# Detection of LMOs and the Cartagena Protocol on Biosafety

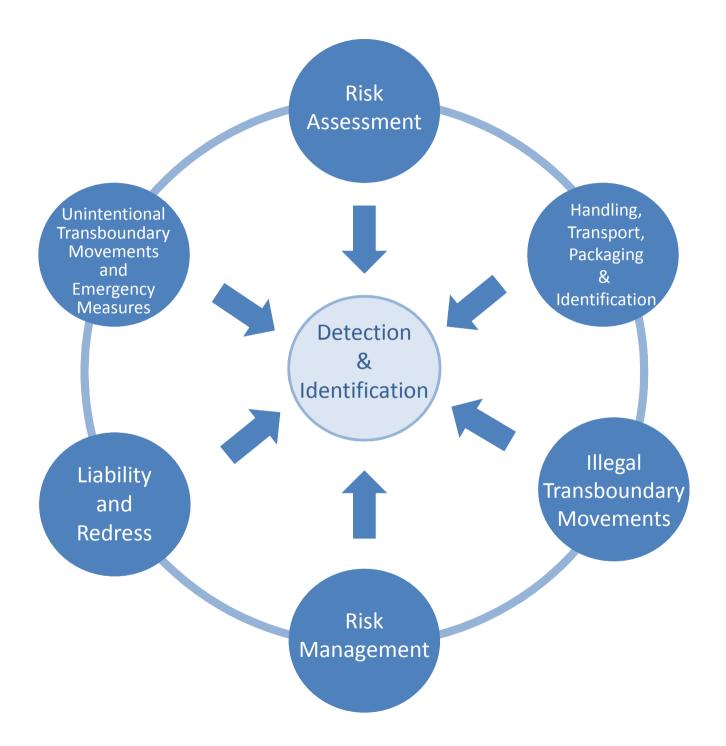
Workshop of the Network of Laboratories for the Detection and Identification of LMOs

— 9-11 June 2015, Ispra, Italy —

# The Cartagena Protocol on Biosafety

The Cartagena Protocol on Biosafety is an additional agreement to the Convention on Biological Diversity. It aims to ensure the safe transport, handling and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biodiversity, also taking into account risks to human health.

The Protocol establishes procedures for regulating the import and export of LMOs from one country to another.





Article 15 & Annex III – Risk Assessment

Risk assessments are carried out to identify and evaluate the potential adverse effects of LMOs on biodiversity in the receiving environment, taking into account risks to human health.

Must be conducted in a scientifically sound and transparent manner and on a case-by-case basis.



### Article 16 – Risk Management

Requires Parties to establish and maintain appropriate mechanisms, measures and strategies to regulate, manage and control risks identified in the risk assessment; and to take measures to prevent unintentional transboundary movements of living modified organisms;



#### Article 17 – Unintentional Transboundary Movements and Emergency Measures

Requires Parties to notify affected or potentially affected countries, BCH, relevant organizations of a release that leads, or may lead, to an unintentional transboundary movement of an LMO;



### Article 18 – Handling, Transport, Packaging and Identification

Sets the requirements for the documentation accompanying the transport of LMOs for direct use as food, feed or for processing, LMOs for contained use and LMOs for release into the environment.



#### Article 25 – Illegal Transboundary Movements

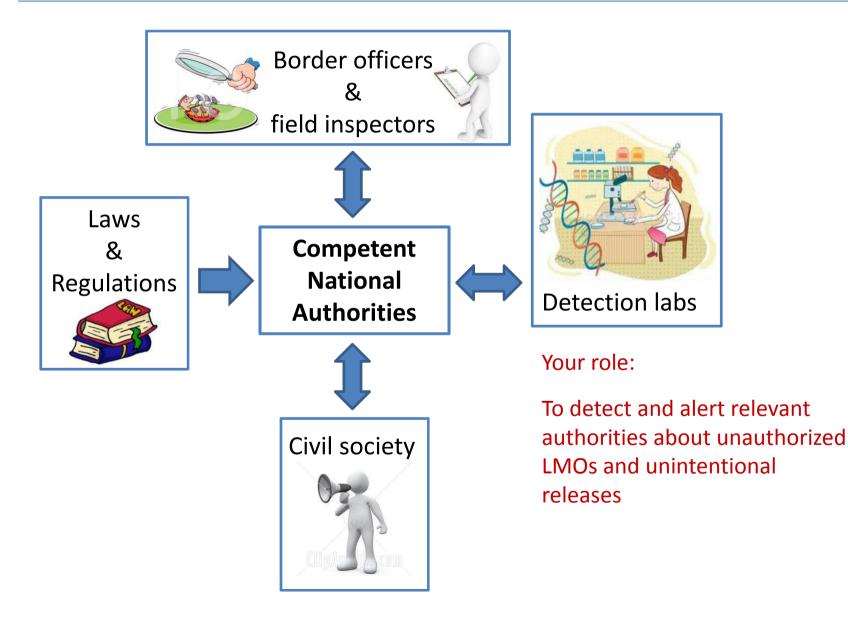
Requires Parties to adopt appropriate measures to prevent and, if appropriate, penalize illegal transboundary movements of LMOs, and make available to the BCH information concerning such illegal transboundary movements.



