UNEP

CBD

Distr.
GENERAL

UNEP/CBD/BS/WS-TTID-LAC/1/2
13 April 2010

ORIGINAL: ENGLISH

Convention on Biological Diversity

LATIN AMERICAN AND CARIBBEAN REGIONAL TRAINING OF TRAINERS WORKSHOP ON THE IDENTIFICATION AND DOCUMENTATION OF LIVING MODIFIED ORGANISMS
Mexico City, 23-27 November 2009

REPORT OF THE WORKSHOP

INTRODUCTION

1. The Latin American and Caribbean Regional Training of Trainers Workshop on the Identification and Documentation of Living Modified Organisms was held in Mexico City from 23 to 27 November 2009. The workshop was hosted by the Government of Mexico at the Universidad Nacional Autónoma de México (UNAM) in collaboration with the Inter-American Institute for Cooperation on Agriculture (IICA). The participation of developing-country participants was funded by the Government of Spain.

2. The workshop was attended by 34 participants from 19 countries and three organizations.

3. The following countries were represented: Bahamas, Belize, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Honduras, Mexico, Panama, Saint Kitts and Nevis, Saint Lucia, Trinidad and Tobago, Uruguay and Venezuela.

4. The following organizations were represented: International Maize and Wheat Improvement Center (CIMMYT), the Inter-American Institute for Cooperation on Agriculture (IICA), and the Universidad Autónoma Metropolitana.

5. Seven resource persons from the following organizations facilitated the workshop: the National Centre for Environmental Research and Training, the International Grain Trade Coalition, the Universidad Nacional Autónoma de México (UNAM), and the Secretariat of the Convention on Biological Diversity (CBD).

6. The objective of the workshop was to introduce customs officers and related border-control officials to:

(a) The Cartagena Protocol on Biosafety and its requirements regarding the identification and documentation of LMOs and their role in enforcing those requirements;

(b) Techniques and methodologies that may be used for the implementation of the above requirements, in particular the sampling of shipments and the detection of living modified organisms; and

(c) Activities and experiences of the Green Customs Initiative.

/…

ITEM I. OPENING OF THE WORKSHOP

7. The workshop was officially opened by Mr. Reynaldo Ariel Alvarez Morales, the Executive Secretary of the Comisión Intersecretarial de Bioseguridad de los Organismos Genéticamente Modificados. Mr. Alvarez thanked the Government of Spain for the financial contribution towards the workshop. He also thanked IICA, UNAM and the Secretariat of the Convention on Biological Diversity for their contributions to the organization of the workshop. He gave special thanks to Ms. Amanda Galvez Mariscal for hosting the workshop at UNAM. He invited participants to discuss and share experiences regarding the implementation of the Protocol, including the requirements for documentation that must accompany transboundary shipments of LMOs. He noted that this workshop would set the basis for similar meetings in the future. He emphasized that since the member countries of GRULAC have common needs, they can learn a lot from one another and achieve a great deal if they work together as a region. Mr. Alvarez wished the participants fruitful discussions and a good stay in Mexico.

8. Mr. Gino Buzetti, IICA Representative in Mexico, noted that the workshop was very important for IICA. He highlighted the importance of biotechnology and biosafety in the region and the need for cooperation. He invited participants to take advantage of the opportunity to exchange information and experiences, to learn from one another and to enjoy Mexico.

9. Mr. Charles Gbedemah, in the opening remarks delivered on behalf of Mr. Ahmed Djoghlaf, the Executive Secretary of the Secretariat of the Convention on Biological Diversity (CBD), noted that this was the second in a series of workshops being organized by the Secretariat in response to a number of decisions of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety that called for capacity-building on Article 18. He said that those workshops were also being conducted as part of the Secretariat's involvement in the Green Customs Initiative. Mr. Gbedemah outlined the expected outcomes of the workshop and urged the participants to freely share and learn from each others' experiences. He thanked the Government of Spain for its generous financial contribution to the workshop, IICA for its collaboration in the organization of the workshop, the Government of Mexico for hosting the workshop and UNAM for providing the facilities and logistical arrangements.

ITEM 2. OBJECTIVES AND PROGRAMME FOR THE WORKSHOP

10. Ms. Kathryn Garforth of the Secretariat of the Convention on Biological Diversity introduced the objectives for the workshop and provided an overview of the programme for the workshop. She invited participants to make brief statements about their expectations for the workshop.

ITEM 3. INTRODUCTION TO THE PROTOCOL AND ITS ELEMENTS RELATING TO THE IDENTIFICATION AND DOCUMENTATION REQUIREMENTS FOR SHIPMENTS OF LIVING MODIFIED ORGANISMS

11. Two presentations were made under this item. The first one, entitled "Introduction the Cartagena Protocol on Biosafety" was made by Mr. Erie Tamale of the Secretariat of the Convention on Biological Diversity. Mr. Tamale provided brief background information on the Protocol and its relationship with the Convention on Biological Diversity and other international instruments that deal with living modified organisms. He described the objective of the Protocol and its scope, the different categories of living modified organisms under the Protocol, the different procedures for the transboundary movement of different categories of living modified organisms and other provisions of the Protocol intended to foster the safe transfer, handling and use of living modified organisms.

