



United Nations Environmental Programme (UNEP)

Terminal Evaluation

Development of Mechanisms to Strengthen the Implementation of the Cartagena Protocol in Guatemala

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ABBREVIATIONS AND ACRONYMS

BS	Biosafety
CONACYT	National Council for Science & Technology
CONAP	National Council of Protected Areas
CPB	Cartagena Protocol for Biosafety
FMO	Fund Manager officer
GEF	Global Environment Facility
GMO	Genetically Modified Organism
ICGB	International Center for Genetic Biotechnology
ICTA	Institute for Agricultural Science & Technology
LMO	Living Modified Organism
M&E	Monitoring and Evaluation
MAGA	Ministry of Agriculture & Livestock
MARN	Ministry of Environment & Natural Resources
MINECO	Ministry of Economy
MSPAS	Ministry of Public Health & Social Assistance
NBF	National Biosafety Framework
NCA	National Competent Authority
NEA	National Executing Agency
NPC	National Project Coordinator
OTECBIO	Technical Office for Biodiversity
SC	Steering Committee
SENACYT	National Secretariat for Science & Technology
ToC	Theory of Change
TM	Task Manager
UNEP	United Nations Environmental Programme
UNOPS	United Nations Office for Project Services
USC	San Carlos University
UVG	Valle University of Guatemala

This report presents the findings of the evaluators and does not necessarily reflect the views or policies of the Government of Guatemala, UNEP or GEF. The evaluators would like to express their appreciation to Dr. Cesar Azurdia, National Project Coordinator, Vivian Gonzáles, Project Assistant and the various participants who generously contributed their time and ideas. Thank you.

EXECUTIVE SUMMARY

1. “Development of mechanisms to strengthen the implementation of the Cartagena Protocol in Guatemala” was implemented over a 56 month-period between August 2010 and April 2015. The project was executed by the Government of Guatemala through the National Council of Protected Areas (CONAP) with participation of government National Competent Authorities (NCAs) with designated biosafety responsibilities. UNEP provided technical guidance in its capacity as designated UN implementing agency. The aggregate US\$ 1,325,533.25 budget was funded by the Global Environment Facility (GEF), which allocated a US\$ 616,364 grant for the project’s implementation and US\$ 16,950 for its design; and by the national executing agency and participating government institutions and universities, with US\$ 692,219.25 in co-financing (cash and in-kind).

2. The project objective was to help to put in place “...an articulated, effective and transparent national biosafety system with policies, regulatory and technical instruments, and local capabilities” in order to comply with and implement the Cartagena Protocol for Biosafety (CPB). There were four technical components: (1) Strengthening the legal, regulatory and policy framework on biosafety; (2) implementing a functional national biosafety risk assessment and risk management system; (3) creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety; and (4) gaining experience in generating and managing biosafety information and public sensitization strategies.

3. The evaluation findings indicate that the project was successful in delivering most planned outputs despite a delayed start-up and national elections that were followed by a change of government, and subsequently a six-month interruption of disbursements. The process of developing a functional national biosafety system has reached a new threshold with the approval of enabling policies and improvements in institutional preparedness, although further training is required and “hands on” experience is very much lacking.

4. The project generated several outputs of recognized technical quality that have a high impact potential: Guatemala’s first national biosafety policy was approved by the President as a government agreement (*Acuerdo Gubernativo*). Several outputs are of recognized technical quality and have high impact potential. NCA awareness and capacities for LMO risk management were strengthened through in-country training workshops given by international experts, and visits to biosafety institutions in selected countries for direct exposure. The training support was very much appreciated and considered to be of high quality by all interviewed participants. A post-graduate diploma course on biosafety is presently offered online at the BCH, creating opportunities for sustained capacity building. There is also a school text for sixth-grade level that will be tested on a pilot basis by the Ministry of Education. More biosafety materials are available for educational and public awareness purposes as well. A regulatory framework was designed and submitted for government approval, but remains on hold and may need further discussion with the private sector to reach agreement on pending aspects.

5. Despite the advances that were achieved, the project objective was not fully met. This was influenced by factors outside the project’s direct influence. A number of important outputs and outcomes were only partially reached because they required political decisions or

other external actions outside the project's influence. The government approval of proposed regulations and administrative procedures remains pending and is needed to enable formal adoption and implementation of the national biosafety system. This *impasse* has prevented the project from reaching some of the higher order outputs and outcomes that were implementation-driven and therefore strategic for achieving the project objective and generating impacts on the scale envisioned.

6. The project experience provides an interesting case study on how good performance can fall short of achieving the project objective when the intermediate states linking outputs to outcomes and impact are not reached. Substantive outputs were designed and are in place, yet are not being applied. As a result, impacts have not been realized on the scale envisioned in the project document, although this could change if the regulatory framework is approved by government in the coming months.

7. The sustainability of results will largely depend on government approval of biosafety regulations and an executive decision to proceed with the system's implementation. The likelihood that this will occur during an election year is uncertain. Advances in institutional capacities and articulation are likely to decline over time if they aren't applied. The approval of the 2013-2023 biosafety policy document is a landmark achievement that enhances conditions for sustainability. However, its legal status as *Acuerdo Gubernativo* does not carry the weight of approved legislation and could be rescinded by a subsequent government administration.

8. In addition to these uncertainties, there are also favorable conditions for sustainability: CONAP is committed to following-up on project initiatives and the approval of biosafety regulations in particular; it will retain the NPC for the remainder of the year and plans to create a Biosafety Unit. There is also a project proposal for further UNEP-GEF support that was recently endorsed by the government and is considerably larger in scale and budget. The approval and imminent activation of a Free Trade Agreement with Honduras (that includes integration of customs procedures) is another incentive as this country already has a functioning biosafety system that regulates the production of transgenic corn and other crops for commercial purposes.

9. The project was efficiently managed. Outputs were reached within approved budget parameters, and there were examples of adaptive management that saved time and money. Annual budget revisions helped to re-program unspent funds and make transfers between budget lines. Delivery has been satisfactory both in program and financial terms. There were problems resulting from the incompatibility of financial management and reporting systems used by UNEP and UNOPS (contracted to manage in-country disbursements). The different formats, budget lines and reporting criteria required periodic reconciliations of expenditure that were time consuming and led to the suspension of project disbursements for a six-month period. These problems were aggravated by the project team's unfamiliarity with Anubis guidelines, and the absence of a UNEP Task Manager for much of the first year.

10. A series of contributing factors have influenced project performance and the level of achievement. These include (i) over-ambitious project design in relation to the allocated time and funding; (ii) uneven NCA preparedness and commitment; (iii) the commendable performance of the NPC (a recognized authority with extensive experience) and project team,

who drove the implementation process and were decisive in the project's achievements; (iv) the channels for stakeholder participation and national ownership offered by the Steering Committee and Policy Task Force; and (v) the recognized guidance and support of the UNEP Task Manager. In-country financial management was contracted to UNOPS to avoid slow government processes, however there were recurrent expenditure reporting and reconciliation problems caused by the use of different financial reporting systems.

11. The recommendations that emerge from the Terminal Evaluation emphasize the importance of continuing to work in support of the approval of biosafety regulations, which is necessary to consolidate the enabling policy framework and improve the likelihood of implementing the system. There are external incentives – an upcoming Free Trade Agreement approved with Honduras, the proposed follow-up UNEP-GEF project - that may help to leverage a government response in the coming months.

12. Continued technical support and funding is needed to consolidate institutional capacities for assuming biosafety functions, and provide guidance and backstopping for the eventual implementation of a national biosafety system. The new proposal - “Strengthening and expansion of capacities in biosafety that lead to a full implementation of the Cartagena Protocol on Biosafety in Guatemala” - is considerably larger in scale and budget than the present project, and focuses support on further NCA capacity building and articulation (with emphasis on LMO detection and risk analysis), education and public awareness, information management, and backstopping support for implementing the biosafety system. All of these aspects are priorities that build on the achievements of this project, and require further support to consolidate results and have impact. However, further UNEP-GEF support should be contingent on the approval of biosafety regulations and a clear signal from the next government that it intends to implement a national biosafety system.

13. Public awareness and information management need to be approached as overarching aspects of the biosafety framework that require longer-term attention, given the highly polarized views on LMOs and transgenics, Guatemala's cultural and linguistic diversity, and the need to reach various target groups in order to have measurable effect on public opinion. If approved, the next project should also incorporate political lobbying expertise to its awareness-raising initiatives, to have greater incidence at senior government and legislative decision-making levels. The national universities have a pivotal role to play as forums for the dissemination of biosafety information and research for public sensitization and discussion, on neutral grounds that are accessible to the different sides of the debate. On an administrative level, Anubis training for project staff should be adopted as standard practice for all UNEP projects that use the system, before or at the start of project activities. Finally, external entities that are contracted to manage GEF funds should either be required to use the Anubis system, or translate expenditures data to this system when preparing financial reports. The table below presents the summary of the project ratings. More details can be found in section IV.

CRITERION	RATING
A. Strategic Relevance	HS
B. Achievement of Outputs	S
C. Effectiveness: Achievement of Project Objectives and Results	MS
1. Achievement of Direct Outcomes	MS

2. Likelihood of Impact	MS
3. Achievement of Project Goal & Planned Objectives.	MS
D. Sustainability & Replication	MS
1. Financial	MU
2. Socio-Political	MS
3. Institutional Framework	ML
4. Environmental	MU
5. Catalytic Role & Replication	MU
E. Efficiency	HS
F. Factors Affecting Project Performance	
1. Preparation & Readiness	MS
2. Project Implementation & Management	HS
3. Stakeholder Participation & Public Awareness	S
4. Country Ownership & Driven-ness	HS
5. Financial Planning & Management	MS/MU
6. UNEP Supervision & Backstopping	S
7. Monitoring & Evaluation	S
Overall Project Rating	S

1. INTRODUCTION

14. The UNEP-GEF project “Development of mechanisms to strengthen the implementation of the Cartagena Protocol in Guatemala” was executed by the National Council for Protected Areas (CONAP), with funding from the Global Environment Facility and technical guidance from UNEP as the designated UN implementing agency. The project’s stated goal was to facilitate implementation of the Cartagena Protocol by establishing a national biosafety system. It aimed to put in place a well-articulated, effective and transparent national biosafety system through the development of policies, regulatory and technical instruments, and local capabilities to meet national needs.

15. The project consisted of four technical components:

- Strengthening the legal, regulatory and policy framework on biosafety;
- Implementing a functional national biosafety risk assessment and risk management system;
- Creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety; and
- Gaining experience in generating and managing biosafety information and public sensitization strategies.

16. Approved as a four-year initiative, this medium size project was implemented over a 57-month period (August 2010 to April 2015) with a US\$ 1,325,533.25 budget that included a GEF allocation of US\$ 616,364 and project preparation grant of US\$ 16,950; the remainder was co-financed with cash and in-kind contributions from CONAP and national partners.

17. This report presents the findings of the project Terminal Evaluation (TE), which assesses performance and impact according to the evaluation criteria of relevance, effectiveness, efficiency, sustainability, national prepared The main project objective was to help to put in place an articulated, effective and transparent national biosafety system with

policies, regulatory and technical instruments, and local capabilities. ness and ownership, and stakeholder participation among others that are listed in the table of contents.

II. THE EVALUATION

18. In line with UNEP evaluation policy and GEF guidelines for implementing agencies, the project is scheduled to undergo a Terminal Evaluation (TE) on the completion of activities. The first step of the TE process was a desk review of project documentation and the preparation of an Inception Report in March, followed by the country visit, interviews and drafting of the main evaluation report. This deliverable analyzes project performance and impact according to evaluation criteria of relevance, effectiveness, efficiency, sustainability and stakeholder participation among others. The qualitative analysis is complemented by quantitative ratings for the various performance criteria. Through this assessment, the evaluation seeks evidence of results to meet UNEP-GEF accountability requirements and support knowledge sharing between UNEP, GEF and national partners. The evaluation includes a forward-looking perspective that focuses on a follow-up project proposal that was recently formulated by CONAP for presentation to GEF.

19. The evaluation approach combined the desk review of project documentation (the approved project document, PIR reports, minutes of the Steering Committee meetings and the Mid-Term Evaluation report, among other documents); with a one-week country visit to Guatemala (April 16-20) to interview the project team based at CONAP, and representatives of the Technical Biodiversity Office (OTECBIO), the ministries of Agriculture & Livestock (MAGA), Environment & Natural Resources (MARN), Economy (MINECO) and Public Health & Social Assistance (MSPAS) in their capacities as National Competent Authorities (NCAs). There were also visits to the public San Carlos University and private Universidad Valle de Guatemala, the Institute for Agricultural Technologies and Training (ICTA) and the National Council for Science & Technology (CONCYT), and private sector representatives who participated in the project. The evaluator also held skype interviews with the UNEP Task Manager (based at UNEP's regional office in Panama), UNEP Finance Manager (at Nairobi) and the Guatemala-based Office for Project Services (UNOPS) official who provided services of in-country funds disbursement and reporting. The list of interviewed persons is annexed to this report.

20. The evaluation was guided by questions that were adjusted by the evaluator needed. They were drawn from the Terms of Reference and are listed in Annex 2 "Evaluation Matrix" with identification of respondents, indicators and data sources.

21. With a large number of questions and short visit (5 working days) the evaluator was unable to ask all questions to the targeted respondents, and had to streamline interviews by stringing questions in a way that covered the fundamental issues. The evaluation visit was held a month and a half before the project's termination (and the project team is going to be retained by CONAP for several months afterwards), it was premature to assess the final status of some outcomes that could develop in coming months. Several outputs and outcomes are still in process of consolidation or may require a gestational period before there are noticeable effects (i.e. new policies and regulations, institutional capacity improvements, changes in public attitude). The lack of an *ex-post* perspective makes it difficult to assess post-project sustainability, catalytic effects or replications of best practice.

22. The findings from interviews with the project team and national participants were triangulated with the desk review and skype interviews with UNEP managers. This approach was used to identify perception trends that influenced (and were shaped by) project implementation. This has helped to systematize perceptions at different levels, documenting “on the ground” effects and contributing factors that have influenced performance and achievement levels.

III. THE PROJECT

A. Context

23. Guatemala set the bases for its biosafety framework through the GEF funded and UNEP executed “Development of a draft National Biosafety Framework (NBF)” project in 2002, and continued by the UNEP-GEF Biosafety Clearing House (BCH) project in 2007. One of the major outcomes of the Guatemala NBF project was the preparation of a proposal for a national biosafety law, which was submitted and presented to the Guatemalan Congress, and the subsequent ratification of the Cartagena Protocol on Biosafety (CPB) in 2004.

24. Since the CPB’s ratification, the country developed some tools and adopted strategies to implement the Protocol. The import of LMOs for food is not regulated and is assumed to occur on a regular basis. There is also the unregulated entry of corn and seed from Mexico and Honduras that are likely to often include LMO; there are porous borders and the both countries regulate the cultivation of transgenic crops.

25. Biotechnology applied to food, agriculture and health is widely adopted. Biotechnology applied to the environment is a budding area, focusing on non-LMO bacterial remediation and various enzymatic processes. Transgenic bacterial strains are produced on a regular basis for confined laboratory use, as is common in academia worldwide. Only one academic institution has the capability and has experimented with the generation of plant and animal LMOs for the improvement of agriculture and public health, respectively, but this research has been confined to the laboratory and greenhouse. At least two private institutions have expressed interest in the import and/or generation of agricultural LMOs for commercial use, but have been unable to do so due to incomplete regulation on the matter.

26. At the time of the project’s design, full compliance with the country’s obligations as a Party to the CPB had yet to be attained. In this context, the project aimed to raise Guatemala’s compliance levels by addressing the following threats and barriers:

- A weak capacity and technical knowledge for assessing the risks and benefits associated with biotechnology products, making management decisions and enforcing them.
- Partial understanding of the tasks and responsibilities of full application of the CPB by the NCAs; poor technological infrastructure for ensuring compliance, especially in trans boundary movements and monitoring;
- Lack of effective means for strengthening public awareness on the safe use of LMOs; difficulties in achieving a balanced representation and participation of the different

sectors of society in instances dealing with LMOs, and a poor science-base for decision making.

- High levels of public misinformation on - and organized opposition to – LMOs and transgenic crops in particular.

27. Awareness of LMO technology and biotechnology in general is not uniform among the population and opinions regarding LMOs are varied and polarized. Most universities, public and private scientific research institutions, including the governmental advisory Biotechnology Commission, favor LMO technology and consider its responsible application safe and beneficial to the population and the environment. In contrast, several, but not all, environmental organizations oppose the introduction of LMOs and consider it a threat to the country's biodiversity. Among the general population, understanding of biotechnology was considered scant at the time of project design. Media coverage is somewhat regular yet tends to be inaccurate.

28. The project document highlighted the lack of clarity of institutional responsibilities for biosafety management as the fundamental systemic threat. This was reinforced by an ambiguous and incomplete regulatory framework, and the absence of a clear policy mandate. Additional threats included: unclear processes and routes for potential approvals of LMOs; (iii) lack of trained human resources, (iv) insufficient scientific infrastructure for adequate risk management; and (v) incomplete scientific information on local environmental conditions to adequately inform decisions.

29. This project had a high level of global significance given Guatemala's biodiversity, which is rich both in wild and cultivated species. Guatemala possesses seven biomes, one of which is unique to the country. Additionally, it houses fourteen different life zones, one of the highest levels in Central America. It ranks third on a list of thirty mega diverse countries worldwide. With regard to flora, it currently occupies third place for abundance of flora by unit area, which includes 7,754 species of reported plants, with 40% of these endemic to Mesoamerica. With respect to fauna, 62 species are endemic, with 2,027 registries of invertebrate's species found in Guatemala. This is matched by diversity in cultivated species: Aside from being a genetic center of origin, it is also a center of domestication of several species that feed populations worldwide, such as maize, beans, squash and cassava. 24% of all bean species, 43% of pumpkin species and 52% of all maize races known in Mesoamerica are found in Guatemala, while certain cassava varieties are unique worldwide.

30. This biodiversity was already considered threatened by invasive exotic species and human intervention, justifying the need for protection and conservation mechanisms, including those preventing potential genetic erosion or natural habitat predation due to the adoption of improved varieties, including LMOs. A sound biosafety framework that protects the environment against the introduction of invasive, exotic or potentially harmful species was therefore considered necessary for ensuring conservation.

31. During its implementation, the project context was influenced by the following:

- *The presidential approval of a comprehensive national biosafety policy (Acuerdo Gubernativo 207/2014), which significantly improves the enabling conditions for adopting and implementing a national biosafety framework.*

- *Upcoming national elections are scheduled this year.* Elections add urgency to the approval of draft regulations that were submitted to the NCA ministers. The intensification of political campaigns and change of national authorities could slow down or impede the approval of regulations needed to operate the system.¹ As a legal mechanism, the *Acuerdo Gubernativo* that approves the biosafety policy is not as strong as a constitutional law approved by Congress, and could be revoked by the next President.
- *The approval of a free trade agreement with Honduras that integrates customs and enters into effect next December.* This adds further urgency to approving the regulatory framework and advance with the implementation of biosafety practices. The bilateral agreement will require the aligning of customs regulations for both countries. Honduras already has an operating biosafety framework that authorizes the release of LMOs and the cultivation of transgenic crops for export. For this reason it is important that Guatemala (MAGA especially) activate the biosafety system to have a level of preparedness and positioning, and to protect the wild relative maize varieties for which Guatemala is a center of origin.

B. Objectives and Components²

32. The main project *objective* was to help to put in place an articulated, effective and transparent national biosafety system with policies, regulatory and technical instruments, and local capabilities. The project's *goal* was to facilitate compliance with and implementation of the Cartagena Protocol through a National Biosafety System. The stated project *purpose* was to contribute to the conservation and sustainable use of biodiversity, and reduce potential risks to wild relatives and agro-biodiversity in Guatemala in line with the global goals of the CPB and CBD.

33. The project was composed of four technical components: (1) Strengthening the legal, regulatory and policy framework on biosafety; (2) implementing a functional national biosafety risk assessment and risk management system; (3) creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety; and (4) gaining experience in generating and managing biosafety information and public sensitization strategies. They are described below:

34. **Component 1:** The first component - strengthening the legal, regulatory and policy framework on biosafety – supported the drafting of a national biosafety policy and regulations to guide the design of the system and specify the legal instruments needed to make it operational.

35. **Component 2:** The second component - implementing a functional national biosafety risk assessment and risk management system - aimed to establish a functional and efficient

¹ As happened in the case of Costa Rica, where proposed biosafety policies, regulations and other project deliverables had not been validated by the new government and were “on hold” at the time of the Terminal Evaluation.

² This section is based on the associated text contained in the Terms of Reference (pp. 2-4)

system with technical guidelines, coordination mechanisms, tools, scientific criteria and protocols for risk assessment and management.

36. **Component 3:** The third component was creating institutional capacities and human resources for effective BS decision-making and regulatory compliance. This was critical to operating and sustaining the biosafety system. The component supported capacity building through three strategies: (i) defining research priorities that would generate locally important scientific information necessary to inform biosafety decisions and to identify funding mechanisms for them; (ii) training personnel in stakeholder institutions on biosafety, risk assessment, risk analysis and risk communication, as well as the design and use of technical documents for this purpose; and (iii) providing the necessary laboratory infrastructure and scientific training to meet the technical and scientific requirements of a National Biosafety System.

37. **Component 4:** The fourth and last component, gaining experience in generating and managing biosafety information and public sensitization strategies, was critical for promoting public confidence in a national biosafety system. This component a national sensitization, communication and information strategy for biotechnology and biosafety; the revision of biosafety information to be communicated, adapted to different levels and local languages; efforts to assure the participation of NCAs in the biosafety Clearing House, and the promotion of the main BCH and Guatemalan websites as a useful tool and information source for risk assessment and management.

Figure 1

Project Components, Objectives and Outputs

<i>Component</i>	<i>Component objectives</i>	<i>Outputs</i>
(1) Strengthening the legal, regulatory and policy framework on biosafety	1.1 A comprehensive, coordinated, and inter institutional policy framework for biosafety is approved and adopted. 1.2 The trans boundary movement, transit, handling and use of Living Modified Organisms (LMOs) are regulated, consistent with the CPB. 1.3 A National Biosafety System is proposed and adopted, along with a coordination, continuity and sustainability strategy 1.4 Biosafety policies are integrated into national programs, plans and strategies for sustainable development	1.1.1 National policy on biosafety and biotechnology, in line with sectoral policies, national regulations, and National Competent Authorities (NCA) roles defined by the CPB. 1.1.2 Implementation plan 1.2.1 Biosafety regulations for: risk assessment and management, environmental release, illicit and unintentional trans boundary movements of LMOs, transit, penalties, research, contained use, food safety and environmental safety, and others. 1.3.1 An administrative system with clear procedures for handling requests and clearly defined mandates, responsibilities and communication channels for different NCAs 1.3.2 Permanent and Ad Hoc scientific advisory biosafety structures 1.3.3 A continuity and sustainability strategy for the system - 1.4.1 Official adoption and implementation of Biosafety policies in different NCAs

(2) Implementing a functional national biosafety risk assessment and risk management system	<p>2.1 The institutional and administrative framework is reinforced and articulated to allow for effective handling of requests and coordinated decisions</p> <p>2.2 The science base for the evaluation of potential risks and benefits of LMO use in Guatemala is strengthened for use in biosafety risk assessment and management</p> <p>2.3 Biosafety measures are applied in accordance with international guidance, national criteria and to the extent necessary and feasible to prevent possible adverse effects of LMOs.</p>	<p>2.1.1 Inter-institutional coordinated and harmonized technical documents, guides, criteria and administrative formats for LMO applications</p> <p>2.1.2 Filing system created to handle mock request documentation.</p> <p>2.1.3 Validated risk assessment and evaluation methodologies.</p> <p>2.1.4 Institutional agreements and coordination mechanisms for decision-making on internal use of LMOs and cross-sectoral collaboration</p> <p>2.2.1 Science based guidelines, scientific protocols, and data collection plans to inform biosafety risk assessment and management decisions</p> <p>2.3.1 Guidelines and plans for effective and science based national biosafety measures</p>
(3) Creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety	<p>3.1 Institutions are more proficient in risk /benefit analysis, and more knowledgeable of monitoring and enforcement requirements.</p> <p>3.2 Technological capacity is sufficient for in-house analysis of LMOs.</p> <p>3.3 Capacity for the safe development and use of modern biotechnology is strengthened in Guatemala</p>	<p>3.1.1 Training Program for the use, management and regulation of biotechnology.</p> <p>3.1.2 Decision-makers introduced to biosafety risk assessment principles</p> <p>3.1.3 Technical staff trained in carrying out risk assessments and defining risk management measures</p> <p>3.2.1 State-of-the-art technology, training and laboratory equipment for LMO testing</p> <p>3.3.1 Relevant scientific research and information to inform biosafety decisions regarding the local biodiversity, environment and human health</p>
(4) Gaining experience in generating and managing biosafety information and public sensitization strategies	<p>4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes</p> <p>4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.</p>	<p>4.1. Information availability in biosafety is increased and contributes to public sensitization and participation processes</p> <p>4.2.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.</p>

C. Target Areas and Groups

38. Biosafety systems are by definition inter-institutional, multi-sectorial and interdisciplinary. They require involvement of public and private parties that range from line ministries, universities and research institutions to agro-enterprises, small-scale farmers and ultimately, the consumers.

39. The main target group consisted of the designated National Competent Authorities (NCAs) that will have risk management responsibilities once the biosafety framework is operational. This includes the ministries of Agriculture & Livestock (MAGA), Environment & Natural Resources (MARN), Public Health & Social Assistance (MSPAS) and Economy (MINECO). There are other institutions and sectors that will have a role in the National Biosafety Council: The National Council of Protected Areas (CONAP), the Institute of Science & Agro-Technology (ICTA), the National Council of Science & Technology (CONCYT), the National Forest Institute (INB), the National System for Food Security & Nutrition (SINASAN), biotechnology and agricultural faculties at public and private universities (USC, UVG), the agro-entrepreneurial sector and environmental NGOs. Much of the policy work and training supported by the project revolved was directed at these

institutions. Several were represented on the project Steering Committee or were present at policy consultations for the first component. For the fourth component, the target groups for information dissemination and awareness raising include food consumers, farmers, school children and eventually the population at large.

