabbaz

Dr. Maan al Hakim

Dr. Ali Akbar Mohammadi

Dr. Anwar Nasim

Dr. Assad Ramlawi

Dr. Mohammad Sharif

Ms. Heather Sheeley

Mr. Terence Taylor

Dr. Khalid Temsamani

Mr. Tim Trevan

Dr. Gazi Yehia



The International Council for the Life Sciences

Appendix II

The Conference programme

Moroccan Ministry of Education, Higher Education, Training and Scientific Research International Council for the Life Sciences Environment Agency of Abu Dhabi Royal Scientific Society of Jordan **Biosafety and Biosecurity International Conference 2009** Healthier and more secure communities in the MENA region APRIL 2 _ 08:30 Registration Opens 09:00 - 10:00 Opening framing remarks and introduction of distinguished guests by conference co-chairs M. Ahmed Akhchichine, Minister of Higher Education and Scientific Research, Morocco Terence Taylor, President of the International Council for Life Science (ICLS), Washington, DC - U.S.A. Remarks by distinguished guests H.R.H. Princess Sumaya BINT EL HASSAN, President, Royal Scientific Society of Jordan - Kingdom of Jordan Mr. Abdulnasser Al Shamsi, Biodiversity Management, Terrestrial Sector Director, Environmental Agency, Abu Dhabi - U.A.E. 10:00 - 10:20 Break SESSION 1 Defining the Problem and Creating Solutions: Challenges in the MENA and the Need for a Regional Biosafety and Biosecurity Strategy Moderators : Mr. Terence Taylor & Dr. Khalid Temsamani 10:20 - 10:45 Assessing Risks methods, tools, and determining priorities Tim Trevan, The International Council for Life Science, Washington, DC - U.S.A. Food Ayman El-Shibiny, Food Sciences Department, Suez Canal University - Egypt

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11:10 - 11:35
         Dr. Bassam Hayek, Director, Environmental Research Center,
         Royal Scientific Society - Kingdom of Jordan
11:35 - 12:00
                             Human Health
         Mr. Nedhif Mabrouk, Director of Hygiene and Environmental
         Protection in the Ministry of Public Health - Tunisia
12:00 - 12:25
                             Animal Health
         Eng. Abeer Sirawan, Head of the Poultry
         Husbandry-ARD-MOA, Ministry of Agriculture - Lebanon
12:25 - 12:50
         Professor Filali Maltouf, Former National Coordinator of
          MISOBIOP (Pole of competences Microbiologie du Sol et
          Biotechnologie des Plantes) and current head of the laboratory of
          microbiology and molecular biology at the Faculty des Sciences de
         Rabat, University Mohammed V Agdall - Kingdom of Morocco
12:50 - 14:00
        Lunch
14:00-14:20
         Introducing the Key Elements of a Biosafety and Biosecurity
         strategy for the MENA region
         Terence Taylor, President, I.C.L.S. - U.S.A.
         Dr. Ali Eltayeb, Head of Institute of Radiobiology - Sudan
          Dr. Ahmed Bashir, Acting Director, Environment Awareness
        Sector (EAS), Environment Agency of Abu Dhabi - U.A.E.
14-20-14-45
         The United Nations Secretary-General's Biotechnology Initiative
          Dr. Eva Busza, Principal Officer, SPU/EOSG, United Nations -
         U.S.A.
14:45 - 15:10
         Case Study: United Arab Emirates
         Dr. Maan Hussein, Environment Specialist Biosecurity,
        Environment Agency of Albu Dhabi - U.A.E.
15:10 - 15:35
          Case Study : Maracco
         Dr. Khalid Temsamani, National Coordinator at the Ministry of
          Higher Education, Training and Scientific Research -
          Kingdom of Morocco
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SESSION 2

Building Human Capacity through Training, Education, Awareness Roising

Moderators: Mr. Toronco Taylor & Dr. Ahmed Bashir

15:35 - 16:00

Biosafety and Biosecurity Curricula Development in Pakistan Dr. Anwar Nasim, OIC's - Standing Committee on Scientific and Technological Cooperation for the promotion and cooperation of science and technology activities COMSTECH - Pakistan

16:00 - 16:25

Biosofety Training Materials

Dr. Heather Sheeley, Head of Safety, Centre for Emergency Preparedness and Response, Health Protection Agency -United Kingdom

