



REPORT OF THE FIFTH SESSION OF THE *AD HOC* WORKING GROUP ON BIOSAFETY: 17-28 AUGUST 1998

The fifth session of the Open-ended *Ad Hoc* Working Group on Biosafety (BSWG-5) met from 17-28 August 1998 in Montreal, Canada. Delegates consolidated options for 45 articles in the revised consolidated draft (UNEP/CBD/BSWG/5/Inf.1), to 40 articles in the conclusions of the Sub-Working and Contact Groups (UNEP/CBD/BSWG/5/L.1/Add.1). Delegates thus achieved the objective BSWG Chair Veit Koester (Denmark) set out at the beginning of the meeting: consolidation of the text into a single option for each article. Thirteen articles remain entirely bracketed, however, indicating that delegates still have not agreed on the elements of the protocol, let alone what the articles' contents shall be. Many commented that the BSWG has not yet begun negotiating and this session was a further exercise in text consolidation.

Polarized positions continued to emerge during discussions over whether the protocol's scope included "products thereof," whether the protocol would address questions of liability and redress, and if the protocol would facilitate information exchange for trade in living modified organisms or reflect a more precautionary approach. Nevertheless, the issues to be negotiated were clarified and this should facilitate delegates' work as they receive their marching orders for the final BSWG, which will meet in Cartagena, Colombia, in February 1999.

A BRIEF HISTORY OF THE *AD HOC* WORKING GROUP ON BIOSAFETY

The Convention on Biological Diversity (CBD), negotiated under UNEP's auspices, was adopted on 22 May 1992 and entered into force on 29 December 1993. As of August 1998, there are 174 Parties to the Convention. Article 19.3 of the CBD provides for Parties to consider the need for and modalities of a protocol setting out procedures in the field of the safe transfer, handling and use of LMOs that may have an adverse effect on biodiversity and its components.

COP-1: The first Conference of the Parties (COP-1) to the CBD, held in Nassau, the Bahamas, from 28 November - 9 December 1994, established an Open-ended *Ad Hoc* Group of Experts on Biosafety, which met in Madrid from 24-28 July 1995. According to this meeting's report (UNEP/CBD/COP.2/7), most delegations favored development of an international framework on biosafety under the CBD. Elements favored unanimously for such a framework included: all activities related to living modified organisms (LMOs) that may

have adverse effects on biodiversity; transboundary movement of LMOs; release of LMOs in centers of origin/genetic diversity; mechanisms for risk assessment and management; procedures for advance informed agreement (AIA); facilitated information exchange; capacity-building and implementation; and definition of terms. Elements with partial support included: socio-economic considerations; liability and compensation; and financial issues.

COP-2: At COP-2 in Jakarta, Indonesia, in November 1995, delegates considered the need for and modalities of a protocol on biosafety. Amidst debate over the protocol's scope, the COP adopted compromise language (Decision II/5) calling for "a negotiation process to develop in the field of the safe transfer, handling and use of living modified organisms, a protocol on biosafety, specifically focusing on transboundary movement of any LMO that may have an adverse effect on biological diversity." COP-2 also established an Open-ended *Ad Hoc* Working Group on Biosafety (BSWG) to elaborate the need for and modalities of a protocol based on elements from the Madrid report. Other terms of reference for the BSWG state that it shall: elaborate key terms and concepts; consider AIA procedures; identify relevant categories of LMOs; and develop a protocol that takes into account the precautionary principle and requires that Parties establish national measures.

BSWG-1: At its first meeting, held in Aarhus, Denmark, from 22-26 July 1996, the BSWG elected Veit Koester as its Chair and began the elaboration of an international protocol on biosafety. Although the meeting produced few written results, it functioned as a forum for

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defining issues and articulating positions characteristic of the pre-negotiation process. Governments listed elements for a future protocol and outlined the information required to guide their future work.

BSWG-2: Delegates to BSWG-2, held from 12-16 May 1997 in Montreal, discussed a range of issues, including: objectives; AIA; notification procedures for transfers of LMOs; competent authorities/focal points; information-sharing and a clearing-house mechanism; capacity-building; public participation and awareness; risk assessment and management; unintentional transboundary movement; handling, transportation, packaging and transit requirements; and monitoring and compliance. BSWG-2 convened a contact group to consider definitions of key terms and directed the Secretariat to compile an alphabetical list of terms requiring definition, as submitted by countries, for consideration at BSWG-3.

BSWG-3: The third BSWG session met in Montreal from 13-17 October 1997. Delegates produced a consolidated draft text to serve as the basis for negotiation of a biosafety protocol. The meeting established two Sub-Working Groups to address the core articles of the protocol, as well as a contact group on institutional matters and final clauses. It also extended the mandate of the existing contact group on definitions to address annexes. Delegates addressed outstanding issues in Plenary, including: socio-economic considerations; liability and compensation; illegal traffic; non-discrimination; trade with non-Parties; as well as objectives, general obligations, title and preamble for the protocol.

BSWG-4: At the opening of BSWG-4, which met in Montreal from 5-13 February 1998, Chair Koester underscored that the BSWG was entering the negotiation phase and that participants must attempt to reduce, through negotiated consensus, the number of options under each article. BSWG-4 followed the structure adopted at BSWG-3, using two open-ended Sub-Working Groups to address the core articles of the protocol and two Contact Groups on definitions and annexes and on institutional matters and final clauses. Delegates began consideration of several articles that had only received preliminary discussion at BSWG-3, including: principles/objectives, general obligations, non-discrimination, socio-economic considerations, and liability and compensation. Delegates also continued work on other issues previously addressed, including: matters relating to AIA, risk assessment and management, minimum national standards, emergency measures and capacity-building.

COP-4: The Fourth Meeting of the Conference of the Parties to the CBD took place from 4-15 May 1998 in Bratislava, Slovakia. In Decision IV/3, "Issues related to biosafety," the COP provided for two more meetings to finalize the biosafety protocol, the first to take place in August 1998 and the second in early 1999, followed by an extraordinary meeting of the COP to adopt the protocol. The decision also: determined the composition of the BSWG Bureau and that it should remain in office under the chairmanship of Veit Koester until the adoption of the protocol; established the agenda for the extraordinary COP; and set a deadline of 1 July 1998 for government submissions of comments on provisions in the protocol.

REPORT OF BSWG-5

Chair Veit Koester opened BSWG-5 on Monday, 17 August 1998, introduced the Bureau and noted COP-4 decisions accepting the BSWG-4 recommendations, in particular to convene an extraordinary meeting of the COP in February 1999 to adopt the protocol. As agreed in COP-4 Decision IV/3, the BSWG-5 Bureau comprised: Tewolde Berhan Gebre Egziabher (Ethiopia); Mohamed Mahmoud Ould el Gaouth (Mauritania); Diego Malpede (Argentina); Lynn Holowesko (Bahamas); Ervin Balazs (Hungary); Alexander Golikov (Russian Federation); Amarjeet Ahuja (India); I.A.U.N. Gunatillake (Sri Lanka); and Darryl Dunn (New Zealand). Alexander Golikov also

served as Rapporteur. Mary Fosi Mbantenkhu (Cameroon) attended Bureau meetings as an observer, at the request of the African Group, given that Mohamed Mahmoud Ould el Gaouth was unable to attend.

In his opening statement, CBD Executive Secretary Calestous Juma cautioned that the urgency to finalize the protocol should not be at the expense of developing an effective instrument enjoying international support. Juma announced he would not renew his contract as Executive Secretary, citing personal considerations. He thanked UNEP, Montreal, Quebec, Canada, and the Secretariat staff. Koester said he would miss Juma's stewardship and suggested that delegates wait until the session's close to offer further comments.

On behalf of UNEP Executive Director Klaus Töpfer, Hamdallah Zedan emphasized the need for the timely conclusion of negotiations. Zedan said the Executive Secretary's presence would be missed. Colombia extended an official invitation to host BSWG-6 and the extraordinary meeting in February 1999.

ORGANIZATION OF WORK: Delegates adopted the provisional agenda (UNEP/CBD/BSWG/5/1), following which Chair Koester outlined objectives and the session's programme of work. He expressed hope that BSWG-5 would arrive at a single proposal for each article, although brackets may remain. He said subjects of vital importance should be dealt with as a matter of priority. Concerning NGO involvement, Koester said they may not initiate direct interaction with delegates or pass them written materials during the session and any Party may ask the Co-Chairs to restrict access to a meeting. He urged all delegations to ensure as much transparency as possible. Noting that "products thereof" implicates the broader issue of scope, as does the definition of and relevant categories of LMOs, Koester stressed progress cannot be made until these core issues are resolved.

Delegates proceeded to break into two Sub-Working Groups, two Contact Groups and numerous drafting and informal groups to consider the revised consolidated text of the draft biosafety protocol, as contained in UNEP/CBD/BSWG/5/Inf.1. The Co-Chairs and mandates for the Sub-Working Groups and Contact Groups continued as at BSWG-4. Sandra Wint (Jamaica) and Eric Schoonejans (France) co-chaired Sub-Working Group I, which discussed Articles 3 and 4-14. Amerjeet Ahuja (India) and John Herity (Canada) co-chaired Sub-Working Group II, which discussed Articles 1, 1 *bis*, 15-27 and 34. Sub-Working Group I (SWG-I) used small drafting groups and Sub-Working Group II (SWG-II) used revised Co-Chairs' drafts and small "reflection" or drafting groups to consolidate delegates' comments and facilitate progress. Contact Group I (CG-I), co-chaired by Piet van der Meer (Netherlands) and Gert Willems (South Africa), reported to SWG-I and discussed the definition of LMO, the protocol's scope and the annexes. On Tuesday, 18 August, the Bureau extended this Group's mandate to give it negotiating authority. Contact Group II (CG-II), co-chaired by Katharina Kummer (Switzerland) and John Ashe (Antigua and Barbuda), served as a legal drafting group. The Sub-Working Groups also referred legal questions to CG-II, such as the definition of illegal traffic and how other international agreements have referred to the notifier and who triggers notification. CG-II also reviewed the final clauses (Articles 29-33, 35-40 and 42-43), which were provisionally adopted by the Plenary on Wednesday, 19 August.

