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CAMEROON BIOSECURITY PROJECT

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

FORMULATION OF RISK MANAGEMENT STRATEGIES FOR BIOLOGICAL INVASION RISK PATHWAYS IN CAMEROON

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Under the Supervision of:

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Acronyms and abbreviations

Abbreviation	Full Name
AVMA	American Veterinary Medical Association
BCH	Biosafety Clearing-House (of the CBD and Cartagena Protocol)
BSL	Biological Safety Level (or BioSafety Level) (BSL1 to BSL4)
BWC	Biological Weapon and Toxin Convention
CA	Competent Authority / Competent Authorities
CBD	Convention on Biological Diversity
CHM	Clearing-House Mechanism (of the CBD)
CBP	Cameroon Biosecurity Project
CEN	("Centre Européen de Normalisation") European Standardisation Centre
CFT	Confined Field Trial
CNER	("Comité National d'Ethique de la Recherche") National Committee of Research Ethics
CPC	Centre Pasteur du Cameroon
CU	Contained Use
CWA	CEN Workshop Agreement
EIA	Environmental Impact Assessment
ERA	Environmental Risk Assessment
EU	European Union
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GISP	Global Invasive Species Programme
GM	Genetically Modified (e.g., GM plants, non-GM organism, etc.)
GMO(s)	Genetically Modified Organism(s)
IAS	Invasive Alien Species
IHR	International Health Regulations
IMPM	Institute of Medical Research and Medicinal Plant Studies
IPPC	International Plant Protection Convention

IRAD	Institute of Agricultural Research for Development
ISSG	Invasive Species Specialist Group
IUCN	International Union for Conservation of Nature
LANAVET	National Veterinary Laboratory
LMO(s)	Living Modified Organism(s)
MINADER	Ministry of Agriculture and Rural Development
MINEPDED	Ministry of Environment, Protection of Nature and Sustainable Development
MINEPIA	Ministry of Livestock, Fisheries and Animal Industries
MINFOF	Ministry of Forestry and Wildlife
MINRESI	Ministry of the Scientific Research and Innovation
MINSANTE	Ministry of Public Health
NABIC	National Adhoc Biosafety Interministerial Committee
NBC	National Biosafety Committee
NBSAP	National Biodiversity Strategy and Action Plan
NFP	National Focal Point (of the Cartagena Protocol)
OIE	("Office International des Epizooties") World Organisation for Animal Health
OPV	Oral Polio Vaccine
PCU	Project Coordination Unit
PTA	Project Technical Advisor
RA	Risk Assessment
TT	Task Team
UNEP	United Nations Environment Programme
UNOG	United Nations Office in Geneva
WHO	World Health Organisation
WTO	World Trade Organisation

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EXECUTIVE SUMMARY

The present report realised in the framework of Activity 2.3.3 of the Cameroon Biosecurity Project (CBP) focuses on gaps and difficulties related to the incorporation of GMOs and pathogens in the formulation of a global strategy for the management of invasion risks in Cameroon. Indeed, previous project activities have mostly considered conventional IAS and their invasive pathways, and the risks of invasion by GMOs and to a lesser extent pathogens had not been studied in the same level of detail. This report provides a SWOT (strengths, weaknesses, opportunities and threats) overview of the situation with respect to invasion risks, more particularly related to pathogens and GMOs, in Cameroon.

The main invasion pathways for pathogens appear to their accidental introduction by vectors, including infected animals or persons, then their incidental dissemination from facilities where they are handled, although this mostly concerns pathogens that are already present in Cameroon, not just alien strains. With respect to GMOs, the most frequently cited invasion pathways are the non-authorised intentional introduction of plants and plant seeds for field trials or commercial culture, and the possible escape from field cultures in case these would become more frequent. However, possible invasion by GMOs is not considered a serious issue in comparison with some other potential IAS, and pathogens in particular.

While the consultation revealed positive initiatives with respect to the control of pathogens, one of its main observations is the lack of control of the situation with respect to GMOs. GMOs appear much more present in Cameroon, including in field culture, than ever declared or even expected. The existing regulations, which present major weaknesses, are not known by a number of stakeholders, and definitely not respected.

Other identified important gaps are the lack of a recognised risk assessment approach, the lack of documented risk assessment for the activities known by the authorities, the absence of real collaboration between the institutions that are involved, the lack of communication with stakeholders in general, and the insufficient involvement of the scientific community.

Other gaps that were identified as likely to impact the control of pathogens or GMOs are a shortage in adequate quarantine facilities at most ports of entry, a shortage of specialised diagnostic and GMO detection capacity, especially in remote areas, the general weakness of the hospital infrastructure, the non-application of safe transport rules for biological samples, the absence of containment greenhouses that would allow testing GM plants safely before possible release, and the lack of a government-owned BSL3 facility for diagnostic purposes. All these are related to limitations in available resources.

Among the main strengths revealed by the consultation appear the availability of competent experts in various disciplines of medicine, animal health, environment and biotechnologies, as well as the recent launch of global and collaborative national strategies and programs, such as the "One Health" strategy and the program to prevent and fight zoonoses.

On the basis of these observations and their possible causes, we identified several priority aspects for the inclusion of GMOs and pathogens in the formulation of a global strategy for the management of invasion risks:

1. The reform of the relevant regulatory framework in order to harmonise, correct and/or complete the relevant regulations, and to make them more applicable.
2. With respect to the regulatory development, the adaptation of the institutional structure to respond to the international commitments of Cameroon, more particularly in relation to GMOs.
3. The development and recognition of a sound and common risk assessment process to become a useful tool for decision-making, and the production of a practical guidance to help the institutions to realise and document sound risk assessments.
4. The reinforcement of the role of the NFP, national BCH and other existing structures in data and knowledge management, information and communication.
5. The re-evaluation of the needs in resource and capacity building on the basis of global, risk-based considerations.

More precise indications are given, particularly in the final discussion and conclusions, on the main modifications that are needed in the legal and institutional frameworks.

The existence and scope of CBP indicate the commitment of the Government of Cameroon to seriously consider the issue of biological invasions and to consider it in a global way; that includes alien and invasive species as well as GMOs and pathogens, in order to protect national biodiversity and environmental resources, including human, animal and plant health. However, ambitious legal and organisational measures are needed to implement a sound and effective management and control of the different categories of potential IAS. More specifically with respect to GMOs, the recommended measures are likely to ensure a harmonious, safe and responsible development of biotechnologies, which is another major stake in Cameroon.