UNITED NATIONS ENVIRONMENT PROGRAMME

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Программа Организации Объединенных Наций по окружающей среде | برنامج الأمم المتحدة للبيئة
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UNEP

PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 Project title: Development And Institution Of A National Monitoring And Control System (Framework) For Living Modified Organisms (LMOs) And Invasive Alien Species (IAS)

1.2	**Project number:**	GFL/3651 PMS:
1.3	**Project type:**	FSP
1.4	**Trust Fund:**	GEF
1.5	**Strategic objectives:**	
	GEF strategic long-term objective:	BD3
	Strategic programme for GEF IV:	SP 6,7 Biosafety/IAS
1.6	**UNEP priority:**	Environmental governance
1.7	**Geographical scope:**	National
1.8	**Mode of execution:**	External
1.9	**Project executing organization:**	Ministry of Environment and Nature Protection (MINEP), Yaounde, Cameroon
1.10	**Duration of project:**	48 months Commencing: 01/10/2010 Completion: 01/09/2014

1.11 Cost of project	**US$**	**%**
Cost to the GEF Trust Fund	**2,400,000.00**	**21**
Co-financing		
Cash		
Government	**700,000.00**	
IUCN	**600,000.00**	
Sub-total	**1,300,000.00**	**12**
In-kind		
Government	**7,100,000.00**	
IUCN	**400,000.00**	
Sub-total	**7,500,000.00**	**67**
Total	**11,200,000.00**	**100**

1.12 Project summary

Cameroon is endowed with a rich biodiversity, both in variety and in quantity. 90% of African ecosystems are represented in Cameroon and the country ranks fourth in Africa in floral richness and fifth in faunal diversity. Cameroon's biodiversity is characterised by a high degree of globally significant national and regional endemic species, many of which are threatened.

Invasive alien species (IAS)[1] constitute a significant threat to Cameroon's biodiversity. This is reflected in the fact that IAS management has been identified as a priority in Cameroon's NBSAP. Mangrove habitats are being invaded by nypa palm (*Nypa fruticans*), riparian zones by *Mimosa pigra*, *Chromolaena odorata* has colonised large areas of forest and savannah and various water weeds notably water hyacinth (*Eichhornia crassipes*) and water lettuce (*Pistia stratiotes*) are affecting fresh water habitat. The impacts of invasive vertebrates and invertebrates on indigenous ecosystems are less apparent but may be very appreciable. Some of the species noted above are also affecting agricultural production as are a wide range of invertebrates and plant diseases. Biosecurity[2] to date in Cameroon has achieved insufficient progress. Measures of presence and impact are imprecise and little attention has been paid to the identification of ports of entry, methods of prevention, early detection, eradication, control and mitigation.

Agriculture is vital to the economy of Cameroon and LMO adoption holds great promise for the country for example by increasing crop yields by utilizing 'green' practices such as the reduction of pesticide use and irrigation. However, no applications for the import of plant and animal LMOs have been received or considered in spite of expressions of interest in utilizing and developing LMOs in Cameroon.

The proposed project focuses on a harmonized approach to build coordinated institutional frameworks with a capacity to detect, exclude, eradicate, control and effectively manage introduced organisms (IAS and LMOs) that could pose a threat to biodiversity. Although reference is made to "IAS and LMOs" throughout this document, this is not meant to imply that all LMOs are IAS. IAS are a subset of all introduced species, the vast majority of which do not become invasive. LMOs are also a subset of all introduced species. LMO introductions have a short history so it is not possible to conclude that very few LMO species are likely to become invasive at this stage. However, the history of (non-LMO) species introductions supports this assertion. This project will establish an objective risk-based approach to the evaluation of proposed species (LMO and non-LMO) introductions and introduction pathways. By definition, this process cannot be compatible with presuppositions that LMOs per se are likely to become invasive.
There are a number of interacting barriers that have limited the effectiveness of biosecurity in Cameroon:

1. ***Ineffective policy, regulatory and institutional framework for the effective prevention and control of the introduction, establishment and spread of biological invaders***. Biosecurity in Cameroon to date has been sectorally based; its main focus being on biological invasions that have clear and direct economic consequences. There is no consolidated legislative or administrative framework for the management of the movement of species as a cross thematic issue in Cameroon. The growth of modern biotechnology has resulted in the further fragmentation of Cameroon's biosecurity framework with responsibilities for the assessment of the environmental impacts of potential LMO introductions to Cameroon being vested in the Ministry of Environment and Nature Protection (MINEP) although the infrastructure for the evaluation of new species introductions resides in the Ministry of Agriculture and Rural

[1] Not all target species are strictly speaking alien to the systems under consideration. For example *Typha latifolia* is native to much of tropical Africa but can take advantage of changed water and salinity levels (often precipitated by invasive *alien* water weeds) to become invasive. *Pteridium aquilinum* is distributed globally and its origin is unclear. Strictly speaking, therefore, it is more precise to refer to "invasive species" but the term "alien" is maintained in this document because of its widespread usage.

[2] Biosecurity encompasses the prevention, eradication, control and other management activities for all types of IAS (pests, diseases, weeds, invasive animals and other organisms) as well as the control of LMOs, traditionally termed biosafety.

Development (MINADER). Poor cross-sectoral integration has been one of the reasons for the fact that no permits for LMO introductions have been applied for in Cameroon in spite of biosafety legislation (Act # 2003/006 on biotechnology in Cameroon) having been promulgated in 2003.

2. ***Inadequate implementation of cost-effective risk-based biosecurity measures***. Basic preventive measures, mainly for plant pests, are practiced by the NPPO (National Plant Protection Organisation – part of MINADER) but capacity is limited (see below). There is no systematic mechanism for early detection and rapid response for new invasions. Some control and mitigation programmes, notably through biological control and integrated pest management, have sometimes been successful, but they have not been based upon a systematic decision-making framework.
3. ***Insufficient capacity for a risk-based approach to biosecurity management.*** Capacity in areas such as traditional and molecular diagnostics/identification, risk analysis, inspection methods and integrated approaches to the management of biological invasions exists in Cameroon but is insufficient for the implementation of an integrated cross-sectoral risk-based approach to biosecurity. A similar skill set is required to assess the risk and environmental impact posed by LMOs and other introduced species. The management of the introduction of diseases with animals and animal products is undertaken by the Animal Health section of MINEPIA. There is no assessment of the invasiveness of animals per se and no work on invasive fish or the threats posed by the introduction of marine invasive species in ships' ballast water or measures including capacity put in place for the management of LMO based animals or marine species. It is therefore logical that those trained in these techniques should apply them to the management of all species (including novel species) introductions. This is particularly the case in a country such as Cameroon where the volume of LMO introductions is unlikely to justify the training and employment of staff to work exclusively on LMO introductions.
4. *Lack of information to inform management and low levels of awareness among key stakeholder groups.* Information is lacking on the status of existing biological invasions in Cameroon. There is also a lack of information on the distribution of most species in Cameroon as baseline studies and therefore little appreciation of the large and growing global body of knowledge on biological invasions and their management. Very little information has been translated into awareness raising materials which can be used to build stakeholder support for the implementation of an effective biosecurity framework in Cameroon.

Each of the four sets of barriers outlined above was used to develop interlinked project components under which project activities will be carried out to achieve the Project Objective: To *Increase capacity to prevent and control the introduction, establishment and spread of Invasive Alien Species (IAS) and management of LMOs in Cameroon through the implementation of a risk-based decision making process*.

Component 1: ***Establish policy, regulatory and institutional framework for effective prevention and control of the introduction, establishment and spread of biological invaders (establish policy, regulatory and institutional framework)***. Under this component a new cross-sectoral and co-operative biosecurity policy, compliant with international guidelines and standards, will be developed and legally supported through a consultative process. A Biosecurity Act will be drafted and other relevant legislation amended so that legislation is mutually supportive. This legislation will be incorporated into the procedures of agencies whose mandates include issues relevant to biosecurity.

Component 2: ***Implement sustainable strategies for the risk-based management of priority pathways and species for IAS and LMOs (implement sustainable biosecurity strategies).*** Under this component biosecurity concerns will be mainstreamed in sectoral agencies and civil society and biosecurity operations executed using a cross-sectoral approach through the execution of pilot risk-based, systematic and transparent decision-making processes for the management of biological invasions. Technical Advisory Committees, constituted of expert opinion, will be established to support and ensure that decision making for IAS and LMOs is not isolated in one organization, but is networked within the revised legislative instruments. Revenues generated from biosecurity services will be retained by relevant executing agencies for operational costs, thus helping to ensure sustainability. Pilot risk- and systems-based management procedures will be undertaken for proposed species introductions

and "dummy" LMO introductions, incursions and established biological invasions under this component to assess the proposed biosecurity approach.

Component 3: ***Build capacity to enable the control of the entry, establishment and spread of IAS and management of LMOs (Capacity building)***. An integrated training programme for staff at all levels of responsibility in all organisations with biosecurity-related mandates will be conducted under this component. The programme will be comprise of two phases: a training of trainers phase where international experts will lead in-country courses and a second phase when those previously trained will train operational staff. Trained trainers will be aided by continued access to remote support from international experts and from training and process manuals developed during phase one of the training programme. Training topics will include risk analysis and other objective decision-making processes (e.g. cost-benefit analysis, socio-economic analysis, expert systems, etc.), diagnostics, detection and monitoring (traditional and molecular), biodiversity informatics, inspection systems including treatments, commodity audit systems and invasive species control procedures. Resource requirements to address major management barriers along priority pathways will be identified under this component and priority infrastructure and materials acquired.

Component 4: ***Raise awareness of key stakeholder groups on risks, impacts and management of IAS and LMOs (Information and awareness)***. Under this component a biosecurity communications and awareness plan will be implemented under which information products available from other countries will be customised for Cameroon's needs in order to increase awareness of biological invasions among key stakeholder groups and the general public. This will avoid duplication, build synergy and ensure replication and capture of good lessons into the Cameroonian Biosecurity process. The communications strategy will use appropriate media (posters, leaflets, radio and television) so as to impact a wider sector of the community. These information resources will also be used for international dissemination with the aim of promoting replication in the African region and neighbouring Sub-regions. National information on the extent and social, cultural, economic, environmental and biological impact of priority invasive species in Cameroon will be quantified through surveys by multi-disciplinary teams. The information generated through this process will be updated by continued monitoring through a national biological invasions monitoring network that will be established under this component. Information from Cameroon and elsewhere will be used to generate black and white lists of priority invasives. Invasive species information generated through the project and associated initiatives will be entered into a species database that conforms to international data management standards which will be established under the project. This and all other relevant information will be uploaded to information hubs such as the International Phytosanitary Portal, CBD CHM and the National Biosafety Clearing House (nBCH). A national database for biosecurity operations will be formulated to provide rapid access to information needed to improve efficiency and effectiveness of biosecurity operations. Surveys will be carried out at intervals during project implementation to establish changes in biosecurity awareness levels among targeted stakeholder groups and the general public as a consequence of this project.

Component 5: ***Project management and coordination***. Project management and coordination will be the responsibility of MINEP, the National Executing Agency. MINEP will establish a Project Coordination Unit (PCU) located in the ministry. The PCU will be led by the National Project Coordinator who will be supported by Project Technical Advisors and administrative staff. MINEP in consultation with key stakeholders will set up a Project Advisory Committee to provide guidance to the project on national political and administrative issues, to facilitate interagency coordination and to provide technical support. This committee will comprise of representatives of key government agencies, intergovernmental institutions and civil society. In addition, each project component will be coordinated through Task Teams comprised of representatives of institutions with sufficient specialised knowledge to ensure that the outputs are of the required quality and that they are delivered in a timely manner. The PCU will establish the project's monitoring and evaluation system which will complement and support UNEP's independent project reviews.