Dr. Leila Oda, President, National Biosafety Association (AnBio)-Brazil

16:25 - 16:40

Break

16:40 - 17:05

Biotechnology Research and Biosafety

Dr. Sabah Almomin, Biotechnology Department, Kuwait Institute
for Scientific Research - Kuwait

17:05 - 17:30

Development of virtual learning platforms and sharing learning tools, Dr. Zayer & Majid, Director of Technology at the Ministry of Education, Higher Education, Training and Scientific Research -Kingdom of Morocco

SESSION 3

Building Technical Capacity through Strengthening Infectious Disease Surveillance in the Animal Plant and Human Health Communities

Moderators: Dr. Mohammed Hassar & Dr. Bassam Hayek

17:30 - 17:55

Foodborne Disease Surveillance, PulseNet Middle East Dr. Suleiman Al-Busaidy, Ministry of Health - Sultanat of Oman

17:55 - 18:20

Rapid detection and faster diagnostics
Tim Brooks, UK Health Protection Agency - United Kingdom

20:30

Gala Dinner-Guest Speaker
"Health, Ethics and Security"
Professor Nezha Guessous, Medical Biologist, Parasitologist,
Honorary Professor at Hassan II University of Casablanca
(Marocco), Researcher and Consultant in Human Rights and
Bioethics - Kingdom of Marocco

APRIL 3 . Building Technical Capacity through Strongthoning Infectious Disease Surveillance in the Animal, Plant and Human Health Communities Moderators: Dr. Mohammed Hassar & Dr. Bassam Hayek 09:00 - 09:25 Animal Health Surveillance Dr. G. Yehia, World Organisation for Animal Health (OIE) -Lebanon 09:25 - 09:50 CDC's Programs for Strengthening Infectious Disease Surveillance Dr. Rima Khabbaz, Director, National Center for Preparedness, Detection, and Control of Infectious Diseases, Centers for Disease Control - U.S.A. 09:50 - 10:15 Cross Border Communications, Middle East Consortium on Infectious Disease Surveillance (MECIDS) Dr. Asaad Ramlawi, Director General, Primary Health Care, Ministry of Health, MECIDS - Palestinian National Authority SESSION 4 Strengthening Institutional, Physical and Legal Infrastructures to Manage **Biological Risks** Moderators: Mr. Terence Taylor & Mr. Abdulnasser Al Shamsi 10:15 - 10:40 The Role of the Biological and Toxin Weapons Convention (BTWC) H.E. Marius Grinius, Ambassador, Permanent Representative, Permanent Mission of Canada to the United Nations in Geneva 10:40 - 10:55 Brook Implementing the WHO International Health Regulations Dr. Nouredine Chaouki, Director of Epidemiology and infectious disease, Ministry of Health - Kingdom of Morocco 11:20 - 11:45 Japan's Efforts for Enhanced Management of Biological Risks Dr. Katsuhisa Furukawa, Fellow, Research Institute of Science and Technology for Society, Japan Science and Technology Agency -Japan

11:45 - 12:10

National Efforts in Yemen Professor Abdul Karim Nasher, University of Sana'a - Yemen

12:10 - 12:35

A National Case Study: World Health Organization (WHO) Project to Develop a National BioRisk Reduction Management Program

Dr. Alt Mohammadi, Epidemic and Pandemic Alert and Response, WHO - Swizterland

12:35 - 14:00

Lunch

SESSION 5

Biosafety and Biosecurity National and Regional Strategies

Moderators: Mr. Torence Taylor & Dr. Khalid Temsamani

14:00-14:10

Preparing for the Breakout Sessions

14:10 - 16:30

Breakout Sessions

Breakout Group 1- Developing and strengthening the framework for national and regional strategy; International and National legislation and regulation - Dr. Ahmed Bashir, Dr. Eva Busza

Breakout Group 2-Information sharing in the region - Awareness Raising; Partnership and Collaboration; and Coordination (website/digital library; formation of a regional biosafety and biosecurity association; creating a small secretariat or other mechanisms for sharing information. expanding disease surveillance networks) - Dr. Khalid R. Temsamani, Mr. Barry Holmes

Breakout Group 3- Surveillance, Diagnostics, Emergency Response and Border Control - Assad Ramlawi, Tim Brooks

