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WORKSHOP OF THE NETWORK OF LABORATORIES FOR THE DETECTION AND IDENTIFICATION OF LIVING MODIFIED ORGANISMS Ispra, Italy, 9-11 June 2015

REPORT OF THE WORKSHOP OF THE NETWORK OF LABORATORIES FOR THE DETECTION AND IDENTIFICATION OF LIVING MODIFIED ORGANISMS

BACKGROUND

- 1. In its decision BS-V/9, the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety (COP-MOP) established an electronic network of laboratories with a view to bringing together representatives of laboratories involved in the detection of living modified organisms (LMOs). Furthermore, COP-MOP requested the network to carry out online discussion forums and workshops to exchange information and experience on the implementation of relevant standards and methods involved in the detection and identification of LMOs.
- 2. In decision BS-V/16, COP-MOP adopted the Strategic Plan for Implementation of the Cartagena Protocol. Under its operational objectives 1.6, 1.8 and 2.3, the Strategic Plan sets out outcomes related to the detection and identification of LMOs.¹
- 3. In response to the above decisions, the Network of Laboratories for the Detection and Identification of Living Modified Organisms developed a set of Technical Tools and Guidance² to assist countries in fulfilling their obligations under the Protocol relating to the detection and identification of LMOs and achieving the relevant outcomes of the Strategic Plan.
- 4. At its seventh meeting, COP-MOP reiterated the importance of the detection and identification of LMOs in the implementation of the Protocol by, among other things, requesting the Network of Laboratories to continue its work with a view to assisting Parties in fulfilling the requirements under Article 17 and making progress towards the relevant outcomes of the Strategic Plan.
- 5. Furthermore, the Parties also requested the Executive Secretary to organize, in cooperation with relevant organizations and subject to the availability of funds, capacity-building activities, such as online and face-to-face training workshops on sampling, detection and identification of LMOs.
- 6. In the light of these requests, the Secretariat organized a series of online discussions³ as a starting point for the implementation of the relevant elements of the decision.

¹ See http://bch.cbd.int/protocol/issues/cpb stplan txt.shtml.

² Available at http://bch.cbd.int/protocol/cpb detection/toolsandguidance.shtml.

³ See http://bch.cbd.int/onlineconferences/portal_detection/discussions.shtml.

Further to the online discussions and with financial support from the Government of Japan through the Japan Biodiversity Fund and in collaboration with the Institute for Health and Consumer Protection of the European Commission's Joint Research Centre, the Workshop of the Network of Laboratories for the Detection and Identification of Living Modified Organisms was held in Ispra, Italy, from 9 to 11 June 2015.

- 7. The specific objectives of the workshop were as follows:
- (a) To design the outline for capacity-building workshops on the detection and identification of living modified organisms;
- (b) To compile and develop, as appropriate, didactic material for the capacity-building activities referred to in paragraph (a) above;
- (c) To continue the development of technical tools and guidance as outlined in the operational objectives 1.6 and 1.8 of the Strategic Plan.
- 8. The workshop was attended by 23 participants from 21 Parties (Antigua and Barbuda, Belarus, Brazil, Colombia, Democratic Republic of the Congo, European Union, Fiji, Germany, India, Italy, Japan, Kenya, Lebanon, Malaysia, Mauritius, Mexico, New Zealand, Republic of Moldova, Slovenia, South Africa and Tunisia) as well as one observer from an organization (Global Industry Coalition). The list of participants is contained in annex I below.

ITEM 1. OPENING OF THE WORKSHOP

- 9. The workshop was opened by the head of the Molecular Biology and Genomics Unit of the European Commission's Joint Research Centre Institute for Health and Consumer Protection, Mr. Joachim Kreysa, at 9.30 a.m. on Tuesday, 9 June 2015.
- 10. In his remarks Mr. Kreysa welcomed the participants and the Secretariat, emphasizing the importance of effective training in the field of detection and identification of LMOs and the pivotal role that international and regional networks of detection and identification laboratories play in stimulating cooperation and information sharing among laboratories.
- 11. On behalf of Mr. Braulio Dias, Executive Secretary of the Convention on Biological Diversity, Mr. Charles Gbedemah also welcomed the participants to the workshop. He noted the importance of detection and identification of LMOs for the effective implementation of the Protocol, particularly in the context of articles 17 and 25 on unintentional and illegal transboundary movements, respectively.

