



PART I: PROJECT IDENTIFICATION

Project Title:	Enhancing National Capacities to manage Invasive Alien Species (IAS) by implementing the National Strategy on IAS		
Country:	Mexico	GEF Project ID:	4771
GEF Agency:	UNDP	GEF Agency Project ID:	4714
Other Executing Partners:	National Commission for Knowledge and Use of Biodiversity (CONABIO)	Submission Date:	January 30, 2012
GEF Focal Area:	Biodiversity	Project Duration (Months):	48
Parent program	NA	Agency Fee (\$):	535,455

A. FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
BD-2	2.3: Improved management frameworks to prevent, control and manage invasive alien species	2.1. Policies and regulatory frameworks for production sectors: IAS management framework operational as recorded by GEF 5 TT	GEF TF	5,099,580	23,062,995
Project Management Cost				254,965	1,153,262
Total Project Cost				5,354,545	24,216,257

B. PROJECT FRAMEWORK

Project Objective: To safeguard globally significant biodiversity in vulnerable ecosystems by building capacity to prevent, detect, control and manage IAS in Mexico						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
National IAS management framework	TA	Strengthened IAS policy, institutions and coordination and outreach efforts increase efficiencies in IAS management at the national level to reduce the risk and spread into vulnerable areas (as measured by increased score in the GEF IAS TT items 1-4). This delivers: <ul style="list-style-type: none"> Improved surveillance and control for trade and travel into and within Mexico Restrictions operationalized on imports and use of 	<p>1.1 Decision making tools aimed at informing cost effective management decisions to address IAS threats in key landscapes and key sectors (aquarium trade, aquaculture, trade of wildlife and forest products in particular)</p> <ul style="list-style-type: none"> National Invasive Alien Species Information System (NIASIS) operating & guiding sectoral policy and investments Niche models on dispersion of IAS under current climate scenarios & under situation of CC. Cost coefficients of different prevention options and appropriate integrated IAS management strategies for selected species in different ecosystems <p>1.2 Sectorial guidance and regulations in place to strengthen the control of main pathways of IAS to vulnerable areas</p> <ul style="list-style-type: none"> Existing laws/regulations related to IAS management revised and harmonized to increase efficiency Standardized protocols developed for IAS that present high risk to BD risk analysis, early warning, monitoring, and coordinated inter-institutional response Specific regulatory guidance for IAS control in the aquarium trade, aquaculture, and trade of wildlife and forest 	GEF-TF	2,498,794	12,608,978

		<p>exotic species in aquarium trade, aquaculture, wildlife and forest products sectors</p> <p>Collectively this increases protection to globally significant biodiversity by reducing the risk of new introduction and spread of IAS into vulnerable ecosystems nation wide</p>	<p>products sectors informs decision-making on the ground</p> <ul style="list-style-type: none"> • “Blacklist” of invasive species for surveillance and control of importations for all sectors • Highest risk species / pathways defined through risk analysis • Training on best practices for sector stakeholders and priority institutions (Institutions with trained staff and tools (e.g. data management, risk analysis, control methods & protocols) for IAS management activities • Government and private-sector stakeholders in aquarium trade, aquaculture, and wildlife and forest products sectors informed of IAS threats, impacts, and new controls and regulations <p>1.3 Multi-sectoral institutional framework in place to implement National Strategy on Invasive Species (NSIS)</p> <ul style="list-style-type: none"> • Securing of public funds from national budgets to increase support to IAS management • Budgetary coordination between sectors to ensure coherent investments and actions to address threats cost efficiently • National IAS experts network established to support decision making and efficient deployment of resources • IAS Expert Committee formalized their work to function as a government advisory body and as lead national body for implementation of the NSIS • Rapid access and dissemination of information to enhance deployment of coordinated actions between institutions (for example IAS National Gateway - web portal) • Coordinated deployment of actions through harmonized standards and training programs across key institutions 			
Integrated IAS management to protect vulnerable globally significant ecosystem	TA	<p>Enhanced IAS surveillance and control strategies reduce introduction rates and contain populations below thresholds that endanger endemic species and their habitats in: 13 islands (total of 48,020 ha) protecting 12 species of seabirds, 3 sub-species of terrestrial birds, 27 reptiles, 6 endemic mammals, and 4-9 high risk / high diversity protected areas on the mainland (tbd during PPG phase)</p> <p>Example of potential sites and types of ecosystems targeted: Biosphere Reserves Socorro-Revillagigedo Archipelago and Guadalupe island /</p>	<ul style="list-style-type: none"> • Strengthened prevention and control of key IAS populations in selected islands. This will include inspection and quarantine systems to prevent IAS introduction (technical training, tourism and community awareness training programs) • IAS management systems established to prevent introduction of IAS to selected terrestrial PAs from productive landscapes. This will include strengthening institutions for IAS control, introducing best practices in sectors to reduce IAS spread, and community awareness programs on IAS • Integrated IAS management in selected PAs implemented to provide appropriate level of protection to vulnerable ecosystems, through prioritization of species; determining current and potential impacts on conservation goals; assessment of existing control and containment strategies; integrating IAS management in PA management programs and training of staff • Early Detection and Rapid Response (EDRR) system developed and implemented at selected island and protected areas (PAs) sites to prevent the establishment and impacts of IAS; experience gained from rapid detection efforts used to develop a national EDRR system 	GEF-TF	2,600,786	10,454,017

	Pacific Ocean, Tropical evergreen forest, Mangroves, Wetlands			
Sub-Total			5,099,580	23,062,995
Project Management Cost			GEF -TF 254,965	1,153,262
Total Project Costs			5,354,545	24,216,257

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Cofinancier	Type of Co-financing	Amount (\$)
National Government	CONABIO	Grant	4,657,468
National Government	CONABIO	In-Kind	562,430
National Government	CONANP	Grant	1,619,075
National Government	CONANP	In-Kind	800,000
National Government	SEMARNAT – SFNA	Grant	74,666
National Government	SEMARNAT – SFNA	In-Kind	47,611
National Government	PROFEPA	Grant	272,728
National Government	PROFEPA	In-Kind	1,844,000
NGO	Island Conservation and Ecology Group (GECI, Mexico)	Grant	2,415,000
NGO	Island Conservation and Ecology Group (GECI, Mexico)	In-Kind	180,000
National Government	National Institute of Ecology (INE)	Grant	318,181
National Government	National Institute of Ecology (INE)	In-kind	60,180
National Government	Mexican Institute of Water Technology (IMTA)	Grant	1,600,000
National Government	Mexican Institute of Water Technology (IMTA)	In-kind	84,000
Others	Autonomous Metropolitan University (UAM) Xochilmico	Grant	6,083
Others	Autonomous Metropolitan University (UAM) Xochilmico	In-kind	74,835
National Government	Government of Mexico ¹	Grant	9,000,000
GEF Agency	United Nations Development Programme*	Grant	600,000
Total Co-financing			24,216,257

* SEE SECTION C.1

D. GEF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY:

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEF TF	Biodiversity	Mexico	5,354,545	535,455	5,890,000
Total Grant Resources				5,354,545	535,455	5,890,000

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

¹ This funding comes essentially from baseline activities and investments done by the GoM in the field of biosecurity as described further under the programmatic baseline section . It also includes relevant Government investments in the Forestry sector. During the PPG phase the project proponent will work out the details of how this additional funding will be linked to the different key outputs of the project and report back on the detailed breakdown of funding per national agency at CEO endorsement.

A.1.1. THE GEF FOCAL AREA STRATEGY:

1. Mexico has identified the introduction and spread of Invasive Alien Species (IAS) as a significant threat to its biodiversity, particularly its highly vulnerable island, marine and freshwater ecosystems. Although Mexico has some existing mechanisms for the prevention and control of invasive species, these are oriented towards threats from IAS to agriculture and human health rather than threats to biodiversity; in addition, little attention has been paid to production and import sectors responsible for continuous IAS introductions to natural environments such as the aquarium trade, aquaculture, and wildlife and forest products (hereafter referred to as AAWF). The Government of Mexico (GoM) is seeking GEF support through UNDP to transform and expand the scope of its existing IAS management systems, taking advantage of the momentum created by the publication in 2010 of its National Strategy on Invasive Species (NSIS). The NSIS recognizes for the first time the importance of minimizing the impact of IAS on the country's biological diversity, and promotes a common national vision for the coordination, and resource allocation regarding IAS management and identifies the institutional responsibilities that need to be strengthened. The project will devote special attention to the development and application of new decision-making tools, information resources, and technical and financial capacities to enable Mexico to implement its national vision for IAS management. In addition, the project will specifically address policies, regulations and tools to reduce or eliminate harmful practices in the AAWF sectors; and will develop practical experience and knowledge on IAS management by implementing integrated IAS strategic programs at selected sites encompassing high priority ecosystems. These will enable the GoM to determine cost effective IAS management practices over the long-term and provide a model for replication. The proposed project actions comply with GEF5's Strategic Objective 2: "Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors", and specifically Outcome 2.3: "Improved management frameworks to prevent, control and manage invasive alien species".

A.2. National Strategies and Plans or Reports and Assessments under Relevant Conventions

2. The proposed project is consistent with national priorities and plans and will advance Mexico's national targets and international commitments for biodiversity conservation. Mexico's National Biodiversity Strategy (NBS, 2000) highlights IAS as critical for biodiversity conservation, and proposes priority actions including: developing an IAS inventory; researching IAS pathways, early detection and monitoring methods; and creating legal instruments to regulate entry and movement of IAS. The NSIS promotes closer cooperation among and between the public and private sectors; agreements and integrated strategic planning to put existing resources to better use; and increased field level activities (Objective 2.2 calls for "control, management and eradication programs operating or completed for the areas and species identified as of greatest concern in the national diagnosis"). In 2010, amendments were made to the General Law of Ecological Equilibrium and Environmental Protection (LGEEPA, Articles 79, 80 & 85) and the General Law of Wildlife (LGVS, amended Article 3; new Article 27) to address IAS, including the first prohibitions on the liberation or introduction of invasive exotic species into natural ecosystems. The project is consistent with Mexico's international commitments such as the CBD (ratified 1993). The project also meets national priorities for GEF 5 projects, as confirmed in the 2010 National Portfolio Formulation Process, which identified IAS management as one of 8 priority themes in its biodiversity focal area. Despite these advances, a number of constraints (see para 8) remain to effective IAS management in Mexico and the IAS threat to globally significant biodiversity remains. The project will advance Mexico's national and international commitments to IAS management by implementing the NSIS and demonstrating effective site-based management of IAS.

B. PROJECT OVERVIEW:

B.1. The baseline of the project and the problem that it seeks to address:

3. Mexico is one of 12 mega-diverse countries in the world, with high percentages of endemic species, ecosystem diversity, and genetic variability in many taxonomic groups. The proportion of species endemic to Mexico is outstandingly high: 57% of flora, 11% of birds, 30% of mammals, 48% of amphibians and 45% of reptiles. With over 11,000 km of coastline and territorial waters of 231,813 km², Mexico boasts high marine biodiversity and productivity; there are 1,616 coastal marine fish species, and levels of endemism are estimated

at 20% for the Gulf of California and 15% for the Caribbean, Gulf of Tehuantepec and the north of the Gulf of Mexico. The country's 500 main islands and islets host 7% of all Mexican vertebrate and plant species, harbor over 200 endemic vertebrates and 110 endemic plants, provide reproduction sites for turtles, birds and marine mammals, and are situated in biologically productive waters of high economic and social value, particularly for local fishermen.

4. Numerous exotic species have been introduced into Mexico, with significant impacts on natural landscapes. In northern Mexico, exotic grasses such as Buffelgrass (*Pennisetum ciliare*), introduced for use as livestock fodder, have dispersed rapidly across native ecosystems (incl. many protected areas), and have substantially replaced native vegetation cover and modified natural fire regimes. Introductions of exotic species for reforestation, soil conservation and windbreaks, such as giant cane (*Arundo donax*), Casuarina (*Casuarina equisetifolia*), and Salt cedar pine (*Tamarix* sp), have impoverished the diversity of native habitats and reduced the availability of water resources throughout Mexico. Mexico also faces the continuing threat of new introductions, such as the Cactus mealy bug (*Hypogeococcus festerianus*), which poses a major threat to several cactus and epiphyte species. Certain productive sectors have been identified as critical pathways for the introduction of IAS into Mexico. Aquaculture has grown rapidly throughout the country and now exceeds the production capacity of both agriculture and livestock; the aquarium trade has expanded since 1993 into an industry with 250 farms in 20 states. Through both intentional introductions and accidental escapes, these sectors are responsible for the widespread transmission of parasites and diseases; hybridization; predation; competition for food and ecological niches; and habitat alteration in aquatic ecosystems, resulting in the localized extirpation of native species at over 100 sites in Mexico. In the wildlife sector, the import of exotic invasive species as pets frequently results in releases of these animals into natural ecosystems, where they compete with and prey on native species, alter food chains and change habitats. In the forestry sector, accidental imports of IAS in forestry products threaten native species and result in damage to forest ecosystems.

5. During the past several decades, Mexico has established an extensive system of protected areas (174 PAs encompassing 25,384,818 hectares). Unfortunately IAS have caused losses of biodiversity and reduced ecological productivity and services. Degradation of forests and pastures within and around PAs from burning, overgrazing, and timber felling has allowed IAS to gain a foothold in many natural ecosystems. In fields surrounding many PAs, exotic agricultural varieties as well as pests have spread into PAs, with negative impacts for native flora and fauna. The Red Palm Mite (*Raoiella indica*) has impacted numerous species of palm trees (including several endemics) in PAs (e.g. Sian Ka'an Biosphere Reserve); the import of exotic plants (the mite is associated with 55 agricultural and ornamental plants) is believed to be the mite's main pathway. The Cactus moth (*Cactoblastis cactorum*) damages various species of *Opuntia* cactus (many of them endemics concentrated in PAs); although eradicated in 2009, monitoring and prevention activities are necessary to prevent new infestations. Island ecosystems also have been affected by IAS, primarily through historical introductions of rats, cats, goats, sheep, pigs, rabbits and dogs. 12% of the endemic birds and 20% of endemic mammals on Mexican islands have gone extinct due to IAS; cats alone have caused the extinction of at least 10 endemic rodents on islands. On Socorro island, a population of Merino sheep introduced in the middle of the 19th century caused immense habitat destruction, feeding on endemic plants and removing vegetation that resulted in increased soil erosion and habitat loss for native plants, reptiles and endemic birds.

6. **Programmatic Baseline:** In recent years, knowledge of and concern about IAS and their harmful impacts has increased in Mexico, sparking changes in the policy environment and new and increased baseline investments in IAS management. The Ministry of Environment (SEMARNAT) encouraged the development of the NSIS and worked to integrate IAS management into laws. CONANP invested approximately US\$710,000 from 2008-2010 on IAS management in PAs, and has provided training in IAS management methods and promoted the use of native species with fisheries, aquaculture and livestock production units in areas around PAs, including: removing exotic rainbow trout (*Oncorhynchus mikiss*) and restoring native Trout (*Oncorhynchus chrysogaster*); launching a native fish species reproduction center; and establishing semi-intensive grazing areas on PA boundaries. From 2008-2010, CONAFOR invested US\$2,561,532 in prevention and control of exotic

forest pests, and this amount of funding is likely to continue. On top of that CONAFOR is also investing yearly around 4,5 million USD to conduct a national forest inventory which is looking at forest health and status of degradation, as well as impact of invasive species among other. CONABIO spent in the last year US\$500,000 on its invasive species program. During the past decade, Mexican islands have been the focus of several programs: INE invested US\$400,000 on research, control and eradication of invasive species, while Mexican and U.S. government agencies together with GECI and private donors invested US\$3.5 million in IAS management, resulting in the eradication of 40 distinct populations of introduced mammals, as well as restoration of ecosystems and reintroduction of native species at some sites. PROFEPA has 90 inspectors stationed at 72 offices to carry out phytosanitary inspections at airports, ports and border crossings, with a focus on imported exotic fauna and flora and potential forest pests. However, with a budget of approximately US\$469,000/year, PROFEPA can only carry out limited inspections and trainings and materials are inadequate. Even so SAGARPA / SENASICA have a bigger budget their mandate is focused on inspections for IAS that pose a threat to agricultural production, which leaves natural ecosystems and biodiversity aside.

7. Recognizing the limitations of its existing programs for IAS, the GoM, through the Ministry of Environment (SEMARNAT) has taken a critical step by developing the 2010 NSIS to consolidate IAS management actions and is working to integrate management into laws. Therefore, the Environmental sector of the GoM will continue to invest in IAS management mainly through key institutions such as CONANP, PROFEPA, INE, IMTA and CONABIO, with a combined projected level of investments over the next 4 years estimated in the range of 12,000,000 USD. In addition, to these solid investments, the GoM will continue to strengthen its expenditures to safeguard BD resources in PAs by investing in improving minimum standards of park management which in turn will have a positive effect in preventing and controlling IAS. It is estimated that CONANP will invest yearly 100,000,000 USD.

8. This projected amount of funding should be added to the increased investments that the GoM has made in the past years in the field of Biosecurity, phytosanitation and control at borders. The yearly budget of SENASICA amounts to around 300 million USD which should be added to the funds that SAGARPA channels to all the states in Mexico for biosecurity measures which in 2011 amounted to approximately 93 852 143 USD .

9. However, the NSIS and current baseline investments now need to be transformed into a comprehensive approach to control the introduction and spread of IAS through production sectors and other pathways, and to reduce the impacts of IAS in biodiversity-rich and vulnerable ecosystems. To achieve this, actions must be taken to strengthen decision-making tools and information resources; to enable institutional coordination; and to enhance financial and technical resources to better take into account the whole spectrum/range of intervention measures, that together will address the overall problem of IAS in the country, including IAS pathways in key productive sectors, and effective IAS management at sites of high biodiversity value. However, progress toward this long-term solution has been constrained so far by a number of barriers; which are described below:

Incomplete national management framework to support a cost efficient and coherent implementation of the NSIS:

Existing legislation and regulation in Mexico pertaining to IAS is fragmented. As a result, the application and enforcement of regulations and programs for prevention, control, eradication and monitoring of IAS has been inconsistent. Because many institutions are engaged in control and quarantine activities, regulations and protocols vary significantly among different productive sectors. More generally, there are few regulations or institutional responsibility for IAS spread to natural ecosystems, and surveillance protocols do not cover IAS for their impact on biodiversity. The NSIS is a critical first step in consolidating legal and policy approaches to IAS, but specific control instruments and protocols, as well as institutional mechanisms for their application, have yet to be developed, and additional budget resources will be needed to extend management actions to cover IAS that pose a risk to biodiversity and ecosystem services (most institutions have insufficient resources for attending existing IAS management priorities; e.g. PROFEPA, which is responsible for border inspections of exotic flora and fauna, is chronically under-funded as it does not keep funds generated from inspection fees and certificates). Institutional responsibility for IAS management is spread widely (see Section B.5), and as there are no inter-institutional coordination mechanisms in place, management actions by these institutions have been isolated and largely reactive. In addition, most resources have been focused on IAS with impacts on crops, livestock or commercial forest species, rather than IAS in natural ecosystems. Furthermore, limited information on the invasion status, pathways, distribution, population size, ecology, and social / economic impacts of IAS is detrimental to preserving the country's BD capital. This is both a reason and a consequence of the lack of attention paid to IAS in Mexico by decision makers and represents a constraint to increased budgetary allocation. This also explains why participation in IAS decision-making by civil society and the private sector is almost non-existent. For example, basic information is not available on the role of the aquarium trade and aquaculture sectors in IAS spread, including the location and operations of production units and application of biosecurity measures used to prevent escapes, all of which hampers the ability to assess or control IAS pathways in key vulnerable ecosystems. In addition, standards and protocols do not exist for prevention and response for IAS species imported by these sectors. Another example relates to the trade in wildlife and forestry products where no tracking schemes exist for movements of products and spread into vulnerable ecosystems inside Mexico. Overall, the country lacks a "black list" detailing restrictions on the import of IAS for all of the major sectors through which IAS tend to enter and spread in Mexico, inspectors do not have updated technical sheets with details on priority IAS in order to identify them. At the broader level sectorial regulations do not incorporate national and international protocols and agreements (WTO, Cartagena Protocol etc.) regarding management of exotic species and in general, producers, importers and retailers are unaware of the risks for biodiversity posed by IAS as they have not received training or information on biosecurity measures. A few agencies have established information systems for IAS, but data is mostly out-dated, inadequate and dispersed, putting constraints on capacities to identify priorities and needs for IAS management. Information on the potential costs of different interventions is not available either, presenting a severe limitation on priority setting for implementation of the NSIS. For example economic data showing the cost-effective added value of improved prevention frameworks of IAS vs. more traditional approaches of control and eradication in vulnerable ecosystems would be highly important to generate in Mexico. Data on imports (purposes, frequency, seasonality and origin) is incomplete and mostly unavailable, but essential for a reliable, long-term evaluation of pathways and improved prevention across the sectors. There is no coordinated national system where data from all institutions /organizations converge in a standardized manner; nor any web-based tools where decision makers, resource managers, and other stakeholders can access and download information on IAS. Technical capacities to identify pathways, commodities and organisms that present an IAS risk, or to measure the threats and impacts of IAS, are still rudimentary. The effectiveness of past as well as current efforts to apply regulations, employ effective prevention and control techniques and technologies, and manage IAS impacts, is largely unknown and there is very little documentation of best practices.

Lack of demonstrated effective strategies and tools for managing IAS pathways in targeted production sectors and for IAS management in priority biodiversity areas:

With regard to IAS in areas of high biodiversity, programs for IAS management have taken place in Mexico (primarily on islands), but these have been implemented on an ad hoc basis and their results have not been systematized. The range of invasive species, the population levels of some and the variety of ways they compete with native and endemic species make single approaches or isolated individual campaigns insufficient to hold back the growing threat posed to areas of high biodiversity. Integrated IAS systems that combine the prevention of new introductions, and spread within these areas, as well as the control of populations and the mitigation of the impact of existing ones are required. Currently essential information necessary to prioritize IAS management and focus scarce resources has not been collected, including studies to identify priority invasive species / ecosystems for IAS management and detailed criteria for risk assessments of pathways for IAS introductions. In many cases, natural areas lack inspection regulations and associated protocols to control IAS introductions (e.g. IAS imported for productive activities; tourism activities; accidental introductions from shipping), and local residents and tourists alike are largely unaware of the threats posed by IAS and do not know best practices to avoid introductions. Protected Areas have limited authority in managing IAS in surrounding productive landscapes, while agencies that do monitor/control IAS in those areas (such as SENASICA

for agricultural pests) are not mandated to prevent IAS impacts on biodiversity or ecosystem functions in productive landscapes or in PAs. In many cases, the most cost effective approach to IAS is early detection and response; however, the necessary early response systems, technical capacities, and support and involvement of local communities are not yet in place to support such actions in high biodiversity areas.

B.2. Incremental /Additional Cost Reasoning and Associated Global Environmental Benefits:

10. As a complement to national baseline investments in IAS policy and legal development, inspection and quarantine functions, and site-level eradications, the GoM is seeking GEF support to overcome the above barriers by developing improved IAS management systems that protect Mexico's globally significant biodiversity. In line with the GEF focal area strategy for IAS, the project will implement a systemic approach to IAS management while also addressing IAS in the AAWF sectors and in targeted areas of high biodiversity value and significant IAS threat. Project activities will be oriented towards maximizing limited national resources to address the most important elements of the threat posed by IAS. As such, the project will place special emphasis on early detection and prevention systems, as well as the use of risk analyses to identify IAS with the most potential environmental and economic impact on Mexico, in order to establish clearly agreed priorities for IAS management interventions.

11. In the absence of this project, globally significant biodiversity in Mexico, including vulnerable islands and PAs, will continue to be threatened by the introduction, establishment and spread of IAS. This project represents critical support at a crucial time as Mexico endeavors to implement the new NSIS, both for the resources and expertise it will provide and for its catalytic effect in bringing other resources and increased attention to the issue of IAS. In the baseline, priority actions identified in the NSIS would likely remain unfulfilled, as gaps in institutional authority and coordination, and limited resources, would make implementation highly difficult. Institutional will, mechanisms and resources to effectively engage with AAWF sectors that are key IAS pathways would remain weak, and most IAS management would remain focused solely on protecting economic resources with little regard for biodiversity conservation. In the islands, IAS management would continue on a case-by-case basis, without a setting of priorities, disregarding a systematic, institutional and programmatic approach, not following a consistent cooperation among stakeholders, or mechanisms for sharing information nationally or internationally. Protected areas would continue to lack technical expertise or models for IAS management. The GEF project will address the barriers to effective IAS management for biodiversity conservation in Mexico, and replace the baseline piecemeal approach with a coordinated and effective IAS management framework for the country.

12. The requested GEF support represents a cost-effective approach to generate GEB. Priority will be given to early detection and prevention systems as well as rapid response mechanisms, to prevent IAS impacts at the source and thereby avoid costly control and eradication efforts. The project will utilize risk analyses to identify IAS with the most environmental and economic impact, and thereby establish priorities for IAS management interventions where limited resources can have the most impact. At the national level, the project will promote cost effectiveness by putting into place institutional coordination mechanisms to optimize the use of shared personnel, materials and financial resources; and by harmonizing regulations and reducing overlap of functions and thereby reducing inefficiencies. At the site level, field-testing of IAS management strategies will take place at sites where prevention and control measures can be effectively applied (previous experience has shown an average cost of removing IAS on Mexican islands of US\$90.00/ha which is considered a good return on investment for BD conservation compared to other experiences conducted elsewhere in the world). Moreover, the project has selected island sites where it can build on previous experience in IAS management, and PA sites where the institutional partners (CONANP working in conjunction with GECI) have on the ground resources and proven experience in IAS management.

13. Global Benefits: Mexico represents an important global reservoir of biodiversity and its ecosystems provide a broad variety of goods and service to the global community (a large number of agricultural varieties have their origins in Mexico). By reducing the introduction and spread of IAS into vulnerable and productive

ecosystems in Mexico (islands and mainland protected areas) and implementing biosecurity measures to reduce escapes of IAS (e.g. aquatic species), the project will make a major contribution towards safeguarding globally important biodiversity. In addition, by promoting a mix of interventions and integrated IAS management into PA buffer zones to reduce threats from surrounding productive landscapes, the project will help to sustain forest ecosystem health and carbon sequestration in the face of climate-related stresses.

Building on the momentum of the 2010 NSIS, the proposed project will allow Mexico to bring together the resources of key stakeholders to implement coordinated policy, legal and institutional changes that will strengthen IAS management and orient it more concretely towards biodiversity conservation.

At the systemic level, the project will strengthen national capacities to implement the NSIS through the development of improved information resources on IAS, priority setting and decision-making tools, strengthened capacity of key institutions, and the integration of critical partners (targeted production sector stakeholders) into IAS prevention and control actions. In general the project will look at ways to adequately integrate and harmonize the work between the programs led by biodiversity and environment-focused agencies and existing national-level IAS processes that are led by agencies in charge of import control and phytosanitary and zoosanitary measures. At the national level the project will also concentrate on promoting the systemic measures to control pathways and prevent IAS entry through sectors such as aquarium trade, aquaculture, wildlife and forest products trade in particular.

At the field level, the project will work with key national actors and build upon existing programs as well as implement IAS prevention, response and control measures in vulnerable globally significant ecosystems, generating biodiversity conservation benefits and helping to determine the most cost effective IAS management options under different conditions. It will promote the expansion of baseline inspection by putting in place improved and coordinated procedures at entry point to Mexico's islands and within the country to further strengthen prevention option.

14. **Component 1.** The project will develop a suite of decision-making tools aimed at informing cost effective management decision to address IAS threats in key landscapes and key sectors (aquarium trade, aquaculture, trade of wildlife and forest products in particular). One of the first steps in that direction will be to strengthen CONABIO's Invasive species Information System to form a National Invasive Alien Species Information System (NIASIS) that will link different existing information sources, providing detailed information on species taxonomy and biology, places and pathways of introduction, ecosystem impacts under current climate scenarios and data on dispersion under different climate change scenarios. The NSIAS will build upon the work initiated by CONABIO and SEMARNAT with institutions such as SENASICA and INAPESCA (SAGARPA), PROFEPA, CONAFOR, CONANP; IMTA, INE as well as experts from Universities and NGOs (see annex-response matrix for further details). The NIASIS once established will ultimately allow for comprehensive diagnosis of IAS, projections of new or expanded invasions, improved priority setting for interventions, informed decision-making on sectoral policies and investments, and easy access to information for decision makers and other users. In order to prepare for future interactions between climate change and IAS introduction and spread in Mexico, niche models will be developed for high risk IAS regarding current and future dispersion scenarios under expected climate change projections. To further guide decision-making on priority interventions and the allocation of resources, the cost effectiveness of prevention options for selected IAS and their management strategies for different ecosystems will be assessed. To complement the decision-making tools and information resources, the project will develop and implement sectorial guidance and regulations to strengthen the control of main pathways of IAS to vulnerable areas. Existing laws and regulations for IAS will be reviewed to detect gaps and inconsistencies and a proposal will be made for revised and harmonized laws and regulations, including those with significant impacts on biodiversity. Risk analyses applicable for all IAS taxonomic groups will be used to improve decision-making regarding imports of species by production sectors and to identify IAS that pose the greatest threat for high biodiversity sites. Standardized protocols and mechanisms regarding the management of IAS that threaten biodiversity, including early warning, monitoring and blacklisting, as well as technical

information sheets on IAS for use by personnel at borders and other entry points will be produced in close coordination with SENASICA and PROFEPA and developed to improve the efficiency of prevention and control. Capacity-building and awareness raising of government personnel will be undertaken on IAS regulations, risk analysis, control methods & techniques, and sanitary & phytosanitary standards, through workshops and on the job training, as well as careful monitoring of results and associated adaptive management. The activities of the aquarium trade, aquaculture, forestry and wildlife (AAWF) sectors, which import, sell and use invasive species, will be assessed to identify high-risk practices and to develop and implement restrictions on imports/uses of exotic species in these sectors. Risk analyses will be undertaken for each sector to identify the highest risk species and invasion pathways, and the black list of invasive species will be continuously updated to control imports of exotic species. Training programs & workshops will be developed to educate stakeholders in these sectors on IAS relevant to their own operations. The project will work with producer associations, PROFEPA; SEMARNAT; SAGARPA, SENASICA; CONAPESCA, INAPESCA and CONAFOR among key actors and build on existing experiences and investments to strengthen biosecurity protocols and processes to control imports, monitor production sites, and implement rapid response protocols.

15. To ensure the sustainability of the project outputs, a multi-sectorial institutional framework will be established to implement the National Strategy on Invasive Species (NSIS). The existing IAS Expert Committee will formalize its work to function as an advisory body to the government and as the leading body for implementation of the NSIS. A national IAS experts network will be established to support decision making and efficient deployment of resources. In order to enable quick and coordinated actions among institutions, an existing IAS web portal will be strengthened, providing rapid and easy access and dissemination of information on IAS, and standards and training programs will be harmonized and applied across key institutions. Recognizing the limited capacity of governmental agencies to monitor production sectors, enhanced regulations and protocols will be complemented by a proposal for a combination of fiscal and market-based instruments (*e.g.* retention of inspection fees; financial incentives for importers who implement certified biosecurity measures) to encourage public and private actors to shift towards low-risk practices and to substitute the use of exotics for native species. Policy makers will be educated on IAS, and an analysis of the overall cost of selected IAS to the Mexican economy will be undertaken to help secure increased government budget allocations for IAS management over the long-term. Finally, budgetary coordination between sectors / institutions will be promoted to ensure coherent and cost effective investments in IAS management.

16. **Component 2.** At site level the project will put emphasis on a combination of two approaches: prevention of new introductions (both in islands and mainland PAs) and integrated IAS management including containment of populations below thresholds. At targeted PA island sites, the project will work with key partners (Mexican and U.S. government agencies; GECI) who have IAS management experience and authority (all PAs are federally owned and under CONANP environmental management) to continue and expand IAS management programmes on 13 priority islands in 6 island groups (totalling 48,020 ha) - see Table below for details. The project will carry out education and outreach with island stakeholders (in particular fishermen and tourism operators, but also scientists, the Navy, and the Ministry of Interior), and work with them to develop and implement participatory protocols for IAS prevention and control as well as strengthening inspection systems. Based on a system (under development) to prioritize island IAS eradication and restoration activities, the project will also implement such activities where it is the only viable option and/or more cost effective than continued control and monitoring and where they provide the highest biodiversity return on investment. For mainland PA sites, CONANP will lead the work in 4 to 9 PAs with viable populations of globally significant biodiversity under threat.² In these sites the focus will be on the strengthening of IAS management to prevent introductions from agriculture and forestry activities in the surrounding productive landscape. The project will work to identify agricultural and forestry IAS and associated pathways around each PA that impact biodiversity; provide detailed

² During further project preparation, the existing diagnosis regarding the National Protected Areas elaborated by CONANP will be evaluated and updated; based on this, 4 to 9 PAs will be selected for site level IAS management activities during the full project

information and reach out to other institutions mandated for each sector such as CONAFOR and SENASICA-SAGARPA on identifying the right combination of prevention, control and response measures and risk reduction strategies. The project will also ensure to integrate IAS management into existing PA management programs and provide sector stakeholders with adapted training. The project will also put a strong focus on local communities in and around PAs and work with farmers to control the spread of IAS from their fields into PAs.

17. Assessments of the distribution, spread, and response to management actions of IAS, and of the most vulnerable and important native species (*i.e.* endemics), will provide the basis for site-level IAS management programs, and will be integrated into awareness campaigns to educate local populations and visitors on the economic and environmental impacts of IAS. An EDRR system will be developed and initiated to test strategies for reducing IAS establishment and spread, as well as long-term IAS management costs; this system will serve as a model for the development of a national EDRR system. CONABIO will integrate the lessons learned from demonstrating IAS management in islands and mainland PAs (and surrounding productive landscapes) into its information management systems and share the results nationally to promote replication at other sites during and after the project, as well as with other countries (e.g. Cuba, Dominican Republic and Brazil).

Project Field Sites – Islands			
Island / Archipelago	Size (ha)	Status	BD Relevance
Socorro -Revillagigedo Archipelago (Pacific Ocean)	13,200	Biosphere Reserve	Mexican island with greatest endemism & biodiversity: 38 species of endemic flora & 11 endemic fauna (10 birds; 1 reptile)
Guadalupe (Pacific Ocean)	24,171	Biosphere Reserve	Center of terrestrial and marine bird endemism (9 species); 34 endemic flora species. Eradication of goats enabled recovery of endemic forest; control of feral cats protecting 4 seabird species
San Benito archipelago (3 islands) (Pacific Ocean)	390	Biosphere Reserve (pending)	Most important seabird breeding site in western Pacific (2 million seabirds); 42 native plant species (9 endemic); 80 native vertebrates (1 reptile, 4 marine mammals; 75 birds)
Espirito Santo (2 islands) (Gulf of California)	9,625	Flora & Fauna Protection Area (part of World Heritage Site “Islas del Golfo de California)	233 vascular plant species (53 insular / regional endemics); 2 native amphibians; 27 reptile (3 endemics); 6 endemic mammals; 90 bird species
Arrecife Alacranes (5 islands) (Gulf of Mexico)	53	National Park (listed under UNESCO MAB Program)	Mangroves, coastal dunes, largest coral reef in Gulf. 29 vascular plant species (2 endemic); 6 crustaceans, 2 lizards, 4 marine turtles, 116 birds
Banco Chinchorro (4 islands / cays) (Caribbean Sea)	581	Biosphere Reserve (listed under UNESCO MAB Program); Ramsar Site.	10 reptile species; 1 bat; 116 birds (incl. 72 tropical migrants; 23 residents). Key site for migratory birds
Possible Mainland Protected Area Sites (to be determined during PPG phase)			
Possible PA Sites	Size (ha)	Status	Targeted EcosystemTypes
Terrestrial: <ul style="list-style-type: none"> • <u>Biosphere Reserves:</u> Los Tuxtlas; El Pinacate y Gran Desierto de Altar; Tehuacan-Cuicatlán; Mariposa Monarca; • <u>Flora & Fauna Protected Areas:</u> Yum Balam; Chichinautzin Biological Corridor 	TBD	TBD	<ul style="list-style-type: none"> • Tropical evergreen forests • Tropical deciduous forests • Cloud forest • Temperate coniferous & broad-leaved forests • Shrub land & Savannah • Wetlands • Pastures
Coastal, Island and Inland Water: <ul style="list-style-type: none"> • <u>Biosphere Reserves:</u> Calakmul; Pantanos de Centla; Río Lagartos • <u>National Parks:</u> Isla Contoy; Isla Isabel; Arrecife de Puerto Morelos 	TBD	TBD	<ul style="list-style-type: none"> • Mangroves • Wetlands • Fringing dunes • Coastal lagoons • Reefs • Islands

18. **Choice of Project Approach:** Before completing the National Strategy for Invasive Species in 2010, CONABIO had considered undertaking IAS-related projects focused on improving IAS information as a tool to enhance decision-making, and on co-financing eradication projects of individual invasive species, as such activities fit into the traditional role and mandate of CONABIO. However, work on the NSIS made it clear that such approaches would not be effective. Enhanced information on IAS will have only a limited impact as long as institutions are not united in their activities and collaborate closely towards a common goal. Species-specific eradication programs typically have a limited impact and in some cases unintended negative consequences (e.g. removing one IAS may allow others to multiply in their place). In addition, a focus on species eradication alone is not cost-effective, as it deals with the effects rather than the causes of invasions, does nothing to prevent future invasions, and raises serious questions regarding long-term sustainability and financing. For this reason, CONABIO has worked with other stakeholders to design a program that will address the inter-linking causes and impacts of IAS in Mexico, through a systemic approach that includes prevention, detection and response, control, and eradication activities; that includes activities at both points of entry and the landscape; and incorporates significant and effective inter-institutional cooperation.

19. **Changed Practices:**

At National Level		
Productive sector	Current practice	Project Alternative
Aquarium trade / Aquaculture	<ul style="list-style-type: none"> • Exotic species known as highly invasive are imported due to lack of official blacklist to prohibit imports • Imports of exotic species subjected to inconsistent or no risk assessments • Import, breeding and/or distribution of ornamental fish in the absence of biosecurity controls result in escapes into natural environments and spread of diseases to native species • Government institutions lack information regarding location and characteristics of production facilities: production capacity, species and varieties produced (imports and production), origin and destination of fish (produced, imported, commercialized) 	<ul style="list-style-type: none"> • Official black lists control import of IAS • Importers, producers and traders aware of risks regarding IAS due to outreach efforts • Import, breeding and distribution more secure through better information systems / tracking of exotic species, application of biosecurity measures, capacity building of personnel, and participation in certification systems
Wildlife and forest products	<ul style="list-style-type: none"> • Difficulty to prohibit import of goods in absence of official blacklist • Entry of IAS as inspectors lack the necessary training and identification tools to detect IAS • Supervision by governmental institutions inadequate as there are no tracking schemes for movements of products inside the country. • Entry of IAS into Mexico as importers are unaware of risks to biodiversity and ecosystem services 	<ul style="list-style-type: none"> • Goods that seek to enter will be subject to inspection based on the official black list and other screening mechanisms (norms), which build on standardized pre-screening and risk analysis schemes for all taxonomic groups • Inspectors utilizing technical information sheets on IAS related to wildlife and forestry products to carry out thorough inspections and taxonomic identification of IAS at entry points • Monitoring system to track movements of high risk IAS inside the country • Importers are more careful with goods due to outreach and awareness efforts

At Site Level		
Project Field Sites	Current practice	Project Alternative
Forestry agriculture in buffer	<ul style="list-style-type: none"> • Human settlement & transport routes create pathways for IAS introductions and ecosystem disturbances in PAs 	<ul style="list-style-type: none"> • Outreach to local inhabitants and prevention / removal of illegal settlements, reduce the introduction and spread of IAS in PAs

zones and productive areas in islands	<ul style="list-style-type: none"> • Agriculture, forestry and livestock activities provide pathways for IAS introduction (especially when exotic species are used), including parasites and diseases; as well as indirect impacts on native species through degradation of forests and overgrazing of shrub lands 	<ul style="list-style-type: none"> • Biosecurity measures and decreased use of exotic species reduce IAS introduction and spread into PAs; improved grazing and forest management reduce ecosystem degradation and vulnerability to IAS
	<ul style="list-style-type: none"> • Fire clearance practices enable spread of introduced exotic grasses from productive landscape into PAs, increasing frequency / intensity of fires and contributing to further ecosystem degradation 	<ul style="list-style-type: none"> • Increased use of native species, and education and control measures on fire practices, reduce spread of exotic grasses and impacts of fires in PAs
	<ul style="list-style-type: none"> • Exotic species introduced for hunting compete with native species for food, water and habitat, and spread exotic pests and diseases 	<ul style="list-style-type: none"> • Restrictions on IAS introductions for hunting (blacklist of high impact IAS) and biosecurity measures at breeding facilities in surrounding landscape, reduce IAS impacts in PAs
	<ul style="list-style-type: none"> • IAS intentionally introduced into water bodies predated and outcompeting native aquatic species, including within PAs 	<ul style="list-style-type: none"> • Restrictions on introductions of IAS (blacklist of high impact IAS) reduce IAS impacts in PAs
	<ul style="list-style-type: none"> • Reforestation & planting activities for different purposes using exotic species -- Casuarina (<i>Casuarina equisetifolia</i>), Eucalyptus (<i>Eucalyptus globulus</i>), Salt cedar Pine (<i>Tamarix ramosissima</i>) etc. significantly reduce availability of water resources 	<ul style="list-style-type: none"> • Refocus planting of native species, and application of blacklist, reduce spread of exotic trees within or bordering PAs
	<ul style="list-style-type: none"> • Infrastructure inside and outside PAs (e.g. dams, channels connecting previously isolated water bodies) alter water regimes and nutrient inputs and facilitate IAS introductions -- water hyacinth (<i>Eichhornia crassipes</i>), armored catfish (loricariidae), snails (<i>Thiara sp.</i>), and parasites and diseases 	<ul style="list-style-type: none"> • Analysis of potential IAS impacts in infrastructure planning processes and monitoring of water and nutrient regimes reduce IAS spread into PAs
	<ul style="list-style-type: none"> • Fertilizers, herbicides and pesticides modify soil and water chemistry and harm native species adapted to nutrient-poor conditions and/or sensitive to chemicals, creating opportunity for spread of IAS able to thrive under the altered conditions 	<ul style="list-style-type: none"> • Awareness raising among farmers, education and incentives for the responsible use of fertilizers, herbicides and pesticides reduce IAS impacts

B.3. Socioeconomic Benefits to be delivered by the Project:

20. Mexican society depends heavily on the production of natural systems (20% of the population relies on subsistence production based on natural resources), many of which are threatened by IAS. For example, aquatic ecosystems, though modest in size, are crucial for much of the economic activity of marginalized populations, and yet highly impacted by IAS; one study concluded that invasive catfish had supplanted native fish species that were the main source of income for 12,877 persons in the state of Tabasco. The cactus moth poses a serious threat to *Opuntia* cacti, which are the main source of income for 25,000 Mexican households (in 2009, approximately 83,000 hectares were cultivated with *Opuntia*, producing revenues of US\$170 million). Many islands and PAs have the potential to generate tourism revenues that can benefit conservation and local communities, but the attraction of tourists to these sites can be greatly diminished by IAS impacts. By safeguarding biological diversity and ecosystems and their services from these and other IAS threats (see paragraphs 5-6), the project will add considerably to local, regional and global environmental and economic benefits. Across all of the project components, special attention will be placed on gender equity, and where possible specifically targeting women at all capacities (labor, technicians, scientists, managers) and youth as participants in IAS management actions.

21. Sustainability: GEF funding can be viewed as “seed money” that will kick-start the implementation of the National Invasive Species Strategy and increase awareness among governmental institutions, decision makers, and private stakeholders as to the extent of IAS problem in Mexico; particularly potential future interactions with climate change. An understanding of the linkage between these threats will broaden the

decision-making process beyond short-term benefits to take account of long-term, costly and potentially irreversible impacts to the environment and human health, and thereby ensure increased long-term funding for IAS management through government budget allocations and the consideration of fiscal and market-based instruments and incentives for invasive species control.

B.4. Risks, including climate change risks that might prevent the project objectives from being achieved, and measures that address these risks to be further developed during the project design:

Risk	Level	Mitigation Measures
Governmental agencies / private companies unwilling to share information / data	L	Information and knowledge generation, management and dissemination are key components of this project. Open-access and the mutual benefits of information sharing will be explicitly included in all agreements for databases, websites, etc. sponsored by the project.
Government unwilling or unable to pass new IAS laws by the end of the project	M	Authority to push through approval of new legislation is beyond the scope of the project partners. The project will mitigate the risk by starting development of new/amended legislation during the PPG phase, thereby maximizing the time available for the legislative approval process. In addition, the project will propose regulations and protocols that can be used to strengthen IAS control without requiring legislative approval.
Conflicts of interest and different priorities of stakeholders constrain implementation of activities	M	Mexico’s new NSIS prioritizes strengthening partnerships between government, private sector and civil society. In implementing the NSIS, the needs and priorities of stakeholders will be identified, and constructive dialogue, joint planning and problem solving will be promoted. The project also will foster interest among stakeholders by developing positive market and fiscal incentives and by making the economic and business case for IAS control.
Insufficient funding to continue necessary IAS management after the project ends	L	Governmental support for biosecurity and IAS management has increased in recent years along with an increased awareness of the economic/environmental impacts of IAS. This dynamic is likely to continue. These issues are at the center of many key national development policy frameworks and the project will take advantage of that to continue to raise awareness, and bring in further information to guide decision making on investments, including providing with detailed analysis of the overall cost of IAS to the Mexican economy and promote increased and efficient budget allocations for IAS management over the long-term. The project also will undertake detailed costing of actions and targets identified in the NSIS, and will develop new financial incentives / mechanisms to support IAS management
Climate change may alter the threats and risks associated with IAS	H	Climate change may raise the threat of IAS by increasing the frequency/severity of fires, floods, etc. and thereby decreasing ecosystem resilience and creating conditions where invasive species can more easily become established. Climatic parameters will be included in the project’s risk analysis activities. Moreover, the project will take an adaptive management approach including developing and using data mining and other predictive tools to continually revise phytosanitary and sanitary measures in response to changing conditions. Risk assessments will be periodically updated to assure that new commodities, pathways and species are accounted for.
Increased international trade may introduce unforeseen IAS	M	

B.5. Key stakeholders involved in the project and their respective roles

22. The project is designed to work in close collaboration with national, regional and international governmental and private organizations working to address the problems associated with IAS, including:

INSTITUTION / STAKEHOLDER	ROLE / TYPE OF COORDINATION
Ministry of Environment (SEMARNAT), particularly the Sub-Secretary of Environmental Regulation (SFNA)	Promoting IAS agenda among different sectors; establishing regulatory measures on IAS
National Commission for Knowledge and Use of Biodiversity (CONABIO)	Training programs + outreach campaigns; educational materials; data management; EDRR; remote monitoring; risk analysis
National Commission for Natural Protected Areas (CONANP)	Monitoring, prevention, control & eradication measures in PAs; training and outreach campaigns
National Commission for Forestry (CONAFOR); General Directorate of Forest & Soil Management (DGGFyS)	Monitoring, control and eradication in forests; forest pest management
National Institute of Ecology (INE)	Inputs for economic evaluation models; monitoring, control and eradication measures; education and training

Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA)	Phytosanitary and zoosanitary measures
Federal Attorney for Environmental Protection (PROFEPA)	Enforcement of national laws and CITES through inspection of transboundary movements of exotic flora and fauna
Autonomous Metropolitan University (UAM) Xochimilco	Development of methodology for prioritization of areas of concern, risk assessment of exotic species
Mexican Institute of Water Technology (IMTA)	Control of aquatic weeds, training programs
Local communities (Island and PA demonstration sites)	Participation in IAS management measures
NGOs (GECI, TNC, ProNatura, Arid America)	Technical assistance to IAS programs on State level
Representatives/Associations of key production sectors	Aquarium trade, aquaculture, wildlife and forest importers

B.6. Coordination with other related initiatives:

23. The project will be executed by CONABIO in collaboration with CONANP, with oversight and coordination functions carried out through the multi-stakeholder IAS Expert Committee, which was established in 2008 to develop the NSIS. The project will complement and seek to work in coordination with a number of other national initiatives, including: 1) the IAS elements of the project “Strengthening of the National Commission for Natural Protected Areas (CONANP) through innovation and continuous improvement”; 2) the program to protect nesting sites for marine birds from IAS, jointly implemented by CONANP, INE, GECI, the Marisla Foundation, and the American Bird Conservancy; 3) a multi-disciplinary (government, universities and private businesses) program to improve the sustainability of the aquarium industry; and 4) various REDD+ initiatives that are collecting information on invasive forest pests and 5) the GoM’s existing programs on biosecurity, control and prevention of spread to productive sectors. At the site level, the project will collaborate with the ongoing CONANP project “Attention and Management Program of Exotic Invasive and Feral Species in Natural Protected Areas of Federal Jurisdiction”. The project will share data with the GEF-financed project “Integrated assessment and Management of the Gulf of Mexico Large Marine Ecosystem”, and will draw on information from the Global Invasive Species Information Network (GISIN), the IUCN Invasive Species Specialist Group, the North American Plant Protection Organization, and the North American Invasive Species Network. Finally the project will work closely with CONANP’s new initiative on the national PA system resilience to climate change currently under submission to the GEF. Efforts will be made in particular to coordinate activities related to climate risk assessments and scenario work. Coordination arrangements will be detailed during further project preparation.

C. THE GEF AGENCY’S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

24. UNDP provides a comparative advantage for this project given its strengths as a development agency with significant experience in working with productive economic sectors, and specifically including initiatives to mainstream biodiversity into their practices. UNDP’s work on biodiversity and environmental management through past and ongoing initiatives at the national and regional level has resulted in a strong relationship with the GoM that will facilitate effective actions by government executing agencies and stakeholders participating in this project. In addition, UNDP’s extensive experience in developing governance frameworks and inter-sectoral coordination will be of great benefit to the project. The project also will benefit from UNDP’s experience in developing IAS management frameworks elsewhere in the world, including Socotra, Seychelles, Mauritius, Sri Lanka, Chile and the Galapagos.

C.1. The Co-financing amount the GEF agency is bringing to the project:

25. UNDP’s comparative advantage lies in its capacity to broker finance from national and international sources to assist countries to meet their environmental finance needs. In line with UNDP’s mandate as chair of the UNDG, it plays a key role in the leveraging of resources from a range of funding sources in the construction of a project funding package. UNDP has brokered US\$600,000 for this project from multiple sources, to be confirmed during further project preparation. UNDP also will provide in-kind support through its broader governance portfolio and through a range of technical staff working in the environment program.

C.2. Fit into the GEF agency’s program and staff capacity in the country to follow up project implementation:


26. The proposed project is in line with the 2008-2012 United Nations Development Assistance Framework (UNDAF) agreed between the Government of Mexico and the UN, in particular with its stated priority of “Institutional and individual capacities strengthened to stop and /or reverse environmental degradation, support natural resources conservation, encourage participatory management, natural resources governance and promote human development through policies and programmes for sustainable development”. The project also is aligned with UNDP Mexico’s 2008-2012 Country Programme Document, which recognized the need “to strengthen national policies and the coordination instruments to achieve a sustainable development.” In this regard, the UNDP commits through the project to support capacity building at the national, regional and local levels. UNDP Mexico has a well-established group of professionals in its environment team that will support project implementation, composed of three individuals who have worked for many years on the design, implementation and monitoring of GEF projects in biodiversity, sustainable land management and climate change. This team will receive technical support from the specialists in UNDP’s Environment and Energy Practice in the Latin American Regional Service Centre, as well as technical backstopping from UNDP’s global network of specialists.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT ON BEHALF OF THE GOVERNMENT:

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Claudia Grayeb Bayata	Adjunct Director General	Ministry of Finance	December 2, 2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	Date (MM/DD/YYYY)	Project Contact Person	Telephone	Email Address
Yannick Glemarec, UNDP/GEF Executive Coordinator		January 30, 2012	Lyes Ferroukhi, Regional Technical Advisor, EBD	+507 302- 4510	Lyes.ferroukhi@undp.org

Annex I. Response to Secretariat Comments at PIF/Work Program Inclusion

Project:	Enhancing National Capacities to manage Invasive Alien Species (IAS) by Implementing the National Strategy on IAS	GEF ID:	4771
Country:	Mexico	GEF Agency ID:	4714

Questions	Secretariat Comment at PIF /Work Program Inclusion	Response	Reference in document (PIF)
A. Institutional Integration / Coordination- Consolidated response for questions 10; 14; 19;20 and 30			
10. Does the proposal clearly articulate how the capacities developed, if any, will contribute to the sustainability of project outcomes?	AWV 12/14/12 The project will build capacity of environment, protected area (PA), and biodiversity officials to engage on IAS detection, prevention, and management, through a national level component and site level components. But sustainability is not ensured for two reasons. First, it does not adequately integrate biodiversity and environment-focused agencies (e.g CONAP, CONABIO, etc.) adequately into national-level IAS processes that are led by those in control of import control and phytosanitary and zoosanitary measures (e.g. SAGARPA). So the piecemeal approach does not seem overcome.	<p>The Ministry of Environment declared in 2005 CONABIO, the lead technical institution at national level on invasive species in Mexico. It confirmed its mandate to function (i) as a coordinating technical institution at national level and (ii) to provide national authorities involved in IAS prevention , control and management with the adequate scientific and technical guidance to conduct their work properly . So for example, while SAGARPA, through SENASICA and SEMARNAT through PROFEPA, are responsible for phytosanitary and zoosanitary measures and regulation of IAS prevention and control measures respectively, CONABIO has an overarching role to provide these agencies with the necessary technical information and has an important coordinating function to ensure that they work together in a harmonized way on these issues. CONABIO is, in other words, in the position to facilitate that all relevant institutions in Mexico, both “environment focused” institutions and “non environment focused” agencies work together in the most coherent and cost efficient manner.</p> <p>The National Strategy on Invasive Species (NSIS) was developed in 2010 under the leadership of CONABIO and through a participatory process where all the key agencies involved in IAS control prevention and management activities in Mexico worked together. It recognizes clearly that there is a need to consolidate and strengthen a national management framework to support a cost efficient and coherent implementation of the NSIS. However, it also clearly recognizes that the existing legislation and regulation as well as the institutional framework pertaining to IAS is fragmented. It clearly states that as result, the application and enforcement of regulations and programs for prevention, control, eradication and monitoring of IAS has been inconsistent. The fragmented institutional framework of approaches and strategies to IAS control, prevention and management of IAS is one of CONABIO’s main priority to address and one of the key reasons why it is seeking GEF support.</p>	<ul style="list-style-type: none"> – Table C and footnote – Paragraph 13; 14; 16; 23 – Table B-4
14. Is the project framework sound and sufficiently clear?	AWV 12/14/11 The overall framework of the project divided between national and site level components is		

	<p>sound, as is the focus of the project on improving management frameworks to prevent, control, and manage IAS (through strengthen decision-making tools, sectoral guidance and regulations, improved institutional frameworks, and early detection and response systems.) The national-level component has weaknesses that need to be addressed in a revised PIF. It does not adequately explain how the new approach will work with important agencies like customs, SAGAPA, SENASICA and others who play a lead role in control in the introduction of IAS to the country. For example, the deepest mentions that "a blacklist" will be introduced, but it does not mention who will enforce it and surely this will require more than just the PA and environmental authorities to implement. It is also not clear how this enhanced level of effort will be financed, either at the national or site-level (individual PAs and islands).</p>	<p>Component 1 of the project with its systemic and national approach, will be crucial in that sense as it will allow the GoM to address through a <u>multisectoral approach</u> the barriers extensively described in paragraph 8 of the PIF and provide with the necessary support to catalyze collective efforts at national level to bridge the existing gaps between the environment and non-environment agencies involved in IAS management. Achieving the outcomes and outputs defined in the PIF under component 1 will not be possible without full participation of institutions such as SENASICA; SAGARPA; CONAPESCA; INAPESCA; CONAFOR etc.. Therefore these agencies will be key actors targeted by the project . Additional precisions have been added to the PIF in the description of component 1 specifically mentioning these institutions. This is also further reflected by the increased amount of cofunding (see specific point on cofinance below) that will specifically contribute to activities under component 1 and which will to a large extent be made of financial resources provided by the GoM to support increased efforts to strengthen national biosecurity measures.</p> <p>Now it is important to remind the reviewer that important activities along the lines described above have already been initiated to create the necessary conditions to bridge the gaps listed in the barriers section in the PIF through a more coordinated and cost efficient approach between key institutions in the country. This work, led by CONABIO, will be pursued with the support of the project which will build upon the existing dynamic in place. For example work has already been initiated regarding the development of the black listing process. This will impact on the imports and restrictions related to exotic species. CONABIO and SEMARNAT initiated this process by organizing a 2 days expert workshop where all relevant institutions such as SENASICA and INAPESCA (SAGARPA), PROFEPA, SEMARNAT, CONAFOR, CONANP; IMTA, INE; etc. participated as well as experts from Universities and NGOs. During this initial phase, the institutions identified possible harmonized pre-screening methodologies and collected the available lists of exotic species established within the different institutions. While SEMARNAT, an “environmental actor”, will be the main regulator of this particular list, SENASICA and INAPESCA (SAGARPA), as well as PROFEPA and other regulatory departments of SEMARNAT are actively involved in the process of creating it, with the aim to produce harmonized regulations between the two key ministries and across the sectors they regulate. Once this process is over, the list will include the species already regulated by SAGARPA in order to avoid gaps and inconsistencies between the agricultural and environmental regulations. The black list approach will provide the GoM with clear rules regarding the species allowed or not into the country and</p>	
<p>19. Is the project consistent and properly</p>	<p>AWV 12/14/11 The project is adequately</p>		

<p>coordinated with other related initiatives in the country or in the region?</p>	<p>coordinated with other biodiversity-focused by IAS control and management efforts in Mexico, but a revised PIF needs to note how this project will be fully coordinated with other national level efforts on IAS control and management (e.g. important control, SAGARPA, etc.)</p>	<p>the individual request procedures for import permissions and resource consuming risk assessments will not be necessary anymore. According to their mandate and the legal status of the list, both Ministries will then be responsible to ensure its enforcement.</p> <p>Another example that could be mentioned relates to the collaboration initiated between CONABIO, SEMARNAT and SENASICA (SAGARPA) on the standardization of information with regards to pests and sanitary threats. All the three agencies are currently working on computerizing the information from the national reference centers. This will eventually evolve into a compatible database between both key ministries (SEMARNAT and SAGARPA) in order to share information and make it accessible to other relevant actors in the country. This effort is coordinated and funded by CONABIO and the agreement is that both ministries will continue to actively pursue their effort to develop a more coherent and harmonized approach to IAS management under the overall framework established by the National Strategy on Invasive Species (NSIS).</p> <p>CONABIO continuously works with the regulating sectoral agencies in developing Official Mexican Norms (such as the NOM 043 on weeds, Nom 013 on pests of Christmas trees, the use of exotics for commercial forestry plantations and reforestation or their use in the plant industry). CONABIO is also working closely together with SAGARPA at the regional level within the North American Plant Protection Organization (NAPPO) and the North American Invasive Species Network (NAISN). The first agency is responsible for the development of regional standards regarding invasive species (CONABIO is currently presiding the Invasive species panel in collaboration with SENASICA.) and the second is a consortium that aims to strengthen IAS capacities across North America, by building on existing capacities and by facilitating information exchange.</p> <p>All the above mentioned examples clearly demonstrate that control , prevention and management of invasive species are priorities that are fully recognized by the GoM as multisectoral and cross-cutting issue which require a multiagency response through an integrated and systematic approach involving both environmental stakeholders as well as actors representing productive sectors and phytosanitary authorities. The fact that environmental-focused agencies are so much implicated in the ongoing efforts and even have the mandate to lead the efforts of the GoM to harmonize intervention protocols and strategies shows the importance given at highest level to the necessity to find more efficient ways to control the impact of IAS not only in productive sectors but also in sensitive</p>	
<p>20. Is the project implementation/ execution arrangement adequate?</p>	<p>AWV 12/14/11 Yes, but further detail will be needed in the PIF and CEO endorsement on how the executing agency (CONABIO) will work with national level agencies to control import/introduction of IAS.</p>		
<p>30. Is PIF clearance/approval being recommended?</p>	<p>2. Linkages between the activities under this project and baseline national level activities to control the import and introduction of IAS need to be made. It is not clear how the incremental activities will join with the existing system to form a true national strategy on IAS, including all the entities involved.</p>		

		<p>ecosystems of the country.</p> <p>Having said this, the project proponents recognize that resolving years of fragmented interventions and institutional piecemeal approaches are complex issues to address and the ongoing efforts initiated by the GoM, such as those mentioned above, need to be pursued actively. The GEF investment will therefore come in at a perfect moment and build upon and complement baseline actions which include Government investments (see additional and new information below) through its national institutions related to inspection, quarantine and protocols for IAS control as well as specific action to control and eradicate populations of aggressive IAS in vulnerable ecosystem. Although the detail of how the GEF investment will be used will be further explained in more precise terms along with cost estimates during the project development (PPG phase) in accordance with guidance on the incremental reasoning for GEF project development, it is clear that the project will put a particular emphasis on identifying the most cost efficient ways to bridge the existing gaps in the current regulatory, institutional and policy frameworks at national level. At this stage of project development an estimate can be given for a key component of this baseline line which is Mexico's strong inspection system in the phytosanitary sector led by SENASICA at the main airports and ports of arrival to continental Mexico from other countries. This has an estimated annual recurrent costs of US\$ 300 million USD (This information has now been added in the PIF). As indicated in the PIF this baseline action is focused on those species that are of risk to agriculture and human health. Furthermore these do not include inspection of IAS pathways to Mexico's islands or internally between regions and vulnerable ecosystems. The result is a growing risk of IAS endangering biodiversity being introduced into the country and their spread within it particularly to its islands where ecosystems are especially vulnerable. The project will build on this type of baseline by developing risk assessments to identify priority IAS for prevention to avoid the threat of biological invasion and develop guides to ensure inspection for these species. It will also expand the existing baseline of protocols to ensure that early action can be taken in a coordinated manner between PROFEPA and SENASICA to contain any such species if they are introduced despite inspection systems and work actively with producer associations, PROFEPA, SEMARNAT and SENASICA, CONAPESCA and INAPESCA (SAGARPA) to strengthen biosecurity protocols and collaborate with the process to control imports, monitor production sites, and implement rapid response protocols.</p> <p>Furthermore under the alternative scenario the baseline regulatory framework will be expanded and know-how provided for improving</p>	
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		procedures that reduce the risk of introduction and spread in the practices of aquarium trade, aquaculture, wildlife and forest products sectors which are key pathways of introduction. Also it will expand baseline inspection putting in place improved and coordinated procedures at entry point to Mexico's islands and within the country to further strengthen prevention option.	
B. Financial Sustainability- Consolidated response for question 10 and 30			
10. Does the proposal clearly articulate how the capacities developed, if any, will contribute to the sustainability of project outcomes?	The PIF does not demonstrate how this effort will be made financially sustainable, both at the national and PA levels. It is not obvious that government budget allocations will increase, and greater specificity is needed in the PIF on what "fiscal and market-based instruments and incentives for IAS control" could be introduced through the project to ensure financial sustainability.	The current institutional context, 1 year before the elections, does not allow to conduct a detailed approximation of future budgets. However, the project proponent has good reasons to believe that current investments in IAS prevention control and management will be at least maintained to current level if not raised. As mentioned in the PIF, the environmental sector of the GoM is projected to continue to invest in IAS management mainly through key institutions such as CONANP, PROFEPA, INE, IMTA and CONABIO, with a combined projected level of investments over the next 4 years estimated in the range of 12,000,000 USD. In addition, to these solid investments, the GoM will continue to strengthen its expenditures to safeguard BD resources in PAs by investing in improving minimum standards of park management which in turn will have a positive effect in preventing and controlling IAS. It is estimated that CONANP will invest yearly 100,000,000 USD. CONAFOR has invested on average 850 000 USD per year since 2008 on prevention and control of exotic forest pests. This is likely to continue as well. On top of that CONAFOR is also investing yearly around 4,5 million USD to conduct a national forest inventory which is looking at forest health and status of degradation, as well as impact of invasive species among other. The yearly budget of SENASICA amounts to around 300 million USD which should be added to the funds channeled by SAGARPA to all the states in Mexico for biosecurity measures which amounted to 93 852 143 USD last year. As mentioned above, the GEF investment will therefore come in at a perfect moment and build upon and complement baseline actions which include Government investments through its national institutions related to inspection, quarantine and protocols for IAs control as well as specific action to control and eradicate populations of aggressive IAS in vulnerable ecosystems. On the issue of fiscal/market instrument and incentives, it is at PIF stage difficult for the project proponent to bring in detailed information as these are options that will be explored together with the relevant agencies during PPG phase. Also it will be necessary to evaluate, which mechanisms make sense and can be applied in the current legal and institutional framework. Such information does not exist yet. This too will be generated during	– Programmatic baseline section/paragraph 6 and 8
30. Is PIF clearance/approval being recommended?	Clearer description on how the project will be financially sustainable is needed. What is the likelihood of extra budgetary resources? What are the "fiscal and market-based instruments and incentives" that can be considered at the national and site-level.		

		<p>PPG phase and reported upon at CEO endorsement. Having said this, the project proponent could as an example mention some of the options that will be evaluated such as linking existing financial instruments (credits, insurances) for new enterprises such as aquaculture to obligatory capacity building on biosecurity issues. Certification schemes such as the one already in place for enterprises dealing with sustainable fishery systems of certain native species in Mexico could be another viable option for aquaculture of IAS.</p>	
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C. Cost Effectiveness

<p>7. Is the project aligned with the focal multifocal areas/LDCF/SCCF/NPIF results framework?</p>	<p>January 17, 2012 The PIF is well aligned with the BD Objective 2 in the focal area strategy with regard to the Implementation of Invasive Alien Species Management Frameworks" because the emphasis of the project is on strengthening prevention of the introduction of new IAS and managing or controlling IAS in a cost effective way. However, the control measures for IAS (mentioned in component 2) include the mention that IAS eradication will be funded on some islands but that great caution will be used in undertaking such activities. (A system will be developed to prioritize such eradications "where it is the only viable option and/or more cost effective than continued control and monitoring and where they</p>	<p>The islands of México are critical feeding, reproductive and resting sites for of a large number of bird populations. Marine birds are key species for island ecosystems due to their guano production. Most of these bird species are nesting exclusively on islands and are defenseless against predators. A total of 22 bird species that live in islands within the Mexican Territory have some kind of protection status by the IUCN. The targeted islands by the project are part of a large corridor, which connects North and South America; hence the protection of marine birds nesting in Mexican islands has a significant impact on regional and worldwide ecosystem conservation efforts.</p> <p>Eradication activities on islands are essential to attend IAS, that pose a threat to biodiversity in general and specifically on endemic ground nesting birds, small mammals, reptiles and amphibians. Their negative impacts include predation and habitat loss; and they have been implicated in the extinctions of at least 17 endemic mammals and birds, plus several local extinctions or extirpations of seabirds. In response to this problem, the Government of Mexico has made important progress regarding the national eradication of invasive species. Rodent eradications using advanced techniques are contributing in a major way to the restoration of seabird populations and habitats at an eco-regional scale, and to date have allowed the recovery of a variety of species, in particular two local subspecies of Leach's Storm-petrel (<i>Oceanodroma leucorhoa cheimomnestes</i> and <i>O. l. socorroensis</i>), Xantus's Murrelet (<i>Synthliboramphus hypoleucus</i>) and Cassin's Auklet (<i>Ptychoramphus aleuticus</i>). On isla Guadalupe Biosphere Reserve the Laysan Albatross (<i>Phoebastria immutabilis</i>) colony is the largest in the Eastern Pacific. These achievements demonstrate the importance of the national eradication programs which are still of high priority to the GoM . Eradication measures needs to continue to be applied in island ecosystems in parallel with ongoing efforts to improve control and prevention measures. The eradication measures in particular form an important part of the <i>National Strategy for the Conservation and</i></p>	
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	<p>provide the highest biodiversity return on investment." Such caution is appropriate because BD objective 2 does not mention eradication. The PIF needs to clarify the following for approval: which islands are likely candidates for eradication efforts, what the target species for eradication will be, (this is only clear currently for Guadalupe island), and an estimate of how much of the \$2.6 million in GEF resources, if any, will be used for the eradication activities.</p>	<p><i>sustainable development of the Mexican Island Territory</i>, which will soon be published. A small portion of the GEF funding sought will be used to improve local coordination efforts related to eradication processes , support direct eradication measures when necessary but especially targeting IAS threatening nesting birds and rare and globally valuable species. The funding will also support the development of a monitoring system of ongoing national eradication efforts which is needed in the country . Please note that the vast majority of the funding invested in eradication will continue to come from the GoM, and in other words be part of the cofinance of this project.</p> <p>Mexico’s islands are of great importance due to their high biodiversity and endemism, and restoration projects have already proven to be successful. In order to provide information for conservation practitioners, government agencies and donors to decide which islands need to be targeted in priority, and when/how to program national conservation efforts, a postgraduate thesis (Mariam Latofski – University of Applied Sciences Cologne, Germany and UASLP, Mexico) is currently being carried out to formally define priorities of conservation for Mexican islands, through the use of multi-criteria and spatial analysis methods. This work follows 3 steps:</p> <ul style="list-style-type: none"> - Characterization of the islands by their environmental, demographic and economic circumstances. - Analysis and prioritization of the islands according to environmental and economic attributes through spatial and multi-criteria tests. - Creation of a guide plan for future restoration programs in Mexican islands. <p>This work will serve as a guide so that future restoration and /or conservation projects are done where they are needed the most and in a cost efficient way. The research is underway and results will be available during the preparation phase of the project which will help the project proponent to make a final decision on the targeted islands. Having said this, the project proponent along with its national partners have already made an effort to outline a first priority list of potential islands to target within the project. The following islands in particular are considered for prevention, control, eradication, post eradication monitoring and restoration activities in coordination with cofinance partners. Whether additional islands (possibly Guadalupe and Alacranes) will be included into the program will be decided during the PPG phase.</p> <p>1. San Benito Oeste, prime seabird habitat (386 ha). 2 million birds</p>	
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		<p>of 12 species: eradication of invasive mouse (<i>Peromyscus eremicus cedrocensis</i>), and vegetation and ecological processes restoration. GEF resources: 140.000\$US</p> <ol style="list-style-type: none"> 2. San Benito Archipelago (554 ha): post-eradication (invasive mouse) monitoring. Mice absence, ecosystem recovery evaluation GEF resources: 75.000\$US 3. Banco Chinchorro Biosphere Reserve, prime migratory bird's habitat and native fauna (2 islands - 44 ha - Cayo Norte Mayor and CN Menor): eradication of the invasive rodent Black rat (<i>Rattus rattus</i>) on small tropical islands as well as vegetation restoration. GEF resources: 190.000\$US 4. Socorro (13,000 ha) Biosphere Reserve: completion of feral sheep (<i>Ovis aries</i>) eradication and feral cat (<i>Felis silvestris catus</i>) control. Endemic and native fauna, as well as vegetation restoration. Facilitation of the reintroduction of the endemic Socorro Dove (<i>Zenaida graysoni</i>). GEF resources: 75.000\$US And 2 year post-eradication monitoring. Absence confirmation. Flora and fauna recovery evaluation. GEF resources: 50.000\$US 5. Isla Espíritu Santo (8,300 ha): feral cat (<i>Felis silvestris catus</i>) eradication. Native and endemic fauna restoration. Endemic mammals. 2 year post-eradication monitoring. Absence confirmation. GEF resources: 50.000\$US Native and endemic fauna recovery evaluation. GEF resources: 40.000\$US <p>The estimated total GEF resources invested to support eradication measures is only about 360.000\$US. This estimate will be defined more precisely during the PPG phase. As mentioned earlier a very significant part of the current and direct eradication costs will be covered by matching funds from other sources.</p> <p>Regarding the eradication methodology the most advanced techniques are currently being used, and constantly updated, in collaboration with leading experts leading in this field from New Zealand. For feral sheep, techniques such as aerial hunting from helicopters, Global Positioning System (GPS) technology, telemetry and “judas” animals are used. For rodent eradications, the latest techniques on aerial broadcast methods of special baits are used, supported by Navy boats with helicopter platforms, designed helicopter buckets, on-board differential GPS, satellite imagery and telemetry.</p> <p>For references regarding eradication costs see below:</p>	
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<p>30. Is PIF clearance/approval being recommended?</p>	<p>January 17, 2012</p> <p>We are pleased that UNDP has responded adequately to comments 1, 2, and 3 that were submitted in mid-December. But we have two final concerns.</p> <p>1. As noted in #7 above, we have a concern linked to issue 4 below related to the eradication of invasive alien species on some islands. Such eradication is not covered under BD objective 2. In order to move this PIF forward to Council consideration, we request that a revised PIF clarify which islands are likely candidates for eradication efforts, what the target species for eradication will be, (this is only clear currently for Guadalupe island), and an estimate of how much of the \$2.6 million in GEF resources, if</p>	<p>See above.</p>	

	<p>any, will be used for the eradication effort on these islands. Please include this information, as appropriate, in the narrative, and in the tables.</p> <p>2. In the table "Project Field Sites - Islands" on page 11, please eliminate rows 3 and 4 as they are duplicates of rows 1 and 2</p> <p>December 14, 2011</p> <p>4. The statement that the average cost of removing IAS on Mexican islands of US\$90/ha is "a return on investment for BD conservation that is one of the highest in the world" needs more comparative data to substantiate it. While for some islands (Macquarie Is., Australia), the per-hectare cost was as high as \$1,900/ha, for the UNDP Galapagos project, the eradication of goats on Isabela Island appears to have cost as little as \$21/ha.</p>	<p>Rows 3 and 4 have been eliminated from the "Project Field Sites – Islands" table. Thanks for the observation.</p> <p>According to information from a recent estimate (Carrion et al. 2011), the cost of removing goats from the Galapagos Islands was, on average, 26.83 ± 37.86 US dollars per hectare ($\\$ \text{ha}^{-1}$). However, eradication campaigns costs ranged from $\\$2.86 \text{ ha}^{-1}$ to $\\$108.60 \text{ ha}^{-1}$. Over the years, goat removal on this archipelago became more cost-effective because of aerial hunting techniques —compared to ground-based hunting— and the existence of local capacity, built from earlier campaigns. Furthermore, infrastructure already existed, the efficiency of techniques had been tested, and the institutional bureaucracy had been navigated, which resulted in cost savings (Carrion et al. 2011).</p> <p>Regarding invasive rodent eradications, the cost varied from $\\$3 \text{ ha}^{-1}$ to $\\$20,000 \text{ ha}^{-1}$ on 47 eradication campaigns worldwide (Howald et al. 2007). The removal of three invasive mammals (i.e. rabbits, rats and mice) from Macquarie Island, Australia (12,780 ha) is budgeted at \$AUS 24.7 million (Springer 2011). That is, an estimated cost of $\\$US 1,960 \text{ ha}^{-1}$. This is one order of magnitude more expensive than the eradication of cats on the same island, which had a cost of $\\$184.38 \text{ ha}^{-1}$ (Martins et al. 2006). From the above it can be understood that the cost per hectare will vary depending on island size, the distance to mainland, and the species to eradicate.</p> <p>In the particular case of IAS eradication on Mexican islands, the average cost is $\\$90 \text{ ha}^{-1}$, involving the removal of rodents, goats, sheep and cats, among other IAS. This also comprises state-of-the-art techniques such as aerial hunting and aerial baiting. Therefore, the overall return on investment for conserving biodiversity is among the highest in the world. However, The project proponent agrees that the initial text could be confusing or misinterpreted. The text in the PIF has therefore been</p>	<p>– Project Field Sites – Islands table, page 11</p> <p>– Paragraph 12</p>
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		modified in order to read in a more balanced way: <i>“the average cost of removing IAS on Mexican islands of USD 90 /ha is considered a good return on investment for BD conservation compared to other experiences conducted elsewhere in the world”</i> .	
D. Baseline & Co-Financing- Consolidated response for questions 11; 24;25;30			
11. Is (are) the baseline project(s), including problem (s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions?	AWV 12/14/12 Yes, the PIF adequately describes the baseline activities on IAS being conducted (at national and local levels), including those undertaken by entities like SAGARPA and CONAFOR aimed at by IAS in economically important sectors. These baseline activities are not included in the co-financing totals and we encourage that they be listed. (see #25 below for further comment.)	The description in the PIF of national baseline investments has been adjusted to include additional numbers related to SAGARPAs activities in the field of biosecurity and CONAFOR’s activities related to the National Forest Inventory as already described in more details in section B of the response matrix . For more details please refer this section above Cofinance taking into account these activities better, have now been added to the cofinance table and amount to 9 million USD. This funding comes essentially from baseline activities and investement done by the GoM in the field of Biosecurity/phytosanitary work. It also includes relevant investments in the field of forestry. However the project proponent would like to request for the possibility to further work out the financial details with all the relevant insititutions during the PPG phase and report back on the detailed breakdown of funding per agency at CEO endorsement.	<ul style="list-style-type: none"> – Project framework – Table C – Footnote on page 3
24. Is the funding and co-financing per objective appropriate and adequate to achieve the expected outcomes and outputs?	AWV 12/14/11 Co-financing for the national IAS management framework does not seem to be adequate because it does not include the financing that will be necessary for national level agencies engaged in inspections, import control, and phytosanitary and zoosanitary measures.		
25. At PIF: comment on the indicated cofinancing;	AWV 12/14/11 This project proposes to deliver \$15.2 million and co-financing for	The description in the PIF of national baseline investments has been adjusted to include additional numbers related to SAGARPAs activities in the field of biosecurity and CONAFOR’s activities related to the National Forest Inventory as already described in more details in section B of the	

<p>At CEO endorsement: indicate if confirmed co-financing is provided.</p>	<p>a co-financing ratio of 1:2.84. This seems rather low. In line with the "Guidelines for Project Financing" (GEF/C.41.Inf.04), paragraph 9, the co-financing for this project should include non-GEF "financing is associated with the baseline project and any non-GEF financing associated with the incremental project." This project does not include any financing, baseline or incremental from the private sector, communities, or Mexican authorities concerned with the introduction/import of IAS to the country or sectors, including customs authorities, SAGARPA, and CONAFOR).</p>	<p>response matrix . For more details please refer this section above</p> <p>Co-financing of the private sector and /or local actors cannot be determined at this point, as the key stakeholders of the private sector especially at local level will be identified during the preparation phase and also once the decision will be made on the final list of site selected. At national level the contact with the relevant associations representing for example the interests of the aquaculture sector will be established during the PPG phase.</p>	
<p>30. Is PIF clearance/approval being recommended?</p>	<p>1. The level of co-financing should be increased, particularly for the national level component.</p>		
E. Risks			
<p>18. Does the project take into account potential major risks, including the consequences of climate change and provides sufficient risk mitigation measures? (i.e., climate resilience)</p>	<p>AWV 12/14/11 The project focuses on the risk of climate change as a causal factor for the future dispersion of IAS. The project will model IAS dispersion under different CC scenarios and uses information for IAS management. As mentioned above, however, we do not believe the project adequately addresses the risk of</p>	<p>The PIF specifically mentions the CC threat as this is identified as one of the key causal effect to take into consideration by the NSIS which requires that all relevant authorities in the field of IAS increase their internal capacities to address new climate induced threat factors. The need to better address introduction of IAS, pests , diseases etc.. in scenarios of CC is also mentioned in the different key governmental policy documents related to adaptation to CC and national vulnerability reduction. In that sense the activities proposed in the PIF respond fully to established national priorities.</p> <p>On the issue raised by the reviewer related to the risk of introduction of new IAS, the project proponent would like to refer to the response under question 10, as well as to the PIF which identifies the need to address risk of new introduction of IAS already at outcome level (see outcome 2 under</p>	<p>–</p>

	<p>introduction of new IAS at the national level.</p>	<p>component 1). In general, the added value of the project will be that a more integrated and coordinated framework of intervention will be put thanks to the catalyzing effect of the GEF investment and in that sense almost all the outputs identified in the two components have been thought out keeping in mind the risk of introduction of new IAS under current climate conditions. Also addressing the risk of introduction of new IAs at national level is also a key priority of the NSIS that this project will have to align with.</p> <p>The project alternatives described in the PIF including for example the black lists to control import of IAS ; the outreach efforts among importers, producers and traders regarding IAS; the improved information systems / tracking of exotic species; the application of biosecurity measures, capacity building of personnel, and participation in certification systems; the improved inspection procedures based on the official black list and other screening mechanisms (norms), which build on standardized pre-screening and risk analysis schemes for all taxonomic groups; the use of new harmonized technical information sheets on IAS related to wildlife and forestry products during inspections and taxonomic identification of IAS at entry points by inspectors of SENASICA and PROFEPA; the monitoring system to track movements of high risk IAS inside the country ; The outreach efforts to local inhabitants and prevention / removal of illegal settlements to reduce the introduction and spread of IAS in PAs and islands; the improved grazing and forest management systems to reduce ecosystem degradation and vulnerability to IAS; the increased use of native species, and education and control measures on fire practices to reduce the spread of exotic grasses and impacts of fires in PAs; the restrictions on IAS introductions for hunting (blacklist of high impact IAS) and biosecurity measures at breeding facilities in surrounding landscape, to reduce IAS impacts in PAs etc.. should all contribute to reducing the risk of introduction of new IAS at national level.</p> <p>The project proponent believes that the systemic work aiming at improving the decision making tools at national level as well as the sectorial guidance and regulations to strengthen the control of main pathways of IAS to vulnerable areas and the budgetary coordination among key actors involved in IAS management combined with the field work that will generate experiences to enhance IAS surveillance and control strategies in key vulnerable ecosystems (thus providing central authorities with very much needed field experiences) will together contribute to strengthen the GoM's abilities to better control existing pathways and reduce the risk of introduction of new IAS in the country.</p>	
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