40. The project design did not focus on geographic areas, being institution-based rather than territorial. The ultimate purpose of the project was to protect Guatemala's biodiversity, which is high in several areas of the country. The biosafety system is intended to protect wild relative varieties of maize, for which Guatemala is a center of origin, and which are concentrated in the highland areas. Much of the work to be done in identifying and registering trans boundary agricultural LMOs would take place at border crossings with Mexico and Honduras.

D. Milestones/key dates in project design and implementation

41.

- Date of GEF approval: 8/4/2010
- Date of UNEP approval: 10/8/2010
- Actual Starting Date: 26/8/2010
- Intended Completion Date: 31/12/2014
- Actual Completion Date: 30/4/2015
- Date of Last Project Revision: 19/3/2014
- Date of Mid-Term Evaluation: 12/2012
- Date of Terminal Evaluation: 3-4/2015

E. Implementation Arrangements

42. The Implementing Agency for the project was the United Nations Environment Programme (UNEP). In this capacity, UNEP had overall responsibility for project implementation, oversight and co-ordination with other GEF projects. The executing agency was the National Council for Protected Areas (CONAP), the CPB National Focal Point, and, through delegation of functions, the Technical Biodiversity Office (OTECBIO). OTECBIO was responsible for the coordination and management of the project and monitored compliance with work plans as a basis for the execution of the project. The project team was compact and comprised by the National Project Coordinator, Project Assistant and Communications Specialist.

43. The project involved many stakeholders in line with the multi-institutional and multi-sector dynamics of biosafety systems. Although CONAP is responsible for CPB implementation, it does not have the legal mandate to regulate biosafety or biotechnology.

These legal mandates were assumed among the four ministries (MAGA, MARN, MINECO and MSPAS) that are designated NCAs.

44. The project intended to constitute three advisory structures: (i) A *Steering Committee* composed of representatives of governmental institutions that are mandated to regulate biosafety; (ii) a *Policy Task Force* or subcommittee, composed of technical delegates from interested public, academic and private entities desiring to contribute to the drafting of a national biosafety policy and structuring of a national system; and 3) A *Scientific Subcommittee* of selected individuals who, through the necessary credentials and expertise, can help to support the national biosafety policy and system. In practice, the Steering Committee met periodically and the policy task force gave feedback to drafting the biosafety policy.

F. Project Financing

(US\$)

GEF Trust Fund:	616,364 (47%)
Co-financing:	684,232 (53%)
<i>Cash:</i>	
National Council for Protected Areas (CONAP)	131,000
National Secretariat of Science & Technology (SENACYT)	32,000
<i>In-Kind:</i>	
National Council for Protected Areas (CONAP)	97,744
National Secretariat of Science & Technology (SENACYT)	45,000
Ministry of Agriculture & Livestock (MAGA)	25,000
Ministry of Environment & Natural Resources (MARN)	17,988
San Carlos University Faculty of Agronomy	50,000
San Carlos University Faculty of Pharmacy	100,000
Del Valle University of Guatemala	35,000
PROJECT EXPENDITURES AND DISBURSEMENTS:	
Actual project expenditures reported as of 30 June 2014 ¹	431,754.98 (70% of GEF Grant)
Disbursements to the project as of 31 March 2015	615,462.00 (98% of GEF Grant)

G. Project Partners

45. The following partners were directly involved in the project's design and implementation:

- *Implementing Agency*: United Nations Environment Programme (UNEP).
- *Executing Agency*: National Council for Protected Areas (CONAP). The Technical Office on Biodiversity (OTECBIO) was responsible for the project's coordination and management, and monitored compliance with work plans.
- *Assisting Implementing Agency*: United Nations Office for Project Services (UNOPS) for financial reporting and in-country management and disbursing of project funds.
- *National Competent Authorities*: Ministries of Agriculture & Livestock (MAGA), Environment & Natural Resources (MARN), Public Health & Social Assistance (MSPAS), and Economy (MINECO).
- *Technical and Sector Stakeholders*: National Secretariat (SENCYT) and Center for Science and Technology (CENCYT), University of San Carlos, University Valle – Guatemala, Ministry of Education. Several private sector representatives participated in project consultations and meetings.

H. Changes to Design during Implementation

46. Changes to project design were not done through revisions – which re-programmed project funds over time or moved resources between budget lines – or otherwise formalized. However, the project team did practice pragmatism and adaptive management in the implementation approach. An example of this was the consideration of legal options to full legislation for the approval of biosafety policies and regulations. Short of submitting a draft law to Congress and obtaining rapid approval (a draft law from an earlier UNEP-GEF Biosafety project was submitted almost a decade without approval thus far), the project opted for the next best option, which was a governmental accord (*Acuerdo Gubernativo*) signed by the President. Although this is legally weaker than constitutional law and could be revoked, it sets an important precedent is a significant step forward for biosafety in Guatemala since ratification of the CPB. Had this failed, a third option would have been seeking a ministerial-level agreement (*Acuerdo Ministerial*). Adaptive management was also reflected in the decisions to focus support on the strengthening of one laboratory (instead of five) and to offer the biosafety diploma course on-line following its discontinuation at USC for budget reasons; this is also an effective means to cope with periodic turnover of technical and training partners.

I. Reconstructed Theory of Change (ToC)

47. As applied to UNEP evaluations, “Theory of Change” (TOC) depicts the logical sequence of desired changes (called “causal” or “impact pathways” or “results chains”) to which the project is expected to contribute. It shows the causal linkages between changes at different results levels (outputs, outcomes, intermediate states and impact) and identifies the

factors influencing those changes. The reconstruction of a TOC can help identify linkages between outputs and outcomes, and the intermediary states between outcomes and intended impact. It identifies the “impact drivers” that move implementation forward, and the “external assumptions” in project design that affect performance yet are often outside the project’s ability to influence.

48. As seen in Figures 2 and 3, project design and performance can be analyzed from the perspective of impact pathways, and the extent to which inter-linked outputs and outcomes are connected sequentially in their design and implementation process. In the case of this project, there is a high level of articulation between the four components and their respective outcomes and outcomes. Indeed, the analysis of pathways indicates that most outputs lead to their respective outcome, with several examples of overarching outcomes linking different project components (i.e. 1.1-2.1, 2.3-4.2, 1.4-4.2).

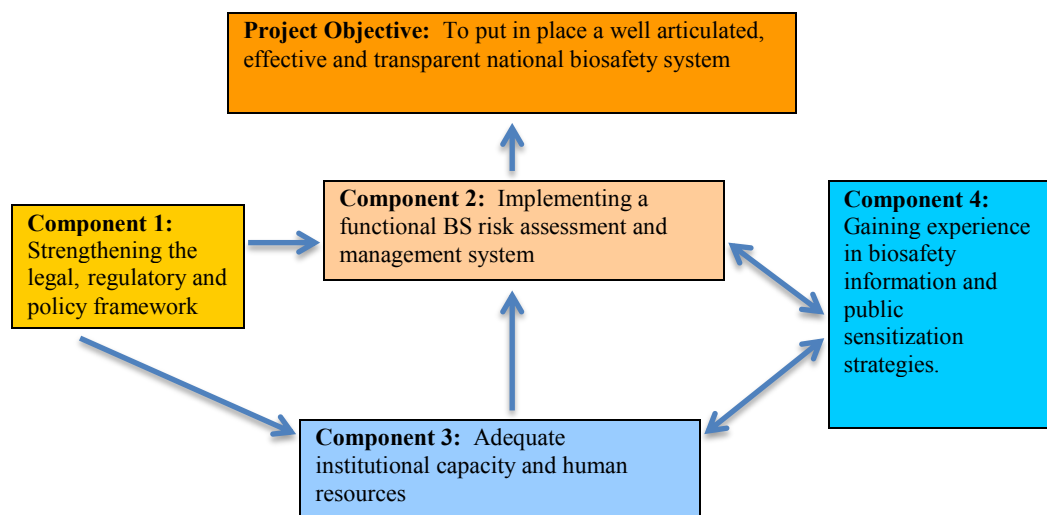
49. A general sequence emerges in which outputs and outcomes pertaining to the first component “strengthening the legal/policy/regulatory frameworks” and those supporting capacity building under the third component (“institutional capacity and human resource development”) provide the enabling conditions for the second component of “implementing a functional biosafety system”. The second component is directly connected to the ultimate project objective and therefore its outcomes represent the “intermediate state” that much be reached in order to achieve the project objective and maximize impact.

50. There is also a hierarchy of outcomes that are essential to achieving success. The main impact pathway emerging from this analysis connects formulation and approval-related outcomes to those representing adoption and implementation. Enabling policy outcomes such as 1.1 “comprehensive, coordinated and inter-institutional legal/regulatory/policy framework adopted” and 1.3 “national biosafety system proposed and adopted” lead to outcome 1.4: “BS policies are integrated into national programs, plans and strategies” (and in particular to output 1.4.1 “policy adoption and implementation by NCAs”, which is thematically closer to the second component). And these subsequently enable implementation-driven outcomes such as 2.3 “BS measures applied in accordance with international guidelines, to the extent necessary and in a feasible manner”, 1.2 “Trans boundary movement, handling and use of LMOs are regulated in line with the CPB” and 4.2 “Collaboration with NCAs achieved for biosafety information management and transparent decision-making” with their respective outputs.

51. The higher-order outcomes and outputs needed to be achieved in order to reach the impact threshold or “intermediate state” preceding the project objective. The third and fourth components that support technical capacity building and information dissemination and management are transversal because they cut across components and time sequences; they nurture and at the same time are reinforced by outcomes and outputs of the first and in particular second components. A representation of the main impact pathway linking project components to the objective is summarized in Figure 2 below, while a more detailed analysis of pathways connecting outputs to outcomes can be seen in Figure 3.

Figure 2

Causal Pathways linking Technical Components to the Project Objective



52. Institutional and technical capacities need to be in place to activate the system, as reflected in the third component and in particular outcomes 3.1 “Institutional proficiency in risk/benefit analysis, and knowledge of monitoring/enforcement requirements”, 2.2 “Science base strengthened”, 3.2 “Technological capacity for in-house LMO analysis”, 3.3 “Capacity for safe BT development” and 4.2 “Collaboration w/ NCAs achieved for BS info management and transparent decision-making”. These capacities create the conditions for achieving implementation and performance-linked outcomes such as 1.2, 2.3 and 4.2, which are described above.

53. There are feedback loops between capacity development and actual performance that are mutually reinforcing and practically symbiotic. Both are dynamic processes that are generally not static. Good capacities contribute to good performance, which in turn improves the capacity level over time through the experience and insight that is gained. Similarly, having an information baseline can help to guide project implementation or measure changes to the pre-project situation, yet the information base also expands as the implementation process advances. The third project component that supports capacity development is transversal to the other project components. The policy formulation and capacity building outputs and outcomes feed into higher-order outcomes that are based on the implementation and performance of the national biosafety system.

54. The analysis suggests that different clusters of outputs and outcomes should ideally be implemented sequentially, following their impact pathways, to maximize their collective impact. This is a admittedly difficult to achieve over a four-year period. Because the outcomes related to the adoption and implementation of national biosafety policy and regulations were not fully met, the project process was unable to proceed to the higher-order outcomes of the second component, which would have brought the project closer to its main objective.

55. There is a lesson in this. The simultaneous pursuit of project outputs and outcomes may be good for delivery and expenditure rates, yet can also lower technical depth or override the absorptive capacity of partner institutions. The cumulative effects of an implementation approach based on causal pathways would probably raise collective impact and broaden the project’s effects; the down side is that an incremental process of this type will probably need more time and money than are available.

56. There appear to be overlaps (semantic if not functional) in the design of outcomes 1.1 and 2.1 (availability and adoption of coordinated institutional, policy and regulatory frameworks), 3.1 and 3.3 (adoption of a comprehensive policy framework and BS system); and between outcome 4.1 and output 4.2.4 (availability of new BS information). However, these overlaps do not appear to have affected the project's implementation performance or efficiency.

57. Although the second component was about implementing a functional national biosafety system, several of its outputs – 2.11, 2.1.3, 2.1.4, 2.3.1 – are actually pre-implementation in terms of their positioning along the causal pathways, because they do not aspire beyond design and proposition (and hence are functionally closer to the first component). For this reason, they are considered “partially achieved” as opposed to “not achieved”, which would have been the case had they been directly linked to the system's implementation.

58. Project design and performance were also influenced by the following impact drivers that moved implementation forward, and by external assumptions that were outside the project's control:

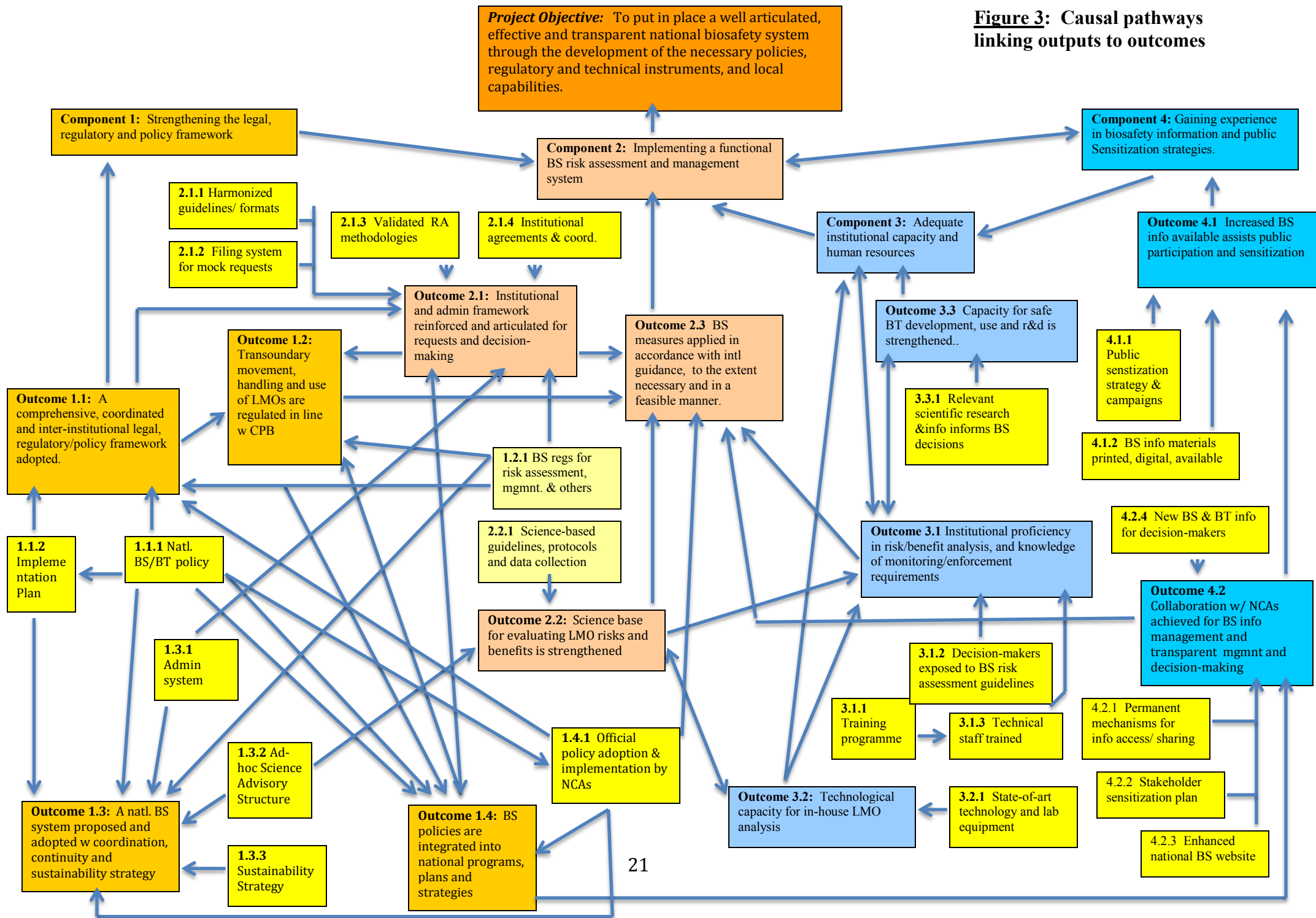
59. ***Impact Drivers:***

- Guatemala's adhesion to the Cartagena Protocol on Biosafety.
- Guatemala's rich biodiversity levels and the threats posed by the unregulated entry of transgenic seed and grains.
- Baseline NCA capacities for biosafety risk management developed by prior UNEP-GEF initiatives.
- Present food imports for human and animal consumption are often genetically modified (FFPs) yet are not subject to regulations or labeling.
- The divided (and often misinformed) public debate on the risks and benefits of LMOs and transgenic crops. This represents a potential threat to the implementation of a NBF and needs balanced and scientifically sound information.
- The technical collaboration received from Mexico on biosafety preparedness and mutual interests that include a common border, robust trade relations and “center of origin” genetic varieties of maize encourage LMO risk management.
- Technical guidance available from the regional GEF project “Latin America: Multi-country Capacity-building for Compliance with the Cartagena Protocol on Biosafety.”
- The approval of a free trade agreement (including customs integration) with Honduras, which already has a NBF that manages the evaluation and release of transgenic seed and crops. The agreement includes customs integration and will enter into effect in December. The expected entry of genetically modified maize, soya and other crops will require aligned biosafety practices on both sides, and adds urgency to the approval of a regulatory framework.

60. ***External Assumptions:***

- There is political will to approve and apply the policy, regulatory and legal frameworks developed through the project.
- The national presidential elections scheduled for this year will not disrupt the approval or implementation of biosafety policies, regulations or institutional arrangements.
- As national executing agency, CONAP streamlines coordination with NCAs and other biosafety stakeholders and facilitates administrative/financial management.
- National Competent Authorities (NCAs) are motivated to participate fully in the project, assigning institutional personnel and resources.
- Project timeframe and resources are sufficient to deliver all outputs and achieve intended outcomes.

Figure 3: Causal pathways linking outputs to outcomes



IV. EVALUATION FINDINGS

A. Strategic Relevance

61. The project was strategically relevant to national and global needs both in design and implementation. This is described in section III.A “Project Context” of this report, sections 2.1 “Global Significance” and 3.1 “Project Rationale” of the project document, and the Terms of Reference of the evaluation. The main points of relevance encompass: (i) Guatemala’s rich biodiversity and status as genetic center of origin of maize and center of domestication of maize, beans, squash and cassava; (ii) unregulated trans boundary movements of transgenic maize and other agricultural LMOs from Mexico and Honduras; (iii) Guatemala’s ratification of the CPB in 2004 and commitment to implementing a biosafety framework; (iv) the robust trade relations with the United States that are guided by a free trade agreement allowing the entry of genetically modified corn, soya and other processed and unprocessed foods for human and animal consumption;³ (v) biotechnology research conducted by universities and research centers; and (vi) the need to inform the public with updated information that is scientifically validated to raise awareness and address a potential threat to the political viability of a national biosafety system. Guatemala’s comparatively high poverty levels (relative to other countries in the region) generate food security concerns in which biotechnology and biosafety play important roles.

62. The global relevance of the project is documented as well. The 2014 Project Implementation Review report noted that “...the project responds to the GEF’s Strategy for Financing Biosafety (Doc GEF/C.30/8/Rev.1) approved in December 2006, and comes under SP-6 (Building Capacity for the Implementation of the Cartagena Protocol on Biosafety) of the Biodiversity Strategic Objective 3 (SO3), of the Focal Area Strategies and Strategic Programming for GEF-4 (Doc GEF/C.31/10) approved in July 2007. It is also fully aligned with the key elements of a national biosafety framework, required for the implementation of the CPB and emphasized in the Updated Action Plan for Building Capacities for the Effective Implementation of the CPB agreed at COP-MOP-3.”⁴

63. Some of the findings from the country visit and stakeholder interviews reinforce the project’s strategic relevance:

- Although CONAP is the executing agency and government focal point for the Cartagena Protocol’s implementation, it lacks the legal mandate to regulate biosafety or biotechnology. These mandates are split, to varying degrees, among four ministries (MAGA, MARN, MSPAS and MINECO) and the National Secretariat for Science & Technology (SENACYT). This situation underscores the need to establish inter-institutional coordination and decision-making instruments to facilitate the insertion of new biosafety practices. The approved policy designates the four ministries as National Competent Authorities, while the draft regulations propose administrative procedures for LMO applications, risk management and decisions.

³ 20% of Guatemala’s national corn stock is imported; half of this is constituted by imports of transgenic yellow corn from the United States. A recent study of MASECA, the staple corn flour that is used for tortillas, revealed high levels of transgenic grain.

⁴ *Project Implementation Review (PIR) 2013-2014*, pp. 7-8

- As mentioned earlier, the recently approved free trade agreement with Honduras will enter into effect in December. The agreement includes customs integration and will require the alignment of biosafety practices, as Honduras already has an operating NBF and cultivates transgenic crops for export. A functioning system is also required by Law 2006/386, which already allows the cultivation of transgenic seed for export.
- The project objective is consistent with Guatemala's national development plans. The *National Policy on Food & Nutritional Safety* presents strategies to ensure availability and access to healthy and nutritional food, stating that Guatemala needs to regulate the import of genetically modified products. Likewise, the *Framework Policy on Environment Management* aims to lower the risks of production processes to human beings and the environment. The *National Strategy for the Preservation & Sustainable Use of Biodiversity* and *Action Plan* plan to reduce threats to biodiversity through the protection, use and valuation of genetic resources, while recognizing the need to achieve food security with improved genetic material. In addition to improving compliance with the Cartagena Protocol, the creation of a national biosafety framework supports Objective VII "Environmental Sustainability" of Guatemala's Millennium Development Goals (MDGs).
- Over the past years there were cases of biosafety "unpreparedness" that underscore the need for a project of this type. In 2013, an event involving the release of BT maize in Guatemala's southern cost was not monitored or communicated to the public.⁵ In an earlier event, LMO maize cultivated by an enterprise for seed was destroyed after being released without the requisite pilot test (mandated by Law 2006/386).⁶ Again in 2013, a shipment of honey exported to Germany was rejected because it contained transgenic corn pollen; the resulting economic and trade costs would have been avoided had in-country detection capabilities been in place.⁷

B. Achievement of Outputs

64. The project played a decisive role in facilitating the design of Guatemala's first national biosafety policy, which recently received presidential approval through *Acuerdo Gubernativo* 207/2014. Draft regulations have been drafted and submitted to the relevant ministers for consideration. There were several in-country and international training events of high quality, involving recognized institutions and practitioners. The combination of these initiatives created more favorable conditions for implementing the national biosafety framework. The relevant sections of the ministerial NCAs have internalized biosafety concepts and, for the most part, defined their institutional and technical role in the system.

65. However, the regulations and administrative procedures required to formalize the system's adoption and implement LMO risk management have not been approved and face critical observations from the private sector. As a result, outputs related to the adoption and implementation of biosafety practices were not realized, affecting the achievement of associated outcomes and objectives. CONAP plans to hold a meeting in the next month to work out

⁵ Interview with Monica Varillas, BCH administrator.

⁶ Interview with Roberto Hera, VISAR/MAGA

⁷ Interview with Pablo Prado, USC

differences with the private sector and achieve the consensus that is necessary to ensure approval at the presidential or inter-ministerial levels before national elections are held.

66. Most of the interviewed persons considered that the project was successful despite falling short of the main objective. The first and third components – policy formulation and training - were pointed out as examples of positive results (they also received the largest budget shares). The project team’s performance was often highlighted as a determining factor. The evaluation findings support this view.

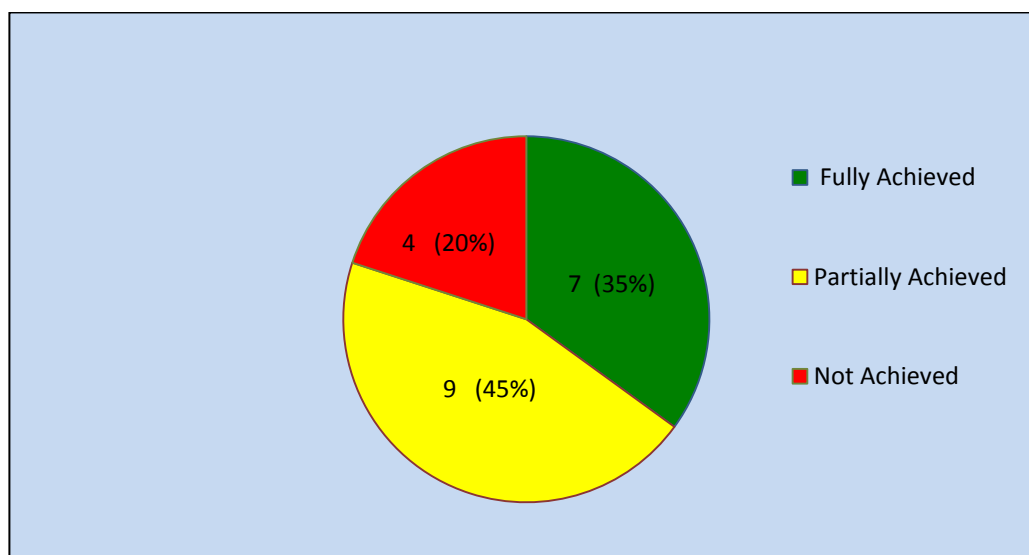
67. In retrospect, the planned outcomes and outputs of the project document (and expectations they generated) were over-dimensioned and collectively not feasible in relation to the approved timeframe and budget. As a result, several outputs that assumed the implementation of the national biosafety system (a political decision external to the project) were either partially achieved or not achieved at all. Nevertheless, the final status of the project’s outputs indicate that 80% were either totally or partially achieved; some of the latter could reach full achievement in coming months if the proposed biosafety regulatory framework is approved and the system is formally adopted for implementation. CONAP’s continued involvement after the project ends may help to raise the level of full achievement.