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

AIA	Advanced Informed Agreement
BCH	Biosafety Clearing House
CBD	Convention on Biological Diversity
CEFDHAC	Conference of the Dense Forest and Humid Ecosystems of Central Africa
CEMAC	Economic Community of Central African States
CHM	Clearing House Mechanism
CIRAD	Centre for Agricultural Research and Development
CITES	Convention on the International Trade in Endangered Species
COMESA	Common Market for Eastern and Southern Africa
COP	Conference of the Parties
CPB	Cartagena Protocol on Biosafety
GDP	Gross Domestic Product
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GISP	Global Invasive Species Programme
GMO	Genetically Modified Organism
GOC	Government of Cameroon
IAS	Invasive Alien Species
IC	International Consultant
IMO	International Maritime Organisation
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
IRAD	Institute of Agricultural Research for Development
ISPM	International Standards for Phytosanitary Measures
IUCN	International Union for the Conservation of Nature (World Conservation Union)
LMO(s)	Living Modified Organism(s)
MARPOL	Prevention of Marine Pollution by the Dumping of Wastes and Other Matter
MINADER	Ministry of Agriculture and Rural Development
MINCOM	Ministry of Communications
MINEP	Ministry of Environment and Nature Protection
MINEPIA	Ministry of Livestock, Fisheries and Animal Industries
MINFOF	Ministry of Forestry and Wildlife
MINMIDT	Ministry of Mines, Industries and Technological Development
MINPOSTEL	Ministry of Posts and Telecommunications
MINSANTE	Ministry of Public Health
MOU	Memorandum of Understanding
nBCH	National Biosafety Clearing House
NBSAP	National Biodiversity Strategy and Action Plan
NEPAD	New Partnership for Africa's Development
NGO	Non-governmental Organization
NPC	National Project Coordinator
NPPO	National Plant Protection Organisation
OIE	Office international des epizooties (World Animal Health Organisation)
PAC	Project Advisory Committee
PBME	Project Benefit Monitoring and Evaluation
PCU	Project Coordination Unit
SADC	Southern Africa Development Commission
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SPS	Sanitary and Phytosanitary Agreement of the WTO
TA	Technical Advisor(s)
TCP	Technical Cooperation Program
TNS	Tri-National Sangha
TRIDOM	Tri-National Dja-Odzala-Minkebe

UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WHO	World Health Organisation
WTO	World Trade Organisation

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1. Background and context

1. Cameroon is situated on the coast of Central Africa, between latitudes 2° and 13° N and between longitudes 8° and 16° E. It has an area of 475 450 sq. km, bounded to the South by Equatorial Guinea, Gabon and, to the North by Chad, to the East by Central African Republic and to the West by Nigeria and the Atlantic Ocean. Cameroon is divided into 10 administrative regions as of 1993, Cameroon's total population in 2008 was estimated at 18 million inhabitants with an average annual growth rate of 2.5%. The geographical position of Cameroon in the continent contributes greatly to its ecological (fauna and flora) and ethnic diversity, which ranges from the tropical rain forest in the South to the Sahel-savannah in the North. The forest zone has an equatorial climate with four seasons' per year (a long and a short dry season and a long and a short rainy season). The Sahel-savannah and montane zones have an anomalous climate with only two seasons (a long wet season in the south and a short but often severe dry season in the north).

2. Cameroon is a biodiversity-rich country containing a number of globally significant threatened national and regional endemic species. About 90% of African ecosystems are represented in Cameroon. They include the sahelian, sudanian, tropical rainforest, afromontane, coastal and marine ecoregions. Cameroon ranks fourth in Africa in floral richness and fifth in faunal diversity. With regards to the diversity of its sylvicultural primates, Cameroon is ranked second in Africa behind the Democratic Republic of Congo. This wealth of biological diversity constitutes an enormous reservoir of genetic material.

3. Cameroon is committed to implement the principles and intent of international agreements to safeguard its biodiversity and for the sustainable management of its resources. This is reflected by the fact that Cameroon became a party to the CBD by ratification on 19 October 1994 and of the CPB on 11 September 2003.

4. Cameroon enacted the Law No 96/12 of 5th August 1996 Relating to Environmental Management, which is an umbrella legislation to enable the national government to promulgate notifications and rules for regulating various activities for conservation of environment and includes reference to important principles such as precaution and prevention as essential measures. The legislation does not however make any specific reference to the protection of the environment from the incursion of invasive species.

5. In addition, Cameroon has already passed the Biosafety Law (No. 2003/006 of 21 April 2003) and a Decree to implement the Biosafety Law (No. 2007/0737 of 31 May 2007). A manual has been developed for the assessment and management of LMO risk, but the document pre-dates the enactment of the legislation and only deals with processes in general terms. Despite these efforts, national capacity to implement the CPB remains inadequate.

6. The proposed project focuses on a harmonized approach to build coordinated institutional frameworks with a capacity to detect, exclude, eradicate, control and effectively manage introduced organisms (IAS and LMOs) that could pose a threat to biodiversity. This approach will help Cameroon not only to build on existing institutional capacity to implement the Cartagena Protocol on Biosafety but also to primarily evolve cost effective measures to prevent, control and manage invasive alien species in terrestrial, freshwater, marine and coastal systems. It will emphasize the need for sharing of resources and expertise, and the harmonization of policy and legislative frameworks across sectors to maximize and consolidate national efforts to sustainably manage introduction of new organisms including LMOs and IAS.

7. Presently, there is no consolidated legislative or administrative framework for the management of IAS or LMOs as a cross thematic issue in Cameroon. However, several agencies under a variety of statutes control movements of organisms. Infrastructure is either lacking or is fragmented and there is the need to put in place an effective mechanism to ensure a coordinated approach involving the key government agencies such as environment, agriculture, customs, trade, forestry, wildlife, and others to be a part of any future coordination mechanism.

8. The economy of Cameroon is based on agriculture and therefore the main objectives of the new Agricultural policy of Cameroon (Ministry of Agriculture [MINAGRI] June 1990) are to increase food production and maintain Cameroon's food self-sufficiency and security through ensuring food security, increasing revenue through export promotion and import reduction, improvement of living standards in the rural areas, and the protection of the environment and the rational use of natural resources.

9. Agriculture employs 60 percent of its workforce, while providing 20 percent of its GDP and 25 percent of its export revenue in 2006. Cameroon produces a variety of agricultural commodities both for export and for domestic consumption. The most important cash crops are cocoa, coffee, cotton, banana, rubber, palm oil and kernel, tea and peanut. Coffee and cocoa are grown in the central and southern regions, banana in south-western areas, and cotton in several northern regions. In addition to export commodities, Cameroonian farmers produce numerous subsistence crops for family consumption. Main food crops include millet, sorghum, peanuts, plantain, sweet potato, cassava, maize, rice and sugar cane. Palm oil production has shown signs of strength, but not much of the product is marketed internationally. Cameroon bananas are sold internationally, and the sector was reorganised and privatised in 1987.

10. Data for the first half of 2009 indicate importations of large quantities of maize as whole grain and milled flour, rice, soybean, sorghum, wheat and barley and fresh fruit and vegetables. These commodities are sourced from all countries of the globe and present a wide range of risk of importation of pests, diseases, weeds and other IAS. The responsibility for the examination and screening of these commodities rests with the Phytosanitary and Zoo-sanitary services within the Ministry of Agriculture and Rural Development (MINADER) and The Ministry of Livestock, Fisheries and Animal Industries (MINEPIA) that operate at the international airports, ports and border posts. Cameroon ports are also used for the transhipment of food aid to countries as far away as Sudan, the transit of which creates an IAS risk and transboundary movements of LMOs (with potential risks to the environment) throughout its journey. The level of trade into and outside of Cameroon is likely to increase as the concept of a Common Market for Africa is further explored.

11. At the national level, MINADER and MINEPIA operate sanitary and phytosanitary control in accordance with the principles outlined in the WTO/SPS Agreement – which Cameroon signed on 13th December 1995 - and the standards developed by OIE and the IPPC – which was signed on 5th April 2006 – at 28 Inspection Posts including one at the seaport in Douala, 3 at the airports in Douala, Yaoundé and Garoua, and 2 in the Parcel Posts in Douala and Yaoundé. There are inconsistencies in the financial model under which MINEPIA and MINADER operate with revenues generated from the services for import and export inspection for IAS control are retained by MINEPIA but not MINADER.

12. A recent review of phytosanitary capacity of the National Plant Protection Organisation (NPPO) by FAO (2009) concluded that there were institutional needs to increase capability at points of entry to address deficiencies in legislation, personnel, infrastructure, decision making and facilities. In particular emergency response plans and capabilities to respond to any type

of incursion were lacking. Such an established entity would mirror the biosecurity services to manage IAS risk that have been developed as a holistic concept in countries such as Australia, New Zealand, Galapagos and Seychelles that incorporate the border activities associated with trade in plant and animal commodities extended beyond traditional (WTO/SPS/IPPC/OIE) agricultural concerns to also address the biodiversity conservation concerns of the CBD.

13. As a result of CBD interventions in Cameroon, the National Biodiversity Strategy and Action Plan (NBSAP) was adopted in 2002 and is being updated in line with current trends. A Biosafety law with an implementing decree were promulgated as referenced in para 5 and a Manual for the assessment of LMOs has also been published. Nevertheless, there is still low levels of activity in the management and control of IAS and LMOs within the Ministry of Environment and Nature Protection (MINEP) - the CBD and the GEF Operational Focal Point and the relevant sectoral ministeries. Although the importation of commodities continues to present a biodiversity threat to the country this is being undertaken by MINADER and there has yet to be demonstrated a need for the importation of LMOs that could present an environmental threat, via plants, seeds or other pathways even though cotton growers in a recently held meeting in Douala (March 15 - 16, 2010) organised by MINADER and Cotton Production Compnay requested for introduction of LMO Cotton seeds. In country control of invasive species through Integrated Pest Management (IPM) and biological control has been undertaken in the past with external support, but currently capacity levels are critically low.

14. The current government structure in Cameroon has created a large number of ministries and agencies with involvement in the management of IAS and LMOs into and within the country, and this can only be coordinated through the development of a coordinated network of cooperating agencies working together under the umbrella of the biosecurity discipline. Biosecurity encompasses the prevention, eradication, control and activities for all types of IAS (pests, diseases, weeds, invasive animals and other organisms) as well as the management of LMOs, traditionally termed biosafety.

15. Biosecurity, as a new discipline, has been clearly trade related and pathway driven through the need to meet the obligations within the WTO SPS Agreement for transparent and technically justified trade access restrictions. In most cases the lead agency for biosecurity is that responsible for agricultural trade, but examples are in place where the agency responsible for environmental protection has this role (where agriculture has a lower impact on GDP such as in Galapagos and Seychelles).