12. The second presentation, entitled "Cartagena Protocol on Biosafety: Identification and Documentation of Shipments of Living Modified Organisms", was delivered by Ms. Kathryn Garforth of the Secretariat of the Convention on Biological Diversity. In her presentation, Ms. Garforth noted that the requirements for the handling, transport, packaging and identification of living modified organisms were set out in Article 18 of the Protocol and she provided some introduction and context to the Article. She described the main types of transboundary movements of living modified organisms under the Protocol:

intentional, unintentional and illegal transboundary movements. In the context of intentional transboundary movements, she underlined that under the Protocol there were different requirements for the information that had to be provided in documentation accompanying shipments of different categories of living modified organisms, namely: (i) living modified organisms intended for direct use as food or feed, or for processing; (ii) living modified organisms for contained use; and (iii) living modified organisms for intentional introduction into the environment. She outlined the specific information requirements contained in the Protocol and related decisions of the Parties to the Protocol and described where to find information on living modified organisms in shipping documentation. She also provided an overview of unique identifiers for transgenic plants and demonstrated how they could be used to search the Biosafety Clearing-House (BCH) for further information. Finally, she noted possible situations that could constitute unintentional transboundary movements of living modified organisms and explained that an illegal transboundary movement was a transboundary movement that was carried out in contravention of domestic measures to implement the Protocol.

ITEM 4. ROLE OF CUSTOMS OFFICIALS IN IMPLEMENTING THE PROTOCOL

13. Under this item, Mr. Tamale of the Secretariat of the Convention on Biological Diversity made a presentation on the role of customs officials in implementing the Protocol. He noted that to play an effective role, customs officers needed to know: what information to look for, why such information was important, where to find the information and who to contact for specialized assistance. He described the following as some of the key roles and responsibilities of customs officers in the implementation of the Protocol: (i) ensuring that imports and exports of living modified organisms had proper approvals before they were cleared; (ii) ensuring that shipments of living modified organisms were accompanied by appropriate identification documentation; (iii) inspecting incoming shipments of living modified organisms to verify the actual content and cross-check them against the accompanying documentation, (iv) detecting illegal or unintentional transboundary movements, and (v) reporting to relevant authorities information concerning shipments of living modified organisms arriving at the ports of entry.

14. In the discussions that followed, it was clarified that references to customs officers were intended to include all related border-services personnel, such as quarantine officers, inspection officers and plant health personnel.

ITEM 5. NATIONAL EXPERIENCES WITH TRANSBOUNDARY MOVEMENTS OF LIVING MODIFIED ORGANISMS

15. Prior to attending the workshop, participants had been invited to prepare short presentations on "The current status and experiences gained with the identification and documentation of living modified organisms" in their respective countries. The presentations were to highlight:

(a) The current status of identification and documentation requirements in their respective countries, including existing provisions in national regulatory and/or administrative frameworks on the documentation that must accompany imports of living modified organisms, examples of the existing documentation systems, existing initiatives and facilities for identification of living modified organisms, etc;

(b) Experience gained, if any, with the identification of living modified organisms and the use of existing documentation systems to fulfil requirements for the identification of shipments of living modified organisms for import;

(c) The difficulties/challenges encountered;

(d) The specific capacity-building needs and priorities; and

(e) Recommendations for improving the national implementation of the requirements for the identification and documentation of living modified organisms.

16. Under this item, the participants from the following countries gave presentations on their national situations and experiences: Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Honduras, Mexico, Panama, Saint Kitts and Nevis, Saint Lucia, Trinidad and Tobago, Uruguay and Venezuela. It was agreed that the presentations would be posted in the Collaborative Portal for Customs Officers in the Biosafety Clearing-House, accessible at: http://bch.cbd.int/onlineconferences/customs_art18.shtml.

ITEM 6. DOCUMENTATION ACCOMPANYING SHIPMENTS OF LIVING MODIFIED ORGANISMS: CASE-STUDIES ON EXISTING DOCUMENTATION SYSTEMS

17. Under this item, Mr. Ricardo Calderon Lopez from the International Grain Trade Coalition (IGTC) made a presentation entitled "Documentation accompanying Food/Feed/Processing Shipments of Living Modified Organisms". Mr. Lopez provided a brief background to the IGTC and discussed its current goal to minimize disruptions in the international trade of grain, oilseeds, pulses and derived products. He noted that IGTC has more than 8,000 members in 80 countries. He outlined the regions of the world that were net importers of grain and those that are net exporters. He described the size and scope of the international grain industry and the world bulk grain handling systems, from farmer to processor. He noted that it was impossible to keep varieties of grain totally separate in a bulk handling system. Mr. Lopez described the role of identity preservation systems in providing tighter tolerance levels than could be provided in normal bulk grain shipments but noted that they could not provide zero tolerance. He stated that identity preservation had to start at the farm level and should be maintained as the commodity moved through the handling and transportation system to market.

18. Mr. Lopez also described international commercial grain transactions. He stated that negotiations between the exporter and importer, which normally began three to six months before the shipment, involved agreement on the commodity to be shipped, its quality and quantity, the price and payment terms and the shipping terms. He noted that the commercial invoice was the only document that currently accompanied all transboundary shipments. In this regard, he said the IGTC supported the position that any identification information that was to accompany shipments of living modified organisms, as required in Article 18.2 of the Protocol, should be incorporated into the commercial invoice. He noted that there were also a number of other rules, at both the national and international level, that shippers had to comply with for the transboundary movements of goods.

19. Mr. Lopez reviewed the handling, transport, packaging and identification requirements of Article 18 of the Biosafety Protocol and associated decisions of the Parties to the Protocol and highlighted the *IGTC Notice to Trade # 7*, which was issued after the decision on paragraph 2 (a) of Article 18 of the Protocol was taken at the third meeting of the Parties to the Protocol in 2006. He provided examples of how the information requirements of the Protocol had been integrated into commercial invoices. He described the Mexico-Canada-United States Trilateral Arrangement that was intended to clarify the shipping documentation requirements for transboundary movements of living modified organisms between the three countries. He also outlined a pilot project for the import of yellow corn to Mexico. Mr. Lopez concluded that additional documentation requirements would result in significantly higher costs in the bulk commodity handling system which would endanger food security primarily in food importing developing countries.

