

United Nations Biodiversity Conference

COP15 / CP-MOP10 / NP-MOP4

Montreal, Canada, 7-19 December 2022

Launch of Biosafety Technical Series No. 5: Training Manual on the Detection and Identification of Living Modified Organisms in the Context of the Cartagena Protocol on Biosafety

**COP 15, CP MOP 10, NP MOP 4
Montreal, 13 December 2022**

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Национальный
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Институт генетики и цитологии
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2022: more than 400 LM plants are approved on the world market



LM animals also approved, including fish for commercial purposes



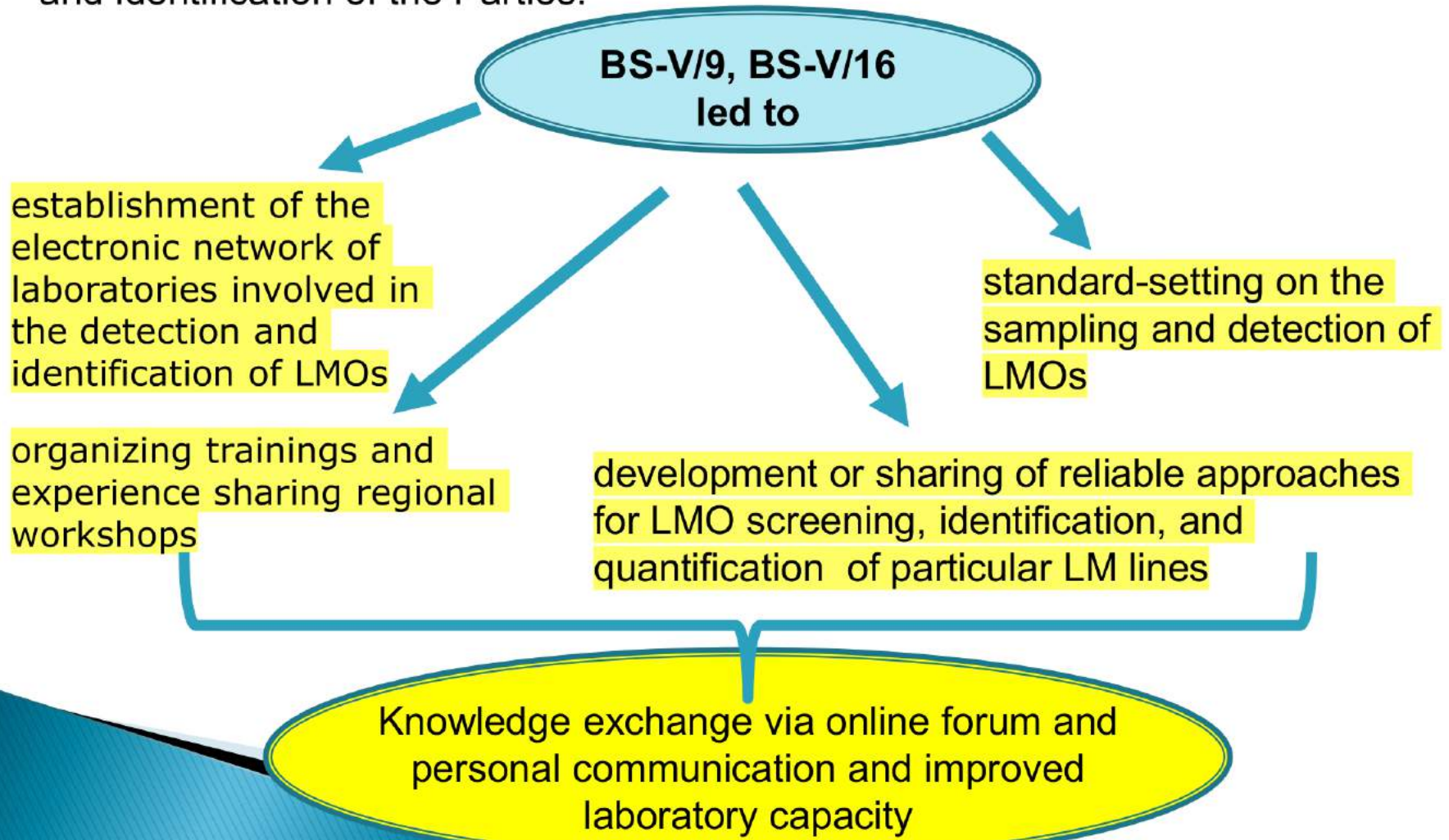
Many LM microorganisms approved for contained systems



