



Convention on Biological Diversity

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ENGLISH ONLY

ANGLOPHONE AFRICAN LABORATORY
TRAINING WORKSHOP ON DETECTION
AND IDENTIFICATION OF LIVING
MODIFIED ORGANISMS
Abuja, 16-20 September 2019

ANNOTATED PROVISIONAL AGENDA

INTRODUCTION

1. In decisions [BS-VII/10](#), [CP-VIII/16](#) and [CP-9/11](#) of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety, the Executive Secretary was requested to continue convening, in cooperation with relevant organizations, subject to the availability of resources, capacity-building activities, such as online training and face-to-face workshops in the fields of sampling, detection and identification of living modified organisms.
2. Accordingly, with support from the Government of the Republic of Korea, through the Korea Biosafety Capacity-Building Initiative, and in collaboration with the Federal Ministry of Science and Technology of Nigeria represented by the National Biotechnology Development Agency and the International Centre for Genetic Engineering and Biotechnology, the Secretariat of the Convention on Biological Diversity is organizing the Anglophone African Laboratory Training Workshop on Detection and Identification of Living Modified Organisms, to be held in Abuja from 16 to 20 September 2019.
3. The objectives of the workshop are to provide theoretical and practical training for participants on:
 - (a) Overview of biosafety, the Cartagena Protocol on Biosafety and relevant activities;
 - (b) Sharing experiences and assessing national needs and gaps for the effective implementation of the relevant outcomes under the Cartagena Protocol;
 - (c) Laboratory methodologies used for the analysis and detection of living modified organisms (LMOs).
4. The workshop will be conducted in English and will consist of theoretical lectures and practical laboratory sessions. Lunch and two tea/coffee breaks will be provided each day. Documents for the workshop will be posted at <https://www.cbd.int/meetings/CP-DI-WS-2019-01>.

ITEM 1. OPENING OF THE WORKSHOP

1.1 Welcoming remarks

5. The workshop will open at 9 am on Monday, 16 September 2019. Representatives of the National Biotechnology Development Agency, International Centre for Biotechnology and Genetic Engineering, and the Secretariat of the Convention on Biological Diversity will deliver opening remarks.

1.2 Organization of work

6. After the introductory comments and the opening ceremony, a representative of the National Biotechnology Development Agency will explain the workshop objectives and present the programme of

work. Participants will perform a pre-course evaluation and assessment before continuing with the workshop.

ITEM 2. OVERVIEW OF BIOSAFETY AND THE CARTAGENA PROTOCOL ON BIOSAFETY

2.1 Laboratory safety

7. Before beginning the practical exercises of the workshop, the National Biotechnology Development Agency will introduce participants to safety within the laboratory.

2.2 Development of living modified organisms

8. Workshop facilitators will provide an overview of the techniques used when creating and developing LMOs and how they relate to the detection and identification of LMOs. Additionally, participants will consider detection and identification in the context of regulatory frameworks.

2.3 Overview of the Cartagena Protocol on Biosafety

9. Under this agenda item, the Secretariat will provide a review of the general concepts in biosafety and the Cartagena Protocol on Biosafety, including the following:

- (a) History of the Cartagena Protocol and main provisions;
- (b) Relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol;
- (c) Overview of ongoing related activities;
- (d) Review of how to use the Biosafety Clearing-House to find information related to the detection and identification of LMOs.

ITEM 3. INTRODUCTION TO THE DETECTION AND IDENTIFICATION OF LIVING MODIFIED ORGANISMS

3.1 Handling and preparation of test samples for detection and identification

11. Under this agenda item, workshop facilitators will present the theory for the handling and preparation of samples for use in analytical workflows. In particular, the session will focus on the extraction and quality assessment of DNA samples.

12. Following the theoretical background, participants will perform DNA extractions using two different methodologies and then learn how to assess and interpret the quality of their DNA extractions using gel electrophoresis and spectrophotometry.

3.2 DNA detection and identification methodologies

13. Under this agenda item, participants will receive the theoretical background of DNA screening methodologies for the detection and identification of LMOs, including different types of polymerase chain reaction (PCR) protocols.

14. After acquiring a theoretical training on PCR, participants will have an opportunity to gain practical experience by performing PCR. The participants will additionally learn how to assess the results of PCR using gel electrophoresis.

3.3 Experimental design, data analysis, and reporting

15. Participants will take part in a seminar detailing experimental design, data analysis, and interpretation. In this session, participants will learn how to write a report and how to effectively communicate the results of a laboratory analysis to the regulatory authority. Reporting guidelines and the

use of appropriate language in a scientific report will be stressed. This session will end with participants preparing and presenting a report.

3.4 Quality assurance and control in the detection and identification of living modified organisms

16. During this session, workshop facilitators will present on aspects of quality assurance and control, focusing on laboratory organization, documentation, and method verification, in the context of internationally recognized standards. Furthermore, participants will consider sources of validated information for use in the detection and identification of LMOs, including, but not limited to, primer sequences, protocols, and sequence datasets.

3.5 Protein detection methodologies

17. Participants will learn how to use strip testing for LMO detection through a practical exercise. This session will also teach participants to interpret and analyse the results of strip testing.

ITEM 4. BIOSAFETY FRAMEWORKS FOR DETECTION AND IDENTIFICATION OF LIVING MODIFIED ORGANISMS

4.1 Overview of the detection and identification of living modified organisms and biosafety regulations in Nigeria

18. A representative from National Biotechnology Development Agency will present an overview of the structure and role of the Nigerian biosafety framework with respect to the analysis and regulation of LMOs. The National Biotechnology Development Agency will also present a video on LMO testing and give a presentation regarding various aspects of biosafety laws related to plant biotechnology.

4.2 Round table on dossier assessment and interpretation of data

19. A roundtable will occur and focus on the assessment of dossiers, troubleshooting, issues in data interpretation and implementing protocols in resource-limited settings.

4.3 African GMO Network

20. Participants will learn about the African GMO Network.

ITEM 5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Evaluation of the workshop and feedback

24. An evaluation form will be distributed to the participants to collect their feedback on the workshop and they will be given an opportunity to provide comments.

5.2 Closure of the workshop

25. The workshop is expected to close at 12 p.m. on Friday, 20 September 2019.

Annex

PROVISIONAL PROGRAMME OF WORK

<i>Date</i>	<i>Activity</i>
Monday, 16 September 2019	
<i>Morning</i>	Item 1. Opening of the workshop <i>Registration of participants</i> Item 1.1 Welcoming remarks Item 1.2 Organization of work Item 2. Overview of biosafety and the Cartagena Protocol on Biosafety Item 2.1 Laboratory safety Item 2.2 Development of living modified organisms Item 2.3 Overview of the Cartagena Protocol
<i>Afternoon</i>	Item 3. Introduction to the detection and identification of living modified organisms Item 3.1 Handling and preparation of test samples for detection and identification
Tuesday, 17 September 2019	
<i>Morning</i>	Item 3.2 DNA detection and identification methodologies
<i>Afternoon</i>	Item 3.2 <i>(continued)</i>
Wednesday, 18 September 2019	
<i>Morning</i>	Item 3.2 <i>(continued)</i> Item 3.3 Experimental design, data analysis, and reporting
<i>Afternoon.</i>	Item 3.3 <i>(continued)</i> Item 3.4. Quality assurance and control in the detection and identification of living modified organisms
Thursday, 19 September 2019	
<i>Morning</i>	Item 3.5. Protein detection methods Item 4: Biosafety frameworks for detection and identification of living modified organisms Item 4.1 Overview of the detection and identification of living modified organisms and biosafety regulations in Nigeria
<i>Afternoon</i>	Item 4.2 Round table on dossier assessment and interpretation of data
Friday, 20 September 2019	
<i>Morning</i>	Item 4.3 African GMO Network Item 5. Conclusions and recommendations Item 5.1. Evaluation of the workshop and feedback Item 5.2. Closure of the workshop