ITEM 2. WORKSHOP OBJECTIVES AND EXPECTED OUTCOMES

12. After self-introductions by the participants, Mr. Gbedemah invited participants to consider and adopt the provisional agenda circulated by the Secretariat as document UNEP/CBD/BS/DI/WS/2015/1/1. The agenda was adopted without amendments.

ITEM 3. RELEVANT ISSUES AND RECENT DEVELOPMENTS UNDER THE CARTAGENA PROTOCOL ON BIOSAFETY

- 13. Under this agenda item, Mr. Gbedemah and Ms. Dina Abdelhakim of the Secretariat gave an overview of the Protocol's provisions and recent developments related to the detection and identification of LMOs, including:
- (a) Relevant articles of the Cartagena Protocol on Biosafety: Risk Assessment (Article 15), Risk Management (Article 16), Unintentional Transboundary Movements and Emergency Measures (Article 17), Handling, Transport, Packaging and Identification (Article 18), Information Sharing and the Biosafety Clearing-House (Article 20), and Illegal Transboundary Movements (Article 25);

- (b) Strategic Plan for the Cartagena Protocol on Biosafety for the period 2011-2020;⁴
- (c) Relevant decisions of the seventh meeting of COP-MOP;
- (d) Overview of the activities of the Network of Laboratories for the Detection and Identification of Living Modified Organisms.

ITEM 4. SUBSTANTIVE ISSUES

4.1. National capacities to detect and identify living modified organisms

- 14. Under this agenda item, activities took place with a view to discussing the current capacity of countries to appropriately detect and identify living modified organisms and sharing of perspectives on the needs and challenges faced by countries in the detection and identification of LMOs.
- 15. Four presentations were made by participants on focusing on their experience and the challenges in the development of capacity in the field of detection and identification of LMOs as well as an overview of regional considerations that need to be taken into account in the development and delivery of training workshops. Each presentation was followed by a brief question and answer period.
- 16. The presentations covered the following topics:⁵
- (a) LMO detection in Brazil: Status, challenges and future needs Ms. Sarah Agapito (Brazil);
- (b) Status of LMO detection in the Caribbean region Mr. Linroy Christian (Antigua and Barbuda);
- (c) Current status of LMO detection in the Democratic Republic of the Congo Mr. Freddy Bulubulu Otono (Democratic Republic of the Congo);
- (d) Current status of LMO detection in India and the Asian region Ms. Gurinder Randhawa (India).
- 17. In addition to the presentations focusing on national capacities, Mr. Ray Shillito of the Global Industry Coalition presented an overview of ongoing capacity-building workshops in the field of detection and identification of LMOs and highlighted the importance of information-sharing and coordination within the regions.
- 18. Finally, each participant was invited to a round-table discussion to highlight their experience and current activities in detection and identification of LMOs.

4.2. Designing the outline for capacity-building workshops on the detection and identification of living modified organisms

- 19. Under this agenda item, participants were invited to break out into four groups, each of which focused on one of the technical sections proposed in the draft outline of training material for capacity-building workshops on sampling, detection and identification of LMOs, specifically:
 - (a) Sampling and challenges to detect trace amounts of LMOs (Moderator: Lutz Grohmann);
- (b) Techniques for detection and identification (Moderators: Chris Viljoen, and Gretta Abou-Sleymane);
- (c) Introduction to the quality assurance/quality control standards (Moderator: Martha Graciela Rocha);

⁴ Decision BS-V/16, available at http://bch.cbd.int/protocol/issues/cpb stplan txt.shtml.

⁵ The presentations can be found at http://bch.cbd.int/protocol/cpb art18/laboratories/workshop 2014-2016.shtml.

- (d) Reporting (Moderator: Gurinder Randhawa).
- 20. Each group was invited to discuss the proposed content under each section of the draft outline of the training material and recommend additional content, including relevant references for didactic material that could be used to develop the final version of the training material.
- 21. Participants were also invited to make note of specific areas where the training material provides potential users with guidance and options on how to implement specific adaptations based on regional considerations.
- 22. Upon completion of their discussions, the moderator of each breakout group made a brief presentation, highlighting the major outcomes of each discussion. Each presentation was followed by a question-and-answer period.

4.3 Compiling and developing, as appropriate, didactic material for the capacity-building activities referred to in 4.2 above

- 23. In their discussion under the agenda item, participants agreed that, where possible, the training material would make use of existing resources to form the basis of the content of the training material. Participants also agreed that the inclusion of the key elements that were discussed in the breakout groups would provide the targeted audience with options on how to adapt the training to regional requirements.
- 24. Participants further agreed that, in moving forward with the development of the training material, the Secretariat would take the lead in drafting the narrative for each section, in consultation with relevant participants of the workshop and the Network, as appropriate, with a view to presenting an advance draft of the training material to the Parties at their eighth meeting.

4.4 Development of additional technical tools and guidance as outlined in the operational objectives 1.6 and 1.8 of the Strategic Plan for Implementation of the Cartagena Protocol on Biosafety

- (a) Development of additional easy-to-use and reliable technical tools and guidance for the detection of unauthorized LMOs
- 25. In introducing the discussion on the development of easy-to-use and reliable technical tools and guidance for the detection of unauthorized LMOs⁷ (under operational objective 1.6 of the Strategic Plan for the Protocol), a presentation was made by Ms. Dina Abdelhakim providing background information on work carried out prior to the seventh meeting of COP-MOP on the issue.
- 26. The presentation outlined the topics that had been selected for the development of technical tools and guidance prior to the seventh meeting of COP-MOP by the participants in the Workshop of the Network of Laboratories for the Detection and Identification of Living Modified Organisms held from 25 to 27 November 2013.
- 27. Ms. Abdelhakim also reminded the participants of the additional topics proposed by the previous workshop, which were to be compiled into the technical tools and guidance after the seventh meeting of COP-MOP, as appropriate (see annex II to the present report).
- 28. In considering the continued development of technical tools and guidance, participants in the workshop emphasized the importance of continuing the compilation on the basis of the topics that were proposed during the previous workshop.
- 29. Participants noted, however, in the light of the ongoing drafting of the training material for capacity-building workshops on sampling, detection and identification of LMOs, that it would be more

⁶ The presentations can be found at http://bch.cbd.int/protocol/cpb art18/laboratories/workshop 2014-2016.shtml.

⁷ The Technical Tools and Guidance can be found at http://bch.cbd.int/protocol/cpb detection/toolsandguidance.shtml.

efficient for the Network to focus on developing a thorough and comprehensive training material. The participants also noted that, in the process of drafting the training material, some of the topics proposed for the development of additional technical tools and guidance might be covered sufficiently in the training manual.

- 30. In their discussions, participants stressed that a more important priority for the technical tools and guidance would be to ensure the development of a mechanism to continually update the existing compilations and to improve the user interface of the Biosafety-Clearing House online format with the view to creating a searchable and indexed database that is more user friendly.
- 31. In moving forward, participants agreed that a decision on taking up the development of additional technical tools and guidance could be revisited at a later date once the training manual had been drafted to a more advanced stage.
 - (b) Drafting operational definitions for "unintentional transboundary movement" and "illegal transboundary movement"
- 32. In taking up discussions on the drafting of working definitions for the terms "unintentional transboundary movement" and "illegal transboundary movement", Ms. Manoela Miranda made a presentation summarizing the background on the agenda item and the emerging understanding over the course of the online discussions on this topic.
- 33. Following the presentation, participants were invited to take part in a round-table discussion aimed at providing further clarity on what constituted an "unintentional transboundary movement" and an "illegal transboundary movement". Participants discussed the various aspects of the two terms in the context of the Protocol and presented various scenarios of potential transboundary movements of LMOs to facilitate the conceptualization of the use of the two terms.
- 34. Taking into account the ideas generated during the round-table discussion and the amalgamated proposals for working definitions of "unintentional transboundary movement" and "illegal transboundary movement" forwarded to the meeting by the Network through its online discussions, the participants were invited to further refine the draft working definitions for consideration by the Compliance Committee at its thirteenth meeting.
- 35. The participants drafted the following proposals for operational definitions of the terms to be submitted for consideration by the Compliance Committee at its thirteenth meeting:
- (a) "Illegal transboundary movements" include the cross-border movements of LMOs that have not been approved for a particular use in the importing Party or that are carried out in contravention of any of the requirements specified in the relevant national legislation;
- (b) "Unintentional transboundary movements" are cross-border movements resulting from a deliberate or accidental release of an LMO in the country of origin that is not intended to be received by the receiving country.
 - (c) Recommendations to the Conference of the Parties serving as the meeting of the Parties to the Protocol
- 36. Under the agenda item, participants were invited to propose recommendations, including future actions to facilitate the implementation of activities relating to the detection and identification of LMOs, for consideration by the Conference of the Parties serving as the meeting of the Parties to the Protocol at its eighth meeting. Participants agreed on the following recommendations that the Parties might wish to consider at their eighth meeting:
- (a) Invite Parties and other Governments to provide information regarding their capacity and needs in the detection and identification of LMOs, including a list of laboratories and their specific activities;