16. Capacity in areas such as traditional and molecular diagnostics/identification, risk analysis, inspection methods and integrated approaches to the management of biological invasions exists in Cameroon but is insufficient for the implementation of an integrated cross-sectoral risk-based approach to biosecurity. A similar skill set is required to assess the risk and environmental impact posed by LMOs and other introduced species. The management of the introduction of diseases with animals and animal products is undertaken by the Animal Health section of MINEPIA. There is no assessment of the invasiveness of animals per se and no work on invasive fish or the threats posed by the introduction of marine invasive species in ship ballast water. It is therefore logical that those trained in these techniques should apply them to the management of all species introductions. Despite the periodic requests for LMO introduction, the volume of LMO introductions in Cameroon for the next few years is unlikely to justify the training and employment of staff and establishment of institutional infrastructure dedicated to work exclusively on LMO introductions.

17. Information is lacking on the status of existing biological invasions in Cameroon. Species have been cited as invasive but nomenclature is often inconsistent and accounts are rarely supported by information on social, cultural, economic, environmental and biological impact.

There is also a lack of information on the distribution of most invasive species in Cameroon. In addition there is very little appreciation of the large and growing global body of knowledge on biological invasions and their management that has the potential for application to the Cameroonian context. Very little information has been translated into awareness raising materials which can be used to build stakeholder support for the implementation of an effective biosecurity framework in Cameroon.

18. This proposal for support intends to create a new paradigm for cooperation between the agencies responsible for regulatory control via management, prevention, eradication and control. The intention is to coordinate the management of entry, establishment and spread of IAS and LMOs in an institutional cooperative mechanism with the lead agency being MINEP as opposed to MINADER, who continue to be the main implementation agency. Human health and invasive diseases are considered separately from the IAS strategy and remains administered by the ministry responsible for health (MINSANTE), though inspection activities of passenger documentation may be undertaken at point of entry by biosecurity service staff. Attempts to control highly contagious non vector-borne human diseases such as swine flu by border activities have been unsuccessful.

19. The project sees MINEP as the lead coordinating agency with the regulatory activities being continued to be undertaken for plant and animal IAS and LMOs by MINADER and MINEPIA, with technical inputs into decision making for IAS by the Ministry of Forestry and Wildlife (MINFOF) for forestry and wildlife matters, the Ministry of Public Health (MINSANTE) for human health, with involvement of marine and fishing authorities (for ballast water management) and for LMOs by the cross sectoral National Biosafety Committee housed by MINEP. Implementation at the borders will require inputs from customs, police, ports authorities and other security related organizations. Postal control will remain with the Ministry of Post and Telecommunications (MINPOSTEL) as the main agency.

20. All cross-border movements of commodities and persons pose species invasion risks. It has to be recognized, however, that risks posed by movements over Cameroon's land borders are relatively small. In most cases these national boundaries do not coincide with geographical barriers and the ecosystems on one side of the border are essentially the same as those on the other side. Species are free to move naturally over national boundaries (e.g. animal migrations and bird dispersal of seeds) and have done so for millennia. Even in recent times the allocation of land to various countries has changed. Even if resources permitted the system would not work for all land border crossings as the risk of non-compliance is very high. The leakiness of many land border crossings would allow people to cross at unofficial entry points along the border in order to avoid biosecurity procedures. The thrust of this project, therefore, will be for the control of IAS that originate from areas remote from Cameroon and to focus on international ports and airports as pathways of invasion and the in country and transboundary management of LMOs. A risk-based "prevention is better than cure" approach does not, however, mean that established invasions will be ignored.

21. This background situation can be summarised as constituting four interacting barriers that have limited the effectiveness on biosecurity in Cameroon to date:

    1. *Ineffective policy, regulatory and institutional framework for the effective prevention and control of the introduction, establishment and spread of biological invaders.*
    2. *Inadequate implementation of cost-effective risk-based biosecurity measures.*
    3. *Insufficient capacity for a risk-based approach to biosecurity management.*
    4. *Lack of information to inform management and low levels of awareness among key stakeholder groups.*

22. Each of the four sets of barriers was used to develop interlinked project components under which project activities will be carried out to achieve the Project Objective: Increased capacities to prevent and control the introduction, establishment and spread of Invasive Alien Species and LMOs through the implementation of a risk-based decision making process.

2.2. Global significance

23. The CPB, which was negotiated under the CBD, entered into force on 11 Sept. 2003 after Palau became the 50th country to ratify this international legally binding instrument to regulate the movement of LMOs across national borders. This marks a milestone in the history of international agreement to regulate the transboundary movement of products of modern biotechnology. Capacity building in biosafety to comply with CPB will ultimately contribute to global benefits through the conservation and sustainable use of Cameroon's important biodiversity, ecosystems and habitats.

24. Protection of biodiversity from loss caused by IAS is one of the main themes of GEF-4 and the necessary focus on inter agency cooperation across other international agreements is a keynote of this project. The project workplan includes many of the features of the IUCN Global Strategy on Invasive Alien Species.

25. The IPPC has been in force since 1951 with its focus on the safe movement of agricultural commodities in international trade. With its revision in 1997 the focus was widened to include the effect of organisms in trade on the environment and also the development of international standards so that it was in compliance with the WTO SPS Agreement provisions. The OIE was formed in 1929 and has responsibility under the WTO for the development of harmonized procedures for zoonotic diseases, but has no responsibility for animals as IAS.

26. Currently the movement towards the harmonisation of regulatory functions concerning sanitary and phytosanitary procedures (and the development of the concept of biosecurity) is being in part driven by the WTO SPS Agreement, of which Cameroon is a signatory. Already, reflecting the decisions on disputes brought before the WTO, the emphasis has been upon the need to undertake technical decision making (risk analysis) in determining restrictions and prohibitions and the acceptance of international standards. The CBD also has a liability and redress component (Art 27) and the use of risk assessment and management in decision making (Arts 15 and 16) so there is commonality in approach between the agreements. The CBD and the IPPC have recognized that there are no clear demarcation lines between the treatment of IAS/pests/diseases/weeds etc and their respective agreements. To foster cooperation they have adopted a common work programme with the aim to harmonise processes wherever possible. This project will build on this cooperative effort to harmonise the policy, tactical and operational approaches to IAS control and management of LMOs so as to achieve the objectives of both agreements.

2.3. Threats, root causes and barrier analysis

27. Cameroon has a wealth of biological diversity constitutes an enormous reservoir of genetic material. The biodiversity (all living organisms and terrestrial and aquatic ecosystems) managed in protected areas and on state land is threatened by poor knowledge of the resource potential, unsustainable exploitation by the local populations and economic operators including uncontrolled transboundary movements of living organisms, inadequate institutional arrangement by the administration, cross sectoral conflicts in regulatory processes and insufficient financial and material resources . Much of the country's population and economy is dependent upon natural

resources (natural and managed forests and biodiverse agricultural systems) that are under threat from land use change, unsustainable use, invasive aliens and climate change.

28. Cameroon's indigenous biodiversity continues to be threatened by IAS such as species of the genera *Pteridium*, *Chromolaena*, *Mimosa*, *Nypa*, *Typha* and *Eichhnornia* that invades pasture and freshwater throughout the country. In addition, diseases such as the African swine fever, rinderpest, and avian flu have also been reported and without appropriate controls introduction into Cameroon of ebola and chicunkunya viruses is a possibility. In terms of LMOs, immediate interest to Cameroon includes modified maize from Argentina or South Africa, as well as entry of modified fish and possibly cotton.

29. Pressures on biodiversity, among others, comes from non application or ignorance of the existing law/regulations, absence or inadequate application of implementation decree of the law, lack of specific laboratory equipment and insufficient capacity for LMOs/IAS risk assessment, risk management, monitoring, and enforcement as well as inadequate scientific knowledge for the management of LMOs and IAS. This project is therefore essential for establishing and strengthening linkages between biodiversity and biosafety mechanisms into a consolidated biosecurity institutional arrangement for Cameroon

30. In addition to threats to biodiversity, there are threats and risks to the success of this project due to the complexity of novel introductions through the biosecurity approach. These include poor coordination between line ministries and executing agencies at the national level, inadequate participation of targeted stakeholders (especially non government organisations) in the capacity building program, lack of political will to institute changes through policies, regulatory regime and enforcement. This is particularly the case with the large number of ministries involved. Negative public opinion and lack of understanding of the concept of biosecurity can also impede the progress of this project.

31. There is also the threat of the misunderstanding of the role of this project in the management of LMOs which could also be considered as IAS, and possible confusion with the wider issues associated with LMO risk (e.g. health and safety issues) which are not part of this control regime, and may be responsible for the current lack of implementation of current laws.

32. In terms of capacity to make technically justified decisions, as are required by the WTO/SPS Agreement and the CPB, for the management of IAS and the assessment of LMOs, Cameroon is lacking in all areas. Although some training has been given by outside agencies, this lack of capability, together with restricted access to information resources, hampers access to new commodity markets and decisions on import control. Although within existing legislation related to biosecurity, a number of technical decision committees have been identified, these are at too high a level to assist with decisions on the identification of risk organisms (as identified by risk assessment) or responses to incursions.

33. The project will provide training in risk analysis for a range of IAS types and LMOs and for a number of different management scenarios. These will be in conformity with international best practice. The project will also provide access to technical resources that will be required to undertake these tasks, as well as links to diagnostic aids, both remote and in country, that will enable national surveys of pest and disease distribution of concern so that reliable inventories can be made.

34. .The primary issue is paucity of existing coordinated infrastructure to assess and manage potential effects arising from LMOs or IAS and therefore it is anticipated that the proposed project will provide for the establishment of an effective and harmonised system for the management of LMOs and IAS in Cameroon. In this regard, monitoring and enforcement mechanims are an important part that will require capacity in personnel and equipment compliant with international standards of good pactice in these areas. Detecion mechanisms will have to be put in place especially at the frontiers and operated by knowedgeable and experienced people on a sustainable basis. The proposed project will focus on shared resources and expertise across the various agencies tasked with the management of LMOs/IAs to address detection, risk assessment and management at the points of entry so as to ensure safe transboundary movements. An approach with an underlying principle of harmonised and coordinated approach in terms of built capacity of expertise across sectors in risk analysis, infrastructure and policy/regulatory frameworks will build on the limited capacity developed from the earlier initiatives on biosafety and the management of biodiversity including IAS.

2.4. Institutional, sectoral and policy context

35. Cameroon enacted the Law No 96/12 of 5th August 1996 Relating to Environmental Management, which deals with environmental impact assessment, protection of land, water, soils and biodiversity, but does not specifically mention IAS as a threat or risk and concentrates on the conservation of the resources rather than protection by prevention of invasion. No mention is made of LMOs in this legislation. The legislation is the responsibility of MINEP but does not envisage any regulatory border activities.

36. The Biosafety Law (No. 2003/006 of 21 April 2003) and a Decree to implement the Biosafety Law (No. 2007/0737 of 31 May 2007) is the responsibility of MINEP but the legislation has not been implemented due to the absence of orders to constitute the consultative committee, the National Biosafety Committee, within the legislation have not been addressed as well as the high level nature of the committee as discussed above. No applications for the import of plant and animal LMOs have been received or considered. There is no indication that any organisation has proposals for the import of plant or animal LMOs although several organizations (e.g. IRAD, Cotton Growers Association and the Cotton Production Company [SODECOTTON]) have expressed an intention of utilizing and developing LMOs.

37. The National Biodiversity Strategy and Action Plan (NBSAP), formulated with assistance from the CBD, proposes to “control exotic species/genetically modified organisms which threaten local species, habitats and ecosystems” and/or “restore/rehabilitate degraded ecosystems”. However action in support of these proposals has been hampered by lack of resources. Those who manage Conservation initiatives such as the Tri-National Sangha (TNS), the transfrontier conservation area shared by Cameroon, Central African Republic (CAR) and the Republic of Congo are aware of the threat posed by invasive species, notably Typha latifolia but no systematic management efforts have been implemented.