ITEM 7. SAMPLING AND DETECTION OF LIVING MODIFIED ORGANISMS

7.1. Introduction and overview

20. Under this agenda item, Ms. Galvez of the Universidad Nacional Autónoma de México gave an introductory presentation on living modified organisms. She introduced the participants to cell biology and genetics and also described the process of making a living modified organism. She described the main methods of plant transformation including electroporation, the use of viruses and gene bombardment

or biobalistics. She noted that genes were inserted randomly into DNA in the process of plant transformation and so each transformation event was unique.

7.2. Sampling methodology

21. Two representatives from the Mexican Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA) gave a presentation on the sampling procedure used by the Ministry for plant health diagnosis purposes. They emphasized that a sample had to be representative of a shipment and describe the different procedures for sampling from bags versus sampling bulk shipments. They noted that the Government of Mexico had a number of certified laboratories where samples from shipments were sent for analysis. They reported that the Government of Mexico has made efforts to develop a sampling standard for the detection of living modified organisms; however, a harmonized standard was not yet in place. Finally, they described the different tools and techniques used in sampling shipments.

7.3. Identification of living modified organisms

22. Under this agenda item, Ms. Galvez made a presentation on the identification of living modified organisms. She outlined the process of identification from sampling through to the interpretation of results. She described lateral flow strip tests and the chemical process through which they could detect whether a specific protein was contained in a sample. She also described the enzyme-linked immunosorbent assay (ELISA) technique for detecting proteins and noted that it could be used to provide both qualitative and quantitative information on the presence of a protein in a sample. She noted a few strengths and weaknesses of protein-based detection methods including that they could be conducted quickly, in the field or in the laboratory and with little equipment; strip tests only provide qualitative information; and ELISA methods could provide quantitative information but tests for some proteins were more sensitive than tests for others and there were no recognized reference materials or agreement on the unit of measurement to be used.

23. Ms. Galvez then described the polymerase chain reaction (PCR) method for detecting genes in a sample. She explained that PCR required the design of specific primers to detect the DNA sequence of interest and that there were limits of detection below which PCR would not be able to detect a sequence of DNA. For real-time quantitative PCR, Ms. Galvez described how the presence of a DNA sequence was detected in real-time over the course of the PCR cycles and that the higher the amount of the target DNA sequence in the sample, the more quickly it would be detected in PCR. In comparing protein- and DNA-based detection methods, Ms. Galvez noted that the former were adequate for detecting proteins in grains and materials that had not been too heavily processed whereas the latter can detect DNA even in highly processed foods.

24. For the final part of her presentation, Ms. Galvez described research being conducted at UNAM on the sampling of shipments of maize entering Mexico and the detection of different transgenic events in these shipments. The research used lateral flow strip tests and ELISA to detect specific proteins. These results were then verified by real-time quantitative PCR and by third party analysis. Ms. Galvez noted that the detection of stacked events whereby multiple transformation events were contained within one organism was one of the ongoing challenges in the research.

7.4. Laboratory exercises

25. Under this agenda item, the participants visited the laboratory of the Faculty of Chemistry. The participants were led through practical exercises to detect Roundup Ready soy and Herculex RW corn. The participants used an ELISA technique to test for Roundup Ready soy in a sample of soybeans. The participants prepared the sample and ran the assay. They also used lateral flow strip test kits to test for the presence of Roundup Ready soy and Herculex RW corn. There was also a demonstration of PCR techniques through both real-time PCR and PCR visualized with an agarose gel (end-point PCR).

7.5. Interpreting the results from sampling and detection

26. Under this item, Mr. Carlos Moles y Castillo discussed both the quantitative and qualitative results of the testing techniques applied in the laboratory session.

ITEM 8. FIELD STUDY VISIT

27. Under this item, the participants visited the *Centro Internacional de Mejoramiento de Maiz y Trigo* (the International Maize and Wheat Improvement Center, CIMMYT). Mr. Scott Ferguson, Deputy Director General of CIMMYT welcomed the participants to the Centre. The representatives of the Secretariat of the Convention spoke on the work of the Protocol that related to CIMMYT. Representatives from CIMMYT introduced the participants to the work of the Centre and the breeding research being undertaken there. They outlined CIMMYT's position regarding genetic modification and biotechnology and referred to the Centre's guidelines on the detection of transgenes in the accessions stored in its genebank. They also described some of the current wheat-breeding research being undertaken at the Centre, which include the use of biotechnological methods to develop drought-tolerant varieties of wheat.

28. Participants were taken on a tour of the germplasm bank at CIMMYT where over 22,000 accessions of maize and teosinte and 168,000 accessions of Triticeae (which includes wheat, barley and rye) are stored and maintained. They also toured other laboratory facilities of CIMMYT where Ms. Martha Hernandez Rodriguez reviewed the process of plant DNA extraction, PCR and gel electrophoresis. She also outlined CIMMYT's experience with the use of marker-assisted selection as part of its wheat breeding programme.

ITEM 9. EXPERIENCES OF THE GREEN CUSTOMS INITIATIVE

29. Under this item, Ms. Garforth gave a presentation introducing the Green Customs Initiative, a partnership of international organizations cooperating to enhance the capacity of customs and other relevant enforcement personnel to monitor and facilitate the legal trade and to detect and prevent illegal trade in environmentally-sensitive commodities. She described the scope and scale of environmental crime and its negative consequences for human health and the environment, government revenues and international environmental agreements. She underlined the key role of customs and border protection officers as the frontline in every country's defence against transboundary illegal trade and as the first link in the compliance and enforcement chain. She also noted that customs and border protection officers played an important role in facilitating legal trade and so building the capacity of these officers was vital. She commented that an effective solution was coordinated training, which was one of the activities of the Green Customs Initiative.