Breakout Group 4- Laboratory and human capacity building and regional training centers Dr. Sabah Al Momin- Dr. Ruth Berkelman

16:30 - 17:30

Reports from break out groups

Moderators : Dr. Khalid Temsamani & Dr. Heather Sheeley

17:30 - 18:00

Conference summary

Moderators : Mr. Terence Taylor - Dr. Bassam Hayek Dr. Ahmed Bashir - Mr. El Majid Zayer

Appendix III

Membership of each of the Breakout Groups

Breakout Group 1

Developing and Strengthening the Framework for National and Regional Strategy
International and National Legislation and Regulation
Moderators: Dr Ahmed Bashir, Dr Eva Busza

Name	Organization	Country
Dr. Ali Mohammadi	WHO	Switzerland
Professor Abdul Karim Nasher	Sana'a University	Yemen
Martin Sanders	CDC	USA
Ahmed el Hattab	Ministry of Higher Education	Morocco
Abdelkarim Filali Maltouf	University Mohammed V Agdal	Morocco
Dr Maan Ahmed Hussein	Environment Agency	Abu Dhabi
Dr Rowaida Saleh Ahmed	Suez Canal University	Egypt
Victoria Sutton	Texas Tech University	USA
Taoussi Zoubidh	Minsitry of Agriculture	Morocco
Dries Aitcheikh	Minsitry of Agriculture	Morocco
Mohammed M Sharif	Nat Comm on Bioethics & Biosec	Libya
Ghazi Yehia	OIE	France
Piers Millet	ISU-BTWC	Switzerland
Ayman el Shibiny	Suez Canal University	Egypt
Nabigha Hajji	MFAC	Morocco
Saleh al Saadi	Ministry of the Environment	Oman
Elarbi Hakkani	Н & Н СОР	Morocco
Aiche Bammoun	ISESCO	Morocco

Membership of each of the Breakout Groups

Breakout Group 2

Information Sharing in the Region

Awareness Raising, Partnership and Collaboration, and Coordination Moderators: Dr Khalid Temsamani, Dr Barry Holmes

Name	Organization	Country	
Aouani Mohammed Elarbi	NEPAD/NABNet African Union	Egypt	
Barry Holmes	НРА	UK	
Dr Saud Al Shehri	Medical Service Department	Saudi Arabia	
Dr Ali al Barrack	Medical Service Department	Saudi Arabia	
Dr Ahmed Alsobae	Medical Service Department - Biology	Saudi Arabia	
Professor Eisa Eltaueb	Ministry of Science and Technology	Sudan	
Engineer Abeer Sirawan	Ministry of Agriculture	Lebanon	
Mediene Sonia	University of Oran	Algeria	
Khalid Fares	Mor. Soc of Biochem & Molecular Bio	Morocco	
Rowaida Saleh Ahmed	Suez Canal University	Egypt	
Ibrahim M Imam	Consultant Civil Engineer	Egypt	
Nasr Albusaidi	Ministry of the Environment	Oman	
Khalid Temsamani	MEHETSR	Morocco	
Azeddoug Houssine	Univeristy Hassan II - Casablanca	Morocco	
Anass Kettani	Univeristy Hassan II - Casablanca	Morocco	
Sari Hussein	MECIDS	Palestine	

Membership of each of the Breakout Groups

Breakout Group 3

Surveillance, Diagnostics, Emergency Response and Border Control

Moderators: Dr Assad Ramlawi, Dr Tim Brooks

		2
Name	Organization	Country
Dr Asad Ramlawi	MECIDS	Palestine
Dr Tim Brooks	HPA	UK
Aktham Haddadin	Ministry of Health	Jordan
Dr Abdelaziz Hmyene	Hassan II University	Morocco
Dr Baduz Hasan Baig	Ministry of Health	Bahrain
Dr Idris Al Abaidani	Ministry of Health	Oman
Dr Erling Myhre	University Hospital Lund	Sweden
Ambassador Marius Grinius	Chairman, BTWC	Canada
Hind el Gadari		Morocco
Dr Sami Sheikh Ali	MECIDS	Jordan
Dr Bassam Hijawi	Ministy of Health	Jordan
Jalal Nourlil	Institute Pasteur	Morocco
Rhizlane Selka	National Institute of Hygiene	Morocco
Nisreen Shuaibi	MECIDS	Palestine
Rima Khabbaz	CDC	USA
Mustapha Ennaji	University of Hassan II Casablanca	Morocco
Hamid Abied		Morocco
Dr Sanaa Lemriss	Royal Gendarmerie Laboratory	Morocco
Sari Husseini	MECIDS	Palestine
Dr Mubarak Mustafa	Central Public Health Lab, MoH	Sudan
Emad Altaf	Ministry of Interior	Saudi Arabia
Saud Alozaibi		Saudi Arabia
Waleed Alharbi		Saudi Arabia
Abdelaziz Barkia	Ministry of Health	Morocco
Rachida Berrais	Ministry of Agriculture	Morocco
Mohammed Hamrani	Ministry of Agriculture	Morocco