“On a scale of 1 to 10, the project achieved an 11”

“Without the project, we’d have almost nothing. People were trained here and overseas, we were exposed to procedures and regulations of other countries, and we now have a biosafety policy framework.”

- A MAGA project participant and trainee

Figure 4
Final Status of Project Outputs



Component 1: Strengthening the legal, regulatory and policy framework on biosafety

68. The objectives and outputs of this component sought to create enabling conditions for an approved biosafety framework. They provided a foundation for realizing the second component and reaching the objective of “...a well-articulated, effective and transparent national

biosafety system”.⁸ Although some outcomes (1.3-4) and outputs (i.e. 1.3.1, 1.3.3., 1.4.1) were not fully achieved and fell short of initial expectations, the project leaves encouraging advances that could enable this to happen, provided there is follow-up by the project team (which will be

	Outcomes	Outputs
Strengthening the legal, regulatory and policy framework on biosafety	<p>1.1 A comprehensive, coordinated, and inter institutional policy framework for biosafety is approved and adopted.</p> <p>1.2 The trans boundary movement, transit, handling and use of Living Modified Organisms (LMOs) are regulated, consistent with the CPB.</p> <p>1.3 A National Biosafety System is proposed and adopted, along with a coordination, continuity and sustainability strategy</p> <p>1.4 Biosafety policies are integrated into national programs, plans and strategies for sustainable development</p>	<p>> 1.1.1 National policy on biosafety and biotechnology, in line with sector policies, national regulations, and National Competent Authorities (NCA) roles defined by the CPB.</p> <p>> 1.1.2 Implementation plan</p> <p>> 1.2.1 Biosafety regulations for: risk assessment and management, environmental release, illicit and unintentional trans boundary movements of LMOs, transit, penalties, research, contained use, food safety and environmental safety, and others.</p> <p>> 1.3.1 An administrative system with clear procedures for handling requests and clearly defined mandates, responsibilities and communication channels for different NCAs.</p> <p>> 1.3.2 Permanent and Ad Hoc scientific advisory biosafety structures</p> <p>> 1.3.3 A continuity and sustainability strategy for the system.</p> <p>> 1.4.1 Official adoption and implementation of Biosafety policies in different NCAs</p>

* Status of outputs as of March 2013: > Achieved > Partially achieved > Not achieved

retained by CONAP until the end of 2015), the new government authorities buy into the biosafety policy and regulatory proposals, and continued efforts are devoted to approving the draft regulations.

69. The project’s most important achievement to date – the design and approval of a national biosafety policy with designated competent authorities – is directly related to outputs 1.1.1 and 1.1.2. The policy’s formulation involved an 8-month drafting and consultation process that was led by CONAP and engaged different biosafety stakeholders. *Acuerdo Gubernativo 207/2014 “National Biosecurity Policy of Living Modified Organisms 2013-2023”* was signed by the President in July 2014 and published in the national gazette. Legally and politically, it is not as strong as an approved law and could be revoked by another administration. However, getting this level of approval was a cost-effective alternative to drafting another biosafety law, as done through the first UNEP-GEF biosafety project and sent to Congress almost a decade ago without action so far.

70. The approved biosafety policy aims to:

⁸ Terms of Reference, p. 2

- Create a national security system for the use of LMOs, and guide the formulation of a regulatory framework for its development, use, release into the environment, and trans boundary movement.
- Implement information management and dissemination that is transparent.

Generate conditions to encourage national biosafety research on LMOs, applying modern biotechnology and precautionary principles.⁹

71. The policy establishes a general framework for evaluating requests and reaching decisions on the release of LMOs and transgenic crops. It addresses gaps in the current legal arrangement and considers biotechnology and biosafety as sustainable development tools that can satisfy the needs of the population. The policy document has four areas of intervention: (i) Developing mechanisms and instruments to regulate LMO risk management practices; (ii) strengthening capacities; (iii)

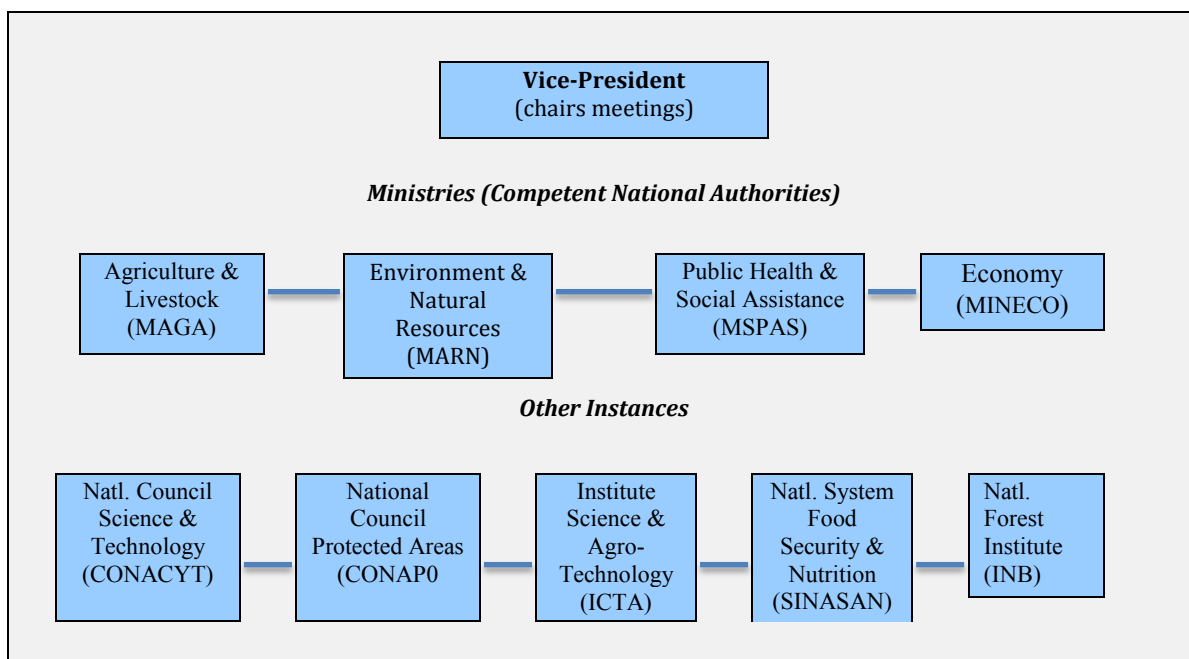
“It is fundamental that regulations be adopted in line with the Cartagena Protocol, and that they not be bureaucratic”

- An interviewed private sector representative

transparency and public participation; and (iv) research & development. A National Biosafety Council will be formed with ministerial National Competent Authorities (MAGA, MARN, MSPAS and MINECO), designated under Executive Decree 114-97, and representatives of private sector associations, public and private universities, the National Council of Protected Areas (CONAP), the National Forest Institute (INB), and NGOs. The Council is expected to assume an advisory role in support of biosafety decisions. CONAP will retain its coordinating role of the national biosafety system, in its capacity as focal point to the Cartagena Protocol and CBD.

Figure 5

National Biosafety Council: Stakeholder Institutions and Sectors



Source: Política Nacional de Bioseguridad 2013-2023

⁹ Política Nacional de Bioseguridad 2013-2013, pg. 41

72. Other issues of concern are the low levels of public awareness, the misinformation and the risk that these could pose for the approval and implementation of biosafety regulations for the cultivation and release of transgenic crops.¹⁰ Various persons interviewed felt that a medium-term approach will be needed to build channels of dialogue and inform the various (and often opposed) stakeholder groups. However, the upcoming political campaigning for national elections may limit opportunities to socialize the regulations and open them to public discussion.

Component 2: Implementing a functional national biosafety risk assessment and risk management system

Component Title	Objectives	Outputs
Implementing a functional national biosafety risk assessment and risk management system	<p>2.1 The institutional and administrative framework is reinforced and articulated to allow for effective handling of requests and coordinated decisions</p> <p>2.2 The science base for the evaluation of potential risks and benefits of LMO use in Guatemala is strengthened for use in biosafety risk assessment and management</p> <p>2.3 Biosafety measures are applied in accordance with international guidance, national criteria and to the extent necessary and feasible to prevent possible adverse effects of LMOs</p>	<p>> 2.1.1 Inter-institutional coordinated and harmonized technical documents, guides, criteria and administrative formats for LMO applications</p> <p>> 2.1.2 Filing system created to handle mock request documentation.</p> <p>> 2.1.3 Validated risk assessment and evaluation methodologies.</p> <p>> 2.1.4 Institutional agreements and coordination mechanisms for decision-making on internal use of LMOs and cross-sector collaboration</p> <p>> 2.2.1 Science based guidelines, scientific protocols, and data collection plans to inform biosafety risk assessment and management decisions</p> <p>> 2.3.1 Guidelines and plans for effective and science based national biosafety measures</p>

* Status of outputs as of March 2013: > Achieved > Partially achieved > Not achieved

73. This component is directly attached to the project's main objective and goal, because it involves the application of the new policies and regulations. Yet it is also dependent on the first project component and in particular the approval/adoption of draft regulations, which requires a political decision. This is why the progress achieved was often below initial expectations. Many outputs assume the actual implementation of a biosafety framework (i.e. 2.1.1, 2.1.4, 2.2.2, 2.3.1) and weren't fully delivered because the enabling regulations and administrative procedures are lacking.

74. As a result, some of the intended outcomes have not materialized. LMO requests are not being handled, biosafety practices are not yet applied according to international guidelines, nor are they integrated within national and sector plans. Binding institutional agreements have not been developed and internal mechanisms are still being considered by some NCAs. Interviewed

"The indicators that show more difficulties to be reached are those linked to political decisions..."

- Project implementation Review Report (PIR) – 2013-2014.

¹⁰ Earlier this year, a proposed law that sought to protect the patent rights of seeds and other agricultural products from the United States was disseminated as the *Ley Monsanto* and subject to considerable controversy and protest by opponents to transgenics; it was eventually withdrawn.

NCA representatives were supportive of the project but sometimes unclear on the role they will play once regulations were approved. Nor was there clarity on the inter-institutional arrangements to be followed (2.1.1, 2.1.4). In both cases this was largely because the regulations haven't been approved and therefore aren't an institutional priority.

75. Once the regulations are approved and a political decision is made to implement the national biosafety system, there may be need to be a transitional period with external technical guidance to help NCAs assume their new role. The MSPAS presently has a project consultant working on the institutional arrangements to be followed. Only ICTA seems fully prepared, having received the laboratory equipment and reagents needed to analyze agricultural LMOs. There is knowledgeable technical staff and analyses could be performed if there were requests. The Biosafety Clearinghouse (BCH) is also fully operational with staff and operations funded by CONAP, but it does not receive information items from NCAs or other biosafety stakeholders in spite of the training provided.

76. The project has brought improvements in institutional perception and commitment. The NCAs have more awareness of biosafety operations and the role they will need to play in risk assessment and information management. The project was instrumental in helping MAGA's new biotechnology department develop a vision and work plan. MAGA will focus on non-processed grain (i.e. feed, and the MSPAS on processed foods; currently the analysis applied looks at toxicity and other health risks, but does not consider genetic modifications. Some NCAs such as MSPAS already manage excessive workloads and are unprepared to assume biosafety functions without additional budget and staff support. Indeed, the institutional commitment will need to be translated into time, people and resources to become operational. The labeling of foods with transgenic content was not been by the policy document; it was consciously been left out to avoid raising conflicts with private sector or other affected parties that could affect the broader issues.

77. Participants from NCAs and other institutions received project training on validated risk assessment and evaluation methods. Training was provided by practitioners from Mexico, Brazil and Cuba, as well as the ICGB (based in Italy). Mexico in particular offers a useful model that provided the basis for the policy document and proposed regulations; the common border, rich biodiversity and joint status as maize centers of origin, support the aligning of LMO risk management practices. During the training workshops, real case studies were reviewed and analyzed by working groups. However, the mock trials and simulations that were planned under this component (2.12.2, 2.1.3) weren't carried out because institutions were not prepared or sufficiently motivated to participate fully (in the absence of approved regulations or the political decision to implement the system).

78. As noted in the ToC analysis, several outputs – 2.1.1, 2.1.3, 2.1.4, 2.3.1 – of the second component are actually pre-implementation in terms of their positioning along the causal pathways, because they do not aspire beyond design and proposition. Therefore, they seem to be functionally closer to the first component.

Component 3: Creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety

	Objectives	Outputs
Creating the necessary	3.1 Institutions are more proficient in risk /benefit analysis,	> 3.1.1 Training Program for the use, management and regulation of biotechnology.

institutional capacity and human resources for effective decision making and compliance in biosafety	and more knowledgeable of monitoring and enforcement requirements. 3.2 Technological capacity is sufficient for in-house analysis of LMOs. 3.3 Capacity for the safe development and use of modern biotechnology is strengthened in Guatemala	> 3.1.2 Decision-makers introduced to biosafety risk assessment principles > 3.1.3 Technical staff trained in carrying out risk assessments and defining risk management measures > 3.2.1 State-of-the-art technology, training and laboratory equipment for LMO testing > 3.3.1 Relevant scientific research and information to inform biosafety decisions regarding the local biodiversity, environment and human health
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* Status of outputs as of March 2013: > Achieved > Partially achieved > Not achieved

79. This component was partially achieved, although lack of practical application could limit the impact of the training offered. Capacity building was one of the project's most successful endeavors that was certainly appreciated by the training beneficiaries. All interviewed participants expressed praise for the technical and organizational quality of the training workshops and study tours managed by the project. The strategy of focusing the component on in-country training by international experts helped the project reach a broader audience and enhance the "buy in" of partner institutions to the proposed biosafety system. More than 40 participants from National Competent Authorities and other stakeholder institutions attended project workshops on LMO detection and risk assessment, and took the post-graduate diploma course on biosafety and biotechnology that was designed through the project and offered by San Carlos University's Agronomy Faculty. Country training activities were complemented by study tour visits to biosafety facilities in Mexico (outputs 3.1.1 and 3.1.2) and two post-graduate degrees at the International Center for Genetic Biotechnology (ICGB) in Italy.

80. The project benefited from prior studies that analyzed and mapped out wild relative varieties of maize, and supported the design of norms to protect native maize that are based on the Mexican model. Two research grants were supported through CONCYT. Yet the operational environment for applying institutional learning is missing; this probably would not have been the case if the regulations were approved and the risk management simulations and mock trials conducted. Most of the NCAs have yet to develop internal capacities to carry out risk assessments (3.1.3); ICTA is probably the only institution that presently has operational capabilities. The turnover of institutional participants at project training events and meetings was an additional limiting factor to the project's capacity building efforts.

81. An important development was the design and offering of a postgraduate diploma course on biotechnology and biosafety. This was implemented through the University of San Carlos' Agronomy Faculty, which validated and certified the diploma given to participants as academic credit. The six-month training course was given over two year period to more than 40 persons. Although discontinued by USC for budgetary reasons, the course continues to be available online through the BCH and CONAP web pages, and has a strong sustainability potential. This is important in a working environment where personnel turnover is frequent.

82. Specialized laboratory equipment for LMO testing was installed at ICTA and is ready to be used (3.2.1) while the operational conditions are lacking at present to inform national biosafety decisions (3.3).

Component 4: Gaining experience in generating and managing biosafety information and public sensitization strategies

	Objectives	Outputs
Gaining experience in generating and managing biosafety information and public sensitization strategies	<p>4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes</p> <p>4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.</p>	<p>➤ 4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes</p> <p>➤ 4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.</p>

**Status of outputs as of March 2013: ➤ Achieved ➤ Partially achieved ➤ Not achieved*

83. The fourth component was necessary to instill public confidence in a national biosafety system, and ensure its political viability. This component included a national sensitization, communication and information strategy; biosafety information to be communicated; the participation of NCAs in the Biosafety Clearinghouse; and promoting the BCH website as an information source for risk assessment and management.

84. The first output of this component was largely delivered to the extent that resources permitted, although the process needs to be taken further in order to make a difference. The project formulated and validated the sensitization and information strategy with other stakeholders (journalists, teachers, scientists, NCA focal points), and received the approval of the project Steering Committee and SENACYT. Early in the project, sensitization workshops were organized for journalists, communications specialists and NCAs; two workshops were held in the provinces. A forum on LMOs and their impact on agriculture, environment, social development and climate change was attended by over 80 persons..

85. The availability of biosafety information improved with the publication of informative documents on LMOs and native plants, and the dissemination of calendars (2013-2015) that have informational value. An encouraging development has been the publication of the school text “Biotechnology, Biosecurity and Biodiversity for the 6th Grade”, which will be applied on a pilot basis by the Ministry of Education in selected schools and (assuming positive results) possibly incorporated to the national environmental school curriculum, which is mandated by law.

86. Although the analysis of experiences and lessons learned from these strategies was anticipated in the project work plan, their application remains at an incipient stage. The implementation of information and awareness strategies require attention and resources beyond those that were available in this project. As noted by the Mid-Term Evaluation report, “...GMOs is a complicated topic in Guatemala since the general public does not have enough accurate information to improve and orient their knowledge and perception on GMOs, thus, there are two opposite groups, the ones that are in favor and the other, against the use of GMOs.

This situation makes complicated to achieve agreements among the different stakeholders. In addition, such situation affects the government decisions regarding approval of the use of GMOs.”¹¹ In a culturally diverse country that has 20 registered languages, a dispersed population of rural farmers and low adult literacy in some areas, informing different target groups that will require different approaches and contents.

87. The project built on the earlier UNEP-GEF Biosafety Clearing House project that created the national BCH and trained a technical staff within CONAP. Awareness of the BCH was raised among NCAs through exposure and training. The project reports indicate that four workshops on BCH management and use were held with over 100 participants from different ministries and organizations engaged in agriculture, environment and health. At present, the BCH has news bulletins, publications and the results of the latest COP. However, the ability or motivation of NCAs to utilize the BCH is limited by the lack of an operating system and none have contributed information. Once the NBF is functional, biosafety events will be uploaded to the “latest news” window. Trends in the number of entries or “hits” to the BCH (5,200 in 2013, 4,890 in 2014 and 1,245 as of March 2015) do not seem to follow a pattern, although entries were considered to have risen in advance of the last COP meeting.

B. Effectiveness: Attainment of Objectives

88. The project experience provides an interesting case study on how commendable project performance can fall short of achieving its ultimate objectives, when the outputs and outcomes that precede project impact aren’t reached. Substantive policy proposals were designed and have been approved by government, yet aren’t being implemented. The biosafety system is not operational because the drafted regulations and administrative procedures haven’t been approved, and there are objections to certain aspects.

89. As a result, there was partial success in achieving the main project objective, in spite of the efficient performance of the CONAP project team. The approval of a regulatory framework before national presidential elections take place would significantly improve perspectives for implementing biosafety policies and receiving further support from GEF and UNEP.

“...the factor of risk comes from the need of approval from national authorities of the project’s final products; which is not 100% dependent on the project efforts.”

- Mid-Term Review Report (2012)

90. Another contributing factor was systemic and relates to the inconsistency of project timelines with the actual dynamics of government and implementation processes. Project design was unrealistically ambitious in relation to the time available. It called for the design, approval and implementation of a national biosafety framework, simultaneous to building national capacities, in a country where a draft biosafety law (designed through the first UNEP-GEF project “Development of National Biosafety Frameworks”) was proposed in Congress almost a decade ago and not acted on. Four years was clearly insufficient to bring about institutional and systemic changes, build capacities and raise public awareness.

¹¹ *Mid-Term Review*, M. Araya-Quesada (2012) pg. 11

91. The project's termination is followed by national elections and a change of government. The resulting political juncture could affect the approval of the regulations and administrative procedures that are needed to operationalize the NBF.

C1. Achievement of Direct Outcomes

Outcome	Level of Achievement: High/Med./Low	Comments
<i>1.1 A comprehensive, coordinated, and inter institutional policy framework for biosafety is approved and adopted.</i>	<i>Medium/High</i>	<i>A policy framework was approved by Governmental Accord. However, this legal figure can be derogated by the next administration. Formal adoption depends on the approval of the proposed regulatory framework and administrative procedures.</i>
<i>1.2 The transboundary movement, transit, handling and use of Living Modified Organisms (LMOs) are regulated, consistent with the CPB</i>	<i>Low</i>	<i>The proposed biosafety system is not operational at present.</i>
<i>1.3 A National Biosafety System is proposed and adopted, along with a coordination, continuity and sustainability strategy</i>	<i>Medium/Low</i>	<i>A regulatory framework has been drafted but not approved. Consensus is lacking with the private sector on some points.</i>
<i>1.4 Biosafety policies are integrated into national programs, plans and strategies for sustainable development</i>	<i>Low</i>	<i>Process is at an incipient stage and regulations have not been adopted.</i>
<i>2.1 The institutional and administrative framework is reinforced and articulated to allow for effective handling of requests and coordinated decisions</i>	<i>Low</i>	<i>The institutional framework has been identified and approved as policy, yet the administrative procedures for handling requests and coordinating decisions have not been approved and presently are not operational.</i>
<i>2.2 The science base for the evaluation of potential risks and benefits of LMO use in Guatemala is strengthened for use in biosafety risk assessment and management</i>	<i>Medium</i>	<i>High quality in-country training was provided on LMO detection and risk assessment, but is not being put to use. Laboratory equipment has been provided to ICTA for LMO detection and risk analysis.</i>
<i>2.3 Biosafety measures are applied in accordance with international guidance, national criteria and to the extent necessary and feasible to prevent possible adverse effects of LMOs</i>	<i>Low</i>	<i>The proposed biosafety system is not operational at present.</i>
<i>3.1 Institutions are more proficient in risk /benefit analysis, and more knowledgeable of monitoring and enforcement requirements.</i>	<i>High</i>	<i>Institutional awareness and understanding of risk analysis, monitoring and enforcement requirements and practices were raised through a combination of in-country training and study tours to collaborating biosafety institutions.</i>
<i>3.2 Technological capacity is sufficient for in-house analysis of LMOs.</i>	<i>High</i>	<i>ICTA has received equipment and reactives, and has the assigned staff to</i>

		<i>conduct in-house analysis.</i>
<i>3.3 Capacity for the safe development and use of modern biotechnology is strengthened in Guatemala</i>	<i>Medium</i>	<i>Capacities have been raised but for most NCAs are not operational. Simulation and mock trial exercises were planned but not implemented.</i>
<i>4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes</i>	<i>Medium/High</i>	<i>The BCH has been improved and more information is available. There were information dissemination and sensitization activities, but not processes as might be expected with the implementation of a national biosafety system.</i>
<i>4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.</i>	<i>Low</i>	<i>NCAs were exposed to the BCH but do not contribute information. At present, the system that would guide biosafety management and decisions is not operational. The approval of a regulatory framework is pending.</i>

C2. Likelihood of Impact

92. Impact is uncertain and will depend largely on political decisions that are outside the project's control. The proposed regulations and administrative procedures must be approved by governmental or ministerial agreement to enable implementation. It is important that this happen before national elections are held and a new government installed. The current situation affects overall project impact and in particular the second project component, which is implementation-driven. Similarly, the capacity improvements acquired by national stakeholders under the third component need to be applied and built upon, otherwise they will decline over time.

"...The final approval of produced outputs is not directly in project hands, and instead is related to external support and/or interest from NCAs and governmental institutions. The project team will have to find a way to get key products approved in order to ensure achievement of outcomes."

- Project Implementation Review (2014)

93. The likelihood of impact will increase significantly if biosafety regulations are approved in the coming months, before national elections take place. CONAP plans to meet in late April with NCAs, private sector representatives and other interested parties to resolve pending differences on the draft regulations, to expedite ministerial approval.

C3. Achievement of the Overall Objective, Purpose, Goal and Outcomes

94. The essential sequence towards the project objective involves achieving the outputs and outcomes of "strengthening the legal/policy/regulatory frameworks", in order to establish conditions for the second component of "implementing a functional biosafety system", which feeds directly to the project objective. The third (institutional capacity and human resource development) and fourth (information management and public awareness) components were over-arching and fed into the first two components, while being strengthened by the cumulative experience acquired.

95. Because the first component outcomes linked to biosafety policy adoption and the approval of regulations haven't been achieved to date, therefore the enabling conditions for moving the second component forward are not in place. This obstructs the impact pathway connecting implementation to the intermediate stage (closely resembling outcome 2.3) that precedes reaching the project objective, according to ToC analysis.

The main project objective was to assist Guatemala to put in place a well-articulated, effective and transparent national biosafety system through the development of policies, regulatory and technical instruments, and local capabilities to meet national needs.

96. As a result, several outcomes under the second component in particular were not realized and the process cannot advance until a decision is reached. This has prevented the achievement of key outcomes such as 1.4 "biosafety policies are integrated into national programs, plans and strategies", 2.3 "biosafety measures are applied in accordance with international guidelines, to the extent necessary and in a feasible manner", 1.2 "trans boundary movement, handling and use of LMOs are regulated in line with the CPB" and 4.2 "collaboration with NCAs achieved for biosafety information management and transparent decision-making". The approval

of the regulatory framework and 'buy in' of the next government to biosafety policies and regulations are necessary for policy implementation to move forward.

97. There is a hierarchy of outputs and outcomes that should be considered when planning implementation strategies. The main impact pathway identified through ToC analysis connects the policy formulation/approval-driven outcomes to those outcomes that are linked to the adoption and implementation of a biosafety system. Enabling policy outcomes such as 1.1 "comprehensive, coordinated and inter-institutional legal/regulatory/policy framework adopted" and 1.3 "national biosafety system proposed and adopted", all lead to outcome 1.4: "biosafety policies are integrated into national programs, plans and strategies". This in turn enables the achievement of outputs linked to the implementation-driven outcomes (2.3, 1.2 and 4.2) that are mentioned above.

98. In particular, the higher-order outcome 2.3 "biosafety measures are applied in accordance with international guidelines, to the extent necessary and in a feasible manner" must be reached because it represents the intermediate state that precedes the project objective. The third and fourth components support capacity building, information management and public awareness; they are transversal and cut across the first two components. The relationship is almost symbiotic in the sense that capacity building and information management nurture the first two components, and at the same time are strengthened by these linkages.