30. Ms. Garforth mentioned the different multilateral environmental agreements that were partners in the Green Customs Initiative, namely the secretariats of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention), the Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention), the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Montreal Protocol on Substances that Deplete the Ozone Layer, and the Biosafety Protocol. Other international organizations that were also partners in the Initiative were: the Organization for the Prohibition of Chemical Weapons, the United Nations Environment Programme's Division of Environmental Law and Conventions and Division of Technology, Industry and Economics, the World Customs Organization, Interpol and the United Nations Office on Drugs and Crime. She described the objective of the Initiative as being to enhance the capacity of customs and other relevant enforcement personnel to monitor and facilitate the legal trade and to detect and prevent illegal trade in environmentally-sensitive commodities covered by the relevant conventions and multilateral environmental agreements.

31. Ms. Garforth outlined the benefits of the Green Customs Initiative for customs officers, countries, the treaty secretariats and the global environment. She referred to a number of Green Customs workshops that had been organized in different countries between 2007 and 2009. She described a number of tools developed by the Initiative including the Green Customs Guide to Multilateral Environmental Agreements and the Green Customs website. She referred to some of the achievements of the Initiative, including being awarded the Partners Ozone Protection Award in 2007 and demonstrating that

coordinated, cost-effective delivery of training and awareness-raising of customs officers and enforcement personnel could be delivered through an umbrella partnership involving multiple organizations with diverse mandates. Finally, Ms. Garforth pointed to some next steps and challenges for the Initiative including exploring how the Initiative could do more to assist the work of customs, integrating Green Customs into national training curricula for customs officers and resource mobilisation for the Initiative.

32. Ms. Maria Teresa Ortuno Arzate from the National Centre for Environmental Research and Training of the National Institute for Ecology made two presentations on the Basel, Stockholm and Rotterdam conventions, all of which are Partners in the Green Customs Initiative. The first presentation provided an overview of the three conventions. Ms. Ortuno Arzate explained that the common objective of the three conventions was to protect human health and the environment. She noted that the three conventions together provided for cradle-to-grave management of the substances concerned. She discussed the scope and coverage of the conventions and their provisions relating to the evaluation/regulation of new and existing chemicals; import/export controls; waste management; hazard communication; replacement; and environmental releases. Ms. Ortuno Arzate also described the technical assistance and financial resources available under the three conventions and the regional centres provided for under the Stockholm and Basel conventions.

33. In her second presentation, Ms. Ortuno Arzate provided more details on technical assistance under the three conventions. For the Basel Convention, she described the Basel Convention Technical Cooperation Trust Fund and its objectives as well as the Basel Convention Regional Centres. For the Rotterdam and Basel conventions, she outlined their Articles 16 and 12, respectively, both of which address technical assistance. Ms. Ortuno Arzate described the status of technical assistance arrangements under both the Basel and Stockholm conventions, both of which provide for regional centres for training and technology transfer. She also provided an overview of the status of delivery of technical assistance under the three conventions including their technical assistance programmes and plans through 2011. Ms. Ortuno Arzate concluded that the delivery of technical assistance was key to the implementation of the three conventions.

ITEM 10. THE WAY FORWARD: NEXT STEPS FOR CONTINUED COLLABORATION AND EXCHANGE OF INFORMATION

34. Under this agenda item, participants were invited to prepare action plans for activities they would undertake after returning to their respective countries, taking into account the lessons learned during the workshop. The participants also worked in two groups (Hispanophone and Anglophone) to develop recommendations on the way forward after the training. They discussed specific actions to be undertaken at national, subregional and regional levels, including collaboration and the sharing of experiences, information and expertise. These recommendations were then presented to the entire group.

35. Ms. Garforth also presented the Collaborative Portal for Customs Officers that the Secretariat was developing through the Biosafety Clearing-House. She said that the Collaborative Portal included a calendar of events, a discussion group for the participants in the different workshops being organized by the Secretariat, and a documents and resource materials section where the presentations from the workshops as well as other materials related to the identification and documentation of living modified organisms would be posted.[1]

ITEM 11. CONSIDERATION OF THE CONCLUSIONS OF THE WORKSHOP

36. During the last plenary session of the workshop, the participants discussed reports from the small discussion groups and agreed on a set of recommendations on the way forward. The recommended activities were as follows:

[1] As mentioned in paragraph 16 above, the Collaborative Portal can be accessed at http://bch.cbd.int/onlineconferences/customs_art18.shtml.

(a) Training of personnel in the identification and documentation of LMOs in order to develop core technical expertise;

(b) Establishment of laboratory facilities;

(c) Fostering mutual recognition of accredited regional laboratories (both official and private);

(d) Strengthening the inspection and monitoring of imports and exports of commodities that may contain living modified organisms;

(e) Strengthening legislative frameworks;

(f) Strengthening negotiation skills;

(g) Training of border officials in each country by the national competent authorities with the support of the Secretariat of the Convention on Biological Diversity;

(h) Developing communication systems between the competent national authority and border authorities regarding the transboundary movement of living modified organisms;

(i) Developing detection and warning system for illegal entries of living modified organisms, based on risk profiles, to guide the action of border authorities; and

(j) Promoting public awareness and engagement on biosafety.

37. The participants also urged countries to make greater efforts to maintain and update their information on the Biosafety Clearing-House and recommended that the Secretariat consider reviewing the Biosafety Clearing House to incorporate query windows (e.g., technical files) more useful for border authorities.

38. In the discussion that followed, a number of the participants noted that the countries in the region could accomplish more by working together. Furthermore, participants noted that those countries that had less developed systems for the identification of living modified organisms could learn from the countries that had already worked to establish their rules and procedures in this area.

39. Participants also undertook an evaluation of the workshop. The results of the evaluation are summarized in annex I.

ITEM 12. CLOSURE OF THE WORKSHOP

40. The workshop was closed at 4 p.m. on Friday, 27 November 2009.

Annex I

WORKSHOP EVALUATION

1. At the end of the workshop, participants were asked to complete a workshop evaluation form. They were asked to rate, on a scale of 1 to 6, the extent to which the workshop had improved their understanding of: (a) the Cartagena Protocol on Biosafety; (b) the role of customs officers in implementing the Protocol; (c) documentation and identification requirements under the Protocol; (d) existing practices in shipments of bulk grains; (e) the process of sampling and detection (identification) of genetically modified organisms and how to report the results of identification. The participants were also invited to provide an overall assessment of the workshop in terms of how well it was organized and conducted and the extent to which it had met their expectations. The results of the evaluation are summarized in the table below.

Item	Average rating (1-6)	Rating	Level of satisfaction
A. Introduction to identification and documentation on living modified organisms under the Cartagena Protocol on Biosafety			
How useful has the workshop been in:			
(i) Improving your understanding of the Protocol?	6	Very Useful	92%
(ii) Improving your understanding of the role of customs officers under the Protocol?	5	Very Useful	88%
(iii) Improving your understanding of what the documentation requirements are under the Protocol?	5	Very Useful	84%
(iv) Improving your understanding of the identification requirements under the Protocol Biosafety?	5	Very Useful	87%
(v) Improving your understanding of the existing practices in shipments of bulk grains?	5	Very Useful	81%
(vi) Improving your understanding of the process of sampling genetically modified organisms (GMOs)?	5	Very Useful	82%
(vii) Improving your understanding of detection of GMOs?	5	Very Useful	87%
(viii) Improving your understanding of how to report the results of identification of GMOs?	5	Very Useful	83%
(ix) Improving your understanding of the Green Customs Initiative?	5	Very Useful	85%
(x) Improving your knowledge of existing practices in other countries?	5	Very Useful	91%
B. Overall workshop assessment:			
(i) Has the workshop met your expectations?	5	Fully	91%
(ii) Has the workshop improved your understanding of how to enforce the identification and documentation requirements of LMOs under the Protocol?	5	Yes	87%
(iii) How useful has the workshop been in improving your understanding of how your country could handle a shipment of LMOs?	5	Very Useful	86%

Item	Average rating (1-6)	Rating	Level of satisfaction
(iv) How useful was the workshop for you as an individual?	6	Very Useful	97%
(v) How well organized was the workshop?	6	Very well organized	92%
(vi) How did you find the balance between presentations and the discussions?	5	Very well balanced	82%
(vii) Overall, how would you rate the workshop?	5	Excellent	91%
Overall appreciation	5	Very Useful	87%

2. In the written comments, a number of participants considered the following to have been the most helpful parts of the workshop:

(a) The presentations on sampling and detection, including the laboratory exercises;

(b) The country presentations on experiences and challenges with the identification and documentation of living modified organisms as well as the preparation of action plans;

(c) The information on living modified organisms and the requirements of the Biosafety Protocol;

(d) The field study visit to CIMMYT;

(e) The presentations on the role of customs officers in the implementation of the Protocol and the Green Customs Initiative, including the Basel, Stockholm and Rotterdam Conventions;

(f) The presentations on the trade and management of the international grain market.

A number of participants indicated that they found all the sessions in the workshop to be very useful and they could not select just one part as the different sessions built upon one another.

3. A few participants considered the following to be the least helpful aspects of the workshop:

(a) The laboratory work, particularly specialized techniques like PCR;

(b) The session on the Green Customs Initiative as it took away from the main focus of the workshop;

(c) The intentions of the participants when they return to their countries.

4. The participants made the following suggestions for improving future workshops:

(a) Incorporating more hands-on, practical sessions, including field trips and use of the Biosafety Clearing-House;

(b) Inviting at least two participants per country including a representative from the Competent National Authority;

(c) Better coordination with the Competent National Authority and each country's customs authority for the nomination of participants;

(d) Sending the invitations to participate earlier to allow more time to prepare and also providing support to the participants in the preparation of their presentations;

(e) Creating a means to maintain communication between countries;

(f) Providing more information on techniques for sampling at the border;

(g) Including the presentations and discussions on customs earlier in the workshop;

(h) More opportunity for the integration of ideas from all participants in order to improve understanding of the situation of the countries represented at the workshop; and

(i) Shortening the work day and respecting the agenda.

A number of participants commented that they found the workshop to have been very well planned and that they hoped there would be more such workshops in the future, particularly at the national level.