38. The protection of agricultural production sectors through prevention of entry of pests and diseases has been traditionally the responsibility of quarantine services that are the responsibility of MINADER Plant Protection Service (an NPPO in accordance with the IPPC) and the Animal Health Service (MINEPIA). These agencies have the powers to regulate the importation of risk commodities through the identification of either specific pests or diseases or of pathways. Powers within the legislation (Act # 2003/003 of April 2003 relating to Phytosanitary Protection and subsequent orders) require permits to be issued for commodities, indicate methods of inspection at points of entry and the actions to be taken if pests or diseases

are detected. The inspection of goods is done in cooperation with the Customs service that has the authority to search both conveyances and persons.

39. The Plant Protection Law also regulates the control over the registration and use of pesticides in the country.

40. MINFOF has the responsibility for the administration of forests but does not regulate IAS at the preventative level. However, importation approval for forestry species of commercial importance is only given by MINADER on the advice of MINFOF. Management/eradication/control/restoration activities relating to biological invasions that have become established in forests is the responsibility of MINFOF.

41. The purpose of the project is to provide technical linkages between the various ministries and agencies so that the complexity of decision making for IAS and LMOs is not isolated in one organization, but is networked within the legislative instruments that each has in the administration of border control or in-country management/eradication/control/restoration activities (see Appendices 16 & 17).

42. The mechanism is to provide within each enabling legislative text the provision for the risk policy to be determined by a technical advisory committee constituted of expert opinion. These experts could be from any sector, but given the restraints on capacity it is planned for some experts to be members of TACs in more than one ministries legislation to provide decision linkages. This will ensure harmonization of procedures and transparency of decision making. It will also create a critical mass of experts who are able to advise on all preventive and control strategies in both animal and plant sciences.

2.5. Stakeholder mapping and analysis

43. MINEP, as the Competent National Authority for CPB and nodal agency for biosafety regulations in the country and the GEF Focal Ministry in the country, will preside and coordinate with relevant ministries, agencies and other organizations at national level. It will work with UNEP/GEF to get stakeholders involved in a stepwise manner as follows:

- *Stakeholder identification*: biosecurity is a cross-cutting issue, which relates to several sectors, including environment, agriculture, health, science and technology, industry, trade, education and customs. The policy makers, scientists/technical experts from public and private sectors, researchers and technicians, legal experts, economists, interest groups, students, mass media and extension workers were identified as important stakeholders through the project preparation phase and were participants in the national consultative workshop held to discuss in detail the draft logframe and work programme of the project. These stakeholders are identified in Appendix 17. In addition more stakeholders will be identified during the execution of the project.

- *Stakeholders participation*: All identified stakeholders were involved in designing of this project, through a consultative stakeholder meeting convened by MINEP. This consultation also helped in identifying the potential project partners. As one of the themes, across all project components, but especially during a consultancy on national policy directions undertaken under Component 1, a stakeholder stocktaking exercise will be carried out and results will be discussed in a national consultation workshop, for setting priorities and refining the work plan of the project. Stakeholders will continue to be involved throughout the project cycle (see Appendix 17).

- *Information dissemination and consultation*: The development of the existing National Plant Protection Organisation (MINADER) website will provide information on the development of the project and will be updated regularly for use by stakeholders. All

project information will be disseminated through the website which will also serve as a platform for public feedback and participation. Links will be established between the NPPO website and the nBCH. Mechanisms for wider dissemination of public outreach material through various extension networks will be developed as part of the community awareness activities. The amendment of laws to include technical advisory committees in key regulatory legislation will ensure stakeholder participation and impact in the long term.

2.6. Baseline analysis and gaps

44. Cameroon has developed a biosafety law and an implementing decree for the management of LMOs. The regulatory regime however lacks the enabling administrative orders to establish the decision making body, the National Biosafety Committee to effectively lead the national process in handling LMOs. A draft risk assessment manual has been developed which has to be used for training and equipping of the line agencies to be able to assist in the decision making process. In the case of IAS, there is no policy or regulatory regime to facilitate management of IAS. As indicated in paras 46 – 51, some initiatives have been undertaken albeit using traditional methodologies to attempt to manage IAS. These initiatives during the stocktaking process were found to be uncoordinated among several sectors. The baseline gained strengthens the need for a coordinated approach using the relevant sectoral mandates supported by an appropriate biosecurity policy, regulatory and institutional enabling to facilitate the management of LMOs and IAS using the risk analysis based approach to facilitate handling and decision making

45. Further baseline and needs analysis will be undertaken early in the project to update the data gathered during the project preparation phase, in conformity to the approved GEF Strategy for Financing Biosafety in GEF4. The stocktaking assessment will be carried out by government institutions and key partners. They will map out how to collect, consolidate and analyse the updated data to guide the fine-tuning of the project design, plan specific activities under this project, develop a detailed work plan and review existing legal documents for compliance between the information needed under the prevailing regulatory system and the CPB. Additionally, the stocktaking assessment will also assist in determining the long term funding needed from the Government of Cameroon to sustain biosecurity activities after completion of this project. The baseline scenario is captured under the incremental cost analysis is included in Appendix 3

2.7 Linkages with other GEF and non-GEF interventions

46. Several capacity building activities are being undertaken at the moment and are also planned in the area of biosecurity. The FAO regional project undertook a phytosanitary control capacity evaluation and identified a number of constraints to efficiency that will complement the work of this project. An FAO project to strengthen the seed science capability of Cameroon through support to the Seed Testing Laboratory will assist this project as seed hygiene is part of the process of pest diagnosis for seed in trade and will reduce the pest content in the pathway, both export and import. It will also assist in the detection of LMO seed to support the national decision process and enhance national capacity through training activities.

47. A proposed FAO project to improve peri-urban vegetable production in four major towns will require the importation of a wide range of seed varieties and the project will be able to monitor this activity to ensure high seed quality and the absence of propagules of potentially invasive species in imported seed stocks.

48. There have been various national initiatives to manage invasive plants in Cameroon. IRAD has carried out research on *Mimosa pigra*, *Chromolaena odorata* and *Pteridium aquilinum*. Livestock farmers in the North West and Adamawa plateau regions have attempted to manage invasions of *Pteridium aquilinum* and *Mimosa pigra*. But these efforts have been largely unsuccessful.

49. The project will build upon the results of the UNEP/GEF project "Removing Barriers to Invasive Plant Management in Africa" (African Barriers Project) a project to reduce or remove the barriers to invasive plant management in four African Countries: Ethiopia, Ghana, Uganda and Zambia. The project comprises of four components relating to: 1) the establishment of guidelines for the relevant institutions to ensure that strategies to control invasive plant species are standardised; 2) raising public and political awareness of the issues surrounding invasive plants; 3) undertaking pilot prevention and control activities including biological control; and 4) setting up training programmes developed for officials, quarantine officers, community members and other groups affected by invasive species. The project is being coordinated at the international level by CABI and IUCN. Both organisations will be supporting the proposed project through the provision of expertise including lessons learned from the African Barriers Project. IUCN will be one of the proposed project's executing agencies.

50. The Cameroon Biodiversity Conservation and Management Programme catalysed through a World Bank GEF Project is supported by nine funding bodies and partners and executed by eight executing agencies including MINFOF. Its goal is to improve management of protected areas in six regions and strengthen key national institutions. This goal is translated into the following specific objectives: 1.) Support Cameroon's efforts to preserve and manage its biological resources sustainably; 2.) Promote the participation of rural populations in biodiversity preservation; 3.) Encourage wise use of renewable natural resources and promote ecologically viable development in the periphery of protected areas. The management of biological invasions will be critical to the maintenance of the ecological integrity of the protected areas.

51. Following the first Summit of Heads of State of Central Africa on forests held in Yaoundé in 1999, the Forestry Commission of Central Africa was established as a regional body under guidance and coordination of interventions in the management of Forest Ecosystems in Central Africa. It has specialized bodies among which the Conference on Dense and Humid Ecosystems of Central Africa (CEFDHAC), which is a forum for dialogue and exchange between actors. IUCN has played a major role in the facilitation of forum and thus enabled the creation of multi-stakeholder networks including the Network of Parliamentarians who may have a role in political influence in the management of natural resources. These networks can be used by the project for stakeholder participation and dissemination activities.

52. The Project will also draw and share lessons through Cameroon's participation in the FAO/GEF project on "Harmonisation of National Biosafety Frameworks in the Central Africa Region[3]" currently under review. In addition, there have been earlier initiatives on biodiversity conservation and management funded by the World Bank/GEF and the UNEP/GEF Biosafety Pilot and Demonstration Projects on National Biosafety Frameworks which also had a component on building capacity for the national Biosafety Clearing House to facilitate access to and participation of the public in decision making. This led to some

[3] Biosafety capacity building project aiming at harmonising CEMAC countries National Biosafety Frameworks at sub-regional level in line with the Cartagena Protocol on Biosafety (Cameroon, Congo, Gabon, Equatorial Guinea, Central African Republic, Chad)

limited installed capacity on which the current initiative will build on as a follow up to the earlier short term training in risk assessment/risk management, the Advanced Informed Agreement Procedure (AIA), methods for monitoring and enforcing legislation and biosafety information management through a holistic approach which will harness a core to expertise and resources to facilitate risk analysis, rapid detection of LMOs using the biosecurity approach

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1. Project rationale, policy conformity and expected global environmental benefits

53. This project will address the threats posed by biological invasions associated with species introductions that stem from cross-sectoral economic activities. Although GOC has established policies, regulations and infrastructure to perform its duties under relevant international law and sector-based national legislation that deal with biosecurity issues, there is a need to improve management effectiveness through identifying risks and gearing interventions towards reducing the highest risks. This is expected to improve the efficacy and cost effectiveness of interventions. This approach needs to be based upon a cross-sectoral and cooperative policy framework for the management of biological invasions based on the risk analysis approach, comprehensive and sustainable capacity building programmes, provision of essential information and awareness-raising to ensure support from decision makers, the identified risk groups and the general public. Improved cross-sectoral collaboration, capacity building, information provision and awareness-raising will provide the foundation for the implementation of a sustainable biosecurity system for Cameroon. The proposed measures to improve biosecurity are particularly timely in light of the likelihood of a worsening problem of biological invasions emanating from increased trade and the movement of goods and people.

54. The GEF investment will remove the identified barriers to ensure the attainment of the GEF alternative solution. GEF funding will build upon the existing policy, regulatory and institutional framework, providing the incremental costs to ensure that the biodiversity management objectives pertaining to biological invasions are mainstreamed into the all sectors.

55. The project has several innovative aspects. The prevention and management of biological invasions (whether from LMOs or non-LMOs) under the biosecurity umbrella requires the establishment of a harmonised system that promotes the sharing of resources and expertise across the various agencies tasked with the management of LMOs/IAS. This synergy will help achieve the objectives of both CBD Articles 8(h) and 8(g). In addition it will aid the effective implementation of the Cartagena Protocol on Biosfaety and the execution of the WTO SPS agreement in a way that embodies the CBD/IPPC common work programme at the national level.