99. Based on the above, the project was not able to achieve the main project objective of putting in place an articulated, effective and transparent biosafety system, although the necessary policies and instruments were developed. The project goal of facilitating compliance with and implementation of the Cartagena Protocol through a national biosafety system was partially achieved with the approval of a national policy and designation of NCAs. In terms of the stated project purpose, the outputs that have been achieved are unlikely to have a noticeable effect on conservation, sustainable use of biodiversity, or reducing potential risks to wild relatives and biodiversity (again, until an operational system is in place).

D. Sustainability and Replication

100. The Terminal Evaluation was held in advance of the project's termination and an *ex-post* perspective is lacking. Therefore, a reliable assessment of prospects for post-project

continuity or the replication of best practices is premature. Several outputs and outcomes are still in process of consolidation, and will require gestation periods before results can be demonstrated (encouraging replication). These include the implementation of the national biosafety policy approved by *Acuerdo Gubernativo* 207-2014, the approval of the proposed regulatory framework, capacity building and human resource development.

101. In spite of these disclaimers, the evaluation considers that there are medium-to-high possibilities for post-project sustainability, and especially at the policy level. The next months will be critical in determining the extent to which the project (or CONAP afterwards) can bridge the gap between policy formulation and the implementation of a national biosafety framework, in the midst of national elections and a change of government.

D.1 Socio-political Sustainability

102. This is a very important aspect that presents strengths and weaknesses, and faces an uncertain scenario with the upcoming national elections and change of government. From a political perspective, the approval of the national biosafety policy is a fundamental step forward that broadens conditions for sustainability considerably. Although *Acuerdo Gubernativo* 207/2014 does not have the legal strength of an approved law and could be revoked, all parties including the private sector seem to agree on the need for biosafety regulations that are aligned with the Cartagena Protocol. The NCAs have confirmed their participation in the national biosafety system, although levels of preparedness vary considerably between ministries.

103. The key measure of sustainability is of course the implementation of a national biosafety system over time. This will depend on (i) the ability of the project team and CONAP to have draft regulations approved by governmental or ministerial agreement before elections take place; and (ii) the commitment level of the next government to implement the biosafety system. Until administrative procedures and other regulations are approved and in place, the institutional arrangements and resources that are necessary for a functional system are unlikely to materialize quickly. As mentioned, CONAP expects to meet in April with NCAs, private sector representatives and other stakeholders to discuss the regulations and work out differences so they can be approved.

104. Social sustainability is very much influenced by public attitudes and their perception of the new biosafety policy. This is an uncertain aspect that could become critical given the prevailing polarization of views and misinformation on biosafety, LMOs and transgenic crops in particular. The project has invested time and resources into information dissemination and awareness raising.

105. However, influencing the media and public opinion will require a more consistent and longer-term approach than is possible within a four-year medium sized project. Recent public protests against a proposed patent law that would have restricted the multiplication of seeds imported from U.S companies (dubbed the *Monsanto law*) led to its withdrawal; a similar scenario could develop against a biosafety policy that aims to introduce regulations and procedures for LMO risk management and making decisions on their release into the environment. The possibility that NGOs and sectors of the public might lobby against national biosafety regulations during an election year could represent the greatest threat to the consolidation and sustainability of the project's results in general. Public opinion needs to be

informed with balanced messages that are backed by scientific fact, so that they are aware of the perceived ‘pros’ and ‘cons’ surrounding LMOs and transgenic crops, and the reasons for having a national biosafety framework.

D.2 Institutional Sustainability

106. Assessing the sustainability of a framework that was approved in writing but is not yet operational is a speculative exercise. Yet the policy advances that were achieved improve the conditions for some degree of sustainability. The ministries that are National Competent Authorities (NCAs) – Agriculture, Environment, Economy and Public Health – were familiarized with biosafety issues and LMO risk management. They are the nucleus of the planned National Biosafety Council that also includes CONAP, SENACYT and other public institutions with biosafety interests. The sustaining of the emerging institutional framework and capacities developed through the project (once again) hinges on the approval of regulations that enable implementation of the national biosafety system. The MSPAS and possibly other NCAs will need additional staff or budget support and further technical assistance, before they are prepared to assume new biosafety functions. CONAP and OTECBIO have contributed decisively to post-project continuity and institutional sustainability by retaining the NPC and project assistant until December under its own budget, and deciding to create a Biosafety Office within its organizational structure.

107. There will be continuity if GEF and UNEP approve the follow-up project proposal that was drafted by CONAP and endorsed by MARN for funding (in its capacity as GEF National Focal Point). The new initiative builds on the advances of this project and focuses on supporting implementation of the NBF; its scale and budget almost double those of this project.

D.3 Environmental Sustainability

108. As described above, one of the reasons for having a national biosafety framework is to protect biodiversity. This is an extremely important point for Guatemala, which is genetic center of origin for maize and domestication of beans, squash and cassava. There are still wild maize relatives and other native crops that are cultivated and need to be protected from LMO seed that crosses the borders. However, at present the project has not had an environmental effect that can be sustained, since the approved regulations are lacking and the biosafety system cannot become operational.

D.4 Catalytic Role and Replication

109. Replication is usually inspired by implementation and validated experience. The evaluation did not come across examples of replication, and it may be too early to look for this. The catalytic role played by the project was important in shaping Guatemala’s first biosafety policy and bring CONAP and the NCAs closer together. The value of the project’s catalytic role will appreciate considerably if the proposed regulations are approved and the biosafety system commences implementation.

E. Efficiency

110. The project was conducted efficiently and attracted the participation of various ministries and institutions. This was influenced to a large extent by the management performance of the National Project Coordinator and support team. Outputs were delivered within approved budgets, and project revisions re-programmed unspent funds to following years or moved them between budget lines. Implementation of the first component was slow during the first years, as pointed out by the Mid-Term Review, and picked up afterwards. The project was extended for several months to compensate for the delay in getting started, which gave more time to achieve its outputs. Overall project delivery was satisfactory despite the initial delay and suspension of disbursements for a six months in 2014 (while expenditure figures were being reconciled).

111. Cost-efficiency was encouraged by project decisions and aspects of its implementation approach:

- The third component's emphasis on in-country training guided by international expertise helped expose a larger mass of government and technical partners to functioning national biosafety frameworks with risk management and decision-making processes. Aside from reaching a wider audience, this helped to develop awareness and "buy in" from participants from within NCAs and other institutional partners to the proposed biosafety system. It provided a cost-effective alternative to financing international study tours and advanced degrees, which the project also supported on a more modest scale.
- The project selected the most accessible option to approve national biosafety policy - a governmental agreement signed by the President – instead of seeking approve legislation, which is stronger from a legal perspective yet time-consuming and difficult to move forward (as experienced by the first UNEP-GEF biosafety project).
- The post-graduate diploma course on biotechnology and biosafety continues to be offered online through the BCH at practically no cost.
- Funds were saved by the decision to focus project resources on strengthening one central laboratory (at ICTA) for LMO detection and risk analysis, instead of equipping five laboratories as was planned in the project document.
- Funds were also saved when the NPC directly assumed the technical work of drafting biosafety regulations and administrative procedures, initially intended for international consultants.
- The NPC'S salary was fully paid by CONAP for 18-months as part of government cash co-financing.
- After the project terminates, the NPC and project assistant will be retained by CONAP until December to manage the planned Biosafety Unit.

112. Efficiency was also the result of learning and experience acquired over time. There were early delays despite the project development (PPD) support and Inception Workshop. Some institutions were slow in preparing for the project, which was supposed to start in January 2010 and actually began in August. According to the project team, it took several months of implementation time to get institutions to participate in the project.

113. The project document foresaw the need to contract an external entity to administer the GEF grant in Guatemala, avoiding delays and administrative problems that were likely to occur if project funds were managed from the government budget. However, the incompatibilities of the Atlas and Anubis financial reporting systems (used by UNOPS and UNEP) were the main obstacle to project efficiency. The use of different budget lines and reporting criteria caused recurrent misunderstandings and required reconciliations of expenditure that absorbed CONAP staff time. This culminated in the 9-month suspension of budget disbursements by UNEP due to perceived over-expenditures that were subsequently clarified.

114. Financial management and delivery have been efficient. As of April 2015, UNEP had advanced US\$ 615,462.00 to the project, representing 98% of the GEF contribution. Likewise, the June 2014 PIR reported that US\$ 480,702 had been disbursed to the project (78% of the total GEF contribution) of which US\$ 431,754.98 (70% of the GEF contribution) had been spent. Hence levels of expenditure have kept up with the advance of the implementation process. Effective delivery was aided by annual budget revisions that re-programmed unspent funds to subsequent years and transferred resources between budget lines.

F. Factors and Processes affecting Project Performance

F.1 Preparedness

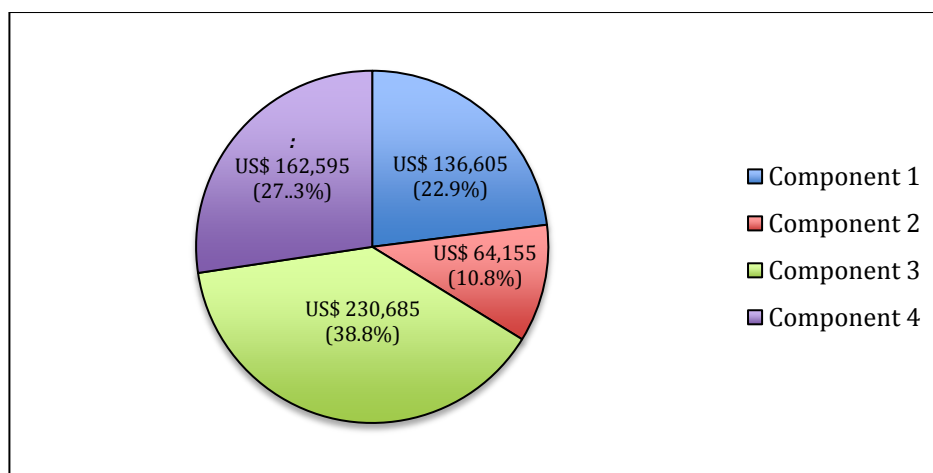
115. The project's design was comprehensive and well thought, supporting the fundamental elements of an operational biosafety system. Policy formulation, approval and implementation were sequentially linked, while capacity development and information management were overarching components that fed into many outputs and outcomes.

116. The GEF grant was allocated, in order of magnitude, to capacity building and human resource development (Component 3), information management and public awareness (Component 2), development of policy and regulatory frameworks (Component 1), and support to implementing the national biosafety system (Component 2).¹² The emphasis on capacity development, information sharing and public awareness was correct for a project that aimed to create the enabling conditions for a national biosafety system, against inadequate policy and legal provisions and low levels of institutional preparedness and public awareness. The four technical components addressed the systemic and institutional dimensions of putting a working biosafety system in place. The allocation of GEF funds by project component is presented in Figure 5.

117. Budget allocations were adequate for most project deliverables, which appear to have been affected more by timelines and governmental decisions outside the project's control. The National Project Coordinator noted that there weren't enough funds to print biosafety guides for teachers as was planned under the fourth component.

¹² The government co-financing contribution follows the same pattern.

Figure 6
GEF Contribution by Technical Component



118. As national executing agency for earlier biosafety projects, CONAP was able to build the lessons of prior initiatives into project design. The project management structure, steering and advisory committees were clearly articulated in the project document. The partnership arrangements applied served to connect institutions and sectors that will play a role in the proposed National Biosafety Council. The responsibilities of National Competent Authorities (NCAs) were clarified and accepted in principle by the designated ministries. The combination of cash and in-kind co-financing from Guatemalan institutions surpassed the GEF contribution, representing 53% of the total budget.

119. The evaluation also notes examples of unpreparedness that are similar to those found in other UNEP-GEF biosafety projects. The objectives, outcomes and combined outputs were over-dimensioned for a project of this scale and duration, in particular given Guatemala's limited advances in implementing the Cartagena Protocol. Baseline capacities, public awareness and the enabling policy and legal environments were insufficiently developed to allow the design, approval and implementation of a national biosafety system within a four-year period. As early as 2012 it was recognized that full implementation of the CPB would not happen in the project's lifetime (see box). In spite of the signals, expected outcomes and other deliverables were not revised to more realistic levels, nor were expectations adjusted. Although the project was extended by six months to compensate for delays (with the same budget), longer timeframes and adjusted resource allocations would have been necessary to achieve project objectives and outcomes - or at least, to transfer project results to the next government.

"The programed outcomes and outputs of the project do not reflect the approved budget and the lifespan of the project. Guatemala has few advances in implementation of the CPB; for this reason, to reach a full implementation is not a real possibility at the end of the project."

- Mid-Term Review (2012)

120. The project preparation (PPD) support and inception workshop were intended to organize the project's implementation arrangements and minimize the risk of start-up delays. The latter did not happen and implementation began five months later than scheduled. The

project team recognizes that in the beginning they lacked experience for executing projects of this type, and had difficulty understanding UNOPS and UNEP administrative and reporting guidelines. The situation was aggravated by the vacancy of the UNEP Task Manager post - an essential resource person and link to UNEP Headquarters – for most of the first year.

“We were dreamers to think that biosafety regulations could be designed and approved in six months, when it took longer just to build consensus.”

- Cesar Azurdia, National Project Coordinator

121. The recurrent difficulties faced in applying the Anubis reporting system declined over time, in part due to the guidance offered by the new UNEP Task Manager. Reporting difficulties were reinforced by the incompatibility of the Atlas system used by UNOPS with UNEP’s Anubis systems, which apply different budget lines and reporting criteria. As a result, the quarterly Atlas reports submitted by UNOPS had to be translated to the Anubis format and inconsistencies explained to UNEP’s

Financial Manager. The oversight of these differences at the time that UNOPS was contracted as a cooperating UN agency for in-country budget management and disbursement is an example of corporate unpreparedness.

F.2 Project Implementation and Management

122. The project’s implementation approach and management performance were its main strengths. The implementation arrangements described in the project document were followed, and complemented by adaptive actions that helped achieve outputs. Optional approaches were considered to secure the approval of proposed biosafety policies and regulations (legislation, law, decrees/governmental agreements signed by the President or ministers - and the most expeditious path selected. Project initiatives were implemented within the framework of existing laws, policies and institutional arrangements when possible. In general, the project team’s management performance and the support provided by CONAP and OTECBIO were of high quality.

123. The findings of the 2012 Mid-Term Review were positive and validated the implementation approach. The MTR’s recommendations for improvement – for example, giving greater attention to the need to approve biosafety policies under the first component – were acted on by the project team.

124. Participation and consultation were intelligently used to draw institutional commitment, as well as to inform and receive feedback. The project team periodically reported progress to the Steering Committee (*Comité Directivo*) as was envisioned in the project document. This was important to expose government partners to biosafety issues and encourage communication between CONAP and designated National Competent Authorities. The Steering Committee represented an embryonic version of the National Biosafety Council that will oversee the implementation of the biosafety system. The design of the biosafety policy benefitted from the feedback of a Policy Task Force that brought together national scientific, academic and technical expertise. Several persons interviewed for this evaluation had participated in project consultations on biosafety policies and regulations; most felt that the project team considered their views.

125. The decision to focus the largest share of project funds on in-country training and capacity development enabled the project to reach a broader audience and has raised institutional support for the project and national biosafety framework. Interviewed participants consistently praised the quality and organization of the training offered by the project.

126. In a country context where public views on transgenic crops are sharply divided and often critical, the image projected by the project was important. The project message, which is reflected in the policy document, has been balanced with recognition of benefits of biotechnology and possible risks of LMOs to biodiversity. The project draws on a baseline study of native maize varieties and other species that maps out their location; the study is an important national reference document that was written a few years ago by the National Project Coordinator. The personal capacity and prestige of the NPC was often singled out as a contributing factor that drew the participation of government institutions and universities, and facilitated cooperation with biosafety institutions of other countries.

F.3 Stakeholder Participation and Public Awareness

127. The evaluation considers that the project made tangible efforts to promote participation and inclusiveness in the project's implementation, and that the level of actual participation was more influenced by institutional preparedness and motivation rather than the availability of mechanisms. On the other hand, the absence of an operational biosafety framework has logically affected the scale and level of stakeholder participation, which stands to increase once the system is in place and there is increased momentum.

128. The cross-sector, inter-institutional dynamics that characterize national biosafety frameworks require the participation of a broad range of stakeholders. NBFs tend to link similar groups of institutions according to institutional mandates, the guidelines of the Cartagena Protocol, and the types of LMOs to be regulated. While the Guatemalan project stakeholders were mapped out during the PPD design phase, the key institutional actors were already known from previous biosafety initiatives implemented in Guatemala: CONAP as the national focal point to the Cartagena Protocol and Convention on Biodiversity; and the ministries for agriculture (MAGA), environment (MARN), economy (MINECO), health (MSPAS) and National Secretariat for Science & Technology (SENACYT) in their capacity as National Competent Authorities that are legally empowered to define and regulate biosafety policy, and expected to constitute the National Biosafety Council that will manage Guatemala's biosafety system once it is operational.

129. The project foresaw three stakeholder advisory structures: (i) A Steering Committee (*Comité Directivo*) composed of CONAP and the aforementioned NCAs, (ii) a Policy Task Force consisting of technical representatives of public, academic and private entities interested in the drafting of a national biosafety policies, and (iii) a Scientific Subcommittee of selected individuals with the capacity and credentials to advise on the drafting of scientific and technical documents related to the national biosafety system.

130. The project team periodically reported progress to the Steering Committee (*Comité Directivo*). The Steering Committee held ten meetings that were attended by the project team and representatives of CONAP, the NCAs and, one one occasion, the UNEP Task Manager.

131. Based on the meeting reports, the Steering Committee appears to have served informative and coordination more than oversight. Progress reports and work plans were presented by the NPC and accepted without much deliberation or discussion. However, the Steering Committee was supportive of the project and clearly helped in coordinating activities with NCAs and other stakeholders.¹³

132. Biosafety policy design benefitted from the feedback of the “Biosafety Policy Task Force” composed of scientific, academic and technical personnel with biotechnology and biosafety backgrounds. Several of the persons interviewed had participated in project consultations during the drafting of biosafety policy and regulatory proposals. Most felt that their views had been considered, with the exception of the private sector participants who feel that their suggestions for the regulations were overlooked and have forwarded their observations to the pertinent Ministers. SENACYT led the review and selection of research proposals that were funded with project grants. NGO participation in project consultations and implementation was negligible, despite invitations to meetings and other events.

133. Public awareness is essential for the political and social viability of the biosafety policy, yet is highly polarized and to a large extent critical towards measures that contemplate the release of LMOs and transgenic crops in particular. As such, it was recognized as a central theme in project design and the fourth component was dedicated to information management and the implementation of public sensitization strategies. Strategies were formulated and sensitization workshops held with different stakeholders (iNCA technical staff, journalists, educators). Information availability was improved with the publication of LMO booklets and the dissemination of calendars, as well as the support provided to strengthen the Biosafety Clearinghouse. Although NCAs now have improved access to biosafety information via the BCH, there is little momentum or demand for such information in the absence of a functioning biosafety system. The evaluator was told that there weren’t enough funds to print biosafety teacher’s guides to accompany the school text. Beyond that, the fourth component was insufficient in scale and duration to have any measurable impact on public opinion, and that a more sustained, longer-term approach is called for.

F.4 Country ownership and driven-ness

134. This was another project strength. The project was instilled with a strong sense of national ownership from the design phase, which was led by a recognized national biotechnology researcher and university (UVG) faculty member. During the project’s formulation there were workshops and consultations with diverse stakeholders, followed by an inception workshop after its approval. During the drafting of the biosafety policy, a Policy Task Force was created with the aim of sharing advances in the document and receiving feedback.

135. CONAP assumed full responsibility as executing agency in assisting the project, and has been decisive in creating conditions for the sustainability of project initiatives and results. The support provided by CONAP (and OTECBIO) to this and prior UNEP-GEF biosafety projects has been commendable. CONAP paid the full salary of the NPC and project assistant

¹³ Project document, pg. 34

for eighteen months. Its Information Department hosts and finances the operation of the BCH on a permanent basis.

136. Implementation was very much driven by the CONAP-based project team. The project team and CONAP deservedly appropriated ownership through their capacity and dedication to project implementation. The NPC work responsibilities that were initially intended for international consultants. Although the involvement of NCAs and other partner institutions varied according to their capacities and motivation, their commitment to the project was established from the onset with cash and in-kind contributions that exceeded the GEF contribution. Institutional involvement was also driven by existing mandate: CONAP has been the national focal point to the Cartagena Protocol and Convention on Biodiversity, and is therefore responsible the lead entity for developing a national biosafety framework. MAGA already had legal responsibility for regulating the commercial release of LMOs through legislation 2006/386.

137. There is also an institutional will to continue. CONAP and the four NCAs have endorsed a follow-up project proposal that was designed by the National Project Coordinator, to support the anticipated implementation of the biosafety system after the regulations and procedures have been approved. After the project is finished, CONAP plans to retain the NPC and project assistant until the end of 2015, and create a Biosafety Unit as part of its organizational structure.

F.5 Financial Planning and Management

138. This was one of the more problematic aspects of the project. The executing team followed the standard UNEP financial management and reporting guidelines as specified in the project document. Cash advance requests were to be prepared quarterly and approved by UNEP on the basis of satisfactory expenditure reports for the preceding period, both of which were the NPC'S responsibility. In practice this did not function as smoothly as expected due to unfamiliarity with reporting systems that used different formats, and other problems that are identified below. A final expenditure statement has to be submitted before the project terminates.

139. CONAP had identified the need to for an external institution to receive GEF funds, process payments and make disbursements to the project. This is a common arrangement for government-executed projects in the region because it avoids the bureaucratic procedures and other limitations often associated with public sector budget systems. The Guatemala representation of the UN Office for Project Services (UNOPS) was contracted to manage GEF funds, receiving 6.5% of the total budget as administrative overhead. UNOPS disbursed funds and provided reports of expenditure to theNPC , who would forward the data to UNEP's Fund Manager. UNOPS also managed the contracting of local suppliers of goods and services. There were advantages to this arrangement: UNOPS had credit with hotels that were used as workshop venues, which enabled the project to pay after the event with flexibility.

140. However, this apparently good idea led to recurrent reporting problems stemming from the different formats and criteria used by UNOPS and UNEP. It was already known that both entities have different systems, and their compatibility should have been considered before UNOPS was invited to join the project.

CONAP and UNOPS entered the project without an understanding of Anubis, the reporting system used by UNEP for its biosafety portfolio. Learning how to put the Atlas reports received from UNOPS into UNEP's Anubis format was time-consuming and subject to trial-and-error for a long time. The following issues were raised by interviewed project staff:

- The financial reports provided by UNOPS to CONAP used the Atlas format, with different budget lines than those used by UNEP. Reported expenditures did not identify the provider or include the IVA tax that was documented in the invoice. When this happened, the project assistant had to search through files and invoices to match reported expenditures with their corresponding transaction.
- The figures reported in the monthly expenditure reports prepared by UNOPS often differed from those included in the quarterly and annual reports. This occurred because some expenditures were not recorded until 3 months following the transaction (i.e. insurance payments for project consultants) while others only appeared in the annual report.
- The reported expenditures included an administrative overhead cost that corresponded to UNOPS and as a result exceeded the amount invoiced.
- Activities for Components 4 and 5 were reported under Atlas but not Anubis because they were managed by UNOPS. As a result, expenditures presented in the UNOPS annual reports exceeded the amounts reported by CONAP to UNEP.
- Anubis mistakenly reported the funds earmarked for the Terminal Evaluation as having been disbursed and spent by CONAP when they hadn't. The funds were advanced in anticipation of a planned administrative "blackout" that was to take place between October and November 2011 (but never occurred). This led to another discrepancy in expenditures that was corrected by the Task Manager.
- Anubis did not reflect the "loss and gains" obtained from fluctuations in quetzal-dollar exchange rates, which were applied by UNOPS.
- The annual audits foreseen in the project document weren't applied because UNOPS is a member of the UN system. Had audits been conducted, they might have flagged the incompatibility of financial reporting systems and suggested alternative arrangements.

141. The discrepancies in financial figures prompted UNEP to suspend disbursements to the project until the reported expenditure figures were reconciled. As a result, the project did not receive funds between February-November 2014 and had to postpone a risk analysis workshop (led by an expert from ICGB), a study tour to Costa Rica (the opportunity was lost thereafter), and the purchase of office equipment and laboratory reactivities (for LMO detection).

142. The project team recognized and valued the administrative support provided by the UNEP Task Manager, whose guidance and coaching helped to clear misunderstandings and reconcile expenditure data.

143. In spite of this, financial delivery has been satisfactory. As of April 2015, UNEP had advanced US\$ 615,462.00 or 98% of the GEF contribution. The June 2014 PIR reported that US\$ 480,702 (78% of the total GEF contribution) had been disbursed to the project, out of which US\$ 431,754.98 (70% of the GEF contribution) had been spent.. The levels of expenditure seem to have kept up with the advance of the implementation process. Effective delivery was aided by annual budget revisions that re-programmed unspent funds to subsequent years and transferred resources between budget lines.

F.6 UNEP Supervision and Backstopping

144. UNEP supervision was exercised through the project Task Manager, who works out of UNEP's regional office in Panama (ROLAC); and the Fund Manager based at UNEP Headquarters.

145. The Task Manager's supervisory functions centered on verifying the quality and timeliness of output delivery and project implementation in general. This was combined with an important supportive role by which the Task Manager offered guidance, advice and "backstopping" to the project team, in provided the link to the Fund Manager and UNEP Headquarters. The Task Manager's role is critical for helping NEAs and NPCCS find their way through management, administrative and reporting procedures that are complex to those unfamiliar with UNEP-GEF projects, and particularly so during the inception stage when implementation arrangements are being established and activities are kicking off.

146. The importance of the Task Manager's function was highlighted by its very absence: The post was vacant for much of the first year, at a time when the newly-recruited project team needed guidance to understand UNEP administrative procedures and Anubis in particular.

147. The arrival of a new Task Manager with a biosafety background facilitated implementation and communications considerably. The National Project Coordinator recognized the "unconditional support" that was provided by the TM. The TM was instrumental in clarifying discrepancies in expenditure data and helping the project team answer questions raised by UNEP Headquarters on financial reports or requests for advances.¹⁴ In 2012, the TM gave three days of training on Anubis that was highly appreciated by the project assistant (and should be required for the inception phase of all UNEP-GEF biosafety projects to address a recurring need). The TM also conducted the Mid-Term Review and prepared an evaluation report that is substantive and proposes corrective actions that helped project implementation.

" The absence of a UNEP Program official in charge of the project for a long period of time was an impediment for the advances of the project. The direct link with UNEP was broken..."

- Mid-Term Review (2012)

F.7 Monitoring and Evaluation

148. A Monitoring Plan was included in the project document that complied with the essential UNEP-GEF monitoring requirements. UNEP standard monitoring, reporting and evaluation processes and procedures were to be applied. Outcome indicators applying SMART criteria were annexed to the project document. The stakeholder mapping and contextual analysis contained in the project document was nurtured by the PPD phase. There was also baseline information on the distribution of wild maize relatives and native varieties of maize and other crops, that would enable the monitoring of changes to the pre-project situation once

¹⁴ In most cases these perceived discrepancies were caused by differences in the reporting criteria and formats of the Atlas and Anubis systems. At one point, UNEP disbursements to the project were suspended between February-November 2014 due to inconsistencies in expenditure data, which led to the postponement of a risk analysis workshop and purchase of equipment, in addition to a missed study tour to Costa Rica.

the biosafety system was in place. Assessments of existing legislation and policies were considered in the design of project activities. In general, monitoring provisions were satisfactory albeit largely limited to reporting.

149. The UNEP Task Manager visited Guatemala to review project progress with the NPC and CONAP partners. In reality, monitoring was integrated with the TM's supervisory and backstopping support roles. The Task Manager's inputs were considered to be very useful by the project team, and clearly augmented by her familiarity with the regional biosafety context and UNEP's administrative guidelines.

150. The Task Manager conducted the Mid-Term Review in 2012. The MTR assessed project performance in terms of its relevance, effectiveness and efficiency) and the likelihood of achieving intended outcomes and impacts. The MTR had two primary purposes: (i) to provide evidence of results to date and of the likelihood of outcomes and impact in the future, to meet accountability requirements, and (ii) to identify the challenges and risks to achievement of the project objectives and to derive corrective actions needed for the project to achieve maximum impact and sustainability. The resulting MTR report is an accessible document that provides a balanced, substantive analysis of project progress. It recognizes the advances that were made under the third and fourth components, and emphasized the importance of securing policy approval (in relation to the first component). The outputs are graphically presented in color codes according to their status (achieved, in progress, pending). The MTR also analyzes the principal challenges facing the project: Low engagement of government decision-makers, the turnover of personnel following national elections and the change of government in 2012, and low technical capacities. The Biosafety course developed with the USC was considered a possible solution to these challenges. The MTR also presents a well-thought out analysis of lessons learned, which includes reflections by the project team.

F.8 Complementarities with UNEP strategies and programs

151. Project objectives were consistent with – and have contributed to - UNEP's Environmental Governance sub-program, a priority focal area within UNEP's 2010-2013 Medium Term Strategy (MTS) and included in its bi-annual s of Work (POWs). The project was additionally linked to the GEF's Biodiversity priority area.

152. The project is part of a “third generation” of UNEP-GEF biosafety initiatives that was preceded by global initiatives supporting the development of national biosafety frameworks (NBFs) and the establishment of Biosafety Clearinghouses (BCHs) for information management. The present project builds on the advances of these earlier initiatives (both of which were implemented in Guatemala) and is consistent with similar “third generation” projects that were implemented (or are under implementation) in Costa Rica, other countries of the LAC region and the Caribbean. The linkages resulting from these complementarities led to the programming of training activities in Costa Rica, in collaboration with CTNBio (Costa Rica's National Technical Commission on Biosafety).

153. Other complementary programs included the GEF-funded “Latin America: Multi-country Capacity-building for Compliance with the Cartagena Protocol on Biosafety” which supported capacity development and has contributed assessment experiences that could help towards standardizing biosafety procedures in the region. Within Guatemala, UNESCO has

funded the design of a human resource training strategy in biotechnology that was coordinated by SENACYT. It included biosafety as a training theme, and supported the drafting of a National Biotechnology and Biosafety Sensitization Strategy that provided an important input to this project.

V. CONCLUSIONS

154. *The project has had moderate success in assisting Guatemala to put in place a well articulated, transparent and effective national biosafety system.* There were important advances over the baseline situation in policy development, institutional awareness and articulation. *The most important achievement was the drafting of a national biosafety policy that was recently approved by the government:* Guatemala's first "National Biosafety Policy of Living Modified Organisms 2013-2023" (*Acuerdo Gubernativo 207/2014*) articulates dispersed legal provisions and provides a framework for evaluating requests and reaching decisions on the release of LMOs. The policy's pillars are (i) the development of mechanisms to regulate LMO risk management practices; (ii) strengthened institutional capacities, (iii) transparency and public participation, and (iv) research and development. It formalizes the role of ministerial National Competent Authorities (NCAs) and foresees a National Biosafety Council with the participation of scientific and technical institutions. Legally, the *acuerdo gubernativo* does not have the weight of approved legislation and can be revoked. This could be an issue with national elections taking place this year. However, the approved national policy is a significant accomplishment that is recognized by project partners and brings Guatemala's biosafety momentum to a new threshold. Particularly considering that biosafety legislation was already drafted and submitted for congressional approval almost a decade ago without result.

155. *A second important project achievement is improved institutional awareness and capacities for biosafety management.* An important share of the project budget was devoted to implementing a training component that has raised the awareness of NCAs on biosafety issues in general and LMO risk management in particular, in addition to an improved understanding of institutional responsibilities as outlined in the policy document. The decision to focus on in-country training (using international expertise) allowed the project to reach a broad audience, raising the threshold of biosafety awareness and 'buy in' to the proposed system. Institutional knowledge and competence for LMO risk management was improved in most cases, although hands-on training through simulations and mock trials was lacking. A post-graduate diploma course on biosafety was offered through the national university over a two-year period and is now available online; this offers an instrument for sustaining capacity improvements over time and coping with the turnover of technical staff.

156. Information management and public awareness were thematic priorities and the basis of the fourth component. There were improvements in biosafety information management through the production of technical guides, a post-graduate diploma course and information materials that are available through the Biosafety Clearing House (BCH), and in the production and dissemination of awareness materials for a broader public. A school text on biotechnology and biosafety was designed for sixth-grade level and will be tested on a pilot basis by the Ministry of Education, with the possibility of wider-scale application. However, the project timeframe and budget were insufficient to sustain the effort needed to have measurable effect on public awareness or the media.

157. *The enabling conditions for implementing a national biosafety system and complying with the Cartagena Protocol are present. However, the adoption and operationalization of the system have not yet happened and depend on political decisions that are external to the project.* The most immediate challenge is to secure government or ministerial approval of regulations that are necessary to operationalize the system and guide LMO risk evaluation and decision-making. The system's implementation is a requisite to fully achieve the project objective and various outputs and outcomes that are implementation-driven. CONAP intends to continue working for the approval of biosafety regulations and plans to open a Biosafety Unit. However, the present juncture is not very favorable for launching a system, which in turn limits impact on the scale foreseen in the project document. Capacity improvements will decline over time if they are not applied.

158. *Project design was comprehensive but over-ambitious in relation to the baseline situation, the project's timeframe and funding. There were also attribution issues with outputs and outcomes whose achievement depended on external factors outside the project's control.* The partial achievement of various outputs and outcomes was influenced more by design than project team's performance. The project objective and several outcomes were over-dimensioned for a four-year medium size project. The project went as far as could be expected considering the national context, time and resources available. Four years was evidently inadequate to design, approve and implement a national biosafety system, build capacities and have a substantive effect on public awareness. More so in a baseline situation where technical capacities and institutional awareness were low, national elections were scheduled, and a biosafety law had been drafted almost a decade ago with no results.

159. Several outputs and outcomes were based on the assumption that biosafety policies and regulations would be implemented. Their achievement therefore depended to a large extent on external *government* decisions. In the absence of an approved regulatory framework or an official decision to implement the system, the project's momentum declined as it moved up the causal pathways. As a result, some of the higher order outputs and outcomes that were directly linked to the project objective could not be realized.

160. *The project's management and implementation approach were contributors to good performance.* Overall performance was satisfactory and in some cases highly satisfactory considering the time and resources at its disposal, national elections and the change of government. The implementation process was almost entirely driven by the project team and NEA, with demonstrations of ownership and adaptive management. Alternative approaches were considered to secure approval for proposed biosafety policies and regulations, and the most expeditious path selected. The capacity and prestige of the NPC played an important role in attracting broader institutional and academic participation. Practically all interviewed NCA representatives and project participants recognized the NPC's technical capacity and approach as determining factors to project performance.

161. *Additional technical and budgetary support is necessary to deliver pending outputs, continue capacity building and support the implementation of a functional biosafety system.* There are encouraging signs of continued commitment by the NEA: CONAP will retain the NPC and project assistant until December and plans to launch a Biosafety Unit. And a follow-up project proposal was recently formulated and formally endorsed by the government: "Strengthening and expansion of capacities in biosafety that lead to a full implementation of the

Cartagena Protocol on Biosafety in Guatemala” is considerably broader in scope and budget than the present project, and focuses support on continued NCA capacity building and articulation (with emphasis on LMO detection and risk analysis), education and public awareness, information/ knowledge management, and backstopping support for implementing the biosafety system. It also contains an innovative field component that establishes conservation areas for native wild relatives of maize and other crops, which is critical to their protection and reproduction (and sends a positive signal to environmentalist sectors that are opposed to the cultivation of transgenics or release of LMOs in any form).

162. Although the proposal was presented in a preliminary format and requires further elaboration, it builds on the achievements of the prior project and will be essential to move Guatemala’s biosafety framework forward to the next stage of operationalization and implementation. However, it is recommended that further support from GEF or UNEP should be contingent on (i) the approval of the draft biosafety regulations that were designed through the project; and (ii) a clear signal that the next government intends to implement the system. The project has done its part and there are several proposals on the table; it is now up to government to respond.

163. The following table presents the ratings given by the evaluator to the project, based on the evaluation criteria applied in this report:

Figure 7

Evaluation Ratings

CRITERION	SUMMARY ASSESSMENT	RATING
A. Strategic Relevance	Guatemala is a center of origin for maize with continued presence of wild relatives and native varieties under cultivation Project design based on gaps and threats identified during PDF phase, linking systemic and institutional interventions. Project builds on prior UNEP-GEF support initiatives. Biosafety system has added relevance given approved free trade and customs integration agreement with Honduras, which has an operational biosafety framework.	HS
B. Achievement of Outputs	The project achieved most of the outputs under Components 1 and 3 that were within its control and attributions, and not dependent on external political decisions or government implementation of the NBF (Component 2).	S
C. Effectiveness: Achievement of Project Objectives and Results	Objectives partially achieved with approval of Guatemala’s first national biosafety policy and improved institutional capacities. However, the adoption and implementation of BS policies will depend on the government’s approval of the enabling regulatory framework and administrative procedures. CONAP will try to secure presidential or ministerial-level approval, before national elections take place.	MS
1. Achievement of Direct Outcomes	Same as above. Outcomes were partially achieved to the extent that a national biosafety policy framework was approved and capacities strengthened. However, outcomes linked to the implementation of a national biosafety system and public awareness strategies were not achieved to date and their status is uncertain.	MS

2. Likelihood of Impact	Uncertain at this stage for the same reasons mentioned above. The project has improved enabling conditions for impact to occur, however the implementation of biosafety measures will depend on the approval of regulations and the political /budgetary commitment of the next government.	MS
3. Achievement of Project Goal & Planned Objectives.	The project did not achieve the main project objective of putting in place an articulated, effective and transparent biosafety system, although enabling policies were approved and instruments developed. The project goal of facilitating compliance and implementation of the Cartagena Protocol through a national biosafety system was partially achieved with the approval of a national policy and designation of NCAs. In terms of the project purpose, the outputs that have been achieved are unlikely to have a noticeable effect on conservation, sustainable use of biodiversity, or reducing potential risks to wild relatives and biodiversity (again, until an operational system is in place).	MS
D. Sustainability & Replication	The <i>Acta Gubernativo</i> that approves the biosafety policy is the project's main achievement and is likely to continue in effect unless derogated by the next administration. However, the sustainability of project outputs/results is uncertain at present and will depend on approval of draft regulations so as to enable the implementation of a biosafety system that exercises institutional capacities, and a political and budgetary commitment from the next government, and the approval of follow-up UNEP-GEF support. A good sign is that the CONAP is still working for the regulatory framework's approval, and will extend the contract of the Project Coordinator to head the planned Biosafety Office. CONAP has been financing the BCH as a permanent budget item.	MS
1. Financial	Same as above. A new biosafety project proposal was recently endorsed by the government for GEF-UNEP support, involving a considerably larger budgetary scale to support the biosafety system's implementation and continue with capacity building and public awareness.	MU
2. Socio-Political	Guatemala's first national biosafety policy received presidential approval; however this does not carry the strength of approved legislation and could be revoked by the next administration. Regulations need to be approved to make them operational. National elections will be held this year followed by the installation of a new government that has yet to be familiarized with the project's work. At present there are polarized perceptions and public opinion on biosafety issues and transgenics in particular.	MS
3. Institutional Framework	The project has contributed to important advances such as designation of NCAs within the approved policy framework, and identification of institutional responsibilities for LMO risk management. However, the formalization of these roles depends on the approval of enabling regulations followed by policy implementation.	ML
4. Environmental	The biosafety system needs to be applied in order to have environmental effects that can be sustained.	MU

5. Catalytic Role & Replication	Same as above.	MU
E. Efficiency	The project has delivered outputs within the original budget and demonstrated good adaptive management. Several project decisions have enhanced cost-effectiveness.	HS
F. Factors Affecting Project Performance		
1. Preparation & Readiness	The capacities of CONAP and the Project Coordinator were important factors in project performance. There was a preparatory design process led by a recognized biotechnology academic, and an inception workshop at the project's beginning. The preparedness levels of NCAs and other stakeholders were uneven. The incompatibilities of the Atlas and Anubis systems were overlooked by UNEP and CONAP when UNOPS was contracted to manage funds in country; this led to recurrent reporting problems and the need for reconciliations of expenditure figures. The four-year project period was insufficient in relation to the project's ambitious design. Start up was slow and the project team was initially unfamiliar with Anubis.	MS
2. Project Implementation & Management	The project implementation strategy was logical and followed a sequence of policy formulation, adoption and implementation, with over-arching capacity building and information management components. Implementation benefitted from the institutional support offered by CONAP and OTECBIO, as well as the recognized capacity and experience of the Project Coordinator. Adaptive management was applied as needed with positive results.	HS
3. Stakeholder Participation & Public Awareness	There were stakeholder consultations during the preparatory PPD phase, and for the design of draft policy guidelines and regulations. Participatory mechanisms included a Steering Committee composed of NCAs and a broader policy advisory committee. Institutional awareness was improved among NCAs and public sensitization activities were supported. However, a more consistent, sustained and better-funded approach is needed to have measurable impact.	S
4. Country Ownership & Driven-ness	The project was driven by CONAP with varying levels of ownership and commitment among NCAs and other stakeholders. The project design process included consultations and was led by a recognized biotechnology academic. UNEP and GEF supported country ownership throughout.	HS
5. Financial Planning & Management	Budget allocations were generally sufficient for envisioned activities and outputs. Budget revisions served to re-phase funds and adjust to changing circumstances. A major obstacle to project efficiency were the inconsistencies of format and reporting criteria between the Atlas and Anubis systems used by UNOPS and UNEP, leading to periodic delays and reconciliations of expenditure data. This in turn delayed the approval of expenditure reports and disbursement of funds to the project.	MS/MU
6. UNEP Supervision & Backstopping	The absence of a Task Manager for most of the first year undermined the guidance and backstopping that was needed by the project team. The replacement	

	Task Manager was technically competent in biosafety issues, helped the project team resolve reporting problems and provided training on Anubis. Her support was highly appreciated by the project team.	S
7. Monitoring & Evaluation	Effective M&E was provided by the Task Manager, who visited the project on several occasions and conducted the MTR.	S
Overall Project Rating	The project is recognized for its efficient performance in policy development, capacity development and information management. However, the political decision to approve regulations and implement the biosafety system is pending and prevents the full achievement of planned outputs and outcomes. As a result, the project objectives and goal were only partially realized, while the operationalization and sustainability of the advances achieved remain uncertain at present.	S

VI. LESSONS LEARNED

164. *Good performance does not always lead to impact if key deliverables are dependent on external decisions, or are over-dimensioned in relation to time and budget provisions.* Almost all respondents gave high marks to the NPC, whose involvement raised the project's profile and level of institutional interest. Project delivery was satisfactory in programmatic and budgetary terms. The quality of the training and policy assistance was of a high level - raising institutional awareness and driving the design and approval of Guatemala's first national biosafety policy. Policies and regulations were drafted in consultation with NCAs and other stakeholders. There is general agreement project team has done commendable work in moving Guatemala's biosafety agenda forward and raising institutional awareness and preparedness to levels well above the pre-project situation.

165. What was achieved does not fully meet the expectations of the project document. Slightly over a third of the project's outputs were fully achieved and almost half partially achieved (this will change if biosafety regulations are approved and the system commences implemented in the coming months). Only three of twelve outcomes were rated with "high" levels of achievement by the evaluation. These shortcomings had little to do with performance and more with project design and the dynamics of governance processes. The project was able to deliver very well on outputs that supported policy formulation and capacity building, but lost momentum as it moved along the pathways into the second and fourth components, which were more implementation-driven. This is because the governmental decision to approve proposed regulations and implement the system did not materialize. To an extent this "disabled" some of the higher-order outputs and outcomes that supported the operational phase and were closer the project objective in their positioning on the pathway.

166. *The project experience highlights the asymmetries of dynamics between project implementation plans that are modeled on log-frame paradigms, and public sector change processes that are less consistent and less linear.* Adaptive management becomes essential under these circumstances. The expectation that a medium-size project with a three-person team could trigger the formulation, approval, adoption and implementation of a national

biosafety system in four years was unrealistic. Particularly in a country with low baseline biosafety capabilities, disarticulated legal provisions, varying levels of institutional commitment, and a draft biosafety law that was submitted for congressional approval almost a decade ago without result. The start-up phase was slow and the project took five months to become operational after approval, in spite of the PPD support and an inception workshop. The initial project period saw national elections and a change of government in 2012, high turnovers of government staff and uneven institutional participation. The achievement of several outputs and outcomes required political decisions that were not factored into the time allocated. These are systemic issues that are not exclusive to this project and are found in other biosafety initiatives across the world. The uneven advance of different activities and outputs tends convergence in their implementation. In the end, the sequence of achieved outputs is more influenced by juncture and opportunity than by causal linkages or pathways.

167. *This leads to the question of why project implementation strategies do not follow causal pathways from the start, if such pathways maximize linkages and cumulative impact.* The answer is likely to center on structural factors that are inherent to the project cycle - starting with funding ceilings, time allotments and management guidelines that apply to UNEP-GEF projects (and all others as well in some form). While causal pathways illustrate the linkages and sequence of outputs that lead to impact and therefore raise project effectiveness, it does not necessarily follow that they are more cost-effective than the standard implementation approach that uses the Results Framework as its reference. An implementation strategy that follows a project's causal pathways is likely to have a greater cumulative impact, but might also move at a more incremental pace and require more time. More so if the implementation strategy is scaled to lower in intensity during election periods, "wait out" political decisions and government transitions, or transfer responsibilities to a new government. Project support systems (managerial, technical, administrative) are finite and close down before the final budget revision; at present, they are not designed to accommodate gradual exit strategies, incremental transfers of project responsibilities, or *ex post* backstopping missions to assist the transfer of results and responsibilities and encourage sustainability.

168. The discussion is theoretical because (to the evaluator's knowledge) there are no precedents of projects that were implemented according to their causal pathways or ToC linkages. Hence the issue is posed as a question rather than a "lesson". An interesting initiative would be to pilot a project that intentionally followed its pathways based on the ToC analysis, to evaluate if such an approach is economically and institutionally viable; this might also validate ToC as a project planning tool in addition to its value as an evaluation instrument.

169. *Projects that aim to influence national policy or legal frameworks face similar barriers and delays, because the achievement of key outputs often relies on political decisions or other externalities that are outside the project's direct control. Under these circumstances, political "savvy" and strategic thinking becomes as important as demonstrating technical competence.* As noted, project implementation dynamics are inconsistent with those of governance change processes, generating an underlying tension that is difficult to bridge. Many projects face situations in which the approval of new policies or legislation is held up by national elections, changes of government authorities or simple institutional indifference. Such bottlenecks are to be expected (and are often identified as risks during project design), yet recurrently hinder implementation processes and prevent projects from reaching the "higher order" outputs and outcomes that are essential for impact to occur. When these situations occur (as they do across

most of the biosafety project portfolio) an understanding of political decision-making processes - and having a lobbying strategy in place – can help to inform government and legislative decision-makers, encourage their ‘buy in’ to the proposals, and expedite approval. This may require investments as simple as organizing brief study tours for key legislators, holding informative breakfast meetings in attractive venues, hiring “lobbying” consultants connected to executive levels, or working more closely with the media. However, the time and resources that these actions require need to be factored into the project work plans.

170. *The training approach developed by the project team was cost-effective and of high technical quality. It offers lessons that are relevant for future biosafety projects.* To start with, the project understood its importance and allocated the largest share of the budget - almost 40% - to capacity building and human resource development. Most of these funds were earmarked for in-country training, which enabled the project team to extend biosafety training and awareness to a wider audience on a more regular basis. By reaching a larger crowd, the project was able to encourage greater “buy in” to the proposed biosafety system. Much of the training was conducted by experienced practitioners from other countries of the region and recognized international institutions such as ICGB. The institutional cooperation arrangements were cost-effective and can be replicated in the future. In general, the training approach that was followed generated a wider radius of impact than would have been possible had it focused on international study tours or overseas degree training (which were implemented on a smaller scale).

171. *The major obstacle affecting project administration and delivery was the incompatibility of financial accounting and reporting systems that are used by UNEP and UNOPS.* The decision to hire an external entity to manage and disburse GEF funds in-country was intended to circumvent slow government budget processes and ensure timely disbursement. UNOPS was selected given its recognized experience in administering funds for UN and other projects, and the presence of a country office. However, the expected gains in efficiency were undermined by the different budget lines, reporting criteria and formats used by the Atlas and Anubis systems. This led to repeated problems in reconciling expenditure figures submitted by UNOPS with the data recorded in Anubis, requiring the translation of all expenditures (by the project assistant) into the Anubis format on a quarterly basis. Nor were there annual audits that might have flagged the problem at an early stage, because UNOPS is exempt as a UN agency. The situation was further complicated by the absence of a Task Manager during much of the first year, and the project team’s complete unfamiliarity with either system. Although recruiting UNOPS was a national decision, it is common knowledge that UNEP uses a different accounting and reporting system than other UN agencies. The evaluator feels that this issue could have been detected by UNEP at the project appraisal/quality assurance stage or sometime thereafter, and corrective actions taken.

VII. RECOMMENDATIONS

172. *The most immediate recommendation is to continue working for the approval of biosafety regulations.* As the project comes to a close, the approval of the draft regulatory framework is its most urgent challenge. Biosafety regulations are necessary to operationalize the system, establish administrative procedures and assign institutional responsibilities for LMO risk evaluation and decision-making. Some aspects need to be further discussed with the

private sector (i.e. the assigned timeframes for processing LMO applications; a required experimental phase prior to release) in order to reach full consensus and enhance the political viability of approving biosafety regulations – and activating the system - during an election year. While the approval of proposed regulations requires an executive decision, CONAP will need to drive this process and intensify efforts to secure approval through an *acuerdo gubernativo* signed by the President, or alternatively, an *acuerdo inter-ministerial* that requires the approval of the Cabinet of Ministers and is considered a more accessible option. There are encouraging signs that CONAP will follow-up on this issue after the project's termination: The NPC and project assistant will be retained until December, and there are plans to open an internal Biosafety Unit. CONAP will also propose a meeting with NCAs and the private sector to work out differences in relation to the proposed biosafety regulations.

173. *There are external incentives that can be used to leverage a rapid government response and ensure the approval of biosafety regulations and adoption of a national system in the coming months.* The recent approval of a free trade agreement with Honduras – which regulates the production and commercialization of LMO crops through its own biosafety framework – underscores the need to have a functioning system in place. The trade agreement enters into effect in December and contemplates the integration of customs procedures. Hence it is in the government's own interest to ensure that biosafety regulations are approved and an operational framework is in place, to ensure that biosafety procedures are aligned and there is capacity to regulate trans-boundary movements of GM corn and other agricultural products at border points.

174. *Further GEF-UNEP support should be contingent on the approval of biosafety regulations and a clear signal from the next government that it intends to implement the national biosafety policy.* A second incentive involves a follow-up project proposal - “Strengthening and expansion of capacities in biosafety that lead to a full implementation of the Cartagena Protocol on Biosafety in Guatemala” - that was formulated by the NEA and recently endorsed by the government. This proposal is considerably larger in scale and budget, and is essential to move Guatemala's biosafety framework towards the next stage of operationalization and implementation. However, the Guatemalan government needs to demonstrate its commitment to implement the system by approving the draft regulatory framework, and formalizing institutional and budgetary arrangements that are needed for its implementation. While this will require political decisions from both the outgoing and succeeding government administrations, there is little point in approving further GEF or UNEP support if a clear national commitment is lacking.

175. *Both CONAP and the follow-up project (if approved) should incorporate a political strategy to its capacity building and awareness-raising initiatives, to have greater incidence at senior decision-making levels.* It is important that CONAP (i) continue to inform decision-makers who are positioned to influence the approval of biosafety regulations, (ii) nurture the commitment of the next government to the national biosafety policy and its implementation, and (iii) start working towards a more solid legal base than that offered by the *acuerdo gubernativo*. All of these tasks require political know-how and lobbying skills in addition to technical competence. This issue was raised as early as 2012 by the MTR, which recognized “...the urgent necessity of creating capacities at the high and medium level of the government personnel since they are the ones that have to support important decisions to allow the achieving of the project objectives. It is a common practice to create capacities only at the technical level.”

¹⁵ This recommendation continues to hold relevance - and urgency – as the project comes to a close.

176. There are threshold stages of the implementation process that determine the fruition of project results. At such junctures the level of political savvy or lobbying support may be more decisive than technical depth. Actions such as ‘packaging’ the biosafety message according to the level and interest of specific target groups, holding informative breakfast meetings for legislators or senior government officials at attractive venues, or organizing international tours to observe biosafety systems at work, can make the difference between a protracted wait and a relatively smooth review/approval process. However, it is important to recognize that biosafety is not high on the list of national priorities, and has been hard to place on the government agenda.

177. *Public awareness and information management should be approached as overarching aspects of the biosafety framework that require longer-term attention.* They are essential components of a functional biosafety system that involve longer horizons than most projects are able to support. For this reason, their inclusion within future projects should be part of a longer-term strategy if they are to have measurable impact on public opinion and the media. This is particularly relevant for a culturally and socially diverse country such as Guatemala that has an extensive and dispersed population of small-scale farmers, a range of native languages and persistently low levels of adult literacy in rural areas. The content and objectives of a biosafety information strategy need to be multi-tiered and able to reach very different target groups – senior government officials and legislators, the academic and scientific community, local government, agro-enterprises, urban consumers and the *campesino*. Hence public awareness and information management should be part of a broader biotechnology strategy that articulates education (formal and informal), multi-media communications, dissemination and extension, rather than a string of project-specific activities or events that take place over a four-year period.

178. *The national universities have a pivotal role to play as forums for the dissemination of biosafety knowledge and research for public sensitization and discussion, on neutral grounds that are accessible to the different sides of the LMO and transgenics debate.* The participating faculties of universities of San Carlos and Valle Guatemala are strategically positioned to sponsor forums, debates and peer reviews on biosafety with the participation of different groups. This type of activity could feed into core academic programs in agronomy, biotechnology, chemistry or plant genetics, and provide an interesting approach for raising public awareness. The lessons of other biosafety project evaluations indicate that public opinion can be a significant determining factor in the political viability of biosafety frameworks, and is best acknowledged from the beginning with adequate time and resources. NGOs, local governments, university faculties, seed enterprises and farmers with opposing views need to be approached and provided information that is scientifically validated (and their views reflected in concrete actions such as the conservation areas for the protection and reproduction of wild relatives of maize that are proposed in the next project). It is true that CONAP, OTECBIO, MARN, MAGA and SENACYT also work with biosafety; however, public or quasi-public institutions should not be directly involved in debates that are as polarized and politically charged as that on LMOs and transgenics, and where opposing positions are entrenched and sometimes misinformed or lacking in scientific knowledge.

¹⁵ Mid-Term Review (2012), pg. 12

179. *The training given to project staff on Anubis by the Task Manager has made a difference in the quality of financial reporting in this and other biosafety projects. Anubis training should be adopted as standard practice for all UNEP projects that use the system, before or at the start of project activities as a preemptive measure.* Most if not all NEAs assume biosafety projects without prior knowledge of Anubis, and struggle with its formats and data requirements every three months. Quarterly expenditure reports are questioned and returned for correction, leading to delays in the release of project funds as was the case for this project. By implementing a brief workshop on Anubis for project financial officers either at the start of the project or on a periodic basis, a number of subsequent problems might be avoided.

180. *Service providers that are contracted to manage GEF funds should either be required to use the Anubis system, or translate expenditures and other financial information from their formats to Anubis when preparing financial reports.* Organizations that provide administrative and financial management services for UNEP-GEF biosafety projects should report with the Anubis format, budget lines and required expenditure data. Otherwise, it is up to the project team to translate and reconcile all expenditures for the required quarterly reports that must be approved by UNEP. This can be time consuming and carries the risk of suspensions of disbursement when financial figures do not match, as happened to this project as a result of differences between the Atlas and Anubis formats.

ANNEXES

Annex 1

TERMS OF REFERENCE

Terminal Evaluation of the UNEP/GEF project

“Development of a mechanism to strengthen the implementation of the Cartagena Protocol in Guatemala”

I. PROJECT BACKGROUND AND OVERVIEW

1. Project General Information

Table 1. Project summary

GEF project ID:	3630	IMIS number:	GFL-2328-2716-4B43
Focal Area(s):	Biodiversity	GEF OP #:	
GEF Strategic Priority/Objective:	GEF-4 Strategic Program: BD-SP6- Biosafety	GEF approval date:	08/04/2010
UNEP approval date:	10/08/2010	First Disbursement:	26/08/2010
Actual start date:	26/08/2010	Planned duration:	48 months
Intended completion date:	31/12/2014	Actual or Expected completion date:	10/02/2015
Project Type:	MSP	GEF Allocation:	USD 616,364
PPG GEF cost:	USD 16,950	PPG co-financing*:	USD 7,987.25
Expected MSP/FSP Co-financing:	USD 684,232	Total Cost:	USD 1,325,533.25
Mid-term review/eval. (planned date):	August 2012	Terminal Evaluation (actual date):	February 2015
Mid-term review/eval. (actual date):	December 2012	No. of revisions:	4
Date of last Steering Committee meeting:	05/14/2014	Date of last Revision:	19/03/2014
Disbursement as of 30 June 2014:	USD 480,702	Date of financial closure:	
Date of Completion:		Actual expenditures reported as of 30 June 2013:	USD 478,222
Total co-financing realized as 30 June 2013	USD 373,925.00	Actual expenditures entered in IMIS as 30 June 2014:	USD 431,754.98
Leveraged financing:			

2. Project rationale

- Guatemala's biodiversity is immensely rich both in wild and cultivated species. Ecologically, Guatemala possesses seven biomes, one of which is unique to the country. Additionally, it houses fourteen different life zones, one of the highest levels in Central America. It ranks third on a list of thirty mega diverse countries worldwide. With regard to flora, it currently occupies third place for abundance of flora by unit area, which includes 7,754 species of reported plants, with 40% of these endemic to Mesoamerica. With respect to fauna, 62 species are endemic, with 2,027 registries of invertebrate's species found in Guatemala. Its diversity of wild species is matched by its diversity in cultivated species. Guatemala is also center of origin for many

economically important species, providing a natural reservoir of wild relatives important for humanity. Aside from being a genetic center of origin, it is also a center of domestication of several species that feed populations worldwide, such as maize, beans, squash and cassava (Yucca root or manioc).

2. Guatemala began to set the bases for its biosafety framework through the Global Environment Fund (GEF) sponsored and United Nations Environment Program (UNEP) executed Project for the Development of a draft National Biosafety Framework (NBF) in 2002, and continued with the UNEP-GEF Biosafety Clearing House (BCH) project in 2007, to address specific BCH-related needs. One of the major outcomes of the Guatemala NBF project was the preparation of a proposal for a national biosafety law, which was submitted and presented by the Environmental and Natural Resources Commission to the Guatemalan Congress, and the subsequent ratification of the CPB in 2004. Despite these milestones, full compliance with the country's obligations as a Party was yet to be attained at the time of designing this project.
3. In Guatemala, at the time of project design, biotechnology applied to food, agriculture and health was widely adopted, mainly in the form of molecular biology-based diagnostics. Biotechnology applied to the environment was a budding area, focusing on non-LMO bacterial remediation and various enzymatic processes. Tissue culture, molecular biology, Polymerase Chain Reaction (PCR) and DNA sequencing capabilities existed in several academic, private and governmental institutions, to different extents. Transgenic bacterial strains were produced on a regular basis for confined laboratory use, as is common in academia worldwide. At the time of project design, only one academic institution had the capability and had experimented with the generation of plant and animal LMOs for the improvement of agriculture and public health, but this research was confined to the laboratory and greenhouse.
4. Guatemala ratified the CPB in 2004. Since its ratification, the country has developed some necessary tools and adopted certain strategies in order to implement the Protocol. However, it did not import LMOs for the purpose of growing them or releasing them into the environment, it did not produce LMOs locally, or export locally produced LMOs. The import of LMOs for food was not regulated and was assumed to occur on a regular basis. It is important to note that most of Guatemala's neighbours (El Salvador, Honduras, and Mexico) had already approved the use of LMOs to varying degrees. The porous nature of local borders (Honduras, El Salvador, and Guatemala are part of a free trade zone, for example) increased the probability that LMOs were growing in Guatemala in an unregulated manner.
5. Stakeholder training and participation was circumscribed in previous projects to technical level positions which sometimes lack the scientific know how and/or institutional backing to make sound and binding biosafety decisions. This project intended to reinforce institutional capacities and human resources, strengthening biosafety decision and management capabilities, at the same time that it intended to promote an inter-institutional effort to draft and implement a unifying state policy regarding LMOs.
6. Awareness of LMO technology and biotechnology in general was not uniform among the population and opinions regarding LMOs are varied and polarized. Among the general population, understanding of biotechnology was scant; although newspaper media coverage of the issue has been somewhat regular, it tended to be inaccurate.
7. Guatemala, through this project, intended to take biosafety to the next level, so that it can fully meet its obligations as a CPB Party; previous efforts were important first steps, but further progress needed to be made to bring the country to comply fully with the Protocol's objectives

3. Project objectives and components

8. The goal of this Project is to facilitate compliance with and the implementation of the Cartagena Protocol through the establishment of a National Biosafety System.

9. The project **objective** was to assist Guatemala to put in place a well-articulated, effective and transparent national biosafety system through the development of the necessary policies, regulatory and technical instruments, and local capabilities in order to meet national development needs.
10. The project **purpose** was to contribute to the conservation and sustainable use of biodiversity and reduce potential risks to wild relatives and agro-biodiversity in Guatemala, thus helping to achieve the global environmental goals of the CBD and CPB.
11. The structure of this project comprised four components: (1) Strengthening the legal, regulatory and policy framework on biosafety, (2) Implementing a functional national biosafety risk assessment and risk management system, (3) Creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety, and (4) Gaining experience in generating and managing biosafety information and public sensitization strategies.
12. **Component 1**
The first component, strengthening the legal, regulatory and policy framework on biosafety to make it fully consistent with the CPB and national goals for sustainable development, intended to focus on assuring stakeholder participation and facilitating the drafting of a National Biosafety Policy that would guide and orient the design of a national biosafety system and specify the types of legal instruments (governmental accords or ministerial agreements) required to implement it and make it operational. Additionally, it included the drafting, approval and adoption of a comprehensive legal, regulatory and policy framework for biosafety.
13. **Component 2**
The second component, implementing a functional national biosafety risk assessment and risk management system, aimed to cement the technical foundations necessary to make a national biosafety system functional and efficient. These foundations included support structures and channels as well as adequate technical guidelines, tools, criteria and protocols for risk assessment and risk management.
14. **Component 3:**
The third component, creating the necessary institutional capacity and human resources for effective decision making and regulatory compliance in biosafety, was seen as critical to achieve a functional and effective biosafety system. This component aimed to achieve capacity building through three strategies: defining research priorities that would generate locally important scientific information necessary to inform biosafety decisions and to identify funding mechanisms for them; intensively and continually training key personnel in stakeholder institutions on biosafety, risk assessment, risk analysis and risk communication, as well as the design and use of technical documents for this purpose; and providing the necessary laboratory infrastructure and scientific training so that the relevant stakeholders can meet the technical and scientific requirements of a National Biosafety System.
15. **Component 4:**
The fourth and last component, gaining experience in generating and managing biosafety information and public sensitization strategies, was critical not only for compliance with CPB guidelines but also for promoting public confidence in a national biosafety system. This component included the joint development, with other stakeholders, of a national sensitization, communication and information strategy for biotechnology and biosafety; a revision and re-editing of relevant biosafety information to be communicated and adapted to different levels and local languages; renewed efforts to assure the participation of NCAs in the biosafety Clearing House, and the promotion of the main BCH and Guatemalan websites as a useful tool and information source for risk assessment and management.

Table 2 summarizes the project components, their objectives and the expected outputs.

Table 2. Project objectives, expected outcomes and outputs

Component	Component objectives	Outputs
(1) Strengthening the legal, regulatory and policy framework on biosafety	<ul style="list-style-type: none"> - 1.1 A comprehensive, coordinated, and inter institutional policy framework for biosafety is approved and adopted. - 1.2 The transboundary movement, transit, handling and use of Living Modified Organisms (LMOs) are regulated, consistent with the CPB. - 1.3 A National Biosafety System is proposed and adopted, along with a coordination, continuity and sustainability strategy - 1.4 Biosafety policies are integrated into national programs, plans and strategies for sustainable development 	<ul style="list-style-type: none"> - 1.1.1 National policy on biosafety and biotechnology, in line with sectoral policies, national regulations, and National Competent Authorities (NCA) roles defined by the CPB. - 1.1.2 Implementation plan - 1.2.1 Biosafety regulations for: risk assessment and management, environmental release, illicit and unintentional transboundary movements of LMOs, transit, penalties, research, contained use, food safety and environmental safety, and others. - 1.3.1 An administrative system with clear procedures for handling requests and clearly defined mandates, responsibilities and communication channels for different NCAs - 1.3.2 Permanent and Ad Hoc scientific advisory biosafety structures - 1.3.3 A continuity and sustainability strategy for the system - 1.4.1 Official adoption and implementation of Biosafety policies in different NCAs
(2) Implementing a functional national biosafety risk assessment and risk management system	<ul style="list-style-type: none"> - 2.1 The institutional and administrative framework is reinforced and articulated to allow for effective handling of requests and coordinated decisions - 2.2 The science base for the evaluation of potential risks and benefits of LMO use in Guatemala is strengthened for use in biosafety risk assessment and management - 2.3 Biosafety measures are applied in accordance with international guidance, national criteria and to the extent necessary and feasible to prevent possible adverse effects of LMOs 	<ul style="list-style-type: none"> - 2.1.1 Inter-institutional coordinated and harmonized technical documents, guides, criteria and administrative formats for LMO applications - 2.1.2 Filing system created to handle mock request documentation. - 2.1.3 Validated risk assessment and evaluation methodologies. - 2.1.4 Institutional agreements and coordination mechanisms for decision-making on internal use of LMOs and cross-sectoral collaboration - 2.2.2 Science based guidelines, scientific protocols, and data collection plans to inform biosafety risk assessment and management decisions - 2.3.1 Guidelines and plans for effective and science based national biosafety measures
(3) Creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety	<ul style="list-style-type: none"> - 3.1 Institutions are more proficient in risk /benefit analysis, and more knowledgeable of monitoring and enforcement requirements. - 3.2 Technological capacity is sufficient for in-house analysis of LMOs. - 3.3 Capacity for the safe development and use of modern biotechnology is strengthened in Guatemala 	<ul style="list-style-type: none"> - 3.1.1 Training Program for the use, management and regulation of biotechnology. - 3.1.2 Decision-makers introduced to biosafety risk assessment principles - 3.1.3 Technical staff trained in carrying out risk assessments and defining risk management measures - 3.2.1 State-of-the-art technology, training and laboratory equipment for LMO testing - 3.3.1 Relevant scientific research and information to inform biosafety decisions regarding the local biodiversity, environment and human health
(4) Gaining experience in generating and managing biosafety information and public sensitization strategies	<ul style="list-style-type: none"> - 4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes - 4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management. 	<ul style="list-style-type: none"> - 4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes - 4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.

Source: Appendix 4, Project document

4. Executing Arrangements

14. The **Implementing Agency** for the project was the United Nations Environment Programme (UNEP). In this capacity, UNEP has overall responsibility for the implementation of the project, project oversight, and co-ordination with other GEF projects.
15. The **executing agency** is the National Council for Protected Areas (CONAP), the CPB National Focal Point, and, through delegation of functions, the Technical Biodiversity Office (OTECBIO). OTECBIO is responsible for the coordination and management of the project and monitored compliance with work plans as a basis for the execution of the project. However, this project involves many stakeholders and aims to be multi-institutional and multi-sectoral. Additionally, although CONAP is in charge of CPB implementation, it does not have the legal mandate to regulate biosafety or biotechnology. These legal mandates are split, to varying degrees, among four Ministries and a National Secretariat. Previous biosafety projects have demonstrated the need for inter institutional coordination at high decision-making levels and for the insertion of new biosafety structures into pre-existing councils, commissions or ministerial units, in order to guarantee the sustainability and durability of these structures once a project terminates.
16. The project intended to constitute **three advisory structures** (see Appendix 10): 1) A steering committee composed of high level delegates from governmental institutions with legal mandates to regulate biosafety, 2) A policy task force or subcommittee, composed of technical delegates from all interested public, academic and private (industry and social organizations) entities desiring to contribute to the drafting of a national biosafety policy and structuring of a national biosafety system, 3) A scientific subcommittee composed of selected individuals who, through the necessary credentials, have demonstrated the required expertise and scientific capabilities to advise the drafting of scientific and technical documents to support and implement a National Biosafety Policy and System. The steering committee and subcommittees intended to comprise several national bodies, public (including CONAP), private and also academic and investigative institutions and will be constructed as a joint effort between two pre-existing institutional commissions: The Biotechnology Commission of the National Secretariat of Science and Technology (SENACYT) and the National Biodiversity Committee (CONADIBIO).
17. The steering committee was supposed to be composed by members of both entities, as well as one member from each of the four concerned ministries (MAGA: Ministry of Agriculture; MARN: Ministry of the Environment and Natural Resources; MSPAS: Ministry of Public Health; CONAP: National Council for Protected Areas; SENACYT: National Secretariat of Science and Technology; MINECO: Ministry of the Economy), and should have reported to both entities, as well as to the four concerned ministries, so that these important stakeholders effectively would become responsible for the project implementation.

a. Project Cost and Financing

17. The GEF provided 616,364 USD. This put the project in the Middle-size Project (MSP) category. The project was expected to mobilize another 684,232 USD in co-financing, mostly from the Government of Guatemala. The estimated project costs at design stage and associated funding sources are presented in Table 3.

Table 3. Estimated project cost

Project component	GEF Budget (USD)	Cofinancing (USD)	Total budget
Component 1: Strengthening the legal, regulatory and policy framework on biosafety, to make it fully consistent with the CPB and national goals for sustainable development	136,605.00	90,800.00	227,405.00
Component 2: Implementing the technical foundations of a functional national biosafety risk assessment and risk management system	64,155.00	89,000.00	153,155.00

Component 3: Creating the necessary institutional capacity and human resources for effective decision making and regulatory compliance in biosafety	230,685.00	263,337.00	494,022.00
Component 4: Gaining experience in generating and managing biosafety information and public sensitization strategies and public awareness	62,055.00	100,540.00	162,595.00
Monitoring and evaluation	61,864.00		61,864.00
Management requirements	61,000.00	140,555.00	201,555.00
Total	616,364.00	684, 232.00	1,300,596.00

Source: Project document

b. Implementation Issues

19. A Mid Term Review (MTR) was originally scheduled for August 2012 and it was carried out in December 2012 by the UNEP Task Manager. In general, according to the MTR, project activities progressed well and several key outputs had been achieved. Specifically, 65 % of the mid-term targets had been fully reached, in addition, the other 35 % were in the phase of implementation. A budget revision took place in order to facilitate project activities and progress.
20. The National Biosafety Policy was expected to be approved at the end of the second year. The first draft of this legal normative was finished by the beginning of 2012, but approval took longer than expected and the process was anticipated to be finalised by the end of 2014.
21. As of June 2014, the proposed National Biosafety System had not been tested through a mock decision since it was not yet approved and implemented. It was expected that this exercise would be carried out after approval of the proposed normative. This seemed to be due to the fact that if there is no approved system, it is no possible to proceed with the test. This applies to the risk assessment methodology as well.
22. Some other deliverables were also expected to be conducted towards the end of 2014 and pending approval of the National Biosafety System. These include the development of an implementation strategy and cost estimate. As noted in the last PIR, there was a risk that some of the project products may not be approved, partially due political influence and this may hamper the long term sustainability of the results.

TERMS OF REFERENCE FOR THE EVALUATION

c. Objective and Scope of the Evaluation

23. In line with the UNEP Evaluation Policy¹⁶, the UNEP Evaluation Manual¹⁷ and the Guidelines for GEF Agencies in Conducting Terminal Evaluations¹⁸, the Terminal Evaluation of the Project “Development of a mechanism to strengthen the implementation of the Cartagena Protocol in Guatemala” will be undertaken upon completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and their executing partners – OTECBIO and the national partners in particular. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and

¹⁶ <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx>

¹⁷ <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationManual/tabid/2314/language/en-US/Default.aspx>

¹⁸ http://www.thegef.org/gef/sites/thegef.org/files/documents/TE_guidelines7-31.pdf

implementation. It will focus on the following sets of **key questions**, based on the project's expected outcomes, which may be expanded by the consultant as deemed appropriate:

- (a) How and to what extent did the project succeed in developing and implementing a framework for biosafety? To what extent is this leading to an active involvement of the NCAs in the implementation of the Cartagena Protocol on Biosafety (CPB)?
- (b) To what extent did the project succeed in implementing the technical foundations of a functional national biosafety risk assessment and risk management system?
- (c) How and to what extent did the project support the development of institutional capacity and human resources for effective decision making and regulatory compliance in biosafety?
- (d) To what extent did the project increase the capacity to manage biosafety information and public sensitization strategies and public awareness?
- (e) To what extent was the project able to achieve its main objective of assisting Guatemala to put in place a well-articulated, effective and transparent national biosafety system?

a. Overall Approach and Methods

24. The Terminal Evaluation of the Project "Development of a mechanism to strengthen the implementation of the Cartagena Protocol in Guatemala" will be conducted by an independent consultant under the overall responsibility and management of the UNEP Evaluation Office (Nairobi), in consultation with the UNEP Task Manager (Panama), and the UNEP Fund Management Officer at UNEP/DEPI (Nairobi).

25. It will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used to determine project achievements against the expected outputs, outcomes and impacts.

26. The findings of the evaluation will be based on the following:

- (a) **A desk review** of project documents and others including, but not limited to:
 - Relevant background documentation, inter alia UNEP and GEF-4 policies, strategies and programmes pertaining to biosafety at the time of the project's approval;
 - Project design documents; Annual Work Plans and Budgets or equivalent, revisions to the logical framework and project financing;
 - Project reports such as progress and financial reports from the executing partners to the Project Management Unit (PMU) and from the PMU to UNEP; minutes of the meetings of the three advisory structures; annual Project Implementation Reviews (PIRs) and relevant correspondence;
 - Documentation related to project outputs;
 - Relevant material published, e.g. in journals and books.
- (b) **Interviews** with:
 - UNEP Task Manager and Fund Management Officer and other relevant staff in UNEP related activities as necessary;
 - Interviews with project management, Committees' representatives and key partners to the extent possible;
 - Stakeholders involved with this project, including NGOs, private sector, academia, national organizations and institutes, including National Competent Authorities, regional and international organizations and civil society representatives, including rural communities to the extent possible;
 - Relevant staff of GEF Secretariat and
 - Representatives of the government and other organisations (if deemed necessary by the consultant).
- (c) **Country visits.** The evaluation consultant will schedule a visit to Guatemala to interview relevant stakeholders and the project team.

b. Key Evaluation principles

27. Evaluation findings and judgements should be based on **sound evidence and analysis**, clearly documented in the evaluation report. Information will be triangulated (i.e. verified from different sources) to the extent possible, and when verification was not possible, the single source will be mentioned. Analysis leading to evaluative judgements should always be clearly spelled out.

28. The evaluation will assess the project with respect to **a minimum set of evaluation criteria** grouped in six categories: (1) Strategic Relevance; (2) Attainment of objectives and planned result, which comprises the assessment of outputs achieved, effectiveness and likelihood of impact; (3) Sustainability and replication; (4) Efficiency; (5) Factors and processes affecting project performance, including preparation and readiness, implementation and management, stakeholder participation and public awareness, country ownership and driven-ness, financial planning and management, UNEP supervision and backstopping, and project monitoring and evaluation; and (6) Complementarity with the UNEP strategies and programmes. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

29. **Ratings.** All evaluation criteria will be rated on a six-point scale. However, complementarity of the project with the UNEP strategies and programmes is not rated. Annex 3 provides detailed guidance on how the different criteria should be rated and how ratings should be aggregated for the different evaluation criterion categories.

30. In attempting to attribute any outcomes and impacts to the project, the evaluators should consider the difference between *what has happened with and what would have happened without the project*. This implies that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. This also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluators, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

31. As this is a terminal evaluation, particular attention should be given to learning from the experience. Therefore, the “*Why?*” question should be at front of the consultants’ minds all through the evaluation exercise. This means that the consultants needs to go beyond the assessment of “*what*” the project performance was, and make a serious effort to provide a deeper understanding of “*why*” the performance was as it was, i.e. of processes affecting attainment of project results (criteria under category 3). This should provide the basis for the lessons that can be drawn from the project. In fact, the usefulness of the evaluation will be determined to a large extent by the capacity of the consultants to explain “*why things happened*” as they happened and are likely to evolve in this or that direction, which goes well beyond the mere review of “*where things stand*” today.

c. Evaluation criteria

A. Strategic relevance

32. The evaluation will assess, in retrospect, whether the project’s objectives and implementation strategies were consistent with: i) Sub-regional environmental issues and needs; ii) the UNEP mandate and policies at the time of design and implementation; and iii) the GEF Biodiversity focal area, strategic priorities and operational programme(s).

33. The evaluation will also assess whether the project objectives were realistic, given the time and budget allocated to the project, the baseline situation and the institutional context in which the project was to operate.

B. Achievement of Outputs

34. The evaluation will assess, for each component, the project’s success in producing the programmed results as presented in Table 2 above, both in quantity and quality, as well as their usefulness and timeliness. Briefly explain the degree of success of the project in achieving its different

outputs, cross-referencing as needed to more detailed explanations provided under Section F (which covers the processes affecting attainment of project objectives).

C. Effectiveness: Attainment of Objectives and Planned Results

35. The evaluation will assess the extent to which the project's objectives were effectively achieved or are expected to be achieved.

36. The evaluation will reconstruct the Theory of Change (ToC) of the project based on a review of project documentation and stakeholder interviews. The ToC of a project depicts the causal pathways from project outputs (goods and services delivered by the project) over outcomes (changes resulting from the use made by key stakeholders of project outputs) towards impact (changes in environmental benefits and living conditions). The ToC will also depict any intermediate changes required between project outcomes and impact, called intermediate states. The ToC further defines the external factors that influence change along the pathways, whether one result can lead to the next. These external factors are either drivers (when the project has a certain level of control) or assumptions (when the project has no control).

37. The assessment of effectiveness will be structured in three sub-sections:

- (d) Evaluation of the **achievement of direct outcomes as defined in the reconstructed ToC**. These are the first-level outcomes expected to be achieved as an immediate result of project outputs.
- (e) Assessment of the **likelihood of impact** using a *Review of Outcomes to Impacts* (ROtI) approach as summarized in Annex 6 of the TORs. Appreciate to what extent the project has to date contributed, and is likely in the future to further contribute to changes in stakeholder behaviour as a result of the project's direct outcomes, and the likelihood of those changes in turn leading to changes in the natural resource base, benefits derived from the environment and human living conditions.
- (f) Evaluation of the **achievement of the formal project overall objective, overall purpose, goals and component outcomes** using the project's own results statements as presented in original logframe and any later versions of the logframe. This sub-section will refer back where applicable to sub-sections (a) and (b) to avoid repetition in the report. To measure achievement, the evaluation will use as much as appropriate the indicators for achievement proposed in the Logical Framework Matrix (Logframe) of the project, adding other relevant indicators as appropriate. Briefly explain what factors affected the project's success in achieving its objectives, cross-referencing as needed to more detailed explanations provided under Section F.

D. Sustainability and replication

38. Sustainability is understood as the probability of continued long-term project-derived results and impacts after the external project funding and assistance ends. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of benefits. Some of these factors might be direct results of the project while others will include contextual circumstances or developments that are not under control of the project but that may condition sustainability of benefits. The evaluation should ascertain to what extent follow-up work has been initiated and how project results will be sustained and enhanced over time. The reconstructed ToC will assist in the evaluation of sustainability.

39. Four aspects of sustainability will be addressed:

- a) *Socio-political sustainability*. Are there any social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? It was noted that political influence may hamper the achievement of the main project objective so the evaluation should assess this aspect carefully and provide lessons learned for future projects. Is the level of ownership by the main national \ stakeholders sufficient to allow for the project results to be sustained? Are there sufficient government and stakeholder awareness, interests, commitment and incentives to execute, enforce and

pursue the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project? To what extent was the project able to reach out to the stakeholders identified in the design phase (academia, private sector, civil society including rural communities etc)?

- b) *Financial resources.* To what extent are the continuation of project results and the eventual impact of the project dependent on continued financial support? What is the likelihood that adequate financial resources¹⁹ will be or will become available to implement the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project? Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?
- c) *Institutional framework.* To what extent is the sustenance of the results and onward progress towards impact dependent on issues relating to institutional frameworks and governance? How robust are the institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustaining project results and to lead those to impact on human behaviour and environmental resources?
- d) *Environmental sustainability.* Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? Are there any foreseeable negative environmental impacts that may occur as the project results are being up-scaled?

40. **Catalytic role and replication.** The *catalytic role* of GEF-funded interventions is embodied in their approach of supporting the creation of an enabling environment and of investing in pilot activities which are innovative and showing how new approaches can work. UNEP and the GEF also aim to support activities that upscale new approaches to a national, regional or global level, with a view to achieve sustainable global environmental benefits. The evaluation will assess the catalytic role played by this project, namely to what extent the project has:

- (g) *catalyzed behavioural changes* in terms of use and application by the relevant stakeholders of: i) technologies and approaches show-cased by the demonstration projects; ii) strategic programmes and plans developed; and iii) assessment, monitoring and management systems established at national level;
- (h) provided *incentives* (social, economic, market based, competencies etc.) to contribute to catalyzing changes in stakeholder behaviour;
- (i) contributed to *institutional changes*. An important aspect of the catalytic role of the project is its contribution to institutional uptake or mainstreaming of project-piloted approaches in the regional and national demonstration projects;
- (j) contributed to *policy changes* (on paper and in implementation of policy);
- (k) contributed to sustained follow-on financing (*catalytic financing*) from Governments, the GEF or other donors;
- (l) created opportunities for particular individuals or institutions ("*champions*") to catalyze change (without which the project would not have achieved all of its results).

41. *Replication*, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated (experiences are repeated and lessons applied in different geographic areas) or scaled up (experiences are repeated and lessons applied in the same geographic area but on a much larger scale and funded by other sources). The evaluation will assess the approach adopted by the project to promote replication effects and appreciate to what extent actual replication has already occurred or is likely to occur in the near future. What are the factors that may influence replication and scaling up of project experiences and lessons?

¹⁹ Those resources can be from multiple sources, such as the public and private sectors, income generating activities, other development projects etc.

E. Efficiency

42. The evaluation will assess the cost-effectiveness and timeliness of project execution. It will describe any cost- or time-saving measures put in place in attempting to bring the project as far as possible in achieving its results within its programmed budget and (extended) time. It will also analyse how delays, if any, have affected project execution, costs and effectiveness. Wherever possible, costs and time over results ratios of the project will be compared with that of other similar interventions. The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency all within the context of project execution.

F. Factors and processes affecting project performance

43. **Preparation and readiness.** This criterion focusses on the quality of project design and preparation. Were project stakeholders²⁰ adequately identified? Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing agencies properly considered when the project was designed? Was the project document clear and realistic to enable effective and efficient implementation? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place? Were lessons from other relevant projects properly incorporated in the project design? What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.? Were GEF environmental and social safeguards considered when the project was designed²¹? Were sufficient components integrated into the project design to ensure the obtaining of commitment of government representatives? Were sufficient provisions integrated into project design to minimise delays in implementation?

44. **Project implementation and management.** This includes an analysis of implementation approaches used by the project, its management framework, the project's adaptation to changing conditions (adaptive management), the performance of the implementation arrangements and partnerships, relevance of changes in project design, and overall performance of project management. The evaluation will:

- (m) Ascertain to what extent the project implementation mechanisms outlined in the project document have been followed and were effective in delivering project outputs and outcomes. Were pertinent adaptations made to the approaches originally proposed?
- (n) Evaluate the effectiveness and efficiency of project management by OTECBIO and how well the management was able to adapt to changes during the life of the project.
- (o) Assess the role and performance of the units and committees established and the project execution arrangements at all levels.
- (p) Assess the extent to which project management as well as national partners responded to direction and guidance provided by the Advisory Committees and UNEP supervision recommendations.
- (q) Identify operational and political / institutional problems and constraints that influenced the effective implementation of the project, and how the project partners tried to overcome these problems.
- (r) Assess the extent to which MTR recommendations were followed in a timely manner.
- (s) Assess the extent to which the project implementation met GEF environmental and social safeguards requirements.

45. **Stakeholder participation and public awareness.** The term stakeholder should be considered in the broadest sense, encompassing project partners, government institutions, private interest groups,

²⁰ Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the project. The term also applies to those potentially adversely affected by the project.

²¹ <http://www.thegef.org/gef/node/4562>

local communities etc. The TOC analysis should assist the evaluators in identifying the key stakeholders and their respective roles, capabilities and motivations in each step of the causal pathway from activities to achievement of outputs and outcomes to impact. The assessment will look at three related and often overlapping processes: (1) information dissemination between stakeholders, (2) consultation between stakeholders, and (3) active engagement of stakeholders in project decision making and activities. The evaluation will specifically assess:

- (t) the approach(es) used to identify and engage stakeholders in project design and implementation. What were the strengths and weaknesses of these approaches with respect to the project's objectives and the stakeholders' motivations and capacities? What was the achieved degree and effectiveness of collaboration and interactions between the various project partners and stakeholders during design and implementation of the project?
- (u) the degree and effectiveness of any public awareness activities that were undertaken during the course of implementation of the project; or that are built into the assessment methods so that public awareness can be raised at the time the assessments will be conducted;
- (v) how the results of the project (strategic programmes and plans, monitoring and management systems, sub-regional agreements etc.) promote participation of stakeholders in decision making.

46. **Country ownership and driven-ness.** The evaluation will assess the performance of national partners involved in the project, as relevant:

- (w) In how far has the national partner assumed responsibility for the project and provided adequate support to project execution, including the degree of cooperation received from the various public institutions involved in the project and the timeliness of provision of counter-part funding to project activities?
- (x) To what extent has the national and institutional framework been conducive to project performance?
- (y) How responsive were the national partners to OTECBIO coordination and guidance, and to UNEP supervision?

47. **Financial planning and management.** Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. The assessment will look at actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing. The evaluation will:

- (z) Verify the application of proper standards (clarity, transparency, audit etc.) and timeliness of financial planning, management and reporting to ensure that sufficient and timely financial resources were available to the project and its partners;
- (aa) Appreciate other administrative processes such as recruitment of staff, procurement of goods and services (including consultants), preparation and negotiation of cooperation agreements etc. to the extent that these might have influenced project performance;
- (bb) Present to what extent co-financing has materialized as expected at project approval (see Table 1 and 3). Report country co-financing to the project overall, and to support project activities at the national level in particular. The evaluation will provide a breakdown of final actual costs and co-financing for the different project components (see tables in Annex 4).
- (cc) Describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector.

48. Analyse the effects on project performance of irregularities (if any) in procurement, use of financial resources and human resource management, and the measures taken by OTECBIO or UNEP to prevent such irregularities in the future. Appreciate whether the measures taken were adequate.

49. **UNEP supervision and backstopping.** The purpose of supervision is to verify the quality and timeliness of project execution in terms of finances, administration and achievement of outputs and outcomes, in order to identify and recommend ways to deal with problems which arise during project execution. Such problems may be related to project management but may also involve technical/institutional substantive issues in which UNEP has a major contribution to make. The evaluators should assess the effectiveness of supervision and administrative and financial support provided by UNEP including:

- (dd) The adequacy of project supervision plans, inputs and processes;
- (ee) The emphasis given to outcome monitoring (results-based project management);
- (ff) The realism and candour of project reporting and ratings (i.e. are PIR ratings an accurate reflection of the project realities and risks);
- (gg) The quality of documentation of project supervision activities; and
- (hh) Financial, administrative and other fiduciary aspects of project implementation supervision.

50. **Monitoring and evaluation.** The evaluation will include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation will appreciate how information generated by the M&E system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensuring sustainability. M&E is assessed on three levels:

- (ii) *M&E Design.* Projects should have sound M&E plans to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified. The evaluators should use the following questions to help assess the M&E design aspects:
 - Quality of the project logframe (original and possible updates) as a planning and monitoring instrument; analyse, compare and verify correspondence between the original logframe in the Project Document, possible revised logframes and the logframe used in Project Implementation Review reports to report progress towards achieving project objectives;
 - SMART-ness of indicators: Are there specific indicators in the logframe for each of the project objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time-bound?
 - Adequacy of baseline information: To what extent has baseline information on performance indicators been collected and presented in a clear manner? Was the methodology for the baseline data collection explicit and reliable?
 - Arrangements for monitoring: Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the frequency of various monitoring activities specified and adequate? In how far were project users involved in monitoring?
 - Arrangements for evaluation: Have specific targets been specified for project outputs? Has the desired level of achievement been specified for all indicators of objectives and outcomes? Were there adequate provisions in the legal instruments binding project partners to fully collaborate in evaluations?
 - Budgeting and funding for M&E activities: Determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.
- (jj) *M&E Plan Implementation.* The evaluation will verify that:
 - the M&E system was operational and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period;
 - annual project reports and Progress Implementation Review (PIR) reports were complete, accurate and with well justified ratings;
 - the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs.

- (kk) *Use of GEF Tracking Tools.* These are portfolio monitoring tools intended to roll up indicators from the individual project level to the portfolio level and track overall portfolio performance in focal areas. Each focal area has developed its own tracking tool²² to meet its unique needs. Agencies are requested to fill out at CEO approval and submit these tools again for projects at mid-term and project completion. The evaluation will verify whether UNEP has duly completed the relevant tracking tool for this project, and whether the information provided is accurate.

G. Complementarities with UNEP strategies and programmes

51. UNEP aims to undertake GEF funded projects that are aligned with its own strategies. The evaluation should present a brief narrative on the following issues:

- (ll) *Linkage to UNEP's Expected Accomplishments and POW 2010-2011 and 2012-2013.* The UNEP MTS specifies desired results in six thematic focal areas. The desired results are termed Expected Accomplishments. Using the completed ToC/ROtI analysis, the evaluation should comment on whether the project makes a tangible contribution to any of the Expected Accomplishments specified in the UNEP MTS. The magnitude and extent of any contributions and the causal linkages should be fully described. Whilst it is recognised that UNEP GEF projects designed prior to the production of the UNEP Medium Term Strategy 2010-2013 (MTS)²³ would not necessarily be aligned with the Expected Accomplishments articulated in those documents, complementarities may still exist and it is still useful to know whether these projects remain aligned to the current MTS. The evaluation should also consider whether the alignment to the MTS 2014-2017 and relevant PoW (2014-2015) was identified once these strategic documents became available.
- (mm) *Alignment with the Bali Strategic Plan (BSP)*²⁴. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.
- (nn) *Gender.* Ascertain to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to and the control over natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation. Appreciate whether the intervention is likely to have any lasting differential impacts on gender equality and the relationship between women and the environment. To what extent do unresolved gender inequalities affect sustainability of project benefits?
- (oo) *South-South Cooperation.* This is regarded as the exchange of resources, technology, and knowledge between developing countries. Briefly describe any aspects of the project that could be considered as examples of South-South Cooperation.

d. The Consultants' Team

52. For this evaluation, the evaluation team will consist of one consultant. The consultant should have experience in project evaluation. A Master's degree or higher in the area of environmental sciences or a related field and at least 15 years' experience in environmental management, with a preference for specific expertise in the area of biosafety and biodiversity is required. Fluency in Spanish is necessary.

53. By undersigning the service contract with UNEP/UNON, the consultant certifies that s/he has not been associated with the design and implementation of the project in any way which may jeopardize his/her independence and impartiality towards project achievements and project partner performance. In addition, s/he will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units.

²² http://www.thegef.org/gef/tracking_tools

²³ <http://www.unep.org/PDF/FinalMTSGCSS-X-8.pdf>

²⁴ <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

e. Evaluation Deliverables and Review Procedures

54. The evaluation consultant will prepare an **inception report** (see Annex 2(a) of TORs for Inception Report outline) containing a thorough review of the project context, project design quality, a draft reconstructed Theory of Change of the project, the evaluation framework and a tentative evaluation schedule.

55. The review of design quality will cover the following aspects (see Annex 9 for the detailed project design assessment matrix):

- Strategic relevance of the project
- Preparation and readiness (see paragraph 25);
- Financial planning (see paragraph 30);
- M&E design (see paragraph 33(a));
- Complementarities with UNEP strategies and programmes (see paragraph 34);
- Sustainability considerations and measures planned to promote replication and upscaling (see paragraph 23).

56. The inception report will also present a draft, desk-based reconstructed Theory of Change of the project. It is vital to reconstruct the ToC *before* the most of the data collection (review of reports, in-depth interviews, observations on the ground etc.) is done, because the ToC will define which direct outcomes, drivers and assumptions of the project need to be assessed and measured to allow adequate data collection for the evaluation of project effectiveness, likelihood of impact and sustainability.

57. The evaluation framework will present in further detail the evaluation questions under each criterion with their respective indicators and data sources. The evaluation framework should summarize the information available from project documentation against each of the main evaluation parameters. Any gaps in information should be identified and methods for additional data collection, verification and analysis should be specified.

58. The inception report will also present a tentative schedule for the overall evaluation process, including a draft programme for the country visit and tentative list of people/institutions to be interviewed.

59. The inception report will be submitted for review and approval by the Evaluation Office before the evaluation team travels to the field.

60. **The main evaluation report** should be brief (no longer than 35 pages – excluding the executive summary and annexes), to the point and written in plain English. The evaluation team will deliver a high quality report in English by the end of the assignment. The team will also provide the executive summary and the conclusions, lessons learned and recommendations section in Spanish. The report will follow the annotated Table of Contents outlined in Annex 1. It must explain the purpose of the evaluation, exactly what was evaluated and the methods used (with their limitations). The report will present evidence-based and balanced findings, consequent conclusions, lessons and recommendations, which will be cross-referenced to each other. The report should be presented in a way that makes the information accessible and comprehensible. Any dissident views in response to evaluation findings will be appended in footnote or annex as appropriate. To avoid repetitions in the report, the authors will use numbered paragraphs and make cross-references where possible.

61. **Review of the draft evaluation report.** The evaluation team will submit the zero draft report latest two weeks after conducting the field visits to the UNEP EO and revise the draft following the comments and suggestions made by the EO. Once a draft of adequate quality has been accepted, the EO will share this first draft report with the UNEP Task Manager, who will ensure that the report does not contain any blatant factual errors. The UNEP Task Manager will then forward the first draft report to the other project stakeholders, in particular CTNBIO and the national partners for review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. It is also very important that stakeholders provide feedback on the proposed recommendations and lessons. Comments would be expected within two weeks after the draft report has been shared. Any comments or responses to the draft report will be sent to the UNEP EO for collation. The EO will provide the comments to the evaluation team for consideration in preparing the final draft report.

62. The evaluation consultant will submit the final draft report no later than 2 weeks after reception of stakeholder comments. The consultant will prepare a **response to comments**, listing those comments not or only partially accepted by them that could therefore not or only partially be accommodated in the final report. They will explain why those comments have not or only partially been accepted, providing evidence as required. This response to comments will be shared by the EO with the interested stakeholders to ensure full transparency.

63. Submission of the final Terminal Evaluation report. The final report shall be submitted by Email to the Head of the Evaluation Office, who will share the report with the Director, UNEP/GEF Coordination Office and the UNEP/DEPI Task Manager. The Evaluation Office will also transmit the final report to the GEF Evaluation Office.

64. The final evaluation report will be published on the UNEP Evaluation Office web-site www.unep.org/eou. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.

65. As per usual practice, the UNEP EO will prepare a **quality assessment** of the first draft and final draft report, which is a tool for providing structured feedback to the evaluation consultants. The quality of the report will be assessed and rated against the criteria specified in Annex 4.

66. The UNEP Evaluation Office will assess the ratings in the final evaluation report based on a careful review of the evidence collated by the evaluation consultant and the internal consistency of the report. Where there are differences of opinion between the evaluator and UNEP Evaluation Office on project ratings, both viewpoints will be clearly presented in the final report. The UNEP Evaluation Office ratings are the final ratings that will be submitted to the GEF Office of Evaluation.

Annex 2

EVALUATION FRAMEWORK MATRIX: EVALUATION QUESTIONS, RESPONDENTS, INDICATORS AND DATA SOURCES

Respondents

EVALUATION QUESTIONS	Project Team	CONAP, OTEC BIO, NCAs	Steering Committee	Min. Education?	Private Industry	NGOs	UNEP Task Manager	UNEP Finance Manager	Indicators	Data Source
A. Strategic Relevance										
1. To what extent were project objectives and implementation strategies consistent with national and sub regional environmental issues and needs?									Respondent perceptions, level of achievement of objectives and outcomes	Interviews, Project document, MTE, Final Report
2. To what extent were project objectives and implementation strategies consistent with (i) UNEP's mandate and policies at the time; and (ii) the GEF Biodiversity focal area, strategic priorities and operational programme(s).									Respondent perceptions, project design	Interviews, Project document, MTE
3. Were project objectives realistic, given the time and budget allocated to the project, the baseline situation and institutional context?									Respondent perceptions, project delivery and level of achievement	Interviews, MTE, PIRs and Final Report
4. To what extent did UNEP and GEF engage NCAs and other national biosafety stakeholders in project design, implementation, monitoring and reporting?									Respondent perceptions, project delivery and level of achievement	Interviews, PDF reports
B. Achievement of Outputs										
5. How successful was the project in achieving its planned outputs, considering aspects such as quantity, quality,									Respondent perceptions,	Interviews, Final Report

sequencing, timeliness and usefulness? To what extent have project outputs contributed towards the expected outcomes?									project delivery and level of achievement	
C. Effectiveness: Attainment of Objectives and Expected Outcomes										
6. How and to what extent did the project succeed in developing and implementing a framework for biosafety? To what extent has this strengthened the involvement of the NCAs in the implementation of the Cartagena Protocol on Biosafety (CPB)?									Respondent perceptions, continued involvement of Public Health Min. and other NCAs in NBF	Interviews, Project document, Final Report
7. To what extent has the project had an impact on the development of capacities for biosafety management?		(MAG)							Respondent perceptions, # and outcomes of cases of liability/redress	Interviews, Final Report
8. How and to what extent did the project build administrative capacities to handle requests, make informed decisions and communicate them to applicants and the BCH?									Respondent perceptions, # of applications, communication of decisions	Interviews, Final Report, CONAP /BCH data
9. To what extent has the project ensured that decisions on LMOs are based on risk assessments, are timely, transparent and coordinated, and avoid duplicity or unnecessary bureaucracy?									Respondent perceptions, # of applications, decisions and processing time	Interviews, Final Report, CONAP /BCH data
10. To what extent did the project increase the capacity to monitor and ensure regulatory compliance?									Respondent perceptions, trends in enforcement and compliance	Interviews, CONAP and BCH data, PIR and Final Reports
11. Are sufficient technical and human capacities being put in place for risk assessment and management for decision-making, considering both traditional and new generation LMOs?									Respondent perceptions, CAN agreements w/ CTNBio, TORs and # personnel involved	Interviews, signed agreements w/ NCAs, personnel assigned.
12. Are trans boundary movements of LMOs occurring in accordance with the CPB, and in a manner that is understood and accepted by the private sector (exporters /importers)?									Respondent perceptions, number of documented trans boundary movements, enforcement of regulations for trans	Interviews, # trans boundary LMO movements.

									boundary movement of LMOs	
13. To what extent have BS public sensitization and educational strategies been contributed to increase public awareness? To what extent is this leading to a change in human behavior?									Results from any surveys conducted by project on public awareness and attitudes and changes to baseline situation	Interviews, data from Min. of Education or other implementers
14. To what extent has the project contributed to increase information sharing through greater access to biosafety information?									Same as above; institutional agreements; access and "hits" to online biosafety web page.	Same as above.
D. Sustainability										
15. <i>Socio-political:</i> Are there any social or political factors that influence positively or negatively the sustenance of project results and impacts?									Respondent perceptions, continuity of project-supported initiatives	Interviews, Final Report
16. To what extent did UNEP and GEF engage the participation of national biosafety stakeholders in project design, implementation, monitoring and reporting?									Respondent perceptions, workshops and consultation events during design phase	Interviews, PDF reports
17. Is there sufficient government/stakeholder commitment to enforce and implement the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project?									Respondent perceptions, policies of new government, budget and staff allocations	Interviews
18. <i>Financial:</i> To what extent is the continuity of project results and their impact dependent on continued financial support? Will adequate financial resources be made available to ensure the continuity of programmes, plans, agreements, monitoring systems etc. that were prepared and agreed upon under the project?									Same as above.	Same as above.
19. <i>Institutional:</i> To what extent is the sustenance of the results and progress towards impact dependent on national institutional frameworks and governance? To what extent are institutional governance structures and capacities in place to sustain processes, policies, agreements and									Same as above	Same as above

legal/regulatory aspects that were supported by the project?										
<i>Catalytic Role & Replication:</i> Has the project had a catalytic role in promoting institutional change, changes in behavior, policy changes, new opportunities or follow-up support?										
E. Efficiency										
21. Did the project apply any time or cost-saving mechanisms in order to achieve results within the approved timeframe and budget?									Project expenditure and delivery trends, project work plans and budget revisions	Interviews, project unit documentation, signed budget revisions, MTE, PIRs
22. Did the project face any obstacles (financial, administrative, managerial) and to what extent has this affected its efficiency?									Respondent perceptions, project expenditure and delivery trends, recruitment and procurement timelines	Interviews, MTE, PIRs
23. To what extent did the delay in implementation affect the delivery of the project outcomes?									Respondent perceptions, project delivery trends (recruitment, procurement, contracts) in comparison with planned timelines	Same as above.
24. To what extent did the project succeed in securing the necessary funds to implement the educational strategy?									Co-financing is made available.	Project financial reports.
25. Were the required progress and financial reports prepared satisfactorily and submitted on schedule?									Reports submitted on time and accepted.	PIRs, financial reports
F. Factors affecting Project Performance										
<u>Preparation and Readiness:</u>										
26. Were the project's objectives and components clear, practicable and feasible within its timeframe?									Respondent perceptions, project performance and delivery trends, positive appraisal of project	Interviews, project document, Quality Assurance

									document	assessment, MTE
27. What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.?									Same as above.	Same as above, PDF reports
28. Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place?									Respondent perceptions, institutional arrangements and counterpart contributions clearly spelt out in project document.	Interviews, project document, PDF reports
<i>Project Implementation and Management:</i>										
29. To what extent were the project implementation mechanisms outlined in the project document effective in delivering project outputs and outcomes? Were adaptations made to the approaches originally proposed									Respondent perceptions, project performance and level of achievement of outputs/outcomes.	PIRs, MTE, Final Report
30. How effective and efficient was project management by CTNBIO and the PMU, and how well did they adapt to changes during the project lifetime?									Same as above.	Same as above.
31. To what extent did the Steering Committee provide guidance and contribute to effective project implementation?									Respondent perceptions, implementation of SC decisions/recommendations	Interviews, minutes of SC meetings
32. To what extent did the project management and national partners respond to the guidance/recommendations provided by the Steering Committee, the UNEP Task Manager and Mid-Term Review.									Respondent perceptions, implementation of SC/UNEP/MTE recommendations by PMU/CNAs	Interviews, minutes of NCC meetings, PIRs, MTE
33. Identify any operational and political / institutional problems and constraints that influenced implementation, and how the project partners tried to overcome these problems.									Respondent perceptions; identified obstacles/constraints and remedial actions taken	Interviews, minutes of SC meetings, PIRs, MTE, Final Report
<i>Stakeholder Participation and Public Awareness</i>										

34. What approaches were used to identify and engage stakeholders in project design and implementation?									Respondent perceptions, evidence of workshops or other consultation mechanisms	Interviews, PDF reports, PIRs, MTE
35. To what extent have project partners and stakeholders collaborated/interacted effectively during project design and implementation?									Respondent perceptions, documented interactions	Same as above.
36. Did the project promote mechanisms for stakeholder participation in decision-making in the programmes, plans and other initiatives that it generated?									Respondent perceptions, evidence of stakeholder participation in planning and decision-making	Same as above.
<i>Country Ownership and Driven-ess</i>										
37. To what degree has CONAP assumed responsibility for the project and provided adequate support to project execution, including the cooperation received from the various public institutions involved and timeliness of counter-part funding?									Respondent Perceptions, performance of CONAP and project team in implementation, timeliness of project delivery	Interviews, PIRs, MTE, Final Report
38. To what extent have the national and regional political/institutional frameworks facilitated project performance?									Respondent perceptions, consistency of NBFs in Central America, synergies with other countries through regional WB/GEF biosafety project	Same as above
<i>Financial Planning & Management</i>										
39. Were sufficient financial resources made available and disbursed in a timely manner to the project and its partners?									Respondent perceptions, timeliness of disbursements, budget revisions	PIRs, budget revisions, financial reports
40. Were administrative processes such as staff recruitment, procurement of goods and services (including									Same as above.	Same as above

consultants), and preparation/ negotiation of cooperation agreements conducted efficiently and in a timely manner?										
41. Were co-financing commitments met as programmed and made available in a timely manner?									Same as above.	Same as above.
42. Were additional resources – financial, in-kind – leveraged by the project, beyond those that were already committed prior to the project’s approval?									Budget revisions, increased allocations to existing/new budget lines through co-financing	Same as above.
43. Identify irregularities (if any) in procurement, use of financial resources and human resource management, and the measures taken by CONAP or UNEP to correct/prevent such irregularities.									Documented irregularities, interrupted procurement/disbursement processes	Interviews, PIRs, MTE, audit reports
<i>UNEP supervision and backstopping:</i>										
44. Assess the quality and efficiency of UNEP’s supervision plans, outcome monitoring, PIR reporting and financial/administrative services									Respondent perceptions, timeliness and acceptance of PIR and financial reports; timeliness of disbursements and administrative support services by UNEP	Interviews, PIRs, MTE
<i>Monitoring and evaluation></i>										
45. Did the project’s design include a viable M&E plan that is based on outcomes and includes indicators?									Monitoring Plan is included in the project document.	Project document
46. Did the project’s design include a monitoring budget?									Project document includes monitoring budget line.	Project document.
47. Have monitoring findings influenced adaptive management and contributed towards resolving implementation problems?									Respondent perceptions, evidence of technical/management decisions based on monitoring findings	Interviews, monitoring reports
48. Are there specific indicators for each of the project									Indicators are included	Project

objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time- bound?									in Results Framework for each objective.	document.
49. Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the frequency of various monitoring activities specified and adequate? In how far were project users involved in monitoring?									Designated parties conduct monitoring activities periodically with inputs from project participants. The monitoring approach is considered methodologically appropriate by the evaluator and most respondents.	Interviews, monitoring reports.