Easy-to-use and reliable technical tools for the detection of unauthorized LMOs contribute significantly to the implementation of the Cartagena Protocol, prevent illegal or unintended transboundary movements, and ultimately increase the credibility of suppliers

Network of Laboratories for the Detection and Identification of LMOs

At its fifth meeting, in decision BS-V/9, the COP-MOP mandated a number of activities for laboratories involved in the detection and identification of LMOs. Decision BS-V/16 also set out outcomes contributing to laboratory LMO detection and identification of the Parties.





在《卡塔赫纳生物安全议定书》
背景下 检测与识别改性活生
物体 培训手册

✓ It is very important for
laboratory personnel that
Biosafety Technical Series
is interpreted in all six
official UN languages

Biosafety Technical Series 05:
Training Manual on the Detection
and Identification of Living Modified
Organisms in the Context of the
Cartagena Protocol on Biosafety is
now available **in Arabic, Chinese,**
English, French, Russian and
Spanish.



Biosafety Technical Series 05:

A logical and thorough narrative

***Explanations starting from LMO safety and the Cartagena Protocol →
why countries should detect and identify LMO →***

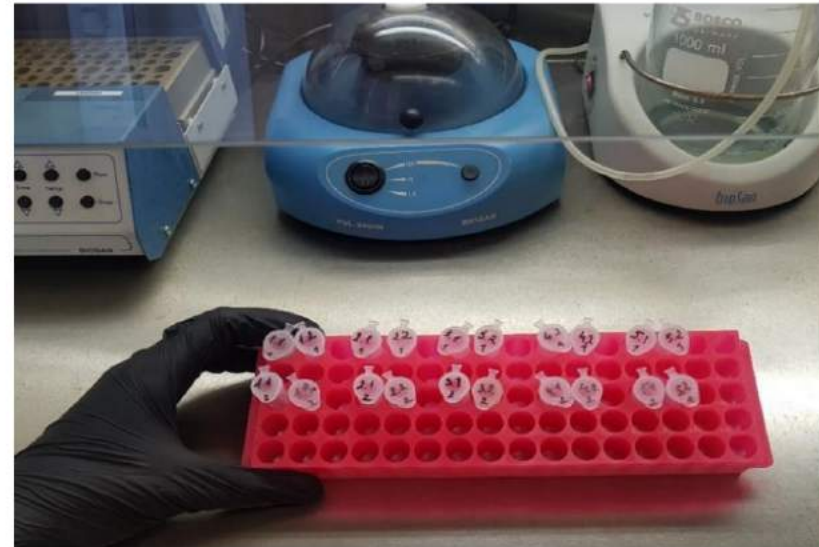
***a thorough overview of the reliable methods of LMO detection and key
mechanics is explained →***

***a thorough explanation of key techniques, starting from sample
preparation, with examples of experimental procedures →***

***description of how laboratory quality is assured, including valuable
information about different standards, method validation,
nonconformances, proficiency testing, databases of methods, and
screening matrices →***

Laboratory documentation and reporting

***Ensure excellent training and retraining
of laboratory personnel***



ACTION AGENDA COMMITMENTS

Sharm El-Sheikh to Kunming & Montreal Action Agenda for Nature and People



Convention on
Biological Diversity

BIODIVERSITY CONVENTION CARTAGENA PROTOCOL NAGOYA PROTOCOL COUNTRIES PROGRAMMES

EXPLORE PLEDGED ACTIONS

CRITERIA

NEWS AND STORIES

STATISTICS

> 559 commitments

> Actions per stakeholder

> Actions per categories

> Actions per region

FAQS

EVENTS

NEWSLETTER

QUOTES

WG2020-4 INFORMATION SESSION

Scientific Support to Biosafety and Food and Feed Safety

The Institute of Genetics and Cytology, Belarus take a commitment to minimize or prevent the impact of the Living Modified Organisms to the environment and human and animal health in Belarus by applying comprehensive laboratory control of unauthorized LMOs in seeds, LMOs in food and feed chains and LMOs in raw materials intended for food and feed. The commitment aims at strengthen systems of LMO detection and identification in the country, further development of Standard Operational Procedures on the LMO screening and identification of LMOs that were not approved for release into the environment or for the use for food, feed or processing in Belarus.

[Action-NCBC-IGC.docx](#)






[Progress-Report-2022](#)

Submitted By



The Institute of Genetics and Cytology of the National Academy of Sciences of Belarus, National
Coordination Biosafety Centre

The knowledge received via the LDGMOs network increased laboratory NCBC capacities and allow apply complex screening in laboratory practice, increasing monitoring and control over the unauthorized and unintended LMOs placed in the market of the country, as well as developing an SOP for screening of the unauthorized LMOs in accordance with approved lists of authorized LMOs in Belarus and successfully fulfill the commitment taken

Two-year screening	2480 samples	seeds, food, animal feed and raw materials
soya, canola, corn, wheat and potato, etc		
Authorized soybean lines for FFP	62,7%  	unauthorized GM lines of rapeseed intended for processing amounted to
Unauthorized soybean lines for FFP	0,7%  	10.17% 

“Enhancing Collaboration between the CEE and Central Asia’s Centres of Excellence to Address the Key Drivers of Biodiversity Loss and Maintain Human, Crop and Livestock Health”



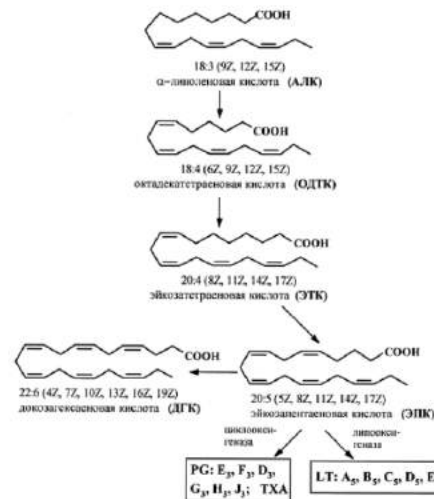
Networking of 7 CEE countries and improvement of laboratory detection with the application of molecular genetic methods *for identification of key drivers of biodiversity loss*

- Species-specific identification
- *LMO detection*
- *Pathogen detection*

Approaches from the Training Manual on the Detection and Identification of Living Modified Organisms can be taken into consideration in the process of development of precise laboratory methods and screening approaches for the detection of the key drivers

New LMOs already released to the market or at the final stages of development, e.g.

✓ **LMOs with incorporated gene circuits**

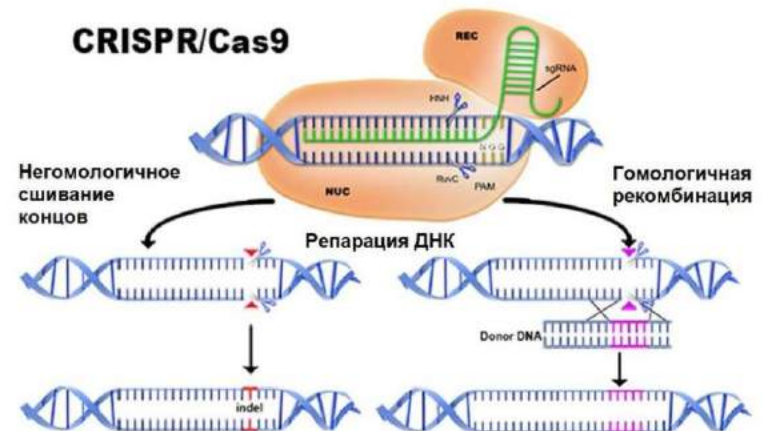


**7 genes converting
Oleic acid**

Docosahexaenoic acid

✓ **LMOs obtained by methods of
genome editing**

CRISPR/Cas9



**The new task for the network of
LDGMOs**

We believe that the development of the new chapters of the guidance devoted to the LMOs created by the new methods would be very logical next step for the intersessional period

Merci pour votre attention!

感謝您的關注

Thank you for your attention!

Дзякуй за ўвагу!

***Reliable methods –
the Fine Art of Global
Collaboration***

***Thanks to the SCBD
for ensuring the
global collaboration
between LDGMOs***