- (b) Encourage Parties to establish effective mechanisms to support the workflow for sampling, detection and identification by, for example, providing border control officials and laboratories with the appropriate mandates to sample, detect and identify LMOs, ensuring that laboratories remain functional and that they receive high-quality test samples;
- (c) Encourage Parties to support regional and subregional LMO detection networks and, subject to the availability of funds, provide the networks with opportunities to host meetings;
- (d) Encourage Parties to nominate experts in the field of LMO detection and identification to the roster of biosafety experts;
- (e) Encourage Parties, with a view to facilitating the identification of LMOs, to submit to the Biosafety Clearing-house information on methods of detection and identification;
 - (f) Request the Executive Secretary:
 - (i) To continue organizing online discussions through the Network of Laboratories focusing on the detection and identification of LMOs;
 - (ii) To convene, in cooperation with relevant organizations, subject to the availability of funds, regional and subregional capacity-building activities, such as online training and face-to-face meeting/workshops in the fields of sampling, detection and identification of LMOs;
 - (iii) To improve the user interface of the Technical Tools and Guidance for the Detection and Identification of LMOs with a view to creating a searchable and indexed database;
 - (iv) To establish a mechanism for regularly updating the Technical Tools and Guidance for the Detection and Identification of LMOs;
 - (v) To establish a mechanism for regularly updating the training material for capacity-building workshops on sampling, detection and identification of LMOs.

ITEM 5. OTHER MATTERS

37. Participants expressed appreciation to the Government of Japan for its financial support to the workshop through the Japan Biodiversity Fund. They also extended their gratitude to the Joint Research Centre for hosting the workshop and to the Secretariat for organizing it.

ITEM 6. ADOPTION OF THE REPORT OF THE WORKSHOP

38. A draft report was circulated online among the workshop participants for their comments for a period of one week. The Secretariat incorporated the necessary amendments into the final version of the present report.

ITEM 7. CLOSURE OF THE WORKSHOP

39. The workshop drew to a close at 5:10 p.m. on Thursday, 11 June 2015.

Annex I

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Annex II

TOPICS SELECTED FOR THE COMPILATION OF TECHNICAL TOOLS AND GUIDANCE⁸

Topics pertaining to laboratory testing and analysis:

- Criteria for the selection of detection methods based on a Party's national needs (including decision trees or checklists of possible strategies at different levels of detection requirements, i.e., presence, identification or quantification);
- Minimum requirements for detection laboratories according to their attributions, level of responsibility, handling of samples (quality system and proficiency testing);
- Access to and availability of reliable reference materials;
- Selecting laboratories and assessing their competences;
- Steps to be taken for screening and/or identification (including the screening of landraces);
- How to interpret the results of matrix screening.

Topics pertaining to setting up supporting systems ("pre-detection"):

- Setting up sampling strategies;
- Setting up a monitoring system (how to monitor for unauthorized LMOs, how to establish a surveillance programme for unauthorized LMOs, including landraces);
- Setting up an inspection system;
- How to implement national enforcement;
- Setting up a rapid alert system among laboratories within a region/network.

⁸ These topics were selected during the Workshop of the Network of Laboratories for the Detection and Identification of Living Modified Organisms held in Ispra, Italy, from 25-27 November 2013, for the compilation of tools and guidance following the seventh meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol.