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Development and Institution of a National Monitoring and Control System (Framework) for Living Modified Organisms (LMOs) and Invasive Alien Species (IAS)

NATIONAL TRAINING COURSE NOTES ON PEST RISK ANALYSIS (INCLUDING LMO RISK ANALYSIS) – DEFINITIONS, USAGE AND MANAGEMENT APPROACHES FOR CAMEROON

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Under the Supervision of:

Project Component Three Taskforce (MINESUP)

&

The Biosecurity Project Coordination Unit (MINEPDED)

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ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	FULL NAME
ANOR	Agency for Norms and Quality in Cameroon
CBD	Convention on Biological Diversity
CBP	Cameroon Biosecurity Project
CPB	Cartagena Protocol on Biosafety
FAO	Food and Agriculture Organization
GISP	Global Invasive Species Programme
IAS	Invasive Alien Species
IMO	International Maritime Organisation
IRAD	Institute of Agricultural Research for Development
IPPC	International Plant Protection Convention
IUCN	International Union for Conservation of Nature
LANAVET	National Veterinary Laboratory
LMOs	Living Modified Organisms
MINADER	Ministry of Agriculture and Rural Development
MINEE	Ministry of Water Resources and Energy
MINEPDED	Ministry of Environment, Protection of Nature and Sustainable Development
MINPOSTEL	Ministry of Post and Telecommunications
MINFOF	Ministry of Forestry and Wildlife
MINEPAT	Ministry of Economy, Planning and Regional Development
MINEPIA	Ministry of Livestock, Fisheries and Animal Industries
MINMIDT	Ministry of Mines, Industry and Technological Development
MINRESI	Ministry of ScientificResearch and Innovation
MINESUP	Ministry of Higher Education,
MINSANTE	Ministry of Public Health
MINTOUR	Ministry of Tourism
MINCOMMERCE	Ministry of Commerce
NBSAP	National Biodiversity Strategy and Action Plan
NPPO	National Plant Protection Organization
OIE	World Organization for Animal Health
OCEAC	Organization of Coordination for the Fight against Endemic Diseases in Central Africa
PRA	Pest Risk Analysis
SODEPA	Animal Products Development and Exploitation Corporation
ToT	Training of Trainers'
WTO	World Trade Organization

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SUMMARY

Biosecurity is a series of measures to protect against the entry, establishment and spread of Invasive alien species (IAS) including living modified organisms that are deleterious to our human, animal and plant health, environment and our economy. It includes protection of Cameroons borders at the sea ports, airports, other entry points and our practices and habits on properties to reduce risk of disease or infestation. In order to achieve this, there must be the establishment of policy and regulatory framework for effective prevention and control of the introduction, establishment and spread of biological invaders. The implementation of sustainable strategies for the risk-based management of priority pathways and species for invasive alien species and living modified organisms is also important. Useful measures like building of capacity to enable the control of the entry, establishment and spread of invasive alien species and management of living modified organisms are paramount. The raising of awareness of key stakeholder groups on risks, impacts and management of invasive alien species and living modified organisms is necessary.

It is in this light that a training workshop is organized with an objective to train participants from the different stakeholder services that are involved in ensuring biosecurity, on pest/LMO risk analysis – definitions, usage and management approaches for Cameroon. This national training of participants is part of Project Component 3 (Capacity Building) of the Cameroon Biosecurity Project (CBP). This is in recognition of the important role of preventing the introduction of invasive species as the first line of defence as part of a risk-based management system for biological invasions and the role that effective inspection systems play.

This is to be achieved by the production of an appropriate plan of activities and delivery of training which is broken down to modules so as to ease the discussions. The modules include;

(1) Pre-course knowledge assessment and introduction to Pest/Living Modified Organisms, during which relevant information on the level of awareness and knowledge of participants on Pest risk analysis is gathered, and a shared understanding of workshop objectives as well as a definition of key terms is developed.

(2) International framework for decision-making and national obligations in which the different international and national organizations involved in biosecurity related issues are introduced. The roles of the different organizations are highlighted.

(3) National context - development plans and trade pattern of Cameroon, in which the Risk pathways and vectors of Invasive Alien Species, Development plans and trade pattern of Cameroon, is elaborated.

(4) WTO/SPS, IPPC and other international agreements, in which a detailed understanding of the functioning of the Sanitary and Phytosanitary Agreement of the World trade organization is ensured. Codex Alimentarius and the International Office of Epizootics are also discussed here.

(5) IPPC and international standards development, in which the role of the International Plant Protection Convention is clearly spelt out with particular emphasis on the different International Standards for Phytosanitary Measures (ISPMs), especially those that deal with Pest risk analysis such as ISPM 1, 2, 11, and 21.

(6) P/LMO Risk Analysis international standards and their applications in which an overview of the protocol for pest risk analysis is discussed using specific examples.

(7) Information needs for P/LMO Risk Analysis which discusses the different sources of information that can be useful during a pest risk analysis.

(8) Simplified P/LMO risk analysis methodology and application, in which, the methodology for risk analysis for LMOs/GMOs based on the Cartagena Protocol and Codex Alimentarius are discussed.

(9) P/LMO risk analysis methodology and application of a Cameroon example, during which data collection and sampling techniques are discussed. The case of Bt Cotton in Cameroon is also examined.

(10) PRA/GMOs, bio-control agents and national administration arrangements, where the different management strategies are examined, general and specific treatment of pests and diseases are also discussed.

(11) National needs analysis to undertake PRA/LMO risk analysis in which the roles and responsibilities, the technical and soft skills as well as the enabling environment for pest risk analysis are discussed in the Cameroon context.

(12.) Post-course knowledge assessment in which the relevant information is gathered from the trainees which will enable the evaluation of the effectiveness of the training.

The national training should run for three to five days. The training methodology includes PowerPoint presentations of each of the different modules, question and answer sessions, and laboratory exercises where necessary. There will be about four exercises for small group discussions, to ensure proper transmission of concepts and effective participation by all trainees. A Practical lab-based activity is developed wherein participants will have the opportunity to see, to touch, to practice, to criticize and audit a laboratory on seed analysis. They can also try isolation of fungi from some diseased fruits such as mangoes and tomatoes. The laboratory exercise helps them to understand the procedure that is followed, after the collection of suspected pest infested samples at the various ports of entry of commodities.

The training presentations are developed from desktop reviews of national documents produced under the CBP as well as those developed by international organizations including other documents from leading international agencies such as the Convention on Biological Diversity (CBD), the Global Invasive Species Programme (GISP), the International Maritime Organization (IMO), the International Plant Protection Convention (IPPC), the World Organization for Animal Health (OIE), the Food and Agriculture Organization (FAO), the World Trade Organization (WTO), the International Union for Conservation of Nature (IUCN) etc.

A maximum of thirty participants from stakeholders' institutions should attend the training. The training is done in a participatory approach; the participants are asked to provide examples, data or case study in their domain. Since the level of knowledge of the participants in domains such as agriculture, pest taxonomy, ecology, epidemiology and molecular biology is not the same, a lot is done to simplify the teaching explanations using mostly appropriate figures and pictures from Cameroon and local examples.

By the end of the training, participants are expected to: understand the national and international context within which risk analysis is conducted including relevant institutions and

standards, understand information requirements for risk analysis, understand risk analysis methodologies and their application and have an overview of risk analysis needs and how they can be addressed in Cameroon.

Significance of Training to Pest risk analysis

During the training, the knowledge of participants on pest risk analysis is increased. They are able to identify lapses at their various places of work which puts the country's biodiversity at risk. They understand the different national and international conventions that guarantee the carrying out of pest risk analysis. They understand Cameroons obligation towards her trading partners in preventing worldwide spread of pest and diseases. They can estimate the economic consequences of non-compliance. They also understand the necessity and importance of information sharing. They are apt in the procedure for pest risk analysis. They are expected to be able to train their colleagues on pest risk analysis so as to ensure uniformity of procedures and guarantee a concerted effort in pest management.

Recommendations

Training should run for five days so that enough time will be allocated for discussions and there will be no rushing over key issues. Many more people should be offered the training so that information on the importance of pest risk analysis is widely disseminated.