56. The project approach builds on strategies traditionally undertaken in the agricultural sector (quarantine and phytosanitary measures) thus strengthening structures that are already operational and emphasising the hierarchical approach promoted by the CBD (prevention, early detection and removal, containment, suppression and control) based on the consideration that financial investments in the early stage of an invasive process may be more cost effective

than controlling already established invasives. The promotion of simple cost recovery mechanisms further supports this emphasis on efficiency to maximise effectiveness and sustainability.

57. In many cases, however, there are clear needs to address established invaders. This project will pioneer the implementation of a decision-making process to operationalise the ecosystem approach for the management of invasive species impacts. This approach will build upon systems developed under the Cooperative Islands Initiative and others to tackle invasive species and other factors that encourage biological invasions (e.g. land management issues, deforestation, fragmentation, etc.) in a systematic manner to achieve ecosystem level goals (improved water supply, access to grazing areas, sustainable fisheries, etc.).

58. It is expected that this approach will have high replication value; providing an opportunity to disseminate knowledge and good practice in addressing biological invasions through cross-sectoral and ecosystem approaches that can be replicated in other countries, notably those in Continental Africa undergoing similar threats.

59. Protecting biodiversity from the potential risk of invasiveness of some LMOs will allow the country to maximise the benefits from biotechnology by increasing crop yields by utilizing 'green' practices such as the reduction of pesticide use and irrigation. This will ultimately contribute to conservation of natural resources and reduced environmental degradation, which translates to global environmental benefits. Greater protection from the impacts of invasive species will help to improve food security and other indices of well-being which can also reduce the pressure on the environment.

3.2. Project goal and objective

60. The Goal of the project is:

The ecological integrity of terrestrial, freshwater, marine and coastal ecosystems of the Cameroon is secured for the conservation and sustainable use of biodiversity.

61. The project will be responsible for achieving the following project objective:

Institutional strengthening the prevention and control of the introduction, establishment and spread of Invasive Alien Species and management of LMOs through the implementation of a risk-based decision making process.

62. The Project Objective will be achieved through 5 Project Outcomes:

Outcome 1: Policy, regulatory and institutional framework for effective prevention and control of the introduction, establishment and spread of biological invaders.

Outcome 2: Cost effective risk-based control and mitigation programmes for IAS in place and cost effective risk-based management system for LMOs operationalised from existing legal instruments.

Outcome 3: Functioning government agencies with operational capability to manage major pathways of IAS and LMO introduction, establishment and spread.

Outcome 4: Key stakeholder groups (decision makers, travelling public, traders, tourism operators, importers, shipping agents, community groups, etc.) aware of risks of IAS and LMOs and need for biosecurity and have access to information at the appropriate level of detail concerning risk pathways and risk organisms.

Outcome 5: Project efficiently managed and coordinated to maximise effectiveness.

3.3. Project components and expected results

63. Each outcome corresponds to one of five interrelated project components

Component 1: Establish policy, regulatory and institutional framework for effective prevention and control of the introduction, establishment and spread of biological invaders (establish policy, regulatory and institutional framework).

Component 2: Implement sustainable strategies for the risk-based management of priority pathways and species for IAS and LMOs (implement sustainable biosecurity strategies).

Component 3: Build capacity to enable the control of the entry, establishment and spread of IAS and LMOs (Capacity building).

Component 4: Raise awareness of key stakeholder groups on risks, impacts and management of IAS and LMOs (Information and awareness).

Component 5: Project management and coordination.

Component 1: Establish Policy, Regulatory and Institutional Framework.

64. Output 1.1: New cross-sectoral policy coordination framework for the prevention and control of IAS and LMOs is established. A comprehensive cross-sectoral and cooperative policy coordination framework for biosecurity will be developed to guide the effective management of the introduction, establishment and spread of IAS and LMOs. A consultative review of the mandates and functions of relevant agencies will be undertaken, with overlaps, conflicts and gaps identified. A new Biosecurity Policy for Cameroon will be developed by a consultancy team in a participatory manner with ample inputs from stakeholders from the government and production sectors and civil society. The policy will be harmonized with other relevant plans, programmes and initiatives and be compliant with international standards. The project will facilitate extensive lobbying among decision makers for the adoption of the text produced. Many parliamentarians have already participated in networks facilitated by IUCN and others. The policy will cover inter alia:
    - Legal changes needed to establish a cross-sectoral and cooperative policy coordination network.
    - Technical Advisory Committees to advise relevant government departments on the general direction of policy and technical decision making.
    - Powers to require permits for declarations, search for goods, detain, treat and destroy without compensation.
    - Capacity to determine import conditions based on risk assessments.
    - Capacity to charge and retain fees, and to levy fines including on the spot fines.

- Requirement for other agencies to provide facilities to permit the undertaking of biosecurity measures (e.g. the airport authority, port authority and importers).
- Powers to eradicate IAS and to take appropriate actions to restrict spread.
- Internal controls against the spread of invasive species.

65. Output 1.2: New cross-sectoral policy coordination framework for the prevention and control of IAS and LMOs is incorporated into the legislation of all agencies. A consultancy team, using the consultative process described above, will draft a new Biosecurity Act and amendments to other related legislation to ensure that linkages are recognized. The Act will ensure that the biosecurity functions of the relevant government agencies are legally binding and meet international standards. Key components of the Act will include those areas listed above. Decision makers in relevant government departments will be kept abreast of developments through regular meetings organized under the project. These meetings, together with broader stakeholder consultations and training and awareness raising activities undertaken under Components 3 and 4 respectively will help to ensure that the amended legislation is passed and operational processes are in place.

Component 2: Implement Sustainable Biosecurity Strategies.

66. Output 2.1: Cross-sectoral and cooperative biosecurity policy coordination framework is in place and supported. Most of the activities that contribute to this output are detailed under Component 1. The major activity that contributes to this output under Component 2 is the constitution of Technical Advisory Committees. TACs established under each set of laws that relate to IAS and LMOs will meet on an as needs basis to review risk-based management options and to provide advice on other policy implementation issues.

67. Output 2.2: Revenues generated from services for import and export inspection is retained by the relevant executing government agency for operational costs. The cost recovery scheme, developed under Component 1 will be implemented under Component 2. Activities that would generate fees will include the following: approval of import requests and issuance of import permits; risks assessments associated with a request for import of a new commodity or of an established import from a new source; treatment of a commodity to remove an invasion risk after detection; LMO detection; commodity inspections at points of entry; maintaining plants or animals in post entry quarantine prior to release; the issue of certificates for export; and fines for non-compliance. The executing agency will formulate a financial, collection and mobilisation plan. Detailed plans will be developed by the levying institution in close collaboration with the project coordination team. The cost recovery mechanism will be piloted and its success evaluated (according to criteria such as funding levels generated, transparency, equitability, willingness to pay and efficiency of collection). Outcomes and lessons learned will be disseminated and used to modify the pilot mechanism as appropriate.

68. Output 2.3: Pilot risk-based management procedures in accordance with international procedures are in place for IAS and LMOs. The policy, regulatory and institutional framework for risk-based management procedures established under Component 1 will be implemented under Component 2. Knowledge of commodity movements in Cameroon and the demand for LMO imports will be strengthened early in the project. This information will help focus management on pathways and products that present the highest invasion risk. Risk management strategies for priority pathways and products will be formulated. The following are likely to be among the elements of any risk-based management strategy at national entry points: pathways and commodities risk assessment, contingency plans, emergency response plans, monitoring and interception systems, private sector collaboration and public awareness campaigns (implemented under Component 4). Agreed management strategies will be

implemented at points of entry for the duration of the project. Most of the above elements of a risk-based management strategy can be executed immediately given an institutional mandate (Component 1), sufficient human capacity, equipment and infrastructure (Component 3) and stakeholder support (Component 4) but the implementation of contingency and emergency response plans is inherently unpredictable. Therefore contingency planning processes and emergency response exercises will be undertaken as part of the project so that operations in these areas can be part of the biosecurity arsenal.

69. Management interventions at pilot sites with established invasives will be formulated using criteria adapted from integrated pest management decision making tools to maximize the net ecosystem benefits of the chosen interventions. Key decision making criteria will include availability of information on the efficacy of management systems adopted by local communities and others in similar systems elsewhere, feasibility, environmental impacts of the biological invasion and the proposed management interventions, the balance between costs and benefits of different management scenarios, conflicts of interest and the effects of action or lack of action on adjacent and other ecosystems. Community involvement in pilot site management is pivotal for awareness-raising and capacity building and ultimately the sustainability of management interventions. Pilot site activities undertaken during the UNEP/GEF African Barriers Project have illustrated the need to resolve frequent conflicts between "users" of an invading species and the "authorities" that want to control, reduce or eradicate it. Conflicts also occur with regard to the management methods advocated including the topic of biocontrol (for sustainability and effectiveness of management). Such conflicts will be addressed early in the project. Pilot sites will be chosen early in the project from those identified during the project development process: these included those in two transboundary basins: Tri-National Sangha (TNS) and the Lake Chad Basin (affected by *Typha latifolia*), and Kumbo in the North-West Region (affected by *Pteridium aquilinum*) and Noun in the Adamawa Region in north-central Cameroon (affected by *Pteridium aquilinum* and *Chromolaena odorata*).

70. As part of the testing procedures, “dummy applications” and case studies will be undertaken, based on potential LMO applications to assess the biosafety procedures, including risk assessment and risk management procedures and options, as part of strengthening the management procedures for LMOs.

71. Operational manuals with procedures that comply with international guidelines will be produced for all recommended management strategies (under Component 3). International measures will be clearly referenced and manuals will be regularly updated to ensure that they continue to reflect international good practice. Pilot interventions will be subject to systematic results and outcomes monitoring which will facilitate adaptive approaches. Monitoring mechanisms will include surveys of travellers and traders, data on interceptions, data on handling LMO introductions and measures of social, cultural, economic, environmental and biological impact in pilot sites with established invaders.

Component 3: Capacity Building.

72. Output 3.1: Human capacity to manage major pathways of introduction, establishment and spread of potentially invasive species is built. The systemic and organisational aspects of capacity building will be undertaken under Component 1. Output 3.1 concerns capacity building of individuals in key organisations through a comprehensive training approach. In all cases training activities will initially focus on training of trainers workshops led by international consultants followed by continued training of operators by those initially trained.

On-going training will be offered for those working at major ports of entry as well as those in the regions as appropriate. Training will be in-country to maximise the number of trainees who can benefit, to ensure that courses involve national as well as international trainers (also a capacity building exercise) and to help to ensure that the curriculum is relevant to the national situation. Training will comprise of intensive short courses (varying in duration from 5 days to two weeks) in the following topics:

- Risk analysis (plant products and weeds, vertebrate invasions, contingency planning and emergency response)
- Other objective decision-making processes (e.g. cost-benefit analysis, socio-economic impact assessment, expert systems, etc.)
- Diagnostics, detection and monitoring - traditional, molecular and biodiversity informatics (diagnostic key development, database development, field guide development, collection curation, remote diagnostics, etc)
- Inspection systems and methods including treatments for border activities
- Commodity audit systems for compliance with risk assessment profiles
- Invasive species control systems and procedures (systems approach utilising the most appropriate combination of methods e.g. manual, chemical, biological, cultural and other approaches to mitigation).

73. Operational manuals will be developed as an essential complement to the training courses and for use in daily biosecurity operations (Component 2). Manuals will be developed in risk analysis (including refining the current LMO manual), contingency planning and emergency response, diagnostics, detection and monitoring, inspection systems, commodity audit systems and decision making for application of the ecosystem approach to established invasions.