### The Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress

Adopted on 15 October 2010, the Supplementary Protocol specifies response measures to be taken in the event of damage to biodiversity resulting from LMOs. Currently 19 ratifications/accessions.

# Detection of LMOs: who does what?



# Strategic Plan for the Cartagena Protocol on Biosafety (2011-2020)

Five strategic objectives:

- Facilitating the establishment and further development of systems for the implementation of the Protocol;
- Capacity-building;
- Compliance and review;
- Information sharing; and
- Outreach and cooperation.

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3 outcomes related to the detection and identification of LMOs

# Outcomes of the Strategic Plan related to detection and identification of LMOs

<b>Operational Objectives</b>	Outcomes	Indicators
1.6 Handling, transport, packaging and	Easy to use and reliable	Number of Parties with access to
identification	technical tools for the	tools that are capable of detecting
To enable Parties to implement the	detection of	unauthorized LMOs.
requirements of the Protocol and COP-MOP	unauthorized LMOs are	
decisions on identification and	developed and made	
documentation requirements for living	available	
modified organisms		
1.8 Transit, contained use, unintentional	Guidance developed to	Percentage of Parties using the
transboundary movements and emergency	assist Parties to detect	guidance to detect occurrence of
measures	and take measures to	unintentional releases of living
To develop tools and guidance that facilitate	respond to	modified organisms and being able
the implementation of the Protocol's	unintentional releases	to take appropriate response
provisions on transit, contained use,	of living modified	measures
unintentional transboundary movements and	organisms	
emergency measures		

# Outcomes of the Strategic Plan related to detection and identification of LMOs



<b>Operational Objectives</b>	Outcomes	Indicators
2.3 Handling, transport, packaging and identification	Personnel are trained and equipped for sampling,	<ul> <li>Percentage of Parties that have established or have reliable access to</li> </ul>
To develop capacity for handling, transport, packaging and identification of living modified organisms	detection and identification of LMOs	<ul> <li>detection laboratories</li> <li>National and regional laboratories certified with the capacity to detect LMOs</li> <li>Number of certified laboratories in operation</li> </ul>

# Outcomes of the Strategic Plan related to detection and identification of LMOs

Outcomes	Deliverables
Easy to use and reliable <u>technical tools</u> for the detection of <u>unauthorized LMOs</u> are developed and made available <u>Guidance</u> developed to assist Parties to detect and take measures to respond to <u>unintentional releases</u> of living modified organisms	Development of guidance and technical tools for the detection of unauthorized LMOs and unintentional releases
Personnel are <u>trained and equipped</u> for sampling, detection and identification of LMOs	Capacity building in sampling (in shipments and environment), detection and identification of LMOs

• **BS-V/9:** Establishment of the Online Network of Laboratories for the Detection and Identification of Living Modified Organisms.

• **BS-V/16:** Adoption of the Strategic Plan For Implementation of the Cartagena Protocol





### Achievements:



 Technical Tools and Guidance for the Detection and Identification of LMOs
 http://bch.cbd.int/protocol/cpb\_detection/toolsandguidance.shtml





 Portal for the Sampling, Detection and Identification of LMOs
 <a href="http://bch.cbd.int/protocol/cpb\_detection.shtml">http://bch.cbd.int/protocol/cpb\_detection.shtml</a>



### Decision BS-VII/10:

- Positive feedback on the work carried out by the Network leading to the development of the Technical Tools and Guidance for the Detection and Identification of LMOs;
- Support for additional activities in the area of detection and identification of LMOs, and requests to the Executive Secretary to continue organizing online discussions through the Network focusing on LMO detection and identification.