The following report summarizes the issues discussed and state of agreement for each article in the protocol. It also highlights BSWG-5's discussion of "products thereof" and the annexes.

Editors' Note: As a matter of policy, the Earth Negotiations Bulletin does not directly attribute statements made by governments in informal negotiations when requested to do so by the Chair. Given the sensitivity to the presence of non-State participants as observers to these negotiations, this report does not include the use of country attributions in the work of the Sub-Working Groups and the Contact Groups.



NEGOTIATION OF THE BIOSAFETY PROTOCOL

PREAMBLE: There are two options for the Preamble: the first recognizes the potential of modern biotechnology to contribute to human well-being if used with adequate safety measures and the limited capabilities of developing countries to cope with the nature and scale of risks associated with LMOs. The second references, *inter alia*, Agenda 21 and the precautionary principle, significant gaps in scientific knowledge and consideration of socio-economic impacts in risk assessment and impact, provision of adequate compensation, promotion of public participation, and development and strengthening of human resources and institutional capacities in the safe handling, transfer and use of LMOs.

The Preamble was considered by CG-II, where delegates preferred to postpone its discussion until the key elements of the protocol were clear. A number of governments, however, made submissions on the Preamble, which are to be incorporated into the revised version for consideration by BWSG-6.

ARTICLE 1 (OBJECTIVES): This article seeks to define the objectives of the protocol. SWG-II deleted a phrase relating to the AIA procedures and other provisions of the protocol. Some delegates proposed adding language from CBD Articles 19.3 (need for modalities for a protocol), 8(g) (risks associated with the use and release of LMOs) and the BSWG's mandate; others underscored that the protocol's objectives should focus specifically on transboundary movements of LMOs. One developed country proposed referencing the precautionary principle; a few countries objected. Some developing countries requested language on "socio-economic considerations," "products thereof" and "risks to human health."

The text adopted by BSWG-5 has several brackets, which reflect key differences that remain to be negotiated including, *inter alia*: whether the protocol's scope will include "products thereof" and socio-economic considerations and whether the protocol should deal with LMO-related activities apart from transboundary movements.

ARTICLE 1 BIS (GENERAL OBLIGATIONS): Article 1 *bis* seeks to outline the general obligations of Parties to the protocol with regard to AIA and development, handling, transport, use, transfer and release of LMOs. It also seeks to establish the superiority of the international Law of the Sea and accepts the right of Parties to take action that is more protective of the conservation and sustainable use of biodiversity. SWG-II debated the need for the provision and the level of detail required for this article. Several delegates suggested streamlining the article, citing the existence of specific obligations elsewhere in the protocol and duplication with CBD articles. They supported a general call for Parties to take all necessary measures to comply with the protocol's provisions. In this spirit, SWG-II deleted the references to international trade, integration of provisions of the protocol into national strategies, and cooperation to prevent and punish measures in contravention of the protocol.

At the request of SWG-I, SWG-II also considered the possible inclusion of elements from Articles 4 (Notification), 13 (Risk Management) and 14 (Minimum National Standards). Most speakers did not support their inclusion in Article 1 *bis* as they were too specific; one delegate said, "a provision on general obligations should be as general as possible." A few developing countries suggested referencing the precautionary principle and retaining references to human health and "products thereof."

The text adopted by BWSG-5 has bracketed references to: Parties' obligations regarding AIA, development, handling, use, transfer and release of LMOs, "products thereof" and human health; superiority of the Law of the Sea; and international cooperation to facilitate implementation of the protocol. SW-II agreed on the basic principle that Parties are to take necessary and appropriate measures to implement

their obligations under the protocol, and they can take action that is more protective of the conservation and sustainable use of biodiversity than called for under the protocol.

ARTICLE 2 (USE OF TERMS): This article defines several terms used in the protocol, including LMO, transboundary movement, and Party of export and import. During BWSG-5, CG-I focused on the definition of LMO using portions of the heavily bracketed LMO definition in document UNEP/CBD/BSWG/5/Inf.1 as the basis for discussion. CG-I developed definitions of LMO, living organism and modern biotechnology. SWG-I discussed these definitions, which then served as one of the bases for an informal discussion on "products thereof" (summarized below). CG-I further refined the three definitions. The only remaining question is whether modern biotechnology covers cell fusion techniques.

The text states that:

- LMO means any living organism containing a novel combination of genetic material through the use of modern biotechnology;
- living organism means any biological entity capable of transferring or replicating genetic material, including sterile organisms, viruses and viroids; and
- modern biotechnology means the application of *in vitro* nucleic acid techniques [and cell fusion techniques] that overcome natural physiological reproductive or recombination barriers, other than traditional breeding and selection.

BSWG-5 also forwarded to BSWG-6 definitions for transboundary movement, export, import, exporter, importer, Party of export and Party of import, as agreed upon at BSWG-4. During the final Plenary, one delegate said the definitions might provide the way to address "products thereof," and proposed bracketing them. Others said brackets would suggest that the definitions' scientific content was under debate and suggested adding footnotes or titling the section "working definitions" to convey the concern about "products thereof." The text was bracketed.

"Products Thereof": BSWG-5's informal discussion on LMOs and "products thereof" helped inform delegates' consideration of the definitions (Article 2) and the protocol's scope (Article 3A). The Secretariat prepared an information document, based on government submissions, to facilitate an informed discussion on LMOs and "products thereof" (UNEP/CBD/BSWG/5/Inf.3). Chair Koester introduced the discussion, held on Wednesday, 19 August, suggesting that delegates address the meaning of "products thereof," the concerns raised by them, and ways of addressing them under the protocol. Some delegates noted that "products thereof" may reproduce or live in their own right. One said an LMO must be capable of propagation or multiplication without human intervention, that "products thereof" are not capable of propagation and that the protocol must be limited to LMOs. Some said non-living or non-viable organisms are not a threat to biodiversity. Another noted that vectors could propagate traits of non-living modified organisms.

Several developed countries stressed that the protocol's scope should not be extended to include products of LMOs. One delegate said that if a process of purification or verification could ensure a product does not contain self-reproducing or novel traits from an LMO, then "products thereof" would not be necessary. One developing country said it failed to see how products of LMOs could be ignored when considering LMOs. BSWG-5 decided that discussion of the definition of LMO should be combined with the issue of "products thereof" and related articles on use of terms, scope, risk assessment (Article 12) and risk management (Article 13), and directed CG-I to take up the issue within that framework.

CG-I initially focused on developing a matrix to compare scopes for the protocol, AIA, risk assessment, risk management and national regulations to assist them in identifying where it might be appropriate to reference "products thereof." They then discussed types of LMO



transboundary movement, and identified four: intentional LMO transboundary movement; unintentional LMO transboundary movement; movement of processed products containing dead modified organisms and/or non-living LMO components; and movement of purified products from LMOs. Delegates agreed the protocol covered the first two and not the fourth. They could not agree whether the protocol covered the third. Their discussion focused on direct and indirect impacts on human health. A proposal on how to treat the third type of movement notes that, while the third type of transboundary movement does not fall under the protocol's scope, CG-I recommends a provision to make relevant information available through the Biosafety Clearing-house (CH). CG-I will continue this discussion at BSWG-6.

ARTICLE 3A (SCOPE OF THE PROTOCOL): This article outlines the areas of applicability and non-applicability of the protocol. SWG-I deleted options to have no article and to designate that the scope of the protocol is the same as the scope of AIA. They focused on the option indicating that the protocol: applies to transboundary movement, [handling and use] of LMOs resulting from modern biotechnology that may have an adverse effect on the conservation and sustainable use of biological diversity, taking also into account risks to human health; and shall not apply to LMOs not likely to have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, to requirements for transport operations or to LMO transit and transboundary movements destined for contained use.

Several delegates said the protocols' scope must conform with CBD Articles 19.3 (need for and modalities of a protocol), 8(g) (risks associated with the use and release of LMOs, taking into account risks to human health) and Decision II/5 (to develop in the field of the safe transfer, handling and use of LMOs, a protocol focusing on transboundary movement of any LMO that may have an adverse effect on biodiversity). Delegates debated and bracketed references to handling and use, risks to human health, adverse effects on socio-economic well-being, "products thereof" and LMOs resulting from modern biotechnology. A footnote in the section limiting scope proposes developing an annex on LMOs "which are pharmaceuticals for humans." All text remains bracketed.

ARTICLE 3B (APPLICATION OF THE AIA PROCEDURE): This article specifies what is subject to and what is exempt from the AIA procedure. A SWG-I drafting group restructured the article's two paragraphs to indicate external boundaries for LMOs subject to the AIA procedure and to list LMOs exempted from the procedure. Some said these paragraphs presented contradictory approaches to identifying which LMOs are subject to the AIA procedure and suggested choosing one approach and consolidating elements of the two paragraphs. Delegates differed in their preference for a positive or negative list, however, and both were included.

The positive list provides that [all] [the first] transboundary movements of [an] [a specific] LMO shall be subject to AIA. Bracketed options specifying which LMOs qualify include those intended for field testing or first release in the Party of import, those banned in the Party of export, and those destined for large scale production in contained use facilities. A footnote provides that Parties must be allowed to impose more stringent or comprehensive notification requirements to protect their biodiversity, where they: are based on [sound scientific rationale] [and the precautionary principle], do not discriminate, and are communicated to all Parties.