74. Output 3.2: Sufficient equipment and infrastructure is available to ensure that priority pilot biosecurity measures can be implemented. Lack of equipment has been identified as one of the barriers to effective implementation of biosecurity programmes by the stakeholder institutions consulted during the project design phase. It will not be possible to meet all the needs identified. However, provision of some priority needs will be of tangible help to project implementation. A comprehensive equipment, consumables and infrastructure needs assessment will be conducted to establish resource requirements to address major biosecurity management barriers along priority pathways. The project will seek to meet material needs for proposed pilot activities across the various agencies tasked with the management of IAS and LMOs to address detection, review and validation of pre-existing risk assessment data and management at the points of entry so as to ensure safe transboundary movements.

Component 4: Information and Awareness.

75. Output 4.1: The impact of project interventions on key stakeholder groups is understood. Initial surveys will quantify the baseline situation regarding awareness of biological invasions. A repeat of the baseline survey will be undertaken at mid term to assess how effectively the communications initiatives are achieving their aims. Such monitoring will also allow strategies to be adjusted if targets are not being met. A repeat of the baseline survey at the end of the project will quantify the changes in awareness levels over the duration of the project. This information will be supplemented by periodic surveys including stakeholder assessments that will be conducted at project meetings and workshops. In addition national bibliographies of information on biosecurity will be compiled and maintained. The rate of change in these bibliographies will give an indication of changing levels of information availability during the

project period. The number of hits on relevant websites will be monitored throughout the project to give an indication of the changing degree of utilisation of information sources.

76. Output 4.2: A biosecurity communications and awareness raising plan is implemented. 2. A national biosecurity communications and awareness raising plan will be developed by a team of consultants in consultation with key stakeholders and national communications specialists. Existing information and communication products (articles, booklets, popular publications, websites and advocacy materials) used successfully elsewhere in the world will, with permission, be used as templates to be adapted to national circumstances. The customized outputs will be produced and distributed by relevant agencies through this project and other existing projects and programmes. Other information and communication products will include workshop outputs and the operational manuals (produced under Component 3).

77. Some of the information produced will be specifically targeted at children. This will be part of a campaign to stop unauthorized introductions at national entry points.

78. Biosecurity information packs will be compiled from the information and communications products described above. These will constitute a portfolio of information and awareness raising resources that will be utilised for national dissemination.

79. The same information packs can be utilized for dissemination in the African Region and Central and West African Sub-regions. This resource will be a product of other activities so the cost of the information packs for this activity will only be that for printing. This project will involve many stakeholders, a large number of whom regularly travel in the Region and Sub-region. This travel represents a considerable project dissemination opportunity.

80. Output 4.3: The impact of biological invasions in Cameroon is understood. Various lists of invasive species in Cameroon have been produced but these lists are incomplete and have not been subject to scrutiny by a wide range of stakeholders. Existing lists will be consolidated into a single list with information on occurrence, abundance, impact and management approaches (those attempted to date in Cameroon and practices undertaken elsewhere). This information will be obtained through stakeholder consultation supplemented by field surveys where necessary. This survey work will be particularly important for the identification of new plant invasions. This information will be fed back into management to limit the spread of such species or even to eradicate them if this is deemed to be feasible.

81. Information gathered through the above activities will provide the basis upon which to draw up black and white lists of priority invasive species together with details of available management approaches.

82. In addition, detailed information on social, cultural, economic, environmental and biological impact of priority invasive species in pilot sites will be quantified. This process will involve intensive surveys in pilot sites of the baseline impacts of invasive species and repeat surveys of the effects of pilot management interventions (Component 2).

83. The invasive species profile of Cameroon will not remain static so a monitoring process is required. A national biological monitoring network based on the processes pioneered in the project will be established. Details, summarized in a manual, will include monitoring and data handling protocols, details of responsible agencies and means of information dissemination.

84. Output 4.4: Biosecurity information is provided through existing national and international portals. Species databases exist in Cameroon but they are hardly used, contain very little information on biological invasions, and are not compatible with emerging standards for national, regional and global information networks. An interoperable species database format that meets these standards will be adopted and populated with invasive species information, much of which will be derived from activities contributing to Output 4.3. This database will be linked to other species databases such as those supported by the Global Invasive Species Information Network (GISN) thus providing an entry point to global information sources. This database will also be linked to a national biosecurity information hub which will be established within an existing structure (e.g. the National Herbarium, the International Phytosanitary Portal, or the National BCH). The database will be kept up to date by uploading information received from the national biological monitoring network.

85. A database for national biosecurity operations will be established. This will provide rapid access to information such as shipping and plane schedules, cargo details, conformity to certification requirements and relevant procedures for inspection and treatment. This will improve efficiency and effectiveness of operations by helping to target actions to the where they are most needed.

86. Relevant biosecurity information produced by the project will be uploaded to information hubs such as the International Phytosanitary Portal, CBD CHM and the Central Portal of the Biosafety Clearing House.

Component 5: Project Management and Coordination.

87. Output 5.1: Infrastructure and arrangements for overall project administration are completed. Project coordination and implementation arrangements will be established within 3 months through MINEP, the lead executing agency. The project will be implemented by UNEP and executed at the country level by MINEP (National Executing Agency). MINEP will designate a National Project Coordinator supported by 1 – 2 administrative and financial assistants and possibly an IT staff to maintain the biosecurity website/nBCH.

88. The National Project Coordinator will be accountable to MINEP and to UNEP for the delivery of agreed national project outputs, maintain regular communication within MINEP and with UNEP and will supervise the work of the Project Coordination Unit (PCU), which will be responsible for the day to day running of the project.

89. The Project Coordination Unit (PCU) will be established within MINEP. The Project Coordinator will be supported by technical support from a technical advisory team with international experience in all aspects of biosecurity. These individuals will not be based in Cameroon and will not work full time on the project but will be available for remote consultation and will undertake regular missions to assist in the technical delivery of project components. The role of the Project Technical Advisors will be to act as the corporate knowledge on technical issues for the project and to provide mentoring and re-enforcement training for national staff. These individuals would need to work closely with consultants and extract from their work and reports the key elements that need to be incorporated into the change management actions towards the provision of a biosecurity framework that is being attempted.

90. In addition necessary support staff will be appointed and the necessary equipment and infrastructure acquired to ensure the satisfactory execution of the project.

91. Project Components 1-4 will be coordinated through Task Teams organised by project component. These will be institutions, sub-contracted through the PCU, with sufficient specialised knowledge to ensure that the outputs are of the required quality and that they are delivered in a timely manner. The following Task Teams will be formed:
    - Component 1 (Establish Policy, Regulatory and Institutional Framework) - MINEP/MINADER
    - Component 2 (Implement Sustainable Biosecurity Strategies) - MINADER
    - Component 3 (Capacity Building) – MINESUP (Ministry of Higher Education)
    - Component 4 (Information and Awareness) - MINRESI
    - Component 5 (Project Management and Coordination) - MINEP

92. A Project Advisory Committee (PAC) will be appointed at the national level to provide guidance to the project, in regard to national political and administrative issues, to facilitate interagency coordination and to provide technical support. The Committee will comprise of 9-11 people including representatives from MINADER (PAC Chair) and MINEP (PAC Secretary), representatives of other key ministries (e.g. MINEPIA, MINFOF and MINRESI) as well as representatives of intergovernmental organizations, NGOs and civil society. The PAC will be set up by the Minister of the Environment and Nature Protection when its exact composition will be established.

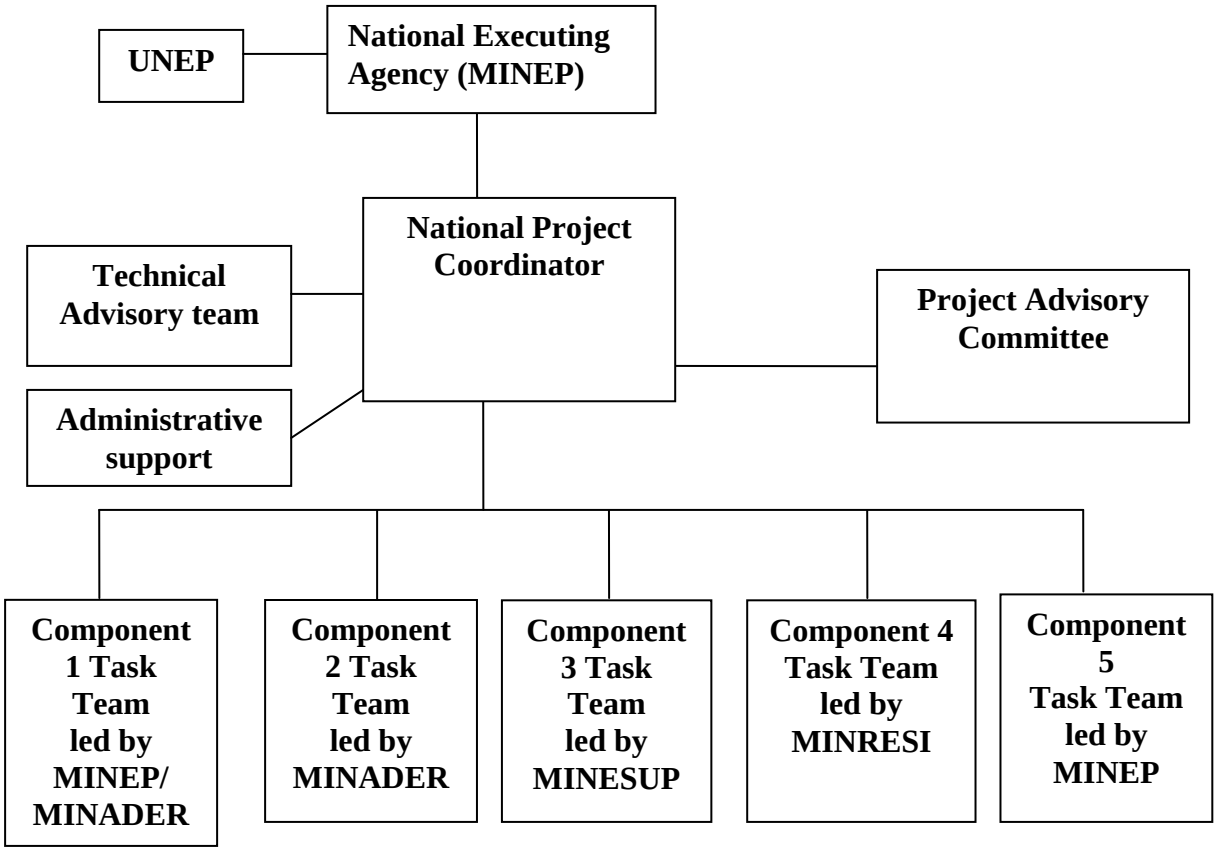
93. The main functions of the Project Advisory Committee will be to provide general policy oversight and guidance to project implementation, monitor project progress and performance as well as providing technical and related policy advisory support to the PCU. Specialists will be co-opted to Project Advisory Committee meetings as needs dictate. Project implementation arrangements are represented diagrammatically in Figure 1 below.

94. Output 5.2: Project inception phase is completed. A detailed work plan accounting, activity and technical reporting system will be established during the project's inception phase. This will form the basis of the Project Benefit Monitoring and Evaluation System (PBME) (described below). The workplan will break down activities to task level and allocate responsibilities to lead agencies through consultations coordinated by the PCU. This project depends on a high level of stakeholder participation. Detailed guidelines for stakeholder participation will be developed, with indicators identified to monitor the extent and quality of participation, and to explicitly address issues relating to conflict resolution. A project accounting system will be set up within MINEP's existing structures to ensure timely disbursement of funds and clear financial accountability. Financial and activity reporting systems will be set up in MINEP to ensure that the project is running on schedule and that outputs are being delivered according to the required quality. A project operations manual will be produced in which all reporting requirements are clearly laid out.