Annex II

WORKSHOP PROGRAMME

	Plenary
Monday ***23 November 2009*** 9.30 a.m. – 10 a.m.	*Agenda item*: 1. Opening of the workshop.
10 a.m. – 10.30 a.m.	*Agenda item*: 2. Overview of the objectives and programme for the workshop.
10.30 a.m.– 10.45 a.m.	**Coffee/Tea Break**
10.45 a.m. – 1 p.m.	*Agenda item*: 3. Introduction to the Protocol and its elements relating to the identification and documentation requirements for shipments of living modified organisms.
1 p.m. – 2 p.m.	**Lunch Break**
2 p.m. – 3.30 p.m.	*Agenda item:* 4. Role of customs officials in implementing the Protocol.
3.30 p.m. – 4 p.m.	**Coffee/Tea Break**
4 p.m. – 5.30 p.m.	*Agenda item*: 5. National experiences with transboundary movements of living modified organisms
Tuesday ***24 November 2009*** 9 a.m. – 10.30 a.m.	*Agenda item*: 6. Documentation accompanying shipments of living modified organisms: Case-studies on existing documentation systems.
10.30 a.m. – 11 a.m.	**Coffee/Tea Break**
11 a.m. – 1 p.m.	Agenda item 6 (*continued*)
1 p.m. – 2 p.m**.**	**Lunch**
2 p.m. – 3.30 p.m.	*Agenda item*: 7. Sampling and detection of living modified organisms: 7.1. Introduction and overview; 7.2. Sampling methodology; 7.3. Identification of living modified organisms.
3.30 p.m. – 4 p.m.	**Coffee/Tea Break**
4 p.m. – 5.30 p.m.	Agenda item 7 (*continued*)

	Plenary
Wednesday ***25 November 2009*** 9 a.m. – 10.30 a.m.	Agenda item 7 (*continued*): 7.4. Laboratory exercises.
10.30 a.m. – 11 a.m.	**Coffee/Tea Break**
11 a.m. – 1 p.m.	Agenda item 7 (*continued*)
1 p.m. – 2 p.m.	**Lunch**
2 p.m. – 3.30 p.m.	Agenda item 7 (*continued*)
3.30 p.m. – 4 p.m.	**Coffee/Tea Break**
4 p.m. – 5.30 p.m.	Agenda item 7 (*continued*)
Thursday ***26 November 2009*** 8.30 a.m. – 10.30 a.m.	Agenda item 7 (*continued*): 7.5 Interpreting the results from sampling and detection.
10.30 a.m. – 7 p.m.	*Agenda item:* 8. Field study visit.
Friday ***27 November 2009*** 9 a.m. – 10.30 a.m.	*Agenda item*: 9. Experiences from the Green Customs Initiative.
10.30 a.m. – 11 a.m.	**Coffee/Tea Break**
11 a.m. – 1 p.m.	*Agenda item:* 10. The way forward: next steps for continued collaboration and exchange of information.
1 p.m. – 2 p.m.	**Lunch**
2 p.m. – 3 p.m.	*Agenda item*: 11. Consideration of the conclusions of the workshop.
3 p.m. – 3.30 p.m.	**Coffee/Tea Break**
3.30 p.m. – 4 p.m.	12. Closure of the workshop.

Annex III

LIST OF PARTICIPANTS

A. Governments

Bahamas

1. Miss Carla Bain
Senior Customs Officer
Customs
E-Mail: carlab@coralwave.com

Belize

2. Ms. Deborah Mortis
Customs Examiner
Customs and Excise Department
P.O. Box 146
Caesar Ridge Road
Belize City, Belize
Tel.: +501 227 7092
Fax: +501 227 7091
E-Mail: debbiemortis@hotmail.com

Brazil

3. Mr. Sergio Figueiredo
Gestor Publico - Assessor
Department of Industrial Technology
Ministry of Development, Industry and International Trade
Esplanada dos Ministerios, Bloco J, Sl 117 sobreloja
Brasilia DF 70053-900, Brazil
Tel.: +55 61 2207 7407
Fax: +55 61 2207 7286
E-Mail: sergio.figueiredo@mdic.gov.br, serguiof_unb@hotmail.com

Chile

25. Mr. Gonzalo Pardo Hernandez
Agrónomo
Servicio Agrícola y Ganadero
Ministerio de Agricultura
Paseo Bulnes No. 140 Piso 3
Santiago, Chile
Tel.: 56 2 3451 211
Fax: 56 2 3451 203
E-Mail: gonzalo.pardo@sag.gob.cl

Colombia

4. Mr. Rodolfo Caicedo Arias
Profesional Especializado
Coordinacion Derecho Obtencion, Bioseguridad y Semillas
Instituto Colombiano Agropecuario
Calle 37 No. 8-43, Officina 409 Ed Colgas
Bogota, Colombia
Tel.: +571 232 8643
Fax: +571 232 4697 ext 371
E-Mail: rodolfo.caicedo@ica.gov.co

5. Ms. Adriana Castano Hernandez
Profesional Especializado - Bióloga
Subdireccion Alimentos
Instituto Nacional de Vigilancia de Medicamentos y Alimentos
Carrera 68D No 17-11/21
Bogota, Colombia
Tel.: +571 294 8700 ext 3844
Fax: +571 294 8700 ext 3920
E-Mail: acastanoh@invima.gov.co, acastanoh@gmail.com

Costa Rica

6. Mr. Javier Laurent Balladares
Estacion de Cuarentena Agropecuaria
Ministerio de Agricultura y Ganadería
Paso Canoas, Corredores
Puntarenas, Costa Rica
Tel.: +506 2732 2124
Fax: +506 2732 2839
E-Mail: jlaurent@protecnet.go.cr, jlaurent@uned.ac.cr

Dominican Republic

7. Ms. Ruth Febrillet
Técnico Departamento Recursos Genéticos
Subsecretaria de Estado de Areas Protegidas y Biodiversidad
Secretaría de Estado de Medio Ambiente y Recursos Naturales
Av. Máximo Gómez esq. Av. Reyes Católicos
Santo Domingo, Dominican Republic
Tel.: +809 472 8737; +809 472 4354
E-Mail: ruth.febrillet@semarena.gob.do, ruth_febrillet@jjbgroup.com
Web: www.semarena.gob.do

Ecuador

8. Ms. Claudia Buitrón Bolaños
Jefe de Nomenclatura y Clasificación Arancelaria
Coordinación General de Gestión Aduanera
Corporación Aduanera Ecuatoriana
Tel.: +593 4 2 480640 ext. 1603
Fax: +593 4 2 500127
E-Mail: cbuitron@aduana.gov.ec