Under the negative list, while no country opposed the concept of exemptions, they differed on what would be exempted and bracketed the entire paragraph. A few delegates called for an exemption for low-risk LMOs intended for contained use. Statements were mixed as to whether AIA should apply to transit of LMOs. Delegates noted links between Articles 3B, 9 (Simplified Procedure) and 11 (Multilateral, Bilateral and Regional Agreements), particularly in reference to

LMOs exempt from the AIA procedure, and suggested that the text be moved. Several delegates agreed that reference to exemption of LMOs subject to another international agreement related to transboundary transfer of LMOs was too broad. Bracketed options for exemption in the revised text include LMOs exempted under the domestic regulatory framework of the Party of import, LMOs exempted pursuant to bilateral, multilateral or regional agreements, LMOs destined for research in contained use facilities; LMOs identified in a decision by the Meeting of the Parties (MOP) as not likely to have adverse effects on the conservation and sustainable use of biological diversity; and LMOs destined for the market in the Party of import, provided that they have previously granted an AIA for that purpose. Delegates also bracketed one speaker's call for LMOs exempted under domestic legislation of the Party of import or bilateral, multilateral or regional agreements to be consistent with the objectives of the protocol, "and obligations under international law." A footnote provides that such exemptions must not result in lower levels of protection than would be provided by the protocol's AIA process; be based on [sound scientific rationale] [and the precautionary principle]; not be discriminatory; and be communicated to all Parties.

ARTICLE 4 (NOTIFICATION): This article requires notification, the first step in the AIA procedure prior to the intentional transboundary movement of an LMO that falls under the scope of Article 3B (Application of the AIA Procedure). Several developing countries in SWG-I preferred placing responsibility for notification on Parties or governments. Some developed countries suggested that the exporter trigger the AIA procedure. One delegate suggested the exporter provide information to the national competent authority and a CH.

Friends of the Chair facilitated informal talks on the subject. They identified possible "concepts": notifier is the importer; export-driven notification/AIA; and importing Party decides whether the importer or the exporter notifies. These proposals reflected the view that the exporter and importer will most likely cooperate in providing required information. SWG-I did not resolve the issue, however. The revised text provides that the Party of [import] [export] [may] [shall] [notify] [or] require the [importer] [or] [exporter] to notify the Party of import in writing prior to the intentional transboundary movement of an LMO.

Delegates agreed that notification should include "at a minimum" information specified in Annex I. Regarding accuracy of information, one developed country suggested the exporter be responsible. Another said the Party of export should make the exporter responsible. A third said the importer is best placed to provide accurate information to the importing authority, although information sharing with the exporter and possibly the exporting Party could be necessary. The revised text, bracketed in its entirety, provides that the Party of [export] [import] shall make its [exporter] [importer] legally responsible for the accuracy of information provided.

ARTICLE 5 (ACKNOWLEDGEMENT OF RECEIPT OF NOTIFICATION [FOR AIA]): This article outlines the requirements for acknowledgement of receipt of notification, the second step in the AIA procedure, by the Party of import. A few delegates suggested that no acknowledgement of receipt be required, but clarified that lack of receipt should not mean consent. Other delegates preferred requiring acknowledgement, in varied forms, and SWG-I deleted the option for no article. Delegates changed the title from "Response" to "Acknowledgement of Receipt" of notification, to reflect several delegates' preference that the article be limited to acknowledgement of receipt. Several delegates said acknowledgement should occur within a specific timeframe, citing 30 days. Others said a reasonable timeframe was sufficient. SWG-I double bracketed a compromise option of 90 days.



There was mixed support for retaining text requiring acknowledgment to state the date of receipt of notification and whether the notification contains the information specified in Article 4, as well as for moving text on whether to proceed according to the Party of import's domestic regulatory framework to Article 6. SWG-I retained all three provisions and bracketed the third. SWG-I moved text on whether intentional transboundary movement may proceed without or only with the written consent of the Party of import after a specified period to Article 6 (Decision Procedure for AIA). Regarding failure to acknowledge receipt, one delegate said consent must be explicit. Another proposed including language from Article 6, stating that if a Party of import fails to communicate its response within a particular time period, the transaction is no longer governed by AIA procedures under the protocol. Many delegates agreed that failure to acknowledge receipt of notification by the Party of import will not imply consent. SWG-I agreed to this proposal.

ARTICLE 6 (DECISION PROCEDURE FOR AIA): This article provides guidelines for communication of the decision, the final step in the AIA procedure, by the Party of import. SWG-I delegates debated whether decisions should be based on risk assessment, scientific principles, the precautionary principle, assessment of adverse effects on the conservation and sustainable use of biological diversity, risks to human health, and social, economic and cultural criteria. All of these options remain bracketed. Delegates also debated the timeframe within which notification should take place, with proposals ranging from 90 to 180 days to "a reasonable period of time," in which case some said they could delete the clause regarding possible extension of this period. SWG-I bracketed 90 and 180 days as well as "a reasonable period of time."

The article notes that, after acknowledgement of receipt of notification, the Party of import shall communicate its decision, in writing, to the notifier and the CH, indicating the approval of the import, including: how the decision applies to subsequent imports of the same LMO; prohibition of the import; request for additional information; or extension of the assessment period. SWG-I bracketed the last two provisions. The text also provides that such decisions shall include the reasons for the decision. SWG-I bracketed text providing that lack of [sufficient information] [or] full scientific certainty or consensus to determine the potential adverse affects of an LMO shall not prevent the Party of import from prohibiting the import of the LMO. SWG-I bracketed text indicating whether the exporter may proceed if the Party of import does not respond within a specified time period. SWG-I also bracketed text providing that the failure of the Party of import to communicate a decision or progress toward a decision within [90] days of the acknowledgement of receipt of notification shall not imply consent for the movement.

ARTICLE 7 (REVIEW OF DECISIONS [UNDER AIA]): This article outlines guidelines for the review of decisions under AIA procedures by the Party of import. Many SWG-I delegates said text providing that the Party who makes the decision should have the right to review its decision, particularly in light of new scientific information, was central to the article. A drafting group consolidated this text, specifying the Party of import as decision-maker.

Delegates debated references to the precautionary principle and risks to human health, which are both bracketed. Delegates also differed over whether someone affected by the decision has a right to review where: a change in circumstances has occurred which may influence the outcome of the risk assessment upon that the decision was based; additional relevant scientific or technical information has become available; or there is reasonable evidence that the decision was not based on scientific [socio-economic, cultural or the precautionary] principles or supported by the best available scientific evidence. SWG-I bracketed this text.

Additional debates focused on the timeframe for written response by the Party of import and text on risk assessment. SWG-I bracketed options for response within "a reasonable period of time" and "90 days." SWG-I transferred and bracketed text on risk assessment from Article 12 (Risk Assessment) to Article 7. It provides that risk assessment for subsequent imports of an LMO into the same Party of import may be taken at the discretion of the Party of import or only be required if: the intended use of the LMO changes; there is a variation in the receiving environment; the import volume of the LMO changes such that it would increase the risk of adverse impacts on biodiversity or it is a condition of first import of the LMO under Article 6 (Decision Procedure for AIA).

ARTICLE 8 (NOTIFICATION OF TRANSIT): This article was drafted to outline notification procedures for an exporter when transiting an LMO through another State's territory. During SWG-I discussions, several delegates suggested deleting the article as it was addressed elsewhere in the protocol. Several developing countries preferred retaining the text, with one offering that the option for notification of transit could indicate that Parties "may," not "shall," require notification. Delegates agreed to delete Article 8 given that it addressed elements covered in Articles 4 (Notification), 5 (Acknowledgement of Receipt of Notification [for AIA]), 6 (Decision Procedure for AIA), 17 (Handling, Transport, Packaging [and Labelling]), and 27 (Liability and Compensation).

ARTICLE 9 (SIMPLIFIED PROCEDURE): This article provides for advance notification of situations where movement can occur simultaneously with notification and identifies LMOs exempted from the AIA procedure. Several speakers recommended including elements of this article in other articles, specifically Articles 3B (Application of the AIA Procedure), 6 (Decision Procedure for AIA) and 11 (Multilateral, Bilateral and Regional Agreements), and did not support a stand-alone article. Others preferred retaining the article until delegates agreed on where to move its elements. One country supported text regarding a simplified procedure for subsequent imports of the same LMO if notification is maintained. The agreed text states that the Party of import may specify in advance to the Biosafety CH: cases for which transboundary movement can take place at the same time as the movement is notified, and such notifications may apply to subsequent similar movements to the same Party; and LMOs to be exempted from the AIA procedure. Both provisions were bracketed. Annex I was designated to contain information relating to a transboundary movement to be provided in the notification.

ARTICLE 10 (SUBSEQUENT IMPORTS): As originally drafted, this article contained five options, ranging from deleting the article to elaboration on instances and procedures for when notification of subsequent imports is or is not required. Some SWG-I delegates said the initial decision to import, addressed in Article 6 (Decision Procedure for AIA), could indicate a procedure for subsequent imports and obviate the need for this article. Some delegates supported the article, especially the option requiring written notification of each subsequent import, acknowledgment of which may indicate that a new risk assessment procedure will be undertaken. Delegates finally agreed to delete the article, given its coverage in Articles 6, 9 (Simplified Procedure) and 12 (Risk Assessment).

ARTICLE 11 (MULTILATERAL, BILATERAL AND REGIONAL AGREEMENTS [OR ARRANGEMENTS] [OTHER THAN THE PROTOCOL]): This article establishes that Parties may enter into other agreements [or arrangements] regarding transboundary movement of LMOs. Most delegates favored providing for the establishment of such agreements, provided they do not eliminate the need for AIA. Several delegates said the article was unnecessary, but that a related reference could be made elsewhere in the protocol. Delegates bracketed calls for such agreements to be "consistent with the objectives of the Protocol" and "obligations under inter-



national law." Bracketed text also provides that decisions taken under these agreements shall be based on risk assessment, made on the basis of scientific principles, and that the Protocol shall not affect trans-boundary movements pursuant to such agreements.

Regarding the rights of a regional economic integration organization (REIO), the article provides that a REIO that is a Party to the protocol and has a specific legal framework for biosafety may declare that the protocol shall not apply to movements within its territory. Several countries said the text attempted to circumvent obligations. SWG-I was assured that it did not, but that it rather attempted to address situations where a REIO already has a biosafety regime in place. The entire article was bracketed.