95. **Output 5.3:** *Project M&E system is operational*. Monitoring of the impact of project activities will be carried out under the relevant activities in each component. The basis for a statistically robust monitoring scheme complemented by the use of qualitative information has been established in the design phase of the project. This will be refined into a fully fledged Project Benefit Monitoring and Evaluation (PBME) system in the first six months of the project. This system will also capture lessons learned which will be useful for replicability. The inception report including the plan for the PBME system will be reviewed by the PAC, UNEP and other relevant stakeholders.

96. Information on the baseline situation regarding the Biosecurity policy, regulatory and institutional framework, the implementation of sustainable biosecurity strategies, biosecurity capacity, and available information and awareness levels will be refined during the project inception phase. This information will provide quantitative indicators that can be used as a basis for the PBME. Monitoring results will be used as a basis for project planning and if necessary project reformulation.

Figure 1: Project Implementation Arrangements



97. In addition an independent midterm evaluation will be coordinated by UNEP. The results of this will complement those of the national elements of the PBME as a basis for improved project delivery. An independent project terminal evaluation will be performed by UNEP which, together with the national elements of the PBME, will be used to evaluate project success, impact and lessons learned. These results will be of value for the post-project implementation of Cameroon's biosecurity system and for dissemination in the wider African Region, Central and West African Sub-regions and beyond.

3.4. Intervention logic and key assumptions

98. The main objective of this project is to support Cameroon in the implementation of the CPB, Article 8(h) of the CBD and the WTO-SPS agreement , by strengthening national capacities to prevent and control the introduction, establishment and spread of Invasive Alien Species and LMOs through the implementation of a risk-based decision making process

99. LMOs have a huge potential to benefit Cameroon but the country requires an efficient biosafety management system to ensure conservation and sustainable use of biodiversity, preserve unique eco-systems and reduce environmental degradation. Biological invasions (from non-LMOs) are already threatening Cameroon's biodiversity as well as productive sectors and the problem is likely to get worse if current trends continue. As detailed in the incremental cost analysis (Appendix 3), the baseline value of the planned activities to be carried out in this project is uneven, varying among and within the project components. A key assumption is that without GEF intervention, Cameroon will be unable to build the human and institutional capacities to ensure that it will be able to evaluate the biosecurity risk of LMO introductions nor to manage species invasions (whether from LMOs or non-LMOs) at each stage of the intervention hierarchy from prevention to ecosystem restoration. The intervention logic and key assumptions used are summarised in Table 1 (below). These interventions will result in expected outcomes as shown in the results framework (Appendix 4).

Table 1: Intervention logic and key assumptions

Intervention Logic	Key Assumptions
1. Project baseline assessment (Stocktaking) • Within the first six months of the project, the project design will be fine tuned based on updated baseline information established by a consultative process coordinated by the PCU (stocktaking activities undertaken under all project components).	• Inputs provided by all concerned government agencies and stakeholders in production sectors and civil society.
2. Establishing policy, regulatory and institutional framework • Within 48 months a cross-sectoral and cooperative policy coordination framework for the prevention and control of IAS and LMOs which promotes conformity with existing national guidelines and international standards is in place.	• Strong commitment from all concerned government agencies. • Formulation of laws and policies will be enacted promptly.
3. Strengthening biosecurity implementation • Within 30 months biosecurity concerns will be mainstreamed in sectoral agencies and civil society and pilot biosecurity operations will be executed using a cross-sectoral approach.	• Cooperation from all concerned government agencies and stakeholders in production sectors and civil society. • Adequate national capacity has been created. • Sufficient information is available. • Awareness levels are sufficient.
Building capacity • Within 24 months there are functioning government agencies with operational capability to manage major pathways of IAS and LMO introduction, establishment and spread.	• Consensus on appropriate inter and intra-institutional framework for biosecurity. • Adequate staff trained to provide support to the national biosecurity process. • Facilities and equipment and trained staff are operating efficiently. • Sufficient information is available. • Awareness levels are sufficient.
4. Information availability and enhancing awareness levels • Within 40 months key stakeholder groups (decision makers, travelling public, traders, tourism operators, importers, shipping agents, community groups, etc.) are aware of risks of IAS and LMOs and the need for biosecurity and they have access to information at the appropriate level of detail concerning risk pathways and risk organisms.	• Strong support from government agencies and stakeholders in production sectors and civil society for awareness raising activities.
5. Project Management	• During the project period the project implementation structure including the PCU, PAC and Task Teams will be operational.
6. Project Monitoring and Evaluation	• M&E results are incorporated into project design according to adaptive management principles.

3.5. Risk analysis and risk management measures

100. Some of the possible risk factors are listed in the table below:

Table 2: Risk analysis and mitigation strategies

Risk	Priority	Risk Mitigation Strategy
Inadequate participation of the targeted stakeholders in the project.	Medium	To overcome this risk the project will make extensive efforts to involve stakeholders at all levels. Decision makers from relevant ministries will be engaged through regular project advisory committee meetings. Relevant agencies as defined by the stocktaking will be involved in PAC meetings and activity-specific consultations and awareness raising campaigns will be targeted at a wide range of stakeholders. These efforts will be detailed in guidelines for stakeholder participation which will be developed during project inception, with indicators identified to monitor the extent and quality of participation, and to explicitly address issues relating to conflict resolution.
National policy and institutional changes that affect project objectives and/or implementation arrangements.	Low	Although the risk is low, changes in national policies and institutions may require a reprioritization of some activities. These can be identified during the annual/mid term project review and if required, the project can be realigned with new policies and / or structures.
Capacity building programs are not maintained on completion of the project.	Medium	Preparation of training modules and manuals will be an integral part of the institutional and human resource capacity process which will ensure a strong information base for continued training activities. Establishing strong links to international organisations responsible for implementation of global agreements and

		standard setting will provide support and backstopping for a continuous capacity building process. Enhanced role of "trainer of trainers" as part of institutional responsibility could also help in potential risk mitigation
Stringent biosecurity measures could lead to economic losses for communities which relie on introduced alien species for economic livelihoods and traditional practices such as roofing, medicinal uses and introduction of LMOs could lead to loss of local biodiversity of importance due to selection pressures	Medium	Emphasis will be placed on risk communication and safe use of modern biotechnology products as alternatives. Selected genes will be introgressed into local cultivars so that local farmers have access to improved germplasm of familiar cultivars Data generated from the socio economic impact studies will be used to develop alternative strategies and potential livelihood options to incentivise local communities to use other improved plants instead of the IAS.

101. Risk mitigation strategies which can be adopted can include an inclusive approach to project design and implementation, so that greater ownership is created among key partners and line ministries. This will not only address barriers to success, but will also ensure sustainability of the project beyond project life. This inclusive approach involving various sectors of society (importers and exporters, travellers, seed companies, farmers and commodity producers, NGOs and local communities, etc.) as well as through activities carried out under Component 4 of this project i.e. on information dissemination for enhancing public awareness would ultimately help in informed feedback from public.

102. The project also separates out the technical decision making (risk analysis) as a key process that has to be conducted by a team of technical experts (the Technical Advisory Commitees - TACs), and this is to be included in revised legislation so that political influence on what is essentially a technical activity is isolated to assist with consistency

3.6. Consistency with national priorities or plans

103. Prevention strategies for the control of plant pests that include the majority of IAS are the responsibility of the Cameroon National Plant Protection Organisation (NPPO) which resides in MINADER. It undertakes prevention and inspection activities at the border posts and international ports and airports. It has been variously supported by FAO activities since the mid 1990s with inputs into training of staff and provision of diagnostic equipment for laboratories. Cameroon has been a signatory to the IPPC since 2006 and most recently has been involved in the updating of its pest and disease reporting to the IPPC portal which has enabled the establishment of a web based national plant protection portal. The NPPO also conducts surveys of IAS

internally though the level of regularity of this work is dependant on external funding. There has been a regional FAO project that has assessed national capacity and reflects the findings on dependency on external support and the need to sustain such processes.

104. National activities in IAS control have focussed on two areas. Firstly, MINADER is responsible through the NPPO for the registration and monitoring of pesticides and undertakes this on a nationwide level, generally aimed at prevention of crop losses. Secondly, there have been some activities in biological control with external support, but this work is now limited. This change reflects the change in government strategy from one where previously the import and use of pesticides was subsidised and supervised by government agencies. Currently there is no activity in the plant area on the importation of LMOs although in the past a single consignment of LMO maize was intercepted, identified as LMO and prohibited import. National IAS diagnostic capabilities are scattered amongst a number of agencies including herbaria, botanic gardens and research laboratories throughout the country (eg IRAD). All off these national level activities are supported by training at technical and professional level by the biological science teachings at various universities in the country.

105. Cameroon is committed to implement the principles and intent of international agreements to safeguard its biodiversity and for the sustainable management of its resources. This is reflected by the fact that Cameroon became a party to the CBD by ratification on 19 October 1994 and of the CPB on 11 September 2003. Cameroon's national biodiversity action plan (NBSAP) and various national reports can be accessed at http://www.cbd.int/countries/default.shtml?country=cm. The website gives an overview of the national biodiversity, outlines the major features of the NBSAP, and describes the measures taken to achieve the 2010 target. It also elaborates on the initiatives in respect of the protected areas and of the requirements of Article 8(j) of the CBD.

106. In addition, Cameroon has already passed the Biosafety Law (No. 2003/006 of 21 April 2003) and a Decree to implement the Biosafety Law (No. 2007/0737 of 31 May 2007). However, despite these efforts, national capacity to implement the CPB remains inadequate. LMO development is growing rapidly worldwide and this is likely to have an impact on Cameroon. Equally, IAS are multiplying (new ones are emerging nationally and regionally) leading to modification of established ecological relationships. With globalisation and other pathways, the movement (transboundary or national) including biodiversity loss caused by IAS is facilitated. Hence, the potential for Cameroon to conserve and sustainably use biodiversity of agricultural importance is greatly threatened. Similarly, her potential to maintain and sustainably use ecosystem services is also threatened. Due to the project based nature of existing measures to manage LMOs and IAS, there have been several overlaps and/or gaps which has affected the execution of national policies/priorities for safeguarding biodiversity. A key lesson from the earlier supported GEF funded biosafety demonstration project was the need to develop a more harmonized and integrated approach, with Competent Authorities responsible for different sectors and biosecurity/biosafety related obligations working together towards a common goal. It was recommended that sector policies, laws and regulations can be harmonized to avoid contradictions, overlaps and/or gaps especially as Cameroon is Party to several international agreements in which Risk Assessment and Management are the key underlying principles eg. IPPC, WTO, OIE etc. Sector agencies can better coordinate their work and actively seek to take advantage of the synergies and complementarities in their roles and responsibilities. This will lead to the joint setting of biosecurity priorities and allocation of resources, joint planning and implementation of activities, and integrated systems for monitoring and review of outcomes. During the past decade, some governments (eg, New Zealand and Norway) have moved to harmonize and

rationalize policies, legislation and core roles as a means to improve overall efficiency and outcomes. Models to rationalise regulatory operations among sectors is mainly targeted at improving effectiveness and efficiency. The proposed activity will therefore develop a coordinated and harmonised institutional capacity for monitoring and management of LMOs/IAS in Cameroon so as to maximise use of existing expertise and resources scattered across several agencies.