Membership of each of the Breakout Groups

Breakout Group 4

Laboratory and Human Capacity Building

and Regional Training Centres

Moderators: Dr Sabah al Momin, Dr Ruth Berkelman

Name	Organization	Country
Dr Bassam Hayek	RSS	Jordan
Arif al Hammadi	University of Sana'a	Yemen
Leila Oda	ANBio	Brazil
Ibrahim Imam	Consultant Civil Engineer	Egypt
Peter Clevestig	SIPRI	Sweden
Samir Jaoua	Centre for Biotechnology	Tunisia
Anwar Nasim	COMSTECH	Pakistan
Ali Eltayeb	Sudan Acadamy of Science	Sudan
Mohammed Benbouida	Dept of Technology, MEHETSR	Morocco
Dr Suleim al Busaidy	Ministry of Health	Oman

Appendix IV

List of the Core Group/Steering Committee members

	BBIC Steering Committee		
Chair: Dr. Zayer el Majid			
Name			
Dr. Sabah Almomin	Kuwait Institute for Scientific Research	Kuwait	
Dr. Rana Amini	Reference Laboratory of Iran	Iran	
Dr. Ahmed Bashir	Environment Agency Abu Dhabi	UAE	
Dr. Ruth Berkelman	Emory University	USA	
Dr. Suleiman al Busaidy	Public Health Laboratory	Oman	
Dr. Bassam Hayek	RSS	Jordan	
Dr. Bassam al Hijawi	Ministy of Health	Jordan	
Dr. Rima Khabbaz	CDC	USA	
Dr. Ali Akbar Mohammadi	WHO	Switzerland	
Dr. Anwar Nasim	COMSTECH	Pakistan	
Dr. Assad Ramlawi	MECIDS	Palestine	
Dr. Mohammad Sharif		Lybia	
Ms. Heather Sheeley	НРА	UK	
Dr. Ali el Tayeb	Sudan Acadamy of Science	Sudan	
Mr. Terence Taylor	ICLS	USA	
Dr. Khalid Temsamami	MEHETSR	Morocco	
Mr. Tim Trevan	ICLS	USA	
Dr. Gazi Yehia	OIE	France	

Appendix V

Text of Final Statement and Press Release issued by the Steering Committee at the end of the conference

Biosafety and Biosecurity International Conference 2009 (BBIC09)

4 April 2009 Hyatt Regency Hotel, Casablanca

A significant step towards promoting healthier and more secure communities in MENA was taken by regional leaders and international experts in Casablanca this week. Recognizing the need to address the threat posed by pandemics, major biological incidents or accidents, some 100 participants from 37 countries agreed upon a plan of action for improving the region's preparedness and ability to respond.

The Biosafety and Biosecurity International Conference (BBIC09) "Healthier and More Secure Communities in the Middle East and North African Region" was co-hosted by the Moroccan Ministry of Education, Higher Education, Training and Scientific Research and the International Council for the Life Sciences, and was sponsored by the Environment Agency of Abu Dhabi and the Royal Scientific Society of Jordan. It built upon the work of the very successful BBIC07 Conference held in Abu Dhabi.

The conference was opened by His Excellency Omar Fassi Fehri, Permanent Secretary of the Hassan II Academy of Science and Technology and former Minister of Research, on behalf of HE Ahmed Akhchichine, Minister of Education, Higher Education, Training and Scientific Research, and by Mr. Terence Taylor, President of the International Council for the Life Sciences. HE Latifa Tricha, Secretary General of the Ministry of Higher Education, also attended the conference. The Moroccan delegation offered to host a North Africa Region Training Centre for Biosafety and Biosecurity in Rabat.