ARTICLE 12 (RISK ASSESSMENT): This article indicates that risk assessment shall be undertaken in accordance with Annex II, taking into account specified information and principles. SWG-I requested CG-I to elaborate Annex II, which identifies principles and procedures for risk assessment. SWG-I agreed that science-based principles should be considered as part of risk assessment. A number of delegates suggested consideration of other principles that remain bracketed, including case-by-case basis, the precautionary principle, socio-economic and cultural concerns and experience, and agricultural and animal health considerations. Most said the competent national authority of the Party of import is responsible for the risk assessment, based on the information supplied by the exporter, and should decide whether and how the risk assessment is done. The relevant text remains entirely bracketed and includes bracketed options specifying who shall undertake the risk assessment.

While many did not think financial responsibility should be addressed, others said it should be the exporter's responsibility. The relevant paragraph, which is entirely bracketed, identifies five options for who assumes financial responsibility for risk assessment: Party of import; Party of export; importer; exporter; or notifier. Delegates also differed on whether to address micro-organisms. The final bracketed paragraph notes that Parties shall ensure that risk assessment and management processes of micro-organisms are conducted in contained conditions.

ARTICLE 13 (RISK MANAGEMENT): This article calls for Parties to establish and maintain appropriate mechanisms, measures and strategies to regulate and manage risks, and elaborates on the mechanisms and risks. Some delegates preferred deleting the article, stating it addresses a domestic matter. One delegate who supported the text said the internal provisions of neighboring States may not be adequate to protect his country. Some said the first paragraph improperly juxtaposes domestic (CBD Article 8(g)) and international (Parties shall establish and maintain mechanisms to manage risks) obligations. Delegates also debated whether text noting that if the Party of import lacks the financial and technical capacity to do so, the other shall offer technical and financial assistance should be in this article or Article 21 (Capacity-building). One delegate suggested altering text on technical assistance allowing a Party of import with inadequate capacity to ask for technical and financial assistance from the Party of export.

Text on technical assistance remains bracketed, as do paragraphs calling for a ban or phase out of certain LMOs and stating that each Party shall ensure that any LMO undergo a period of observation commensurate with its life-cycle or generation time before being put to its intended use. Additional bracketed text addresses whether: measures shall regulate both contained use and deliberate release; measures based on risk assessment may be imposed to prevent adverse effects of the LMO; and the type of risk management appropriate to the LMOs and activity in question. SWG-I bracketed the entire article.

ARTICLE 14 (MINIMUM NATIONAL STANDARDS): This text contained an option to delete the article and an option calling on Parties to ensure that appropriate legal, institutional and administrative measures concerning the safe research and development, manufacture,

transfer, handling and use of LMOs are in place. SWG-I delegates differed over whether to retain the text. Several of those who supported it agreed it could be moved elsewhere in the protocol, especially to Article 1 *bis* (General Obligations). Delegates revised the operative option and transferred it, verbatim, to SWG-II for consideration in its deliberations on Article 1 *bis*. The revised version states that each Party shall take [as a minimum] appropriate legal, administrative and other measures to implement and enforce its obligations under the protocol. Bracketed text notes that: Parties may impose more stringent requirements, based on the [precautionary principle][scientific considerations]; nothing in the protocol shall restrict a Party from taking more protective action than called for in the Protocol; and such measures shall regulate both contained use and deliberate release. SWG-II decided it was not appropriate for Article 1 *bis*. During the closing Plenary, one delegate noted SWG-II's deliberations and supported maintaining the text in Article 14, which was retained and bracketed.

ARTICLES 15/16 MERGED (UNINTENTIONAL TRANS-BOUNDARY MOVEMENTS AND EMERGENCY MEASURES)

This merged article details measures that Parties will take in the event of unintended transboundary movements of LMOs, including notification, provision of information and consultation. In SWG-II, several countries supported differentiating accidents into those that occur during transboundary movements and those that occur domestically with possible transboundary impacts. Significant debate centered around the extent of information required in the event of an accident, including ability to respond promptly, and the breadth, relevance and actual possession of relevant information. Most delegates supported deleting language on protecting confidential information, citing coverage under Article 20 (Confidential Information) or its irrelevance to the protocol. Some developed countries supported provision of four categories of information: circumstances of the movement, date, amount and intended use; information for risk assessment and management measures; appropriate methods for monitoring, control and mitigation/emergency measures; and a contact point for further information. Delegates discussed the appropriate individual to contact (e.g., competent national authority, national focal point) and agreed to "point of contact," allowing Parties to specify the individual(s) according to national priorities/systems. Delegates also discussed communication of information to the Biosafety CH.

The Co-Chair noted difficulties in establishing responsibility, posing the question: if Party A is importing an LMO from Party B, carried by a ship of Party C that crashes off Party D's coastline, who is responsible? Some said the Party of origin should be responsible, as it would have technical information regarding the LMO. Others noted that delegation of responsibility could delay prompt notice of accidents. Some countries supported language on an emergency fund or the provision of assistance, including financial, from responsible Parties. Some countries requested that links between responsibility and liability should be dealt with in Article 27 (Liability and Redress).

Bracketed text remains on requiring Parties to take preventative measures, protection of confidential information and designation of Parties to consult to determine appropriate action. The Party under whose jurisdiction the release occurred is obligated to notify and consult with other affected Parties, and there are no references to financial assistance. Types of information to be provided remain bracketed and include: estimates on quantity and characteristics of the LMO; point of contact; circumstances of release and intended use; possible adverse impacts on biodiversity and possible risk assessment and management measures; and any other relevant information.

ARTICLE 17 (HANDLING, TRANSPORT, PACKAGING [AND LABELLING]): This article seeks to ensure that LMOs are handled, transported, packaged and labelled under conditions of safety, taking into consideration relevant international rules and stan-



dards. Some SWG-II delegates suggested deleting the provision because it could constitute a technical barrier to trade. Some delegates suggested excluding labelling from the article's purview since customs procedures are mere paper exercises and labelling of LMOs would not contribute to safety. Delegates differed on the scope of the provision with some supporting provisions on handling, transport, packaging and labelling only for LMOs subject to AIA procedures and others for all LMOs. There was considerable disagreement on the nature of the international rules and standards that would apply. While some noted potential gaps in existing international standards and preferred creating standards under the protocol, others supported using existing international rules and standards, or at least taking them into account. One delegation underscored the fact that standards used by exporting Parties should not be less strict than those applied domestically. Most developing countries supported retaining the reference to human health, while most developed nations supported its deletion. A reference to trade was deleted, with developing countries stating it was inappropriate to deal with trade in a safety-related protocol and developed countries stating the reference was irrelevant in the present context. Additional bracketed text addresses scope and purview, the need for identification and development of standards. The entire article is also bracketed.

ARTICLE 18 (COMPETENT NATIONAL AUTHORITY/NATIONAL FOCAL POINT): This article requires governments to designate one [or more] national focal points and one or more competent national authorities to liaise with the Secretariat and perform administrative functions. Discussions focused on whether a Party could designate more than one focal point, whether the Secretariat and the Biosafety CH should be involved in exchanging information on competent national authorities and national focal points and the timeframe for designation. SWG-II agreed to the timeframe, which is no later than the date of entry into force of the protocol. Delegations agreed that the Secretariat should inform the Parties of notification and make such information available through the Biosafety CH. Delegations also affirmed that Parties should provide relevant information on the respective responsibilities of their competent national authorities and, if applicable, on which competent national authority is responsible for which type of LMO. The only remaining issue to be considered at BSWG-6 is whether a Party could designate more than one focal point.

ARTICLE 19 (INFORMATION SHARING/BIOSAFETY CLEARING-HOUSE): This article establishes a Biosafety Clearing-house (CH), its objectives and the types of information that shall be provided to it. SWG-II delegates debated what the fundamental concept of the CH should be, differing on whether it should be a database or a clearing-house. Several developed countries preferred a simple electronic database mechanism, while many developing countries supported a CH separate from the CBD Clearing-House Mechanism, noting obstacles to Internet access. Citing cost effectiveness and efficiency, some delegates supported text on using the CBD Clearing-house Mechanism, which remains in brackets. A "reflection group" decided that a CH is a means through which information is made available, by providing access to information provided by Parties. Delegates agreed to use "Clearing-house" over "database".

Regarding information to be provided, delegations debated issues of public availability and protection of confidential business information, eventually retaining a clause on confidential information. Some developed countries requested clear identification of the information required for the CH. Some delegates proposed bracketing or removing text on risk assessments/environment reviews, unilateral declarations on exemptions, field-testing, commercial use and reports on implementation of AIA procedures. Delegates agreed that required information would include: national laws and guidelines for implementing the protocol, including information on AIA procedures; bilateral, regional

and multilateral agreements; and final decisions regarding import or release of LMOs. Provisions for information on risk assessment summaries and reports required under Article 35 (Monitoring and Compliance) remain bracketed. Delegates agreed to include reference to existing international biosafety information exchange mechanisms. They also decided that decisions on CH modalities, including reports on its operation, would be considered at the first MOP and kept under review thereafter.

ARTICLE 20 (CONFIDENTIAL INFORMATION): This article requires the Party of import to permit the notifier to identify confidential information that should be properly protected and not used by the receiving Party for commercial purposes. The article also requires the Party of import to consult with the notifier on the confidential status of information and clarifies which information should not be considered confidential.

Debate focused on the necessity for the provision. Most developing countries preferred no provision to ensure a workable and transparent protocol. They underscored that the issue, sufficiently addressed by other international agreements and regimes, was trade-related and irrelevant to biosafety. Some developing countries and most developed countries favored including a provision on confidential information to safeguard information and the private sector so as to ensure its involvement. Delegations differed as to whether a Party should develop procedures to protect such information. Delegates differed on a number of issues, including references to human health and language on the extent to which exemptions on non-confidential information would apply. As to which information should not be considered confidential, some delegations supported language "should not generally" and others supported "in no case may;" some countries stressed reference to human health, others disagreed. Delegations also differed on whether information whose confidentiality is a subject of disagreement between the competent authority and notifier should be respected by a Party. At the request of several developed countries, the entire article was bracketed.

ARTICLE 21 (CAPACITY-BUILDING): This article addresses the need to develop human and institutional resources for developing countries and the forms it should take. All SWG-II speakers noted the need for this article, and several developing countries emphasized its centrality for an effective protocol. Several delegates supported language to include countries with economies in transition and small island developing States. Delegates debated whether the article's scope should cover biotechnology as well as biosafety. Several developed countries objected to inclusion of references to biosafety and biotechnology in capacity-building and requested that, if biosafety was included, a definition should accompany it. Text on both remains bracketed. Delegates stressed maximizing the use of existing resources and institutions, including regional cooperation, in capacity-building. At the suggestion of some countries, text on financial matters was referred to CG-II's discussions on Article 28 (Financial Mechanism and Resources). Developing countries still requested references to financial resources, as well as technical and scientific assistance and technology transfer, which remain in brackets. Several developed countries proposed language on facilitating the involvement of the private sector. Such text is bracketed since developing countries preferred its deletion, stating that it is an internal matter and could be covered elsewhere in the protocol. Delegates deleted text on Secretariat obligations regarding capacity-building. Delegates discussed SWG-I recommendations to include text from Articles 11 (Multilateral, Bilateral and Regional Agreements), 12 (Risk Assessment), 13 (Risk Management) and 14 (Minimum National Standards) and said these references were too detailed, inappropriate or already covered by existing language. Bracketed paragraphs remain on private sector involvement and types of capacity-building, including financial



resources, technical and scientific assistance, technology transfer, scientific cooperation and training, and expertise and training in the use of risk assessment and management techniques.

ARTICLE 22 (PUBLIC AWARENESS AND PARTICIPATION): This article requires Parties to promote public awareness and participation in the protocol's implementation through: facilitating public awareness and education programmes; providing the public with access to/results of the decision-making process; and informing the public about the Biosafety CH. SWG-II debated the nature of the public's role in the decision-making process. Some countries preferred providing the public with "the opportunity for involvement in the decision-making process" while others favored "the results of the decision-making process." One delegation expressed concern about implementing such a provision at the national level and proposed adding "where appropriate" on both options. Delegations also differed on reference to national laws, regulations and administrative measures. Some delegates supported deleting the reference in the title to public participation since it is not addressed. Most developing countries suggested taking human health into account when developing and implementing public awareness programmes on the safe transfer, handling and use of LMOs. They also called for inclusion of "products thereof" in addition to LMOs and suggested deleting the reference to respecting confidential information. One developed country suggested restricting Parties' obligations to facilitating public participation to "intentional" transboundary movements of LMOs and others suggested using "release of LMOs" to simplify language related to LMOs. Most delegations supported the article and provisions on international cooperation for promotion and development of educational and public awareness programmes.

ARTICLE 23 (NON-PARTIES): This article details the relationship of Parties to non-Parties. Delegates debated the necessity for the article and whether trade with non-Parties should be banned or restricted. Some delegations preferred no article, citing complications during the protocol's preliminary stages, the importance of not affecting trade with non-Parties and the possible disincentive to signing the protocol. Many developing country delegations requested a paragraph stating no Parties should export or import LMOs or "products thereof" to or from non-Parties; some developed countries opposed it. Developed countries argued that trade with non-Parties could be conducted under certain conditions, including on a basis consistent with the protocol's objectives and substantive provisions, but one opposed the reference to the protocol's objectives. One developed country stressed the importance of bilateral, regional or multilateral agreements or arrangements to trade with non-Parties and their availability through the Biosafety CH. The entire article is bracketed.

ARTICLE 24 (NON-DISCRIMINATION): This article states that Parties will not discriminate among foreign and domestic LMOs in implementation of the protocol, including risk assessment procedures, or create unnecessary obstacles to international trade. Debate in SWG-II centered around the need for such an article. Several developing countries supported no provision, stressing the environmental, not trade, nature of discussions and the sufficiency of existing international frameworks, including the World Trade Organization (WTO). Most developed countries supported including a provision, noting that international transport of LMOs relates to trade. Some developed countries cited the provision's relevance for those Parties not members of the WTO. Noting inter-linkages, delegates discussed Article 24 in relation to Articles 23 (Non-Parties) and 34 (Relationship with Other International Agreements) in SWG-II and CG-II, although positions did not change. Delegates also discussed language on national treatment, most favored nation status, the GATT with regard to unnecessary restrictions on trade, and ensuring non-discrimination among

foreign LMOs and LMOs of domestic origin. The entire article, which contains two paragraphs on non-discrimination of LMOs and prevention of obstacles or restrictions to international trade, is bracketed.

ARTICLE 25 (ILLEGAL TRAFFIC): This article obligates Parties to adopt appropriate domestic measures to prevent and penalize illegal traffic of LMOs and provide information concerning cases of illegal traffic to the Biosafety CH. Delegates in SWG-II debated the necessity of the provision. Most developed countries favored deleting the provision since a general reference to Party obligations exists in Article 1 *bis* (General Obligations) and illegal traffic is a matter of domestic legislation. One delegate also noted that, in the event that an importer-based AIA system was adopted, the provision would be unnecessary. Developing countries favored the article, noting that its scope should extend to "products thereof" and it should include references to informing the Secretariat and CH, developing national legislation and cooperation among Parties. Developing countries introduced text regarding the right of the affected Party to request the Party of origin to dispose of the LMOs in question at its own cost/expense. Several developed countries opposed this text. One said that the State could not be made responsible for illegal activities, and another that normal quarantine procedures sufficed. The text was bracketed.

CG-II prepared a definition of illegal traffic, at the request of SWG-II, to facilitate discussions on the article. A few developed countries suggested deleting the definition. One developing country said it would be illogical to include an offense and not define it. The definition was transferred for consideration under Article 2 (Use of Terms). The article is bracketed along with references to "products thereof" and the nature of the information to be conveyed to the Biosafety CH.

ARTICLE 26 (SOCIO-ECONOMIC CONSIDERATIONS): This article seeks to ensure that socio-economic impacts of the introduction, transfer, handling or use of LMOs [and products thereof] on the Party of import are appropriately considered. A number of developing countries stressed the importance of this provision due to their special social and economic situations, noting that a protocol without socio-economic considerations would be unacceptable. They supported text requesting Parties to: consider socio-economic impacts in risk assessment; incorporate strategies to prevent adverse socio-economic impacts; notify the exporting country of import substitution; protect the public from biotechnology monopolies; and protect public moral and socio-economic interests. Some countries opposed addressing monopolies and free trade issues and expressed concern over trade protectionism. Many developed countries preferred either deleting the article or having a preambular reference. One developed country noted divergent understandings of socio-economic considerations and supported an option requesting research on such considerations instead of detailing obligations. Another suggested dealing with the issue in Article 13 (Risk Management).

With regard to import substitution, developing countries requested language assuring financial and technical assistance to the affected Party; developed countries disagreed. Delegations also differed as to whether such considerations should extend to "genetic erosion and associated loss of income and dislocation of traditional farmers and farm products." Delegations supported a paragraph encouraging research on socio-economic considerations and the exchange of the results of such research in order to clarify the subject. Other issues like "products thereof" are pending discussions on relevant articles. The entire article was bracketed.

ARTICLE 27 (LIABILITY AND REDRESS): This article contains four options: the zero option, the enabling clause, which would postpone the discussion to the first MOP or "as soon as practicable;" the substantive provision of liability imposing differing liability on the operator and the state of origin and establishing an



Emergency Compensation Fund; and the provision imposing fault-based liability on the Party of origin if the operator/exporter is unable to discharge its liability.

Several developed countries suggested deleting the article, especially since similar discussions in other fora have spanned decades. One noted the discussion's theoretical nature since the risks posed by LMOs are not comparable to oil spills and nuclear disasters. He further noted that LMOs would not be forced on importers and national legislation would apply after appropriate AIA and risk assessment. Another delegate preferred deletion, citing duplication with CBD Article 14.2 (impact assessment and minimizing adverse impacts). Some believed it could be dealt with as a matter of domestic product liability. Others said it should appear under "general principles" instead.

Most developing countries supported the substantive provision of liability, dismissing arguments of time and complexity. One delegate noted the absurdity of extended discussions on regulatory issues to ensure safety without considering the consequences of accidents. Delegates supported including, *inter alia*, state liability, civil liability, compensation fund and the prescription of liability. One delegate said that, in the absence of a general international law of liability, liability has to be tailor-made. Another noted that the existence of liability would ensure the exporter exercised caution in the AIA and exporting process.

SWG-II asked CG-II to discuss the issue. CG-II created a small group to clarify positions and reach agreement on text. After a series of deliberations, a consolidated text was presented to CG-II and sent to Plenary. The article is in brackets along with text on, *inter alia*, liable subject, nature of liability, extent of liability and necessity for and nature of the Emergency Compensation Fund.

ARTICLE 28 (FINANCIAL MECHANISM AND RESOURCES): This article seeks to establish the CBD financial mechanism as the financial mechanism for the protocol, and reference CBD Article 20 (Financial Resources) in considering financial resources under the Convention. The article notes the special needs of developing country Parties, in particular the least developed and small island developing States, with regard to capacity-building. Delegates in CG-II differed on the necessity for the financial mechanism to take into account the need for financial resources by developing countries for capacity-building, promotion of safe use of biotechnology, and development and implementation of programmes in the areas of risk assessment and management. This provision was bracketed. The reference to CBD Article 20 was also bracketed.

ARTICLE 29 (CONFERENCE OF THE PARTIES): This article states that the Conference of the Parties (COP) to the Convention shall serve as the Meeting of the Parties for the protocol. Parties to the Convention that are not Parties to the protocol may participate as observers, and any Bureau member of the COP that is not a Party to the protocol shall be substituted for by a member elected by the Parties to this protocol. CG-II revised this draft, which was adopted by the Plenary.

ARTICLE 30 (SUBSIDIARY BODIES AND MECHANISMS): This article states that any subsidiary body established under the Convention may serve the protocol; Parties to the Convention that are not Parties to the protocol may participate as observers at any such subsidiary body, and any member of the Bureau of the subsidiary body that is not a Party to the protocol shall be substituted. CG-II considered this draft, which was adopted by the Plenary.

ARTICLE 31 (SECRETARIAT): This article stipulates that the CBD Secretariat shall serve as the protocol's Secretariat; that the Secretariat functions defined in CBD Article 24.1 (Secretariat's Functions) shall apply *mutatis mutandis* to the protocol; and that the financial costs of Secretariat services for the protocol shall be met by Parties

to the protocol. The first MOP shall decide the necessary budgetary arrangements. CG-II removed brackets from text on financial arrangements, and the Plenary adopted it.

ARTICLE 32 (JURISDICTIONAL SCOPE): The draft text (UNEP/CBD/BSWG/5/Inf.1) coming into BSWG-5 noted that this article was deleted, and CG-II reiterated this recommendation. BSWG-5 agreed to delete it.

ARTICLE 33 (RELATIONSHIP WITH THE CONVENTION): This article states that CBD provisions relating to the protocol shall apply unless otherwise noted. A footnote states that delegates may want to revisit the article pending discussions relevant to issues such as settlement of disputes, adoption and amendment of annexes. CG-II forwarded this article unchanged to Plenary, which adopted it.

ARTICLE 34 (RELATIONSHIP WITH OTHER INTERNATIONAL CONVENTIONS): This article ensures that the protocol will not affect a Party's obligations under any existing international agreement to which it is also a Party. Initially considered by CG-II, a drafting group from SWG-II discussed this article in relation to Articles 23 (Non-Parties) and 24 (Non-discrimination). Delegates differed on the need for such a provision. Several developed countries supported the article in order not to compromise obligations in other fora. Several developing countries opposed its inclusion. Some of them stated that, if retained, the article should contain an exemption "where the exercise of those rights and obligations would cause serious damage or threat to biological diversity," which is consistent with CBD Article 22 (Relationship with Other International Conventions). One delegation proposed changing language in the exemption from "would" to "could reasonably be considered to," although several delegations objected, noting inconsistency with CBD language. Several developing countries requested deletion of the exemption, which was retained in brackets using the CBD language. Delegates deleted text regarding the timing of this provision's entry into force. Delegates also considered Article 11 (Multilateral, Bilateral and Regional Agreements [or Arrangements] [Other than the Protocol]) forwarded by SWG-I. Most delegates noted that Article 11 dealt with agreements to facilitate the Protocol's implementation and was more relevant to Article 23 (Non-Parties) than the present clause. The entire article remains in brackets, as well as internal language on the exemption.

ARTICLE 35 (MONITORING AND REPORTING): This article requires each Party to monitor implementation of its obligations and to report to the MOP at intervals to be determined by the MOP. CG-II removed brackets and deleted language on the establishment of systems for reporting. The article was adopted with no outstanding issues.

ARTICLE 35 BIS (COMPLIANCE): This article provides for the first Meeting of the Parties to consider and approve procedures and institutional mechanisms to promote compliance and address non-compliance, which shall be separate from and without prejudice to CBD Article 27 (Settlement of Disputes). Delegates in CG-II differed on the article's relevance, and it was bracketed.

ARTICLE 36 (ASSESSMENT AND REVIEW OF THIS PROTOCOL): This article provides for an evaluation by the MOP of the protocol's effectiveness. Most delegates supported the article, particularly an option providing for the MOP's evaluation. A few countries favored the MOP's evaluation three years after the protocol's entry into force and at least every six years thereafter, but others favored five years for both. Some supported an option for the Parties' assessment of the protocol's procedures and annexes based on available scientific, environmental and technical information and a panel of experts' conclusions, provided the panel of experts was not completely responsible for the assessment. Another country supported the option only if the reference remained. A few countries supported either option. Several delegates noted the article complements Article 29



(COP) as it establishes precise time limits for review. A drafting group merged the two options, maintaining the first option but adding text on the assessment of the protocol's procedures and annexes.

Many supported the MOP's evaluation either three or five years after entry into force; "five" remains in brackets. Brackets were inserted around "and at least every five years thereafter." Delegates agreed on an evaluation of the effectiveness of this protocol including an assessment of the procedures and annexes.

ARTICLE 37 (SIGNATURE): This article states the dates and locations that the protocol will be open for signature. Dates and initial location for signature are still to be included. CG-II forwarded this without change to the Plenary, which adopted it.

ARTICLE 38 (RATIFICATION, ACCEPTANCE OR APPROVAL): The draft text (UNEP/CBD/BSWG/5/Inf.1) coming into BSWG-5 noted that this article was deleted, and CG-II reiterated this recommendation. Delegates agreed to delete it.

ARTICLE 39 (ACCESSION): The draft text (UNEP/CBD/BSWG/5/Inf.1) coming into BSWG-5 noted that this article was deleted, and CG-II reiterated this recommendation. Delegates agreed to delete it.

ARTICLE 40 (ENTRY INTO FORCE): This article indicates when the protocol shall enter into force based on a specific number of instruments of ratification, acceptance, approval or accession. The protocol shall enter into force for a Party that ratifies, accepts or approves this protocol after it enters into force or the 90th day after the ratification is deposited, whichever is later. This article contains one bracketed section regarding the number of ratifications, acceptances, approvals or accessions necessary before the protocol will enter into force. Delegates adopted the bracketed text, as forwarded from BSWG-4 and recommended by CG-II.

ARTICLE 41 (RESERVATIONS): This article states that no reservations will be made under the protocol. Delegates bracketed the article, indicating disagreement on the necessity for the provision.

ARTICLE 42 (WITHDRAWAL): This article notes that a Party may withdraw from the protocol any time after two years from the date on which the protocol has entered into force and that such withdrawal shall take place one year after receipt of notification, or later if specified. Delegates adopted this article.

ARTICLE 43 (AUTHENTIC TEXTS): This article indicates that the original of the protocol, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the UN Secretary-General. Delegates adopted this text.

ANNEXES: CG-I elaborated two annexes, the first titled "Information Required in Notification for AIA" and the second, "Risk Assessment." Consideration of the annexes began with an evaluation of which of the 19 annexes forwarded by BSWG-4 in document UNEP/CBD/BSWG/5/Inf.1 were likely to be included in the protocol. Delegates overwhelmingly supported Annexes I (Information Required in Notification for AIA) and II (Risk Assessment). Seven additional proposed annexes received some support: information required in the notification of transboundary movement/transfer; LMOs not likely to have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risk to human health; risk management; contained use of an LMO; information required for unintentional release/transboundary movement; cases of explicit consent; and LMOs to be exempted from the AIA procedure. Several delegates said proposed annexes on "LMOs not likely to have adverse effects," "LMOs to be exempted from AIA procedure" and/or "cases of explicit consent" were not appropriate for the protocol. SWG-I asked CG-I to elaborate Annexes I and II into as clean a text as possible. The list of 19 annexes will be forwarded to BSWG-6. CG-I may elaborate additional annexes addressing informa-

tion for notification of transit, contained use and LMOs not to be included for AIA. The final list of annexes is not expected to exceed four.

Annex I contains 15 sub-paragraphs, each specifying a different element of information to be provided in notification, including:

- name and identity of the LMO;
- name, address and contact details of the [exporter][applicant] and [importer][receiving company/institution/individual];
- intended date of transboundary movement;
- the taxonomic status, common name, point of collection and characteristics of the recipient or parental organism and donor organism;
- the center of origin of the recipient and/or parental organism;
- description of the nucleic acid or the modification introduced, the technique used and the resulting characteristics of the LMO;
- the intended use and quantity or volume of the LMO;
- [a known and available risk assessment report];
- suggested methods for [safe handling, storage, transport and use, including packaging, labelling, documentation, disposal and contingency procedures];
- regulatory status within the exporting State;
- [the result of any notification to other governments by the [exporter][applicant] regarding the LMO]; and
- a [declaration] that the information is factually correct.

As drafted by CG-I, Annex II contains a framework structure, outlining the objective, use, general principles and methodology of risk assessment. Discussions are expected to continue at BSWG-6, particularly on elaborating the technical and scientific details that should be taken into account in risk assessment. These details focus on: the characteristics of the recipient or parental organism(s), donor organism(s), vector, inserts and LMO; information relating to intended use; the receiving environment; resuscitated organism; safety considerations for human and animal health; and socio-economic considerations. Further discussion will be based on UNEP/CBD/BSWG/5/Inf.1 and UNEP/CBD/BSWG/5/2.

CLOSING PLENARY

Delegates met on Thursday evening, 27 August, to adopt some elements of the final report and hear a statement by Colombia, host of BSWG-6. BSWG Chair Veit Koester invited delegates to consider UNEP/CBD/BSWG/5/L.1 (Draft Report of BSWG-5) for adoption. Delegates also deleted text indicating that they had decided to discuss "and negotiate" LMOs and products thereof, as it presumed agreement to negotiate inclusion of "products thereof."

Colombia, as host government of BSWG-6, emphasized the precautionary principle and expressed concern over the little known impacts of LMOs on biodiversity-rich countries, especially when science has focused primarily on their impacts in more homogenous agricultural conditions. She said it would be a misnomer to call this a biosafety protocol if it simply serves as a mechanism for information exchange and if it unfairly burdens importing over exporting countries. She expressed Colombia's commitment to an effective protocol balancing the CBD's objectives and the COP's mandate.

Chair Koester opened the final Plenary at 12:30 pm on Friday, 28 August. He invited delegates to consider the conclusions of the work of the Sub-Working Groups and Contact Groups, as contained in UNEP/CBD/BSWG/5/L.1/Add.1. He asked the Groups' Co-Chairs to introduce their respective work.

SWG-I Co-Chairs Sandra Wint and Eric Schoonejans presented the articles considered by the Sub-Working Group and highlighted outstanding issues. On scope, more discussion is required on "products thereof," socio-economic impacts, the question of exemptions, and handling and use of LMOs. Questions regarding notification include who triggers the notification and where the responsibility for informa-



tion provided lies. Issues related to lack of acknowledgement of receipt and the link between decision procedure for AIA and risk assessment must be clarified. Finally, delegates reached no consensus on, *inter alia*, whether to retain the article on multilateral, bilateral and regional agreements, types of information necessary and responsibility for carrying out risk assessment, and phase out of certain LMOs. Delegates offered editorial amendments and changes to reflect SWG-I's deliberations and the report on these articles was adopted.

CG-I Co-Chairs Piet van der Meer and Gert Willemse then introduced the results of the group's deliberations on the definition of LMOs, "products thereof," and the annexes. The group developed definitions of LMO, living organism and modern biotechnology. The question of cell fusion techniques remains under discussion under the definition of modern biotechnology. With regard to "products thereof" CG-I identified four types of LMO transboundary movement and discussed which the protocol would cover. Their discussion focused on the impacts on human health. Van der Meer said a Norwegian proposal may provide the basis for further discussion during BSWG-6. That proposal notes that, while the transboundary movement of processed products containing dead modified organisms and/or non-living components of LMOs does not fall under the protocol's scope, CG-I recommends that there be a provision to make relevant information available through the Biosafety CH.

CG-I also discussed the two annexes, the first on information required in notification for AIA and the second on risk assessment. Co-Chair Willemse said the second was a framework structure and discussions would continue in Cartagena, particularly on elaborating the technical and scientific details that should be taken into account in risk assessment. Other annexes that may be elaborated address information for notification of transit, contained use and LMOs not to be included for AIA.

During discussion of CG-I's work, Ethiopia said the final resolution of "products thereof" might be linked with the definitions (Article 2) and bracketed the definitions to leave that option open. Australia said the definitions represented a major achievement of BSWG-5 and suggested using a footnote to indicate Ethiopia's concern. Co-Chair van der Meer said brackets would suggest that the scientific content of the definitions was under debate and supported Koester's suggestion to title them "working definitions." Ethiopia insisted on bracketing the text. Koester said he enjoyed attending CG-I and "watching the engagement of people who probably understand what they are dealing with." The Plenary adopted CG-I's work.

Co-Chair Amarjeet Ahuja introduced SWG-II's work on Articles 1, 1 *bis*, 15-27 and 34. She highlighted the following key issues that need to be resolved at BSWG-6: notification of unintentional transboundary movement; labelling; national standards for handling, transport, packaging and labelling; confidential information; relationship of the protocol with other international agreements; States' sovereignty over their territorial sea; trade with non-Parties; illegal traffic; and socio-economic considerations. Canada proposed adding a footnote to Article 17 (Handling, Transport, Packaging [and Labelling]) that would indicate a linkage between information on LMOs and the AIA procedure. He later withdrew this proposal, but asked that it be reflected in the report.

CG-II Co-Chair John Ashe presented the articles discussed by the Contact Group. He reminded delegates that an earlier Plenary had already adopted several articles. He also highlighted the articles and issues that remain to be resolved. Parties felt it premature to discuss the Preamble without a clear picture of the whole protocol. He said the submissions made by various governments would be included in the revised Preamble text considered at BSWG-6. On Article 27 (Liability and Redress) after several deliberations, a small group produced a consolidated text preserving all earlier options and creating a new one. On Article 28 (Financial Mechanism and Resources) he noted that a

consolidated text had been produced pending discussion on one paragraph and the right to reopen another paragraph. At the request of Mauritius the latter paragraph was bracketed. On Articles 35 *bis* (Compliance) and 41 (Reservations), the Co-Chair reported that no fundamental disagreement existed on content, but delegates had not agreed whether or not to delete them.

Koester then discussed the preparations for BSWG-6. He urged delegates not to open discussions on unbracketed text. He said all articles would be renumbered, and all articles provisionally adopted and not revisited in the Plenary will be identified as such in the document. He reminded the delegates that work would not end once the protocol was adopted. Delegates would need to consider recommendations to forward to the extraordinary COP. He said the extraordinary COP must consider "interim arrangements," for which the Secretariat would prepare proposals. He outlined the type of issues the working group would need to consider, including the adoption of an enabling decision up to 1 March, the establishment of an intergovernmental committee, election of the Bureau's chairs, adoption of the programme of work and provisions for a supplemental budget.

Koester then discussed the anticipated organization of BSWG-6. The Sub-Working and Contact Groups, Co-Chairs and mandates will remain the same. The session will most likely start with a Plenary on Sunday, 14 February 1999, after which BSWG-6 "will go on and on." An extraordinary COP is scheduled for 22-23 February. Koester noted that BSWG-5 had reduced the size of the document by 50 percent, but that was no reason to be overly optimistic. He said the last two weeks could be considered a vacation compared with what must be done in Colombia. He offered his personal opinion that delegates would be regretful if they did not use this last chance to complete the protocol on biosafety, and encouraged delegations to secure as flexible a mandate as possible for BSWG-6.

Austria, on behalf of the EU, said BSWG-5's discussions helped identify key issues to be discussed further and deepened delegates' understanding of those issues. He said the last meeting should attract the broadest possible participation. Argentina, on behalf of the Latin American and Caribbean Group, said they have and will continue to contribute to efforts to develop the protocol. As this appeared to be the last BSWG in Canada, he thanked Canada, Quebec and Montreal. He also thanked outgoing Executive Secretary Calestous Juma. Japan paid tribute to Chair Koester and expressed concern about developing an understanding of and publicizing the biosafety issue.

The Third World Network, on behalf of a number of NGOs, noted that this has been the most open process in the international system for civil society participation. She said the protocol's primary objective should be safety, not trade, and stressed the precautionary principle. She reiterated the call for a global moratorium on the transboundary movement of LMOs until the protocol is in place.

BioteCanada, on behalf of an international industrial consortium, noted industry's support for a protocol that ensures that transboundary LMO movement does not result in adverse impacts on conservation of biological diversity. He said energy should be concentrated where scientific research shows the potential for adverse impacts on biodiversity. He also noted industry's support for capacity-building. He said industry looks forward to continuing the dialogue on biosafety and will provide information on product development, technical issues and trade matters.

At the close of the Plenary, a number of delegations recalled their work with Executive Secretary Calestous Juma and bid him farewell. Speakers included BSWG Chair Koester, Austria, on behalf of the EU, Antigua and Barbuda, Ethiopia, Canada, the Philippines, India, Zambia, Norway, Kenya and Hamdallah Zedan of UNEP. Ethiopia expressed sadness at his departure but welcomed him back home to Africa. Zambia, on behalf of the African Group, expressed concern that its region was losing another voice in international sustainable



development fora, given the recent departure of Ruben Olembo, former Deputy Executive Director of UNEP. Executive Secretary Juma said he will continue to contribute to the CBD process, and the best farewell gift that BSWG delegates could give him would be the successful completion of the protocol.

BSWG-5 concluded its work at 3:45 pm.

A BRIEF ANALYSIS OF BSWG-5

At the outset of the meeting Chair Veit Koester outlined the fundamental objective of BSWG-5: to reduce each article to a single option. Looking at the final decisions, one could say this meeting was a success; the text is 50 percent shorter and appears to contain one option for each article. But closer evaluation reveals that the options still remain, in the form of brackets. While some might criticize this *trompe l'oeil* as superficial, the fact that delegates condensed the multitude of options and thus clarified the choices they must make represents a standard step in the negotiating process and will certainly facilitate discussions in capitals between now and February 1999. It goes without saying that the process will come to a head in Cartagena where delegates will no longer have the space and time to rephrase options or play with brackets. Instead they will have to make political concessions on issues of definite national and regional interest with implications for both biodiversity and trade. These background struggles started coming to light at BSWG-5 and are only a hint of what is to come.

THE LONG AND WINDING ROAD: Dynamics within the Biosafety Working Group have given rise to a range of regional and interest groups and negotiating tactics. The host of characters included faces, new and old, among them Miami Plus, Valdivia, Cairns, G-77/China, GRULAC, WEOG, the African Group, Asian Group, Central and Eastern European countries, JUSCANZ, and industry, as well as an increasing number of lawyers and trade specialists. Part of the rise in new groups was due to continuing splits in some traditional negotiating groups. Divisions in the G-77/China first apparent at BSWG-3 continued at BSWG-5, as did definite differences between GRULAC and other G-77/China countries and within GRULAC itself. Such divisions among the developing world with its differing levels of economic development and biotechnological capacity are by no means clear and tend to shift according to the issue at hand (e.g., capacity-building, liability, confidential information). Negotiations in Cartagena will not simply be a tit-for-tat between two sides; a panoply of interests and demands complicates the bargaining picture and analysis of where trade-offs may lie.

At this meeting, more delegates voiced absolutist positions on the floor to the tune that "my government cannot accept." While certainly an element of posturing, such language threatens the congenial level of negotiation, as reflected in a late Plenary session where delegates debated whether they had "discussed" or "negotiated" the issue of "products thereof." Rumors circulated throughout the second week about possible pull-outs from the talks on a number of sides. Such signs indicate that the gloves are starting to come off as hard-ball politics begin. It was still unclear, however, if the groups had convinced each other of their mutual interests in a successful outcome. With some proclaiming on their lapel buttons "No Liability, No Protocol" and others talking as though they would not be a major beneficiary of the protocol, it is evident that the debate has not been framed in terms of mutually beneficial outcomes, let alone salient solutions. Some began saying that the final document would, in the end, be a face saving exercise reflecting the lowest common denominator. Numerous bilateral meetings between regional groups presumably moved delegates closer to understanding each other's needs and the way forward, but the discussion on the floor of the Sub-Working Groups did not indicate that any side was ready to budge from their firmly stated positions.