El Salvador

9. Mr. Jeremias Ezequiel Yanes
Técnico en Biotecnologia - Punto Focal BCH
Ministerio de Medio Ambiente y Recursos Naturales
Km 5½ Carretera a Santa Tecla
Calle las Mercedes, Colonia las Mercedes
San Salvador, El Salvador
Tel.: +503 2267 9301
Fax: +503 2267 9326
E-Mail: jeritosv@yahoo.com, jereyanes@gmail.com
Web: http://www.marn.gob.sv

Grenada

10. Ms Simone Lewis
Head of Certification
Grenada Bureau of Standards
Queens Park
St George's, Grenada
Tel.: +473 440 5886; +473 440 6783
E-Mail: simonelewis@spiceisle.com, certification@gdbs.gd

Guatemala

11. Mr. Carlos Montenegro
Técnico de Proyectos
Oficina Técnica de Biodiversidad
Consejo Nacional de Areas Protegidas
5a. Av. 6-06, Zona 1, Edificio IPM, 6to. Nivel
Edificio IPM
Guatemala City, Guatemala
Tel.: +502 24 226 700, ext. 2000
E-Mail: cmontenegro@conap.gob.gt
Web: www.conap.gob.gt

Honduras

12. Mr. Elías Armando Jarquin Sevilla
Subjefe oficina de Cuarentena
Servicio de Protección Agropecuaria (SEPA)
Organismo Internacional Regional de Sanidad Agropecuaria
Puerto Castilla
Trujillo, Honduras
Tel.: +504 449 8022
E-Mail: ejarquin1963@yahoo.com

Mexico

13. Mr. Reynaldo Ariel Alvarez Morales
Executive Secretary
Comisión Intersecretarial de Bioseguridad de los Organismos
Genéticamente Modificados
San Borja 938
Col. Del Valle, Beni Juarez
Mexico D.F. 03100, Mexico
Tel.: 52 55 5575 7880
Fax: 52 55 5575 6878 ext 31
E-Mail: ralvarez@conacyt.mx

14. Ms. Claudia Arcos Salvatori
Subadministradora de Asuntos Jurídicos
Administración Central de Operación Aduanera
Secretaria de Hacienda y Crédito Publico
Calzada Legaria 608
Col. Irrigación
Mexico DF 11500, Mexico
Tel.: +52 55 5128 2554, +52 55 5128 2604, +52 55 5128 2545
E-Mail: claudia.arcos@sat.gob.mx

15. Ms. María Guadalupe Barrera Andrade
Subdirectora de Detección de OGMS
SENASICA/SAGARPA
Guillermo Pérez Valenzuela 127, Edif. Principal 1er piso
Col. Del carmen Coyoacán
Mexico D.F. 04100, Mexico
Tel.: +52 55 5905 1000 ext. 51372
E-Mail: maria.barrera@senasica.gob.mx

Mexico

16. Dr. Luis Alberto Calderilla Barbosa
Comisión de Control Analítico y Ampliación de Cobertura
Calzada de Tlalpan 4492
Col. Toriello Guerra
Mexico, D.F. 14050, Mexico
Tel.: +52 56 82 33 85
E-Mail: lcaldebar@gmail.com

17. Mr Ricardo Cano Rentería
Jefe de Departamento
Procuraduría Federal de Protección al Ambiente
Secretaría de Medio Ambiente y Recursos Naturales (Mexico)
Carretera Picacho-Ajusco No.200, colonia Jardines de la Montaña
Delegación Tlalpan
Mexico DF 14210, Mexico
Tel.: +52 55 5449 6323; +52 55 5449 6300 ext. 16157
Fax: +52 55 5449 6300 ext. 16287
E-Mail: rcano@profepa.gob.mx

18. Ms. Martha Elva German Sanchez
Secretaria Ejecutiva
Subdirectora de Politica y Normatividad Internacional
Comisión Intersecretarial de Bioseguridad de los Organismos
Genéticamente Modificados
Universidad de Sonora
Mexico DF 03100, Mexico
Tel.: +52 (55) 5575 6878
E-Mail: mgerman@conacyt.mx

19. Maestra Alma Liliana Tovar Diaz
Profesional Ejecutivo de Servicios Especializados, Enlace "C"
SENASICA/SAGARPA
Av. Guillermo Pérez Valenzuela 127
Col. Del Carmen Coyoacán
Mexico DF 04100, Mexico
Tel.: +52 55 5090 3000 ext. 51533
Fax: +52 55 5090 3000 ext. 51533
E-Mail: altd.ino@senasica.sagarpa.gob.mx,
alma.tovar@senasica.gob.mx

Panama

20. Ms Marisol Dimas
Department of Management and Protected Areas
Autoridad Nacional del Ambiente (ANAM)
Albrook Bldg 804
Balboa, Ancon
Panama City, Panama
Tel.: +507 500 0839
E-Mail: m.dimas@anam.gob.pa
Web: www.anam.gob.pa

Saint Kitts and Nevis

21. Mr. Derionne Edmeade
Environment Education Officer
Department of Physical Planning and Environment (Sustainable Development)
Bladen Commercial Development
Wellington Road
Basseterre , Saint Kitts and Nevis
Tel.: +869 465 2277
Fax: +869 465 5842
E-Mail: phyplskb@sisterisles.kn, dedmeade@gmail.com

Saint Lucia

22. Ms. Anita Pinky Alexander
Customs Supervisor
Customs Department
Ministry of Finance
Jeremie Street
Castries, Saint Lucia
Tel.: +758 452 2308; +758 468 4800
E-Mail: aalexander@customs.gov.lc, anitap69@hotmail.com

Trinidad and Tobago

23. Ms Louise Tarvares Jackson
Customs and Excise Division
Custom House
Abercromby Street
Port of Spain, Trinidad and Tobago
Tel.: +1 868 638 0369
Fax: +1 868 627 9277
E-Mail: weezzie55@hotmail.com

Uruguay

26. Ms Katia Puchcariov
Ministerio de Ganaderia, Agricultura y Pesca (MGAP)
Constituyente 1476, Piso 3
Montevideo CP 11200, Uruguay
Tel.: +598 2 309 8410
E-Mail: kpuchcariov@mgap.gub.uy
Web: www.mgap.gub.uy

Venezuela

24. Mr. Luis Diaz
Coordinador de bioseguridad, Direccion de Bioseguridad y Biocomercio
Oficina Nacional de Diversidad Biologica
Ministerio del Poder Popular para el Ambiente
Torre Sur, Piso 6, Centro Simon Bolivar, El Silencio
Ofic. 600
Caracas, Venezuela
Tel.: +58 212 408 4755/57
Fax: +58 212 408 4756
E-Mail: ladiaz@minamb.gob.ve
Web: http://www.minamb.gob.ve

B. Organizations

International Maize and Wheat Improvement Center (CIMMYT)

27. Sra Martha Hernandez Rodriguez
Asistente de Biotecnología
Laboratorio de Biotecnologia Aplicada
Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT)
Km.45, Carretera Mexico-Veracruz
El Batan, Texcoco, Edo. De Mexico 56130
Mexico
Tel.: +52 55 5804 2004 ext. 1399
Fax: +52 55 5804 7558
E-Mail: i.hernandez@cgiar.org

Inter-American Institute for Cooperation on Agriculture (IICA)

28. Mr. Armando Mateos Poumián
Especialista en Sanidad e Inocuidad Agropecuaria
Inter-American Institute for Cooperation on Agriculture
San Franscisco 1514, Colonia Tlacoquemecatl, del Valle
Mexico, D.F. 03200, Mexico
Tel.: +52 55 5559 8519; +52 55 5559 8477 ext 234
Fax: +52 55 5559 8887
E-Mail: armando.mateos@iica.int

29. Mr. Bryan Munoz Castillo
Specialist
Biotechnology and Biosafety Directorate
Inter-American Institute for Cooperation on Agriculture
P.O. BOX 55-2200
San Isidro de Coronado
San José, Costa Rica
Tel.: +506 2216 0361
Fax: +506 2216 0444
E-Mail: bryan.munoz@iica.int
Web: http://www.iica.int

International Grain Trade Coalition

30. Mr. Ricardo Calderon Lopez
Executive Director
APPAMEX-Mexico
International Grain Trade Coalition
Durango 245-902 Col.Roma
Mexico City 06700, Mexico
Tel.: +52 55 5533 4339
Fax: +52 55 5525 2776
E-Mail: appamex@prodigy.net.mx,
ricardo.calderon@appamex.com.mx

National Centre for Environmental Research and Training

31. Mrs. Maria Teresa Ortuno Arzate
National Institute of Ecology (INE)
National Centre for Environmental Research and Training
Av. San Rafael Atlixco No. 186
Col Vincentina
Mexico D.F. 09340, Mexico
Tel.: +52 55 5613 3662
Fax: +52 55 5613 3821
E-Mail: tortuno@ine.gob.mx

Universidad Autónoma Metropolitana - Azcapotzalco

32. Mr. Jorge Avila
Professor
Depto. Sociologia
Universidad Autónoma Metropolitane - Azcapotzalco
Av. 553 No. 109
Colonia Unidad Aragón
Mexico, D.F., Mexico
Tel.: +52 57 60 62 89
E-Mail: jorge.avila.sat@gmail.com, jora_vi@yahoo.com.mx

Universidad Nacional Autónoma de México

33. Dra. Amanda Galvez Mariscal
Professor
Dept. Alimentos y Biotecnologia
Universidad Nacional Autónoma de México
Facultad de Quimica UNAM
Cd. Universitaria
Mexico D.F. 04510, Mexico
Tel.: +52 55 5622 5208
Fax: +52 55 5622 5223
E-Mail: galvez@unam.mx

Universidad Nacional Autónoma de México

34. Mr. Carlos Moles y Castillo
University Food Programme
Universidad Nacional Autonoma de México
Faculdad de Quimica UNAM
Cd. Universitaria
Mexico D.F. 04510, Mexico
Tel.: +52 55 5622 5208
Fax: +52 55 5622 5223
E-Mail: carlosmoles@gmail.com

C. Secretariat of the Convention on Biological Diversity

35. Ms. Kathryn Garforth
Legal Officer - Biosafety
Secretariat of the Convention on Biological Diversity
413, Saint-Jacques, Suite 800
Montreal, Canada
Tel.: +1 514 287 7030
Fax: +1 514 288 6588
E-Mail: kathryn.garforth@cbd.int
Web: http://www.cbd.int

36. Mr. Charles Gbedemah
Senior Programme Officer
Biosafety Division
Secretariat of the Convention on Biological Diversity
413, Saint-Jacques, Suite 800
Montreal, Canada
Tel.: +1 514 287 7032
Fax: +1 514 288 6588
E-Mail: charles.gbedemah@cbd.int
Web: http://www.cbd.int

37. Mr. Erie Tamale
Programme Officer
Biosafety Division
Secretariat of the Convention on Biological Diversity
413, Saint-Jacques, Suite 800
Montreal, Canada
E-Mail: erie.tamale@cbd.int
Web: http://www.cbd.int