The conference was honoured with the presence of HRH Princess Sumaya bint el Hassan, in her role as President of the Royal Scientific Society of Jordan. Her Royal Highness delivered an important speech on the need to protect and promote human dignity and security. In this speech, she offered Amman as the site of the next Biosafety and Biosecurity International Conference in 2011 and as the site of a Middle East Regional Training Centre.

The experts discussed the development of biosafety and biosecurity strategies in the MENA region, the creation of biosafety and biosecurity Regional Training Centres, and the establishment of a regional biosafety association. In particular, the participants discussed practical measures for bringing about national strategies for improving health security, such as raising awareness of the issues among members of the public and policy-makers, education and training for biotechnology professionals, disease surveillance and rapid diagnostics to ensure early detection of disease outbreaks, strengthening human and infrastructure capacities to enable more effective and immediate responses to biological incidents, and coordination and networking to ensure that the views of scientists and biotechnology professionals are properly incorporated into policy-making and to ensure the rapid dissemination of best practices throughout industry and the region.

As a result of this conference, it has been agreed to:

- 1. Adopt the Framework Document "Developing National and Regional Biosafety and Biosecurity Strategies in the Middle East and North Africa" as the road map for the region's efforts to develop such strategies. Certain improvements and additions were made to this document;
- 2. Hold a third Biosafety and Biosecurity International Conference (BBIC11) in Amman, Jordan in 2011, under the auspices of the Royal Scientific Society of Jordan;
- 3. Create a Steering Committee to meet regularly and to shepherd the process of building national and regional biosafety and biosecurity strategies. The composition of the Steering Committee was agreed, with the Moroccan Ministry of Education, Higher Education, Training and Scientific Research named as Chairman until 30 April 2010. Thereafter, the Chairmanship will pass to the Hashemite Kingdom of Jordan for the following 2 years. It was agreed that the Chairmanship of the Steering Committee should lie with the organizer of the BBIC for the year before and the year after the conference it hosts. It was agreed to hold the first meeting of the Steering Committee in Amman, Jordan in July 2009. The main purpose of this meeting will be to agree the Committee's mandate, its work schedule, and the schedule of meetings and mandates of each of the four working groups (see below);
- 4. Create four working groups of experts in appropriate fields to address technical issues relating to the creation of these strategies. These working groups will address, respectively:
- a. Human Capital Development;
- b. Institutional, Physical and Legal Infrastructure;
- c. National and Regional Prevention and Preparedness; and
- d. Policy-Making;
- e. Create a committee to assess the feasibility of establishing Regional Training Centres in Abu Dhabi, Jordan and Morocco with a common curriculum for training policymakers, institution directors and safety trainers in issues of biosafety and biosecurity. It was further agreed that this committee should hold its first meeting in Amman, Jordan in July 2009;

Create a regional biosafety association with the mandate of enhancing the knowledge and understanding of biological safety issues throughout the region, spreading best practices amongst its members, encouraging dialogue and discussion of developing biosafety and biosecurity issues, influencing and supporting emerging legislation and standards in the areas of biological safety, biosecurity, biotechnology, transport and associated activities, and acting as a focal point for the consolidation of views on these issues.

The participants of the Casablanca Conference reiterated their strong support for continuing the Biosafety and Biosecurity International Conference process. In this regard, the Conference heard that COMSTECH will continue its technical and financial support for its future meetings and work. In addition, Professor Anwar Nasim offered to host a meeting in Pakistan to demonstrate that country's national curricula for teaching biosafety and biosecurity at the undergraduate, graduate and master's levels.

The representative of the World Health Organization announced a joint WHO-EU Project for the Development of Regional and National Capacity for Biological Risk Management for the Middle East and North Africa. This project will conduct regional outreach and create a one-country model demonstration of a national biological risk management strategy, to include development of national regulations and standards, preparation and implementation of a national preparedness plan, the creation of a National Authority to include representatives of all stakeholders, a national training programme, field exercises and tests, and the creation of networks of experts.

Finally, Morocco offered to lead efforts to establish, and thereafter host, the regional biosafety association.

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BBIC

BBIC 2009 was a significant step towards promoting healthier and more secure communities in the Middle East and North Africa (MENA) – it signalled the resolve of regional participants to create a MENA-wide biosafety and biosecurity strategy



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