Many delegates are comparing the pace of deliberations to other processes, such as the negotiation of the CBD and the Kyoto Protocol. From this perspective, many state that the tempo and level of bracketed text seem to be on par. One fundamental question remains as to how much difference a final meeting of one week, as opposed to two, will make. Many have commented on inconsistencies and irregularities in the final text of the Kyoto Protocol, which alludes to the tension between finishing this protocol on time and negotiating a consistent and coherent agreement. Bargaining will have to commence from the start, especially as some delegates have observed that superficial discussions tend to expand to fill the maximum time allotted before making crucial concessions. Despite Koester's statements at BSWG-4 that negotiations had begun, some participants stated that BSWG-5 had not negotiated, but rather clarified positions.

DESTINATION CARTAGENA: Greater progress was made at BSWG-5 on the protocol's procedures than the more basic issues of scope, liability, socio-economic considerations and trade issues. With AIA and notification discussions moving along, central questions emerged on distributing burdens and responsibilities between importers and exporters. But the breadth and implications for such a mechanism are the core issues still to be defined. Discussions on scope and "products thereof" highlight that delegates still vary widely in terms of the "what" that they are actually negotiating about. While some delegates continually asserted that the protocol was not related to trade, its implications for transport of commercial products and provision of proprietary information cannot be ignored. While such discussions circled mainly around the retention or deletion of articles on non-confidential information, trade with non-Parties and relations with other agreements, larger questions remain in terms of how this protocol will relate to the WTO. Even the issues of liability, redress and socio-economic considerations return to the issue of trade and economic interests/penalties.

The provision on liability and redress was perhaps the most hotly debated issue at BSWG-5. Liability traditionally has not been a central feature of most multilateral environmental agreements, and Parties have largely depended on moral suasion and publicity to enforce obligations. Despite the lack of a precedent, from the start of negotiations most developing countries have supported such a provision and at BSWG-5 their position took on near militancy. Deliberations, if anything, merely helped both the developed and developing countries consolidate and strengthen their respective polarized positions. While discussions were plentiful, negotiations on this issue were minimal. Both sides had clear and vocal reasons for their position. Developing countries stressed uncertainty as to the risks along with the polluter pays and precautionary principles. Developed countries traced their reluctance to assume liability for uncertain risks, potentially huge damage and lack of foreseeability in damage, and ambiguity as to methods of assessing and proving damage. One not-so-vocal reason for the contentious nature of this issue may have been its linkage with the trade issue. Some developing countries believe that, with the proliferation of trade rules, the option for countries with limited scientific and technological capabilities to refuse imports of new technologies or products is limited. The existence of liability provisions would provide some reassurance that redress will be available should the imported technology cause damage.

The interlinkage between trade and environment within the protocol was another contentious issue. Trade issues surfaced in discussions on various articles other than the obvious ones, Article 17 (Handling, Transport, Packaging [and Labelling]) and Article 1 *bis* (General Obligations) among them. Former US President Jimmy Carter's well-timed pro-biotrade op-ed in the *New York Times* (26 August 1998) also raised the profile of trade issues, and could create new interest in the BSWG in national capitals. As with liability, there was minimal, actual negotiation on the trade issue. Hardline positions



were taken and a clear rift appeared between developing and developed countries. Some developing country delegates believed the interest in trade and the desire to attain unfettered access to the markets of developing economies may provide the only incentive for the developed countries to negotiate this protocol. Some even expressed suspicions that the developed countries were attempting to use this protocol to bring non-Parties to the WTO within the multilateral trade regime.

Delegates raised questions throughout the session regarding the protocol's role as an information exchange mechanism to facilitate biotrade or an instrument to regulate safety in transport and application consistent with the precautionary principle. Additionally, one delegate inquired whether the protocol will simply reflect the existing level of knowledge and practices in international law, or if it would be a more innovative instrument capable of handling future unknowns and addressing a range of social and economic concerns. Such fundamental differences raise the question of what incentives, as well as points of leverage, different groups have. Many developing countries have an interest in securing capacity-building and financial resources along with compensatory guarantees through liability and socio-economic considerations. For many developed countries the key point is a negative: that any mechanism created not pose an undue constraint on trade, and in some cases the protocol could even facilitate trade through increased confidence and security in the trade of LMOs. Recalling the circumstances around the protocol's inception and its initial association with the CBD's benefit-sharing provision, one has to wonder to which side the balance tips regarding need for and interest in a protocol.

BIOSAFETY AND BEYOND: All participants recognize that Cartagena will not be an easy meeting, and many have conjectured what the points of compromise will be, whether within the protocol itself or possible concessions within the CBD or other fora. With the range of actors and issues, the trade-offs are not as apparent as in Kyoto where percentage points of emissions reduction were obvious bargaining chips. A few delegates noted that with BSWG-5's consolidated text it will be easier for capitals to digest and fully understand the protocol's implications. Additionally, with the final meeting the level of political authority and interest in delegations will rise, and many expect increased presence of ministries heretofore less active.

Looking beyond the protocol, there have been musings as to how it will negatively impact the CBD as an instrument. A protocol with strong provisions may increase the costs both in time and money of implementing a legal regime and could have an impact on the number of countries willing to ratify. A protocol with weaker, ambiguous provisions may not provide the inspiration to draw more signatories but may not push the envelope for biodiversity conservation and sustainable use. Finding the balance between these two extremes is essential to guarantee a Cartagena Protocol that accommodates and engages the broader international community.

THINGS TO LOOK FOR BEFORE BSWG-6

46TH ANNUAL CONFERENCE OF THE SOCIETY FOR MEDICINAL PLANT RESEARCH: This meeting will be held from 31 August-3 September 1998 in Vienna, Austria. For more information contact: Dr. W. Kubelka, Institute of Pharmacognosy, University of Vienna, Center of Pharmacy 14, A-1090 Vienna, Austria; tel: +43-1-31336-8067; fax: +43-1-31336-772; e-mail: Pharmacognosy@univie.ac.at

XV EUCARPIA GENERAL CONGRESS: The meeting "Genetics and Breeding for Crop Quality and Resistance" will be held 21-25 September 1998 in Viterbo, Italy. For information contact: Dr. Mario A. Pagnotta, XV Eucarpia Congress, University of Tuscia, Via S.C. de Lellis, 01100, Viterbo, Italy; fax: +39-761-357256; e-mail: eucarpia@unitus.it; Internet: <http://www.unitus.it/confsem/eucarpia/eu.html>

CONFERENCE ON GENETICALLY MODIFIED ORGANISMS IN NORDIC HABITATS-SUSTAINABLE USE OR LOSS OF DIVERSITY: This conference will be held from 1-2 October 1998 in Helsinki, Finland. For more information, contact: Marja Ruohonen-Lehto; tel: +358-9-4030-0541; e-mail: marja.ruohonen-lehto@vyh.fi

SECOND ANNUAL EUROPEAN BIOTECHNOLOGY BUSINESS CONFERENCE: This conference will be held from 27-30 October 1998 in Brussels, Belgium. For more information, contact: EuropaBio, Avenue de l'Armee 6, B-1040 Brussels, Belgium; tel: +32-2-735-0313; fax: +32-2-735-4960; e-mail: mail@europa-bio.be; Internet: <http://www.europa-bio.be>

MEETING OF A LIAISON GROUP OF EXPERTS ON AGRO-BIODIVERSITY: The meeting, to be convened by the CBD, is tentatively scheduled for October/November 1998. For more information, contact: CBD Secretariat, World Trade Center, 393 St. Jacques Street, Montreal, Quebec, Canada H2Y 1N9; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: chm@biodiv.org; Internet: <http://www.biodiv.org>

STRATEGIES AND TECHNOLOGIES FOR CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY IN WEST ASIA AND NORTH AFRICA LANDSCAPES: This meeting will be held from 7-12 November 1998 in Marsa Matrouh, Egypt. This international workshop is organized to focus on strategies and technologies for conservation and sustainable use of biological diversity in plant communities in the Middle East. For information, contact: IPGRI-WANA/CA; Regional Office, c/o ICARDA, P.O. Box 5466; Aleppo, Syria; e-mail: g.ayad@cgnet.com

BIO-INDUSTRY CHALLENGE: This meeting will be held from 10-12 November 1998 in Lyon, France. For more information, contact: Anthony Artuso; BIOTRADE Initiative, University of Charleston, 66 George Street, Charleston, SC 29424 USA; tel: +1-843-953-5825; fax: +1-843-953-8140; e-mail: artusoa@cofc.edu

SECOND ASIA-PACIFIC CONFERENCE ON BIOTECHNOLOGY: This meeting will be held from 23-27 November 1998 in Perth, Western Australia (WA). This conference will discuss the application of new biotechnologies to basic scientific and conservation issues. For more information, contact: Biodiversity, Biotechnology & Biobusiness, Congress West Pty. Ltd. PO Box 1248, West Perth WA 6872, Australia; fax: +61-8-9322-17341; e-mail: biodiversity@science.murdoch.edu.au

SIXTH EXTRAORDINARY SESSION OF THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE: The Sixth Extraordinary Session for the revision of the International Undertaking will be held in the latter part of 1998 at FAO Headquarters in Rome. For more information, contact: FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy; tel: +39-6-52251; fax: +39-6-52253152; Internet: <http://www.fao.org> or <http://web.icppgr.fao.org>

SIXTH SESSION OF THE OPEN-ENDED AD HOC WORKING GROUP ON A BIOSAFETY PROTOCOL: This meeting is tentatively scheduled for 14-19 February 1999 in Cartagena, Colombia. For more information, contact: CBD Secretariat; World Trade Center, 393 St. Jacques Street, Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: chm@biodiv.org; Internet: <http://www.biodiv.org>

EXTRAORDINARY MEETING OF THE CONFERENCE OF PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY: This meeting will be held from 22-23 February 1999 in Cartagena, Colombia. For more information, contact the CBD Secretariat.