3.7. Incremental cost reasoning

107. The GEF contribution will ensure that the CPB is implemented in Cameroon by integrating biosafety within the ambit of biosecurity thus utilising existing capacity at the systemic, organisational and individual levels. The GEF contribution will expand the scope of biosecurity to take into account the impact of biological invasions on biodiversity and the broader environment. An incremental cost analysis is described in Appendix 3.

3.8. Sustainability

108. Sustainability has been a major consideration throughout the development of this project. There are five key interlinked challenges to assuring sustainability of the biosecurity system to be established under the project – (i) financing, (ii) maintaining institutional buy-in including agreement on sustainable execution arrangements (Section 5: Stakeholder Participation), (iii) the continuation of the capacity building programmes beyond the project phase, (iv) the maintenance of public awareness and support (3.10: Public Awareness, Communications and Mainstreaming Strategy) and (v) the need for adoption of similar biosecurity systems by neighbouring countries to ensure that biosecurity efforts in Cameroon are not undermined in the long term (3.9: Replication).

109. Cameroon is a significant agricultural trader, serving as the breadbasket for other countries of Central and West Africa and actively trading with the developed world. This volume of trade can serve as the basis for a sustainable funding strategy that can utilize revenues from import and export services to finance biosecurity operations.

110. Capacity building programmes must be maintained beyond the project. This will be achieved by training of trainers approach and through involving all agencies with biosecurity mandates in relevant training at the policy and regulatory level. This will not only ensure that capacity is maintained but will continue the cross-sectoral emphasis pioneered in this project.

3.9. Replication

111. As outlined above replication at least to the level of the African Sub-Region is essential if gains from the project at the national level are not to be ultimately undermined by poor biosecurity practices among neighbouring countries combined with Cameroon's inherently leaky land borders. For this reason it is essential to establish mechanisms to exchange information in order to facilitate regional dissemination and replication. Regional dissemination will be undertaken as an extension of national dissemination. Project outputs (leaflets, brochures, booklets, posters, manuals, etc.) will be consolidated into information packs through which the project and its relevance in the regional context can be explained. This information will be presented by project collaborators at meetings of relevance to biosecurity in its broadest sense (e.g. meetings concerning trade, agriculture and the environment).

112. The potential for other countries in the region to gain from Cameroon's experience with this project and the lessons learnt that can be transferred to others are high for the following reasons.

- Cameroon's strategic position as "gateway into Central African Republic and Republic of Congo" (imports into the region pass through Douala sea port to Chad, Central African Republic).
- Cameroon's influence (economic and technological leadership) in Central Africa.
- Presence of regional fora for common action/interaction such as the Congo Basin Forest Partnership, Lake Chad Basin Commission, and New Partnership for Africa's Development (NEPAD).
- Presence of sub-regional agencies or sites of transboundary resources management: Niger Basin Authority, Forestry Commission of Central Africa, CEFDHAC, TNS, TRIDOM, etc.

3.10. Public awareness, communications and mainstreaming strategy

113. Public awareness and communications (Component 4) and mainstreaming (Components 1 and 2) are at the heart of this project. The project, with its emphasis on establishing a multisectoral approach to biosecurity in Cameroon, is a mainstreaming project. Specific mainstreaming activities include the establishment of a framework for improved cross-sectoral planning and coordination of biosecurity and the passing of a Biosecurity act and amendments of linked legislation. The project's emphasis on working with industry and civil society reinforces this mainstreaming approach. The Biosecurity communications and awareness raising plan executed under Component 4 will build support for biosecurity activities among key stakeholders including decision makers, traders, the travelling public and communities affected by the negative consequences of biological invasions. Gaining support from the agriculture industry is critical and can be achieved through awareness raising activities that highlight the link between achieving a low pest status for Cameroon and continued market access. Once exporters can appreciate this link between the sanitary and phytosanitary status of the country and market access they will not object to having to pay out charges to meet market obligations.

3.11. Environmental and social safeguards

114. Environmental safeguards are an integral part of this project. As the NEA of this project and also the NFP for the CBD and CPB, MINEP is mandated to ensure that environmental safeguards are incorporated into the implementation of this project. Environmental impacts are among the key decision-making criteria when assessing biosecurity management options.

115. Social safeguards are incorporated into the project through empowering all citizens of Cameroon, irrespective of race, gender and creed. By establishing a mechanism to enable the public to access information on LMOs, social concerns will also be voiced and responded to. This project will endeavour to ensure gender balance through the development of training packages and regulatory tools which is gender sensitive, for example in field analysis and laboratory experimentation, safety safeguards will be put in place so as not impact negatively on all users irrespective of gender. In training programs, the selection of participants will be reviewed to ensure a fair gender balance through openness with emphasis on inclusion and respect for cultural diversity. This will be assessed as part of deliverables of the project on socio-economic studies and impact. In addition, all presentations and documentation will be done in the two official languages, English and French and where feasible public awareness

material will be later translated into one or two key local languages. Project staff recruitment and project activities and training will not discriminate against any particular group or gender. Target groups like farmers will receive special attention in the development of awareness raising materials. Developing procedures for the assessment of the socio-economic and cultural impacts of biological invasions is a key project activity.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

116. The institutional arrangements for project supervision at the national level are outlined in Section 3.3. Project components and expected results -Component 5: Project Management and Coordination.

SECTION 5: STAKEHOLDER PARTICIPATION

117. An inclusive approach to involve all stakeholders has already been adopted by their identification and participation in workshops during the design phase of the project. National Consultants have also been active in the identification of agencies that would have input into the processes involved in the management of biosecurity.

118. The project will also consider the findings of a recent study[4] on environmental democracy in Cameroon, in particular noting the need to deploy some effort to ensure effective participation of civil society in decision making and the enhancement of law enforcement.

119. The stakeholder mapping and analysis as described in Section 2.5 which has been devised as a result of in country activities during project formulation is the basis for planned stakeholder groups to be involved in various way. Major stakeholders and their proposed involvement is summarised in Table 3 below.

Table 3: Major stakeholders and their participation

Stakeholders	Type of involvement
Strategic decisions - Policy makers • Ministries with legislative powers – MINEP; MINADER; MINFOF; MINSANTE etc • Agencies with legislative powers • Project advisory groups	• Involvement in project implementation through PCU and the PAC • Involvement in consultations and meetings on key issues with consultants during missions. • Involvement in awareness raising campaigns through inputs into design and content of material
Strategic decisions - Legal and economic experts • Ministries with legislative powers – MINEP; MINADER; MINFOF; MINSANTE etc • Agencies with legislative powers • Project advisory groups	• Involvement in drafting of new legislation with legal and technical consultants. • Resources persons on socio-economic impact of IAS and LMOs
Tactical decisions – technical experts from universities and research organisations (e.g. IRAD)	• Participation as experts in the risk analysis decisions of the legislative agencies through inputs into technical advisory committees. • Advice on the management of IAS and LMOs in the field to

[4] Njamshi, Nchunu, Galega and Chili, (2008). Environmental democracy in Cameroon. Assessment of access to information, participation in decision making and access to justice in environmental matters. Access initiative Cameroon. 118pp.

	respective ministries. • Participation as technical resource experts in training workshops • Inputs into technical content of communications strategy
Operational activities – regulatory officials (Quarantine Officers; Customs; Police; Health Officers and Immigration Officers)	• Inputs as resource persons in training workshops on barrier activities • Participants in training courses as trainees • Resource persons for operational manual development. • Post release monitoring and border control • Post approval monitoring and related risk management practices related to LMOs • Monitoring of IAS through surveys • Participation in outreach of communications strategy to the community
Operational activities – civil society and NGOs	• Participation in development of communications strategy. • Sensitisation of media on biosecurity mission and aims • Participation in outreach of communications strategy to the community. • Participation in control operations and pilot field activities.

SECTION 6: MONITORING AND EVALUATION PLAN

120. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

121. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.

122. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

123. The project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

124. At the time of project approval 50% percent of baseline data is available. Baseline data gaps will be addressed during the first year of project implementation. A plan for collecting the necessary baseline data is presented in Appendix 7. The main aspects for which additional information are needed are the roles and responsibilities of existing biosecurity agencies (see Appendix 16), the levels of awareness of biological invasions and biosecurity among key stakeholder groups and information on the status of biological invasions in Cameroon.

125. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

126. A mid-term management review or evaluation will take place on the 1st October 2012 as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 2.5 of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

127. An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for the terminal evaluation are included in Appendix 9. These will be adjusted to the special needs of the project.

128. The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Overall project budget

129. The overall project budget is US$ 11,200,000 comprising US$ 2,400,000 from GEF. Details of budget according to UNEP budget lines are enclosed in Appendices 1 and 2.

7.2. Project co-financing

130. The GOC and IUCN will provide in kind and cash co-financing amounting to a total of US$ 8,800,000 as detailed in Table 4 below. IUCN will provide US$ 600,000 in cash co-financing and US$ 400,000 in-kind with GOC providing US$ 700,000 in cash co-financing and US$ 7,100,000 in-kind

for the Full Sized Project (breakdown of cofinancing contribution is reflected in Appendix 2 and summarised in Table B of the CEO endorsement template).

Table 4: Project Financing

	Project Preparation A	***Project B***	***Total C = A + B***	***Agency Fee***	***For comparison: GEF and Co-financing at PIF***
GEF financing	93,000	2,400,000	2,493,000	249,300	2,400,000
Co-financing	100,000	8,800,000	8,900,000		8,200,000
Total	**193,000**	**11,200,000**	**11,393,000**	**249,300**	**10,600,000**

7.3. Project cost-effectiveness

131. This project will be cost effective because it provides for the creation of inter-departmental linkages for the management of biosecurity as a single entity, rather than the *ad hoc* activities of a range of separated agencies. The focus of the project will be guided by the recommendations of the FAO Regional TCP project that was conducted in 2008, as an activity of the Economic Community of the Central African States. The TCP assessed the performance of the National Plant Protection Service in meeting international standards of phytosanitary control (Ndikontar, 2008). The recommendations of this report are applicable to all aspects of IAS and LMO control and include issues such as the application of up to date legislation, the organisation and monitoring of point of entry controls, risk analysis and effective diagnosis and the harmonisation of process by adoption of international standards.

132. A stocktaking exercise at the beginning of the project, to update and consolidate the baseline situation established during the project preparatory phase identified capacity needs which has to be addressed. Based on the assessment at the PPG stage, the project will emphasise inter-agency coordination and collaboration through the creation, in all the relevant legislation, of Technical Advisory Committees, that will have overlapping memberships. This will ensure that decisions on risk that are made within any particular specialist discipline and legislative responsibility will not be undertaken in isolation thus ensuring harmonisation of process and resulting efficiencies.

133. The project also mainstreams biosafety (management of LMOs) within the context of biosecurity rather than as a separate entity, thereby ensuring that the technical issues that relate to decision making need not be duplicated in what is basically a closely related discipline.

134. The administrative functions of the project will be undertaken by a central PCU which will have the responsibility for the coordination of all inputs and reducing duplication. The role of the Technical Advisory Committee will be to act as the corporate knowledge of the project, retaining the recommendations of each of the Consultants, thereby reducing the need for them to obtain basic baseline information from disparate sources in country at the commencement of their tasks.

APPENDICES