Annex 3

PROJECT COSTS AND CO-FINANCING TABLES

	Estimated Cost at Design (GEF Grant(Actual Cost (GEF Grant):	Expenditure Ratio (actual/planned)
Component 1:	136,605	136,605	1.0
Component 2:	64,155	64,155	1.0
Component 3	230,685	230.685	1.0
Component 4	62,055	62,055	1.0
Monitoring and evaluation	61,684	61.684	1.0
Management requirements	61,000	61,000	1.0
Total	616,364	616,364	*

Co- financing (Type/Source)	IA own Financing (US\$)		Government (US\$)		Other US\$)		Total (US\$)		Total Disbursed (US\$)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
– Grants	616,364	616,364	163,000	163,000			779,365	779,364	615,462 **
– Loans									
– Credits									
– Equity investments									
– In-kind support			348,732	348,732	185,000	185,000	533,732	533,732	533,732
– Other (*)									
Totals									

* The June 2014 PIR reported that US\$ 480,702 had been disbursed to the project (78% of the total GEF contribution) of which US\$ 431,754.98 (70% of the GEF contribution) had been spent.

** This represents only disbursements of the GEF (IA) grant up to June 30, 2014. Data on government disbursements is not available. It is equivalent to 98% of the GEF grant.

Annex 4
PERSONS INTERVIEWED

<u>Name</u>	<u>Title/Organization</u>	<u>E-mail</u>
Cesar Azurdía	National Project Coordinator	raxtul@yahoo.com
Vivian González	Project Assistant	vgonzalez@conap.gob.gt , bioseguridad.guatemala@gmail.com
Mariana del Cid	ex- Project Assistant	mdelcidabs@gmail.com
Maria Villatoro	Legal Consultant	marialema@gmail.com
Enio Aguilar	Communications Consultant	eagularreyes@gmail.com
Azucena Barrios	Project Consultant	acaremina@gmail.com
Mónica Barillas	BCH Focal Point	mbarillas@conap.gob.gt moni.barillas@gmail.com
José Luis Echeverría	Director OTECBIO	otecbio@conap.gob.gt
Mario Díaz	Ministry Environment & Natural Resources	mdiazcbm@marn.gob.gt
Oswaldo Morales *	Ministry of Environment & Natural Resources	omorales@marn.gob.gt
Walter Mansilla	Ministry of Health & Social Assistance	wmansillag@hotmail.com
Carmencita Joachin	Ministry of Health & Social Assistance	carm_quimica7@yahoo.com
Ileana Palma	Ministry of Economy	ipalma@mineco.gob.gt
Milton Sandoval	National Council for Science & Technology (CONACYT)	msandoval@concyt.gob.gt
Hector Sagastume	Institute for Agricultural Science & Technology (ICTA)	hasagastume@yahoo.com
Sergio Melgar	University of San Carlos	smelgar@usac.edu.gt
Margarita Palmieri	University Valle Guatemala	margaritapalmieri@yahoo.com
Ursula Quintana	GREFAL (private sector)	ursulaquintana@icasa.com.gt
Luis Molina *	CENGICANA (private sector)	lmolina@cengicana.org
Eduardo Terceros *	UNOPS	EduardoT@unops.org
Marianela Araya *	UNEP Task Manager	marianela.araya@unep.org

* Skype interview

Annex 5

BIBLIOGRAPHY

Atlas of Guatemalan Wild Crop Relatives (César Azurdía) – CONAP web page

GFL/3630 “Development of mechanisms to strengthen the implementation of the Cartagena Protocol in Guatemala”: Project Document

GFL/3630 “Development of mechanisms to strengthen the implementation of the Cartagena Protocol in Guatemala”: Results Framework (Appendix 4)

GFL/3630 “Development of mechanisms to strengthen the implementation of the Cartagena Protocol in Guatemala”: Project Implementation Review (PIR) – 2012/2014

GFL/3630 “Development of mechanisms to strengthen the implementation of the Cartagena Protocol in Guatemala”: Mid-Term Review

Biosafety Clearinhouse (Web Page) – BCHGuatemala.gob.gt

Guatemala Project Inception Workshop: Mission Report

Ministerio de Ambiente y Recursos Naturales, Acuerdo Gubernativo 61-2015

National Biosafety Policy for Genetically Modified Organisms 2013-2023/Acuerdo Gubernativo 207-2014 (2014)

Online biosafety diploma course – BCHGuatemala.gob.gt

Terminal Evaluation of UNEP-GEF project “Development of a mechanism to strengthen the implementation of the Cartagena Protocol in Guatemala”: Terms of Reference

Annex 6

REVIEW OF OUTCOMES TOWARDS IMPACT RATINGS (ROTI)

Likelihood of Achieving Intermediate States and Impacts

Outputs	Outcomes	Ratings	Intermediate States	Ratings	Impacts	Ratings
1.1.1 National policy on biosafety and biotechnology, in line with sectoral policies, national regulations, and National Competent Authorities (NCA) roles defined by the CPB. 1.1.2 Implementation plan	1.1 A comprehensive, coordinated, and inter institutional policy framework for biosafety is approved and adopted.	A	Biosafety policy was designed and approved but adoption is pending (during an election year)	B	Moderately Likely	AB
1.2.1 Biosafety regulations for: risk assessment and management, environmental release, illicit and unintentional trans boundary movements of LMOs, transit, penalties, research, contained use, food safety and environmental safety, and others.	1.2 The trans boundary movement, transit, handling and use of Living Modified Organisms (LMOs) are regulated, consistent with the CPB.	D	Regulations were designed and submitted to government but approval and adoption are pending	C	Moderately Unlikely	DC
1.3.1 An administrative system with clear procedures for handling requests and clearly defined mandates, responsibilities and communication channels for different NCAs 1.3.2 Permanent and Ad Hoc scientific advisory biosafety structures 1.3.3 A continuity and sustainability strategy for the system	1.3 A National Biosafety System is proposed and adopted, along with a coordination, continuity and sustainability strategy	B	The system has been proposed but not adopted, and will depend on the approval of regulations and external political decisions during an election year	C	Moderately Unlikely	BC

1.4.1 Official adoption and implementation of Biosafety policies in different NCAs	1.4 Biosafety policies are integrated into national programs, plans and strategies for sustainable development	D	Biosafety policies have not been officially adopted nor integrated into national plans, programs and strategies	D	Highly Unlikely	DD
2.1.1 Inter-institutional coordinated and harmonized technical documents, guides, criteria and administrative formats for LMO applications	2.1 The institutional and administrative framework is reinforced and articulated to allow for effective handling of requests and coordinated decisions	B	NCAs are more aware of their responsibilities to varying degrees and have received training on LMO risk evaluation. Mock trials and simulations are lacking.	B	Moderately Likely	BB
2.1.2 Filing system created to handle mock request documentation.						
2.1.3 Validated risk assessment and evaluation methodologies.	2.2 The science base for the evaluation of potential risks and benefits of LMO use in Guatemala is strengthened for use in biosafety risk assessment and management	B	NCAs and SENACYT have participated in technical training, and ICTA and UVG have scientific capabilities. However, further preparedness is required.	B	Moderately Likely	BB
2.1.4 Institutional agreements and coordination mechanisms for decision-making on internal use of LMOs and cross-sectoral collaboration						
2.2.1 Science based guidelines, scientific protocols, and data collection plans to inform biosafety risk assessment and management decisions	2.3 Biosafety measures are applied in accordance with international guidance, national criteria and to the extent necessary and feasible to prevent possible adverse effects of LMOs.	D	Biosafety measures are not applied because regulations have not been approved and system is not operational	D	Highly Unlikely	DD
2.3.1 Guidelines and plans for effective and science based national biosafety measures						
3.1.1 Training Program for the use, management and regulation of biotechnology.	3.1 Institutions are more proficient in risk /benefit analysis, and more knowledgeable of monitoring and enforcement requirements.	B	NCAs are more aware of their responsibilities to varying degrees and have received training on LMO risk evaluation. Mock trials and simulations are lacking.	B	Moderately Likely (assuming system is implemented)	BB
3.1.2 Decision-makers introduced to biosafety risk assessment principles						
3.1.3 Technical staff trained in carrying out risk assessments and defining risk management measures						
3.2.1 State-of-the-art technology, training and laboratory equipment for LMO testing	3.2 Technological capacity is sufficient for in-house analysis of LMOs.	A	Research and training conducted, the ICTA laboratory has been equipped and has reactivities.	A	Highly Likely	AA
3.3.1 Relevant scientific research and information to inform biosafety decisions	3.3 Capacity for the safe development and use of modern					

regarding the local biodiversity, environment and human health	biotechnology is strengthened in Guatemala					
4.1. Information availability in biosafety is increased and contributes to public sensitization and participation processes	4.1 Information availability in biosafety is increased and contributes to public sensitization and participation processes	A	There is more information available for public sensitization, although more in-depth and longer-term support is needed to have impact.	B	Moderately Likely	BB
4.2.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.	4.2 Collaboration with all NCAs is achieved for the management of Biosafety information and for greater transparency in Biosafety decisions and management.	D	NCAs are aware of BCH but do not use it because system is not operational	C	Moderately Unlikely	DC

Outcome Ratings:

A: The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.

B: The project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding.

C: The project's intended outcomes were delivered, and were not designed to feed into a continuing process, with specific allocation of responsibilities after project funding.

D: The project's intended outcomes were not delivered.

Annex 7

EVALUATOR CV SUMMARY

Hugo Navajas

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EDUCATION:

1984 - Masters Degree (MRP) in Regional Planning - Maxwell School of Citizenship & Public Affairs, Syracuse University USA

1978 - Undergraduate Degree (BA) in Cultural Anthropology - University of Arizona USA

KEY QUALIFICATIONS:

Design, evaluation and technical support for environmental management, sustainable development, poverty reduction and governance projects.

SPECIFIC COUNTRY EXPERIENCE:

Country Missions:

Latin America & Caribbean: Argentina (3/97, 2-3/2011); Belize (9/96); Bolivia (9-10/93, 5/94, 8/94, 12/95, 9/96, 2-6/2011); Brazil (2, 8-9/01, 4/2006); Chile (3/99, 7/2001, 7/2003, 4/2006, 9/2006); Colombia (10/95); Costa Rica (8/96, 10/2013, 4/2014) Cuba (4/98, 11-12/2001, 7/2004, 2/2005); Dominican Republic (6/99; 9/2000); Ecuador (10/97, 11/95, 4/2005, 8/2006), El Salvador (10/2014), Guatemala (7/94, 11/95, 11/98 7/94, 4/2003); Guyana (4/2010, 8/2014); Honduras (8/95, 3/96, 4-5/8/2002); Jamaica (3/97, 4/2010); Mexico (5/2000, 9/2004, 4/2005); Nicaragua (8/99, 12/95); Peru (7/97, 9/2006), St. Lucia (8/2014), Tortola, BVI (3/97); Uruguay (10/97); Trinidad & Tobago (9/98,); Venezuela (9/98; 9/2003); 8/2014

Asia & Pacific: Bangladesh (5-7/2006), China (10-11/2000); South Korea (7/2003); Laos (5/2001, 9-11/2002); Marshall Islands (10/2002); Mongolia (5-6/2003; 7-8/2005); Thailand (4/95; 1/2005).

Africa & Middle East: Egypt (4/99, 2/2000, 3/02); Jordan (7/03); Kenya (4/2005, 3/2006, 11/2011, 4/2012), Mozambique (2/98, 3/99); South Africa (11/97); Syria (2/2000); Tanzania (11/97; 7/2003); Turkey (2/2000; 4-5/2007); Yemen (8/01, 2/2003)

Central & Eastern Europe: Albania (2/2000); Macedonia (4/2004); Slovakia (3-4/2004; 5-6/2005); Slovenia (7/2003); Romania (6/2005), Ukraine (4/2004).

Fixed-Term Employment Contracts:

Bolivia (1/88-12/88); Honduras (7/91-5/93); Kenya (1/89-6/91); Mozambique (12/85-12/87); United States (7/78-6/82)

RELEVANT WORK EXPERIENCE:

8-11/2014 *Mid-Term Evaluation of "Implementing Biosafety Frameworks in the Caribbean Sub-region"*, a US\$ 5 million project funded by the Global Environment Facility and implemented by UNEP and the University of West Indies (UWI). The project worked with 13 countries that are CARICOM members in

developing national and regional biosafety legal/regulatory frameworks, technical capacities and LMO risk assessment systems. Desk review of project documentation,; country visits and interviews with regional/national project coordinators, government partners and national stakeholders in Trinidad & Tobago, Guyana, St. Lucia, Grenada, Belize and St. Vincent. Elaboration of MTE Report with recommendations to improve implementation performance.

8-11/2014 Final evaluation of “Implementing the National Biosafety Framework in Costa Rica”, a US\$ 3 million project funded by the Global Environment Facility (GEF) and implemented by UNEP and Costa Rica’s Ministry of Agriculture and Livestock. Responsibilities included the desk review of project documentation, a country visit and interviews with project teams, government, NGO and university partners, and elaboration of Final Evaluation report. Supervision of evaluation team.

10/2013-2/2014 *Project Evaluator/Team Leader* UN-Habitat. Ex-post evaluation of UN Habitat’s Joint Programme for the LAC region, encompassing 9 projects implemented in 6 countries (Brazil, Mexico, Costa Rica, El Salvador, Ecuador and Guatemala) for a combined budget of US\$ 6.8 million. The projects address thematic areas of urban slum improvement, water and sanitation, environmental conservation, democratic governance, race and gender rights, and peace-building/conflict resolution in the context of MDG 7 with financing by the MDG Achievement Fund. The project portfolio was co-implemented with other UN agencies under the joint programme modality. Duties include desk review, preparation of inception report, elaboration of questionnaires, direct/skype interviews, field visits to projects in El Salvador, Costa Rica, Guatemala and Ecuador; and preparation of draft and final evaluation reports.

10/2012-2/2013 *Project Evaluator* United Nations Environment Programme and Global Environment Facility (GEF). Final evaluation of GL4880 “Reducing Pesticide Runoff to the Caribbean Sea”, a GEF-funded US\$ 15 million initiative that was implemented in Colombia, Costa Rica and Nicaragua through the ministries of Environment, in collaboration with cooperative/private producers of banana, plantain and pineapple, CROPLIFE Latin America, national NGOs and other public/private partners. The project supported components for introduction of environmentally sound agricultural practices, integrated pest management (IPM), capacity building and the establishment of a regional pesticide monitoring network with universities and national research institutions. Evaluation activities include (i) interviews with programme stakeholders linked to central and provincial government, NGOs, international organizations; (ii) field visits to targeted cooperatives and private enterprises situated in the Caribbean basin, and interviews with beneficiaries; and (iii) elaboration of the final evaluation report.

11/2011-6/2012 *Programme Evaluator* United Nations Environment Programme (UNEP), Nairobi Kenya. Final evaluation of the UNEP Environmental Governance Sub-programme, which is one of four sub-programmes within UNEP’s 2010-2013 Medium Term Strategy (MTS). The EGSP involves 5 UNEP Divisions and encompasses 18 outputs and 14 projects, with a total programmed budget of US\$ 139 million. Interviews with representatives of UNEP’s Divisions, Regional Offices and Executive level; review of Sub-programme and project documentation; and preparation of a final evaluation report in collaboration with UNEP’s Evaluation Office.

2-8/2011 *Programme Evaluator/Team Leader* Global Environment Facility (GEF), Washington DC and United Nations Environment Programme (UNEP), Nairobi Kenya. Final evaluation of the Implementation of the Strategic Program for the Bermejo River Binational Basin, a US\$ 11 million initiative encompassing the provinces of Salta, Jujuy, Formosa and Chaco in northern Argentina, and the department of Tarija in southern Bolivia. The programme was funded by GEF and implemented by UNEP, the Organization of American States (OAS) and the Bi-National Commission for the Bermejo Basin (COBINABE), with components addressing institutional strengthening and capacity building, erosion and flood control, biodiversity conservation and environmental education. Evaluation activities include (i) interviews with programme stakeholders at the central and provincial government level, the academic sector, NGOs and beneficiary communities among others, (ii) field visits to a project sample in both countries, and (iii) elaboration of a final evaluation report and technical report addressing structural measures.

6-11/2010 *Programme Evaluator* UNDP, New York. Final evaluation of the GEF Country Support Programme (CSP), a US\$ 11.8 million initiative offered in 128 countries to build national/sub regional capacities for accessing GEF funds and managing the GEF project cycle. Direct interviews with the

project team based at UNDP Headquarters and representatives of the GEF Secretariat and Evaluation Office. Design and implementation of e-surveys directed at national GEF focal points that participated in the programme, followed by in-depth interviews with selected respondents. Review of project documentation, subregional workshop reports and the CSP web page. Drafting of the final evaluation report.

4-5/2010 Programme Evaluator UNDP Jamaica - Kingston Jamaica. Outcome evaluation of UNDP Jamaica's environment and energy portfolio under the 2007-2011 Country Programme. Interviews with UNDP senior management and programme staff, government counterparts and implementing partners. Visits to selected project sites. Review of relevant documentation and preparation of preliminary findings for Stakeholder Meeting. Elaboration of the evaluation report.

3-4/2010 Programme Evaluator/Team Leader UNDP Guyana - Georgetown Guyana. Outcome evaluation of UNDP Guyana's environment, energy and poverty reduction portfolio under the 2007-2011 Country Programme. Interviews with UNDP senior management and programme staff, government counterparts and implementing partners. Visits to selected projects. Review of relevant documentation and preparation of preliminary findings for Stakeholder Meeting. Elaboration of environment and energy components of the evaluation report, and incorporation/editing of sections addressing poverty reduction.

11/2009 – 1/2010 Consultant United Nations System Staff College (UNSSC) – Turin, Italy. Assessment of existing evaluation practices among 7 UN research and training institutes, considering levels of adherence to UN Evaluation Group (UNEG) guidelines, gaps and analysis/recommendations for harmonizing evaluation practices in the context of OneUN/Delivering as One. Elaboration of a report for circulation among the institutes, UNEG and the SG's Office.

9/2009 – 11/2009 Consultant UNDP - New York / UNEP - Nairobi. Assessment of trends and stakeholder perceptions regarding various forms of UNDP - UNEP collaboration, both within and outside the One UN/Delivering as One context. Preparation of a global inventory of UNDP-UNEP collaboration, grouping initiatives by theme/strategic objective, region and country. Consultations with UNDP, UNEP and partner focal points through on-line surveys and questionnaires. Elaboration of inventory and forward-looking assessment reports for the UNDP-UNEP Working Group.

4 – 8/2009 Project Evaluator UNEP, Nairobi. Final evaluation of the Biosafety Clearinghouse Project (BCH Phase I), a US\$ 14.9 million capacity development initiative implemented in 112 countries to support the Cartagena Protocol on Biosafety. Consultations with project staff based in Geneva and Nairobi, review of documentation and country visits to Mongolia, Ethiopia, Albania, Guatemala and Uruguay. Preparation and processing of on-line surveys to national coordinators and regional advisors. Formulation of the final evaluation report.

9-11/2008 Project Evaluator UNEP – Nairobi. Final evaluation of the UNEP/Belgian Partnership covering the 2004-2008 period. Under the partnership, the Government of Belgium provided US\$ 12 million to support programmes for implementing the Global Plan of Action (GPA) for marine and coastal zone protection, designing National Action Plans for coastal/river basin conservation and integrated waste management; integrating environmental priorities within Poverty Reduction Strategies; strengthening national legislation and participation to implement Multilateral Environmental Agreements (MEAs); and implementing demonstration projects. The evaluation included the desk review of relevant documentation, interviews with programme managers at UNEP Headquarters, design/dissemination of an on-line survey to programme recipients, and field visits to Peru and Bangladesh. Elaboration of Final Evaluation Report.

6-7/2008 Project Evaluator UNEP – Nairobi. Mid-term evaluation of "Enhancing conservation of the critical network of sites required by Migratory Waterbirds on the African/Eurasian Flyways" (Wings Over Wetlands), a US\$ 6 million initiative funded by the Global Environment Facility (GEF) and implemented by UNEP in 12 countries of the African and Eurasian regions. Interviews with the Project Coordination Unit, Steering Committee and institutional partners in Wetlands International, Bird Life International, UNEP, Africa Eurasian Waterbirds Agreement (AEWA) and Government of Germany.

Design and processing of on-line surveys targetting stakeholder groups in the participating regions. Desk review of relevant documentation. Elaboration of Mid-Term Evaluation Report.

5-6/2008 Evaluator UNDP – New York. Assessment of the Civil Society Organization Advisory Committee to the UNDP Administrator, which provided policy advice, monitoring and advocacy support to UNDP senior management between 2000 and 2006. The assessment considered Committee performance, influence/impact on policy and programmes, institutional responsiveness and coordination with different levels of UNDP. Interviews and focus group meetings with senior UNDP staff (Office of the Administrator, BPE, RCBP and Regional Bureaux), CSO Division and CSO Advisory Committee members. Design and processing of an on-line survey for committee members and UNDP partners/clients. Desk review of relevant documents. Analysis and presentation of findings at UNDP Headquarters. Preparation of Assessment Report.

8-11/2007 Programme Evaluator UNDP Evaluation Office – New York. Assessment of Development Results (ADR) Study for UNDP-Ecuador covering the 2002-2007 period. The ADR focussed on governance, environment/sustainable development, economic development, HIV/AIDs and other thematic components of the UNDP Country Cooperation Framework. The assignment additionally included an assessment of UNDP Ecuador's energy/ environment portfolio as a component for UNDP's Global Assessment of Energy & Environment report. Activities included the desk review of relevant documents; interviews with UNDP/UN agency and project staff, central/local government officials, NGOs and other stakeholders; and field visits to projects in Quito, Guayaquil and Galapagos. Co-drafting of ADR Study and drafting of the Ecuador component for the Global Assessment of Energy & Environment.

4-5/2007 Country Evaluator Global Environment Facility (GEF)/World Bank – Washington DC. Country evaluation of GEF Small Grants Program in Turkey, under a joint global evaluation of country SGPs conducted by GEF-World Bank and the UNDP Evaluation Office. Meetings with GEF-SG staff, GEF national focal points, NGO and donor representatives in Turkey. Field visits to small grant projects, review of documentation, and focus group interviews/workshops with grantees and Steering Committee members. Analysis of findings with UNDP Evaluation Office participant, supervision of national consultant and drafting of Country Study.

8/2006-2/2007 Evaluator Gordon & Betty Moore Foundation (GBMF) – San Francisco, USA. Evaluation of the Global Conservation Fund, a US\$ 100 million financing facility implemented by Conservation International (CI) that supports the creation/expansion and long-term financing of Protected Areas in wilderness areas and "hot spots." Meetings with GCF-CI staff in Washington DC and Moore Foundation staff in San Francