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PROTOCOL ON BIOSAFETY

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Item 6 of the provisional agenda*

STATUS OF CAPACITY-BUILDING ACTIVITIES

Report on the progress towards the implementation of the Action Plan for Building Capacities for the Effective Implementation of the Protocol and the Coordination Mechanism for the Action Plan

Note by the Executive Secretary

I. INTRODUCTION

1. In decision BS-III/3, the Conference of the Parties serving as the meeting of the Parties to the Protocol (COP-MOP) adopted an updated Action Plan for Building Capacities for the Effective Implementation of the Protocol. Section 6 of the updated Action Plan requires the Executive Secretary to prepare reports on the steps taken by countries, multilateral/bilateral and other international actors towards the implementation of the Action Plan and submit them to COP-MOP so they can determine whether the actions listed in the Action Plan are being carried out successfully and effectively.

2. In paragraph 12 of decision BS-II/3 the Parties to the Protocol also requested the Executive Secretary to further develop the Coordination Mechanism, taking into account the Bali Strategic Plan for Technology Support and Capacity-building (UNEP/GC.23/6/Add.1), adopted by the Governing Council of the United Nations Environment Programme (UNEP) in February 2005 with a view to creating synergies and avoiding unnecessary duplication of work.

3. This note provides a status report on the implementation of the Action Plan since the last COP-MOP meeting, which was held in March 2006, the challenges encountered and the steps taken by the Executive Secretary to further develop the Coordination Mechanism. Section II of the note summarizes the initiatives undertaken by Parties, other Governments and relevant organizations towards the implementation of the Action Plan. Section III reviews the capacity-building needs and gaps identified by Parties in their first national reports and the measures being taken to address the needs of Parties, including measures to enhance biosafety education and training. Section IV describes the steps

* UNEP/CBD/BS/COP-MOP/4/1.

taken by the Executive Secretary to further develop the Coordination Mechanism and to enhance synergies with relevant initiatives; the final section presents the conclusion and recommendations, including elements of a possible decision on capacity-building.

4. The Parties to the Protocol are invited to consider the information provided in this note and provide further guidance to facilitate the implementation of the Action Plan and its Coordination Mechanism and to address the capacity-building needs and priorities of developing country Parties and Parties with economies in transition.

II. STATUS REPORT ON THE IMPLEMENTATION OF THE CAPACITY-BUILDING ACTION PLAN: OVERVIEW OF THE INITIATIVES TAKEN

5. This section presents a summary status report on capacity-building activities undertaken by the Secretariat and by Parties, other Governments and relevant organizations. The report focuses on activities undertaken since the third meeting of the Parties, i.e. between 2006 and 2008, and principally contains information made available to the Secretariat and the Biosafety Clearing-House as at the end of February 2008. It also draws from the information contained in the first national reports.

A. Overview of the capacity-building activities undertaken by the Secretariat

6. The Secretariat continued to contribute to strengthening the capacities of Parties to implement the Protocol through various activities. In partnership with the UNEP-GEF, the Secretariat facilitated a number of training workshops on the Biosafety Clearing-House, including: the second BCH Training of Trainers Course for IT and CPB Regional Advisors in Bangkok ((May 2006); the 3rd BCH Training of Trainers Workshop in Geneva (5-9 February 2007); the UNEP-GEF Latin American Regional Training Workshop in Panama City (3-7 September 2007); the EU and CEE Regional Training Workshop in Ljubljana (17-21 September 2007); and the second Caribbean subregional BCH workshop in St. Michael, Barbados (19 - 23 November, 2007). The Secretariat also revamped the central portal of the Biosafety Clearing-House in order to improve user-friendliness and accessibility. It also continued to expand and improve the capacity-building databases and the Biosafety Information Resource Centre.

7. Through its partnership with the Green Customs Initiative since 2006, the Secretariat undertook a number of activities aimed at strengthening the capacities of customs officers to detect and control the illegal trade of living modified organisms and to enforce the requirements for documentation and identification of living modified organisms under Article 18 of the Protocol. During 2007, the Secretariat developed a module on the Cartagena Protocol as part of the Green Customs Guide. It also facilitated a training session on the Protocol at the Green Customs Train the Trainer Workshop for the Asia and the Pacific Region, which was held in Shanghai in May 2007. Furthermore, it contributed resource materials to training workshops for the Indian Ocean Islands in Mauritius; West Africa in Dakar, Senegal; and Latin America in Caracas, Venezuela.

8. In March 2007, the Secretariat signed a Memorandum of Cooperation (MoC) with the United Nations Industrial Development Organization (UNIDO), through which the two organizations will collaborate in strengthening the capacities of developing countries to implement the Biosafety Protocol and promote the sharing of biosafety information through the Biosafety Clearing-House. In this regard, the Secretariat and UNIDO jointly organized the second meeting of academic institutions that provide education or training programmes in biosafety, which was held in Kuala Lumpur, from 16 to 18 April 2007. It was hosted by the Government of Malaysia through the University of Malaya and was co-financed by UNIDO, the Government of Switzerland, the Government of Denmark (through the

BiosafeTrain project), and the Biosafety Interdisciplinary Research Network (RIBios), based at the University of Geneva. The meeting adopted a number of recommendations on possible measures to promote long-term education and training in biosafety and made proposals regarding core elements of post-graduate biosafety courses, curriculum development processes and delivery mechanisms. It also developed a biosafety training needs matrix, which was sent to all Parties for completion and submission to the Secretariat.

9. Furthermore, the Secretariat, pursuant to paragraph 2 of decision BS-II/9 and paragraph 10 of decision BS-III/11, organized regional workshops on capacity-building and exchange of experiences on risk assessment and risk management of living modified organisms for Africa (August 2007), Central and Eastern Europe (November 2007), and for Latin America and the Caribbean (December 2007). ^{1/} The workshops were intended to enable participants, *inter alia*, to learn about risk assessment and risk management in the context of the Protocol; to review the general concepts, principles and methodologies; and to exchange practical experiences and lessons learned in conducting/reviewing risk assessments and implementing risk-management measures.

10. The Secretariat also continued to liaise closely with the Global Environment Facility (GEF) Secretariat regarding implementation of the guidance by the Conference of the Parties with respect to financial support for biosafety capacity-building. It also provided input in the development of the GEF Strategy for Financing Biosafety as well as comments on various biosafety project proposals submitted by Parties to the GEF.

11. The Secretariat's capacity-building activities have been constrained mainly by a lack of adequate and predictable financial resources. Most activities rely on voluntary contributions from donor countries and organizations and the contributions have been made on an ad hoc basis and within unpredictable timeframes. This situation has made it difficult for the Secretariat to plan and implement activities strategically. To address this problem, the Secretariat is developing a four-year result-oriented strategy (2008-2012) to guide the Secretariat's efforts in assisting Parties to build their capacities for the effective implementation of the Protocol. The strategy identifies a number of key strategic outcomes and a set of prioritized activities and their associated indicators. The aim is to enable the Secretariat to provide support services to the Parties in a proactive, systematic and efficient manner. It will also enable the Secretariat to determine its resource requirements and identify possible sources of support in a strategic manner. It is hoped the strategy will allow prospective donors to know about the Secretariat's planned activities and its resource needs in the medium term and facilitate the establishment of multi-year donor partnerships for specific activities.

B. Capacity-building activities undertaken by Parties and other Governments

12. Since the previous meeting, Parties and other Governments have continued to develop and implement biosafety capacity-building activities. According to information provided in the first national reports, some Parties initiated and implemented new capacity-building activities and many others continued implementing activities initiated earlier. A large number of Parties that submitted the national reports by deadline of 30 November 2007 indicated that they implemented activities mostly financed and supported by bilateral and multilateral organizations. Many mentioned that they implemented activities under the GEF-funded projects for the development and implementation of national biosafety frameworks and the UNEP-GEF Project for Building Capacity for Effective Participation in the BCH.

13. A number of developed country Parties and other Governments reported on their activities and support to developing biosafety capacities for the purposes of effective implementation of the Protocol in

^{1/} The subregional workshop for Asia was scheduled to take place February 2008 in Kuala Lumpur.

other developing country Parties or Parties with an economy in transition. The support was provided through different mechanisms including funding of specific activities and projects; technical assistance, training and scholarships; and through the provision of, or improvement to, access to information and technical tools. Examples of the latest activities mentioned in the national reports include the following:

(a) In 2007, Australia hosted the sixth meeting of the APEC High Level Policy Dialogue on Agricultural Biotechnology; as well as contributed to the APEC workshop on liability and redress, held in Viet Nam. In 2006, Australia participated in the APEC Conference on Biosafety Policy Options;

(b) Austria supported twinning biosafety activities in Bulgaria (November 2005 to October 2007, together with Germany); twinning on coexistence in Estonia (18 months until September 2007, together with Germany); and participated in the EU TAEIX Mission to Romania (June 2006). Austria also provided support to training/expert workshops on public participation and inspection in Belgrade, Serbia (December 2005, March 2006); the UNEP/GEF workshop on secondary biosafety legislation in Viet Nam (October 2006); and to the review of the draft national biosafety frameworks for Romania (November 2005) and Malta (October 2006);

(c) Belgium continued to support the "Biosafety Clearing-House: Data Search and Input" initiative. Through this initiative, it supported three training workshops for (i) officials from Congo Brazzaville, Mauritania and Togo (May 2005); (ii) officials from Burundi, Mali and Senegal (December 2005); and (iii) officials from Comoros, Guinea and Côte d'Ivoire (May 2006);

(d) The European Community, through its Joint Research Council (JRC), developed and disseminated training materials on biosafety, i.e., a user manual on "The Analysis of Food Samples for the Presence of Genetically Modified Organisms (GMOs)" and an Interactive DVD on "Detecting GMOs". The EC-JRC also conducted training courses on "Analysis of food and feed samples for the presence of GMOs" in Sofia, Bulgaria (June 2007); Tunis, Tunisia (September 2006); and Nicosia, Cyprus (June 2005). The courses and the training materials provide theoretical and practical information on the methodologies and protocols currently used in GMO detection and quantification. The EC-JRC also developed a database on analytical methods for the detection, identification and quantification of genetically modified organisms, and published it on the internet. The database allows direct and user-friendly access to information regarding methods of GMO analysis. Furthermore, the EC provided funds for capacity building-related research in biosafety. The research projects supported include the Integrated Project "Co-Extra" (GM and non-GM supply chains: their CO-EXistence and TRAcability), which looks for integrated methodologies to trace GM materials along the food chain and to facilitate the coexistence of genetically modified, conventional and organic crops. The "Co-Extra" which includes participants from Argentina, Brazil and Russia will develop practical systems for sampling, tracing, labelling and documenting GM content of foods and feeds. The EC-JRC is also planning to hold the first "Global Conference on GMO Analysis" in Como, Italy from 24 to 27 June 2008;

(e) Finland continued to support the Nordic-Baltic biosafety capacity-building project implemented by the Baltic Environmental Forum. The project aims to transfer experience and expertise from the relevant Nordic authorities (Denmark, Finland, Norway and Sweden) in the area of biosafety to their counterparts in the Baltic States (Estonia, Latvia and Lithuania);

(f) Germany continued to support the EC Twinning Project BG04/IB/EN/02 entitled "Transposition and Implementation of the Environments Acquis on GMOs at National Level" in Bulgaria (January 2005-May 2007). The project aimed at improving Bulgaria's administrative capacity in biosafety by developing a national biosafety system in line with EU standards. Germany also supported the EC Twinning Project EE05-IB-AG-01 in Estonia on the "Development of GMO chain management for co-existence of genetically modified, conventional and organic crops" (July 2006 - July 2007).

Furthermore, through its capacity-building initiative for the implementation of the Cartagena Protocol on Biosafety, Germany continued to support the Capacity-Building Programme for an Africa-wide Biosafety System and the Biosafety Capacity Building project in China on Data Management, Promoting Expertise and Awareness Raising. It also supported a project to promote civil society participation in Algeria's Biosafety Process as well as a project to increase the biosafety-related knowledge of educational and civil society organizations and journalists in Colombia to support their biosafety awareness-raising work. It supported studies focused on the implementation of a biosafety regime in Peru. Furthermore, Germany also commissioned InWEnt Capacity Building International to implement long-term training on development-oriented and environmentally-sound plant biotechnology for developing countries, integrating elements relevant to the implementation of the Cartagena Protocol;

(g) Italy financed a workshop titled "Introduction to Risk Assessment for the Deliberate Release of GMOs: Assisting Decision-Making in a Biosafety Framework" for competent authorities and relevant institutions in developing countries. The workshop was held in May 2007 in Ca' Tron di Roncade, Italy, and was organized and hosted by the International Center for Genetic Engineering and Biotechnology (ICGEB);

(h) The Netherlands continued to support the Southern Africa Biosafety and Environment Programme (2005-2007), which is implemented by the Regional Agricultural and Environmental Initiatives Network in Africa (RAEIN-Africa). A number of training courses were organized under this programme. ^{2/} These included (i) a five-day training workshop on "Public Education, Awareness and Participation in Biosafety, Biodiversity and the Environment" (22-26 May 2006 in Gaborone, Botswana); (ii) "GMO Testing Course", (5-8 September 2006 in Harare, Zimbabwe); (iii) "Biotechnology, Biodiversity, Biosafety and law workshop" (29 October to 3 November 2006 in Mbabane, Swaziland); and (iv) SADC National Biosafety Committees workshop (23-26 October 2006 in Pretoria, South Africa). The RAEIN-Africa also provided support for research projects to generate data to facilitate risk assessment, risk management and decision-making. These included: (i) a study on the distribution, molecular variation and assessment of gene flow between wild/weedy varieties of Sorghum Bicolor (L) Moench and commercial varieties in Zimbabwe and the SADC region; and (ii) a study on the distribution of genetically modified organisms in selected southern African countries. The Netherlands also provided support for the regional workshops on capacity-building and exchange of experiences on risk assessment and risk management of living modified organisms for Africa (August 2007) and central and eastern Europe (November 2007);

(i) Norway continued to support a bilateral project between Zambia and Norway. Some of the activities undertaken under the project include establishment of a laboratory for qualitative and quantitative analysis of GMO, which is expected to serve as a regional reference laboratory for the SADC region. A number of Zambian personnel were trained in Norway and a number of national biosafety seminars and technical workshops were organized. Norway also provided capacity-building assistance to South Africa for the continued implementation of the national biotechnology and biosafety policy and the Cartagena Protocol, including the strengthening of management capacities and knowledge for risk assessment and monitoring. Furthermore, Norway continued to support the biosafety courses on "Holistic Foundations for Assessment and Regulation of Genetic Engineering and Genetically Modified Organisms", which were organized by the Norwegian Institute of Gene Ecology (GenØk) in Tromsø, Norway (30 July 2006 - 11 August 2006, and 30 July - 10 August 2007); in Bogor, Indonesia (24-29 January 2006); and in Lima, Peru (19-24 March 2007). GenØk will also start offering an online learning course in biosafety starting January 2008 in cooperation with the University of Tromsø and the Global Virtual University (GVU);

^{2/} See: <http://www.raein-africa.org/programms.htm>

(j) Slovenia organized the Second Meeting of the European Advisory Committees on Biosafety in the field of the deliberate release of GMOs in Ljubljana from 14 to 16 May 2007. The meeting enabled biosafety advisory committees within Europe to build, improve and strengthen contacts with one another and exchange views and possible solutions to European-wide topics related to the deliberate release of GMOs into the environment. Participants also initiated discussions on risk assessment and risk management of genetically modified trees;

(k) Sweden provided support for phase III of the East African Regional Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development, BIO-EARN (2006-2009). Biosafety capacity-building is one of the core components. The programme continued to support three East African PhD graduates who are investigating the potential risk of gene flow in an East African context, focusing on pollen transfer and seed dispersal mechanisms. It also supported a number of national biosafety seminars and training workshops. Biosafety regulatory officials in the region also prepared a BIO-EARN resource book on risk assessment. Furthermore, through the Swedish International Biodiversity Programme (SwedBio) of the Swedish Biodiversity Centre, Sweden supported the participation and engagement by civil society in key international biosafety meetings, events and processes. Sweden also co-sponsored the Nordic-Baltic capacity-building project discussed in (e) above. In 2007, it also provided support to a biosafety capacity-building project in Viet Nam, which aims to set up new rules concerning genetically modified organisms and genetically modified products.

C. *Capacity-building activities undertaken by relevant international organizations*

14. A number of United Nations agencies and relevant international organizations also initiated and continued to implement biosafety capacity-building activities. At least 135 previous and ongoing projects are registered in the Biosafety Clearing-House (<http://bch.cbd.int/database/activities>). The activities range from training of individuals, establishment and strengthening of institutions to carry out tasks more effectively, to development and implementation policy and legal frameworks. The capacity-building activities undertaken by different agencies, drawn principally on information submitted to the Secretariat and the Biosafety Clearing-House, are summarized below. It should be noted that the activities and the organizations referred to in this section are by no means exhaustive. They constitute only part of the wide range of biosafety capacity-building programmes, projects and initiatives.

UNEP-GEF biosafety projects

15. UNEP-GEF continued to support the global project on “Development of National Biosafety Frameworks (NBF)”, which was expected to end in December 2007. A total of 123 countries participated in project and by the end of December 2007, 98 countries had completed preparing their draft national biosafety frameworks. In December 2006, UNEP-GEF produced a comparative analysis of experiences and lessons from the project, which provides useful lessons for other biosafety capacity-building initiatives.^{3/} UNEP-GEF also continued to support the global project entitled: “Building Capacity for Effective Participation in the Biosafety Clearing House (BCH)” costing US\$ 13.5 million from GEF plus US\$ 1.4 million in co-financing. As of November 2007, 121 countries were participating in the project. Interactive training modules were developed and a number of regional and national BCH training workshops were organized. UNEP-GEF also mobilized and trained a pool of 47 Regional Advisors from Africa, Asia, Caribbean Islands, Central and Eastern Europe, Latin America and Pacific Islands who assisted countries to better understand the provisions of the Cartagena Protocol and in the design and development of the national systems for participation in the BCH. The project is expected to end in December 2008. Furthermore, UNEP-GEF concluded the eight Demonstration Projects on Capacity-Building for the Implementation of the Cartagena Protocol in Bulgaria, Cameroon, China,

^{3/} See a copy at: http://www.unep.org/biosafety/Documents/UNEPGEFBiosafety_comp_analysisDec2006.pdf

Cuba, Kenya, Namibia, Poland and Uganda. The experiences and lessons learned from these projects are being prepared. In 2006, 11 new implementation projects were approved under GEF-3 and these will run until 2010. These include: Cambodia, Czech Republic, Egypt, Estonia, Lithuania, Mauritius, Moldova, Slovakia, Tanzania, Tunisia, and Viet Nam.

16. The UNDP-GEF demonstration project in Mexico was completed in 2006. The project in Malaysia started in 2006 and will end in 2009.

World Bank-GEF projects

17. The World Bank-GEF continued to support the demonstration projects on capacity-building for the implementation of the Cartagena Protocol in India and Colombia, which were successfully completed in June and September 2007, respectively. The GEF also recently approved the following World Bank-GEF regional projects:

(a) Latin American Multi-country Capacity-building for Compliance with the Cartagena Protocol on Biosafety, which aims to strengthen technical capacity of the five participating countries (Brazil, Colombia, Costa Rica, Mexico and Peru) in knowledge generation for biosafety risk assessment and risk management using selected target crops and in biosafety decision-making capacity;

(b) The West African Regional Biosafety Project, covering eight cotton-producing countries (Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo). The project aims to produce operational and regionally-harmonized methodologies (such as guidelines, technical documents, forms, and checklists) for risk assessment and risk management of LMOs; support implementation of the national biosafety regulatory frameworks; strengthen national capacity for decision-making with regards to biotechnology issues; and set up biosafety and IPR legal frameworks. The project should be launched in the first half of 2008.

18. The World Bank also recently submitted a US\$ 1.9 million proposal (with US\$ 900,000 from GEF) for a regional project entitled: "Communication and Public Awareness Capacity-Building for Compliance with the Cartagena Protocol on Biosafety". The project aims to strengthen biosafety communication and public awareness capacity in Latin America in general and in Brazil, Colombia, Costa Rica and Peru in particular. The objective will be achieved through piloting communication and public awareness strategies and sharing the results widely across the region.

United Nations Industrial Development Organization (UNIDO)

19. The United Nations Industrial Development Organization (UNIDO) continued to support a network of regional centres providing internationally accredited training in biosafety to policy makers, researchers and officials in government agencies and industry. The network includes the University of Concepcion in Chile, the University of Malaya in Malaysia, Ghent University in Belgium, the Marche Polytechnic University in Ancona, Italy, and the Pontifical Catholic University of Minas Gerais, Belo Horizonte, Brazil. African trainees are supported through Biosciences eastern and central Africa (BecA) in Nairobi, and receive their academic accreditation through the Universities of Ghent and Ancona. ^{4/} The universities are offering a 12-month post-graduate diploma in biosafety through a combination of distance learning and short on-campus residential teaching.

^{4/} See details at: http://binas.unido.org/wiki/index.php?title=Main_Page

Food and Agricultural Organization of the United Nations (FAO)

20. FAO continued to implement a number of biosafety and biotechnology activities. It responded to various requests for assistance in building national biosafety systems through the implementation of Technical Cooperation Projects (TCPs). These included assistance in biotechnology policy development to Nicaragua, Paraguay and Sri Lanka as well as support for strengthening capacity in legal aspects of biosafety and GMOs in Grenada. In 2006, FAO completed the regional project on Capacity Building in Biosafety of GM Crops in Asia (GCP/RAS/185/JPN), which contributed to strengthening national capacities in biosafety in ten regional countries. In 2006, the FAO Biotechnology Forum also moderated an e-mail conference on public participation in decision-making regarding GMOs. The searchable database, FAO-BioDeC, and the FAO Glossary of Biotechnology for Food and Agriculture, continued to provide useful information.

International Centre for Genetic Engineering and Biotechnology (ICGEB)

21. The International Centre for Genetic Engineering and Biotechnology (ICGEB) continued to organize biosafety workshops and training courses. Between 2006 and 2007, it organized seven five-day training workshops. These included: (i) the regional workshop “Principles of Biosafety Research for the Release of Genetically Engineered Crops” in Khartoum, Sudan (February 2007); (ii) workshop on “Introduction to Risk Assessment for the Deliberate Release of GMOs: Assisting Decision-making in a Biosafety Framework” in Ca' Tron (Treviso), Italy (May 2007); (iii) workshop on "Biosafety of GM Crops and the Evolution of Regulatory Frameworks: Issues and Challenges" in Belo Horizonte, Minas Gerais, Brazil (September 2007); (iv) practical course on “Evaluation of Risk Assessment Dossiers for the Deliberate Release of GMOs” in Ca' Tron (Treviso), Italy (8-12 October 2007); (v) workshop on “Introduction to Biosafety and Risk Assessment for the Environmental Release of GMOs: Theoretical Approach and Scientific Background” in Ca' Tron (Treviso), Italy (March 2006); (vi) regional practical training programme on “Detection of GMOs and Genetically Modified Food” in Peradeniya, Sri Lanka (March 2006); and (vii) practical course on “Practical Course in Evaluation of Field Release of Genetically Modified Plants” in Florence, Italy (May 2006). The ICGEB Biosafety Outstation for training and research on biosafety also continued to conduct research on appropriate procedures for risk assessment (horizontal gene flow, persistency, allergies, induction of resistance, susceptibility, etc). It also offered opportunities for long-term training (initially at the post-doctoral level) for fellows from ICGEB Member States. ICGEB also continued to disseminate biosafety information through its biosafety web pages, the biosafety bibliographic database, and the "Risk Assessment Searching Mechanism”.

Africa-wide Biosafety Capacity-Building Project

22. The Africa-wide Biosafety Capacity-Building Project, a collaborative initiative between the African Union Commission (AUC) and the German Federal Ministry for Economic Cooperation and Development, started in January 2006. A number of activities were implemented under the project in 2006 and 2007. These include: establishment of a Biosafety Unit within the AUC Department of Human Resources, Science and Technology and a Technical Advisors Committee on Biosafety. The project also developed an African Strategy on Biosafety and supported the revision of the African Model Law on Safety in Biotechnology. Furthermore the project organized preparatory meetings for African delegates for the third meeting of the COP-MOP in March 2006 in Curitiba, Brazil and third and fourth meetings of the Ad Hoc Open-ended Working Group of Legal and Technical Experts on Liability and Redress in the context of the Protocol (February 2007 and October 2007 in Montreal). It also co-organized with the CBD Secretariat the African Regional Workshop on Capacity-Building and Exchange of Experiences on Risk Assessment and Risk Management of Living Modified Organisms in August 2007. Further details about the project are available from its website: http://www.africa-union.org/root/au/AUC/Departments/HRST/biosafety/AU_Biosafety.htm.

Program for Biosafety Systems (PBS)

23. The Program for Biosafety Systems (PBS), which is funded by the US Agency for International Development, continued to support partner countries to develop their policy and legal framework, administrative procedures and outreach mechanisms integral to their national biosafety systems. It supported a number of technical training workshops on environmental and food risk assessment in East and Southern Africa, the Philippines, and Indonesia. It also provided additional grants for scientific research through its Biotechnology-Biodiversity Interface (BBI) grant program to generate scientific data essential for assessing environmental risks and benefits of transgenic organisms, particularly in centers of diversity. Furthermore, it supported regional policy research projects in collaboration with ECAPAPA, ACTS and FANRPAN to inform the policy process in sub-Saharan Africa, for example on the likely trade implications of planting GM crops for selected countries.

GMO Environmental Risk Assessment Methodologies (GMO ERA) project

24. The international project on GMO Environmental Risk Assessment Methodologies (GMO ERA) project, which ended in 2007, developed teaching tools for advanced courses on the methodologies for environmental risk assessment of GM crops, in conjunction with regional partners in Latin America (Brazil), Southeast Asia (Viet Nam), and East Africa. The teaching materials were developed from four years of project experience in developing methodologies. The project carried out a number of capacity-building activities to create Expert Training Teams (ETT) in Brazil and Viet Nam to develop and validate training tools employing the environmental risk-assessment methodologies developed during the first phase of the project. The activities in Brazil included five workshops for the Brazil Expert Teaching Team (ETT) on different topics including: gene flow, transgene expression and locus structure, and resistance risk assessment and management. The activities in Viet Nam included two workshops for the Viet Nam ETT workshop (May 2006 and May 2007) to improve the teams' knowledge and skills in conducting resistance risk assessments and developing practical resistance risk-management plans, with a focus on Bt crops and in risk assessment and risk management of non-target and biodiversity impacts of GM Crops. The project also supported the participation of four Vietnamese scientists in a 3-week training course at the Australian Cotton Research Institute (November 2006).

BiosafeTrain Project

25. The BiosafeTrain, a Danida-funded project, which aims to build regional capacity in biosafety and ecological risk assessment in East Africa, conducted a number of training activities in Africa. ^{5/} These included: (i) the training course on data analysis for risk assessments for 20 participants (11 July 2007); (ii) the biosafety training course on "Basic concepts and practices in risk assessment of GMOs" in Nairobi (25-30 September 2006); and (iii) the GM biosafety course in West Africa at the AGRHYMET Headquarters, in Niamey, Niger (3-7 November 2006). The project also supported the training of six MSc and four PhD students on the agricultural and environmental impacts of GM plants in East Africa. Furthermore, the project contributed to the improvement of existing infrastructural capacity by upgrading biosafety and biotechnology facilities including the Anthropod Biosafety and Quarantine Laboratory (ABSQL) at Makerere University, the Biosafety Glasshouse at the Kenya Agriculture Research Institute (KARI), and a biosafety training laboratory at the University of Dar es Salaam. Phase 2 of the project began on 1 December 2007 and will end on 30 November 2010. The focus will be on further training of key stakeholders in biosafety risk assessment, specialist training for students and completion of infrastructural developments initiated in Phase 1.

^{5/} See details about the project at: <http://www.biosafetrain.dk/Home/About.htm>

The Biosafety Interdisciplinary Network (RIBios)

26. The Biosafety Interdisciplinary Network (RIBios), based at the Graduate Institute of Development Studies (IUED), University of Geneva, implemented a number of training courses for decision makers, practitioners, researchers and NGOs on biosafety-related issues in Switzerland and Mali. These included: (i) the “Biosafety Interdisciplinary Training Course for West Africa” (CIBAF) course at the University of Bamako, Mali (October 2007 to January 2008), which benefited 20 professionals from Francophone Africa; and (ii) the Certificate course for Ongoing Training in Biosafety at the University of Geneva.

27. The above review shows that progress is being made towards the building of capacities for the effective implementation of the Protocol, especially with respect to the establishment of policy and regulatory systems. However, the review also reveals that most activities were initiated before the third meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol. Only a few projects were initiated in the last two years and most of these projects were funded by the Global Environment Facility. There were few new activities funded through bilateral support. The review also shows that most of the biosafety capacity-building activities in developing countries and countries with economies in transition depended considerably on external support. While developing countries and countries with economies in transition clearly require significant external funding and technical assistance, it is important for them to also endeavour to mobilize resources locally through national budgets to support their biosafety capacity-building activities in order to foster sustainability.

28. The Parties to the Protocol may wish to take note of the status report on the biosafety capacity-building activities presented in this note and commend the various donor countries and organizations that contributed to those activities. The Parties to the Protocol may also wish to further invite developed country Parties and other bilateral and multilateral donors to provide additional support to enable developing country Parties and Parties with economies in transition to develop and implement new capacity-building initiatives to supplement the funding support being provided by the Global Environment Facility. Furthermore, Parties to the Protocol may wish to encourage developing country Parties and Parties with economies in transition to increase the allocations for biosafety activities in the national budgets.

29. One challenge encountered in preparing the status report above was the limited submission of progress reports by Parties, other Governments and relevant organizations on their biosafety-building initiatives and lack of a systematic format for submission to the Secretariat and the Biosafety Clearing-House. Further, the current questions in the capacity-building section of the format for national reports are adequate for facilitating comprehensive submission of information regarding progress on the implementation of the capacity-building action plan. In this regard, COP-MOP may wish to request the Executive Secretary to develop a more comprehensive common reporting format for use by Parties, other Governments and relevant organizations for submitting information on their capacity-building activities and integrate it into the format for national reports. Parties to the Protocol may also wish to invite Parties, other Governments and relevant organizations to make submissions to the Secretariat and the Biosafety Clearing-House at least six months before the regular meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol in order to facilitate more comprehensive reporting on the implementation of the capacity-building Action Plan and the sharing of experiences in capacity-building activities.

III. CAPACITY-BUILDING NEEDS AND PRIORITIES OF PARTIES

30. In their first national reports, a number of developing country Parties and Parties with economies in transition shared their experiences with the implementation of Article 22 and identified their needs and some of the major obstacles encountered. A review of the information provided clearly indicates that there are still major capacity-building needs and gaps in many countries and the current levels of funding and technical assistance are not sufficient to meet those needs. An assessment of internationally-funded capacity-building activities for biosafety and biotechnology, which was carried out by the United Nations University Institute of Advanced Studies (UNU-IAS) between 2004 and 2007, also concluded that there are significant deficits in the capacity of many developing countries to implement the Protocol.

31. The needs and priorities identified were quite varied. They range from a lack of financial, human and technical resources to limited institutional capacities in biosafety. One of the needs consistently mentioned by Parties is the lack of funding for biosafety. As noted above, limited funding has been available for new biosafety capacity-building activities over the last two years. The Global Environment Facility has funded most of the present projects. Clearly there is a need for more funding support and technical assistance from bilateral and multilateral donors. The present meeting of the COP-MOP may wish to explore ways of increasing support for capacity-building. The UNU-IAS study has recommended that donors should raise the issue of biotechnology and biosafety training in the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD). It also proposed that an international donor's conference on capacity-building in biosafety and biotechnology should be organized to explore ways of raising more support for capacity-building. The Parties to the Protocol may wish to request the Executive Secretary to explore the possibility of such a donor conference.

32. In terms of infrastructure, several Parties identified the need for laboratories and equipment for LMO detection and identification; suitable greenhouse and field containment and confinement facilities for conducting environmental risk assessment; appropriate facilities such as laboratories, including those appropriate for conducting relevant analyses and detection studies; and border control and inspection facilities (LMO detection facilities at the ports of entry) and mechanisms for detecting unintentional or illegal LMO movement. Some Parties also identified the need for database infrastructure and protocols and adequate access to the internet to retrieve information in support of risk assessments.

33. A few Parties indicated that their biosafety legal frameworks (including the laws, regulations, by-laws and ordinances) have not been fully developed and operationalized. Some also expressed the need for support to build institutional mechanisms including customs and border control procedures, decision-making systems and administrative procedures, and inter-agency communication and coordination systems.

34. Another capacity-building need consistently mentioned by Parties and other Governments is the lack of properly qualified biosafety personnel. Many Parties also indicated that they need trained personnel in various fields including: risk assessment and risk management, risk communication, biosafety inspection, monitoring of the impact of genetically modified organisms, LMO detection and quantitative analysis and evaluation of genetic modification. Some also mentioned that they need training in legal drafting and regulatory processes including enforcement and inspection, public awareness and education and in the analysis of the socio-economic impacts of genetically modified organisms and their products on small farmers and indigenous communities and on trade.

35. A number of assessment reports have also noted that a lack of trained personnel is a major impediment to the effective implementation of the Protocol. For example the "Evaluation of GEF Support for Biosafety (2006)" observed that many countries do not have experts in key areas such as risk

assessment. It noted that biosafety is a highly technical and specialized area and that development of the necessary competencies requires systematic and longer-term training of staff; in addition, specialized types of collegiate and postgraduate training are needed in many countries. In this regard, it recommended that the GEF should consider providing longer-term training for building and sustaining specialist capacity in key areas such as risk assessment and risk management. The UNU-IAS assessment report also noted that more focus on long-term training and support is critical. It also observed that the different types of training approach should be considered carefully, such as “training of trainers” and learning-by-doing. Concerted collaborative measures are required to address this challenge. In accordance with paragraph 2 of Article 22 of the Protocol, Parties need to cooperate in promoting scientific and technical training in biosafety. The Second International Meeting of Academic Institutions and Organizations involved in Biosafety Education and Training, which was held 16-18 April 2007 in Kuala Lumpur, made a number of recommendations which could contribute to the enhancement of education and training in the field of biosafety. The recommendations are contained in an information document (UNEP/CBD/BS/COP-MOP/4/INF/6). The Conference of the Parties may wish to take into account, as appropriate, the above recommendations in its decision on capacity-building.

36. Participants at the Third Coordination Meeting for Governments and Organizations implementing and/or funding Biosafety Capacity-building Activities, which was held 26-28 February 2007 in Lusaka, identified four specific areas concerning capacity-building support and guidance: (i) socio-economic considerations in decision-making regarding living modified organisms; (ii) implementation of the LMO identification and documentation requirements under Article 18, paragraph 2, of the Protocol; (iii) integration of biosafety into broader national development plans, strategies and programmes, such as Poverty Reduction Strategy Papers (PRSPs) and the national programmes for achieving the Millennium Development Goals; and (iv) environmental risk-assessment and post-release LMO monitoring and evaluation.

37. At the fourth coordination meeting, participants shared experiences gained in addressing socio-economic considerations in decision-making regarding living modified organisms and in the implementation of identification and documentation requirements under Article 18, paragraph 2, of the Protocol and made a number of recommendations on possible measures to enhance efforts to build capacities for addressing these two issues. The other two issues will be addressed at the fifth meeting. The meeting observed that while Parties have identified the first two issues as key elements in the Action Plan requiring urgent action, specific issues and needs have not yet been identified. It was also noted that currently only a limited number of biosafety capacity-building initiatives deal with the two issues. In this regard, the meeting made a number of recommendations for consideration by the fourth meeting of the COP-MOP concerning measures that could help Parties effectively meet the capacity-building requirements for addressing the two issues. The recommendations are contained in an information document (UNEP/CBD/BS/COP-MOP/4/INF/22). COP-MOP is invited to consider those recommendations in the context of considering measures for addressing the capacity-building needs of Parties and incorporate them, as appropriate, in the decision on capacity-building.

IV. REPORT ON IMPLEMENTATION OF THE COORDINATION MECHANISM AND THE MEASURES TAKEN TOWARDS ITS FURTHER DEVELOPMENT

38. At their second meeting, the Parties to the Protocol considered a progress report on the implementation of the Coordination Mechanism for the Action Plan for Building Capacities for the Effective Implementation of the Protocol and requested the Executive Secretary to further develop the mechanism taking into account the Bali Strategic Plan for Technology Support and Capacity-Building adopted by the Governing Council of the United Nations Environment Programme in February 2005 with a view to creating synergies and avoiding unnecessary duplication of work.

39. In accordance with decision BS-I/5, the Secretariat continued to administer the Coordination Mechanism and facilitate its implementation. It continued to improve and populate the capacity-building databases in the Biosafety Clearing-House. A number of new records were added to the databases for projects, short-term opportunities and biosafety training courses. Several new biosafety resource materials were also collected and added to the Biosafety Information Resource Centre. The Secretariat also organized, in collaboration with the Governments of Zambia and India, the third and fourth coordination meetings for Governments and organizations implementing or funding biosafety capacity-building activities in Lusaka, Zambia (26-28 February 2007) and New Delhi, India (11-13 February 2008), respectively. The third meeting was funded by the Government of Germany; the fourth meeting was financed by the International Centre for Genetic Engineering and Biotechnology (ICGEB) and the Government of Norway. Furthermore, the Secretariat also organized the fourth and fifth meetings of the Liaison Group on Capacity-Building for Biosafety back-to-back with the above-mentioned coordination meetings.

40. In response to a request by the second COP-MOP meeting to further develop and improve the Coordination Mechanism, the capacity-building databases and the Biosafety Information Resource Centre in the central portal of the Biosafety Clearing-House were revamped in order to improve user-friendliness and accessibility and retrieval of cross-referenced data and information from multiple databases. The Executive Secretary also sought views from participants who attended the third and fourth coordination meetings on possible measure to improve the implementation and effectiveness of the Coordination Mechanism to achieve its objectives. Participants at the third meeting highlighted the need to expand the coordination function and mandate of the coordination meetings beyond the sharing/exchange of information. It was agreed that the meetings would play a bigger role in fostering coordination among different players, for example, by facilitating interactions and inter-linkages between the donor agencies and the organizations implementing biosafety capacity-building activities. Some participants also recommended that the meetings should discuss ways of fostering linkages between biosafety and the broader development issues, plans and programmes, such as poverty alleviation programmes.

41. At the fourth coordination meeting, participants agreed to use the Biosafety Capacity-Building Collaborative Portal established by the Secretariat more effectively through the Biosafety Clearing-House to improve the interaction and exchange of information among Governments and organizations implementing or funding biosafety capacity-building activities during the period between the coordination meetings. The meeting agreed that the Steering Committee would organize, in collaboration with the Secretariat, e-mail conferences on specific issues and invite all Parties, other Governments and organizations actively implementing or funding biosafety capacity-building activities to participate.

42. Furthermore, the Secretariat continued to reach out to and invite relevant organizations and bilateral and multilateral donor agencies to participate actively in the Coordination Mechanism. The Secretariat has also continued to identify and establish links with relevant initiatives and processes. In this regard, contact has been established with the United Nations Environment Programme regarding the implementation of the Bali Strategic Plan for Technology Support and Capacity Building. Implementation of the plan has been initiated in six pilot countries: Burkina Faso, The Gambia, Kenya, Lesotho, Rwanda and Tunisia. Those countries have begun the national needs assessment, which they will use to develop national plans for capacity-building and technology support. UNEP has also developed a technology support and capacity building database, which contains searchable information

on technology support and capacity-building projects and activities. ^{6/} Plans are being made to link this database to the biosafety capacity-building databases in the Biosafety Clearing-House.

43. Implementation of the Coordination Mechanism continued to be constrained by the limited and untimely submission and update of information to the capacity-building databases by Parties and organizations, a lack of financial resources (for example to support the participation of developing countries and countries with economies in transition) and the limited participation of key relevant organizations and donor agencies in the coordination meetings.

44. The Parties to the Protocol may wish to take note of the progress made in the implementation of the Coordination Mechanism and consider, as appropriate, the recommendations in the next section.

V. CONCLUSION AND RECOMMENDATIONS

45. Capacity-building continues to be one of the critical elements for the effective implementation of the Protocol. The information provided in this note clearly show that while some progress is being made towards strengthening the human, institutional and technological capacities, there are still major gaps and unmet needs in many developing countries and countries with economies in transition. A number of recommendations on possible measures to address this challenge have been proposed in this note and in the various reports referred to. COP-MOP is invited to consider the information provided in this note and take, as appropriate, a decision containing further guidance to facilitate the implementation of the Action Plan and the Coordination Mechanism and to address the capacity-building needs and priorities of Parties.

46. Among other things, the Parties to the Protocol may wish to:

(a) Take note of the status report on the implementation of the capacity-building Action Plan contained in a note by the Executive Secretary (UNEP/CBD/BS/COP-MOP/4/4);

(b) Welcome the various initiatives and activities carried out by Parties, other Governments and relevant organizations to build capacities for the effective implementation of the Protocol;

(c) Reiterate its invitation to Parties, other Governments and relevant organizations to make submissions to the BCH in order to enable more comprehensive reporting on the implementation of the capacity-building Action Plan and the sharing of experiences in capacity-building activities;

(d) Invite Parties, other Governments and relevant organizations to submit reports on their capacity-building activities to the Secretariat and the Biosafety Clearing-House at least six months before the regular COP-MOP meetings in order to facilitate more comprehensive reporting on the implementation of the capacity-building Action Plan and the sharing of experiences in capacity-building activities;

(e) Request the Executive Secretary to develop a common web-based reporting format for use by Parties, other Governments and relevant organizations to submit information on their capacity-building activities before the next COP-MOP meeting;

(f) Invite relevant international organizations to carry out appropriate measures to enhance the implementation of capacity-building activities and share their experiences, best practices and lessons learned through the Biosafety Clearing-House;

^{6/} See details about the database at: <http://cbts.unep.org/>

(g) Take note of the capacity-building needs of developing countries and countries with economies in transition and invites Parties and relevant organizations in a position to do so to continue supporting capacity-building activities in those countries;

(h) Invite developed Party countries to continue to improve the availability of information on existing opportunities for technical and financial support for capacity-building;

(i) Request the Executive Secretary to explore, in collaboration with the relevant organizations, the possibility of convening a donor's conference on biosafety capacity-building;

(j) Invite Parties, other Governments and relevant organizations to submit information on how they have implemented capacity-building activities to the Executive Secretary, at least six months prior to the next COP-MOP meeting;

(k) Request the GEF, and invite multilateral and bilateral organizations, to provide additional financial and technical support, as appropriate, to support the capacity-building activities in developing countries and countries with economies in transition;

Coordination Mechanism

(a) Take note of the progress made in the implementation of the Coordination Mechanism and commend the Executive Secretary for the measures undertaken to further improve its implementation;

(b) Take note also of the reports of the third and fourth coordination meetings for Governments and organizations implementing or funding biosafety capacity-building activities;

(c) Express its appreciation to the Governments of Zambia and India for hosting the third and four coordination meetings respectively and to the Governments of Germany and Norway, as well as the International Centre for Genetic Engineering and Biotechnology for providing financial support that enabled the participation of developing countries and countries with economies in transition;

(d) Reiterate its invitation to Parties, other Governments and relevant organizations and donors to participate actively in the Coordination Mechanism and support its implementation;

(e) Invite Parties, other Governments and relevant organizations to submit and update information regarding their biosafety capacity-building activities in the Biosafety Clearing-House databases in a proactive and timely manner;

(f) Request the Executive Secretary to continue encouraging relevant organizations and bilateral and multilateral donor agencies to support and participate actively in the Coordination Mechanism;

(g) Request also the Executive Secretary to continue to undertake measures to improve the implementation of the Coordination Mechanism and provide a report to the sixth meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol.