### **Decision BS-VII/10:**

 Request the Executive Secretary to organize, in cooperation with relevant organizations, subject to the availability of funds, capacity-building activities on sampling, detection and identification of LMOs

# Outcomes of COP-MOP decisions related to detection and identification of LMOs

# Online Discussions towards the implementation of elements of decision BS-VII/10:

- Drafting an outline of training material for capacitybuilding workshops on sampling, detection and identification of LMOs
- Establishing conceptual clarity for the terms "unintentional transboundary movement" and "illegal transboundary movement"



# Outcomes of COP-MOP decisions related to detection and identification of LMOs

# Outcomes of online discussions for consideration of the workshop:

- 1. Outline of the training material including topics relevant to the detection and identification of LMOs.
- 2. Amalgamation of proposals made for conceptual clarity of terms to be forwarded to the Compliance Committee



# Our Tasks in this Workshop

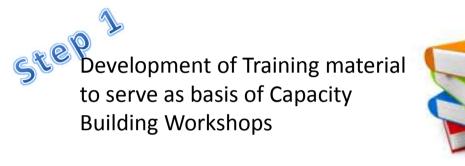
- 1. Initial draft of training material for capacity-building workshops on sampling, detection and identification of LMOs;
- Recommendation on the development of additional technical tools and guidance as outlined in the operational objectives 1.6 and 1.8 of the Strategic Plan for Implementation of the Cartagena Protocol on Biosafety;
- Input towards establishing conceptual clarity of the terms "unintentional transboundary movement" and "illegal transboundary movement" to be forwarded to the Compliance committee.

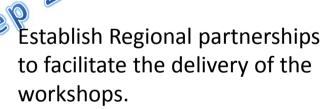


Drafting of Training Material for Capacity-Building Workshops

### Decision BS-VII/10:

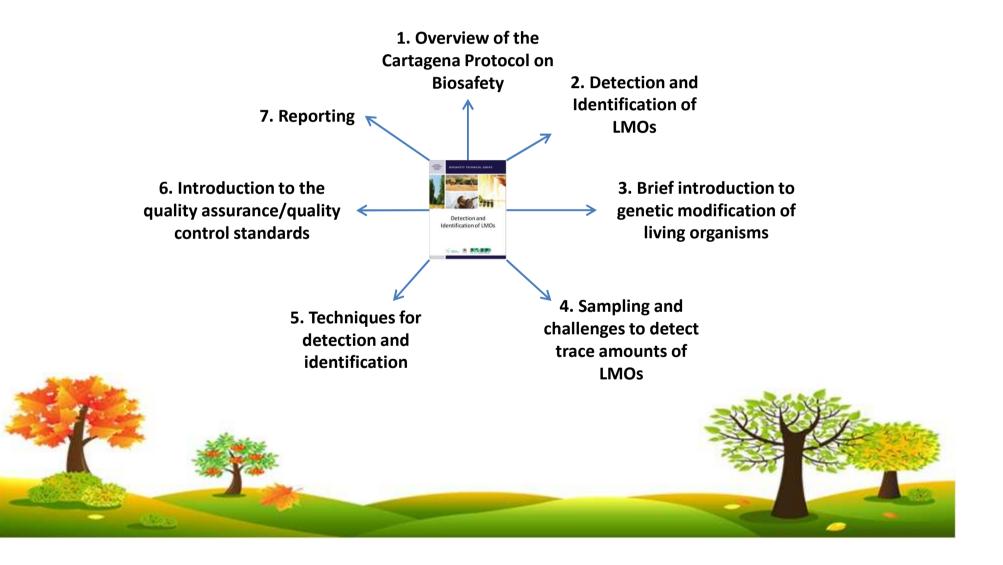
✓ Organize, in cooperation with relevant organizations, subject to the availability of funds, capacity-building activities on sampling, detection and identification of LMOs.







Two online discussions: To provide a basis for the face-to-face deliberations on this topic



Target audience:

• Focus on laboratory personnel to create an efficiently delivered, comprehensive and in depth training.



### Complementary workshops:

• Sampling at the border or in the field to facilitate the detection and identification process since the way in which a sample was collected can affect the outcome of the laboratory analysis.

### Regional considerations:

 Inviting experts from regional laboratories who have a strong background in the detection and identification of LMOs to the capacity building workshops.



## Goal:

First Draft of training material developed with input from all participants

## Work Plan:

- 1. Round table discussion to take stock of current needs and regional considerations;
- 2. Breakout Groups focusing on one of each major topics of the draft outline
  - Final agreement on outline within group
  - Draft sections of text
  - Report from group moderators indicating progress, special challenges and areas for support



Name	Pick up Place	Destination	Departure Date	Pick Up Time
Galina Mozgova	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-giu-15	05.30
Mr. Maher Chaouachi	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	08.00
Charles Gbedemah	Locanda Dei Mille		12-giu-15	07.30
Dina Abdelhakim	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-giu-15	
Manoela Miranda	Locanda Dei Mille	MILAN LINATE, ITALY	12-giu-15	
Martha Graciela Rocha-Munive	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	
Carolina Villafañe	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	
Waisea Jikowale	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	08.30
Chris Viljoen	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-giu-15	
Ms. Cornelia Charito Siricord	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-giu-15	
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Sarah Agapito-Tenfen	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	11.45
Linroy Christian	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	
Gurinder Randhawa	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	14.00
Angela Lozan	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-giu-15	
Freddy Bulubulu Otono	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	15.45
Ms. Julia Njagi	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	
Gretta Abou Sleymane	Don Guanella	MILAN MALPENSA, ITALY	12-giu-15	18.30
				19.30

#### **Reminders:**

- Book/ Confirm your Taxis!!!
- Dinner Tonight; Pick up at 1900
- Feedback form

Way Forward on the Development of Additional Technical Tools and Guidance

### Recommendation on the Development of Additional Technical Tools and Guidance

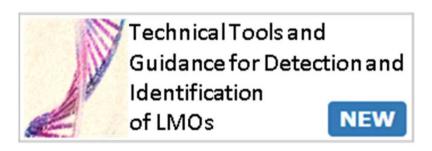
• **2013:** Compilation of Technical Tools and Guidance by Workshop and Network



- Introduction and strategic umbrella;
- Overview of available detection methods, including validated methods;
- Overview of available databases for methods and sequence information, and available screening matrixes;
- Minimum performance criteria for sample handling, extraction, detection and identification methodology;
- Experience and case studies on detection and identification

## Recommendation on the Development of Additional Technical Tools and Guidance

- Workshop participants set out a list of Technical tools and guidance to be compiled after the seventh meeting of the COP-MOP
- **2015:** Discuss way forward with list of suggested topics.



### Way Forward on the Development of Additional Technical Tools and Guidance

### 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 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 from matrix screening.

# Way Forward on the Development of Additional Technical Tools and Guidance

### <u>Topics pertaining to setting up supporting systems ("pre-</u> <u>detection"):</u>

- 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.

Possible ways forward:

- Integrate topics into ongoing development of Technical Series for Capacity building Manual;
- Develop further tools and Guidance on specific topic;



Name	Pick up place	Destination	Departure date	Pick up time
Galina Mozgova	CANCEL			
Charles Gbedemah	Locanda Dei Mille		12-Jun-15	7:30
Dina Abdelhakim	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-Jun-15	
Manoela Miranda	Locanda Dei Mille	and MILAN LINATE, ITALY	12-Jun-15	
Chris Viljoen	Locanda Dei Mille	and MILAN LINATE, TALT	12-Jun-15	
Ms. Cornelia Charito Siricord	Locanda Dei Mille		12-Jun-15	
Martha Graciela Rocha-Munive	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	8:30
Additional Guest 1 (Martha)	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Additional Guest 2 (Martha)	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Carolina Villafañe	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Waisea Jikowale	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	0.50
Balakrishna Ponnusawmy	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Mr. Maher Chaouachi	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Gretta Abou Sleymane	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Sarah Agapito-Tenfen	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	11:00
Linroy Christian	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
Gurinder Randhawa	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	
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Angela Lozan	Locanda Dei Mille	MILAN MALPENSA, ITALY	12-Jun-15	14:00
Freddy Bulubulu Otono	Don Guanella	MILAN MALPENSA, ITALY 12-Jun-15 MILAN MALPENSA, ITALY 12-Jun-15	12-Jun-15	15:45
Ms. Julia Njagi	Don Guanella		12-Jun-15	13.45
Freddy Bulubulu Otono	Don Guanella	MILAN MALPENSA, ITALY	12-Jun-15	

### **NOTE:** Participants will be responsible for their own fare (Cash only)

# Discussion: Recommendations to COP-MOP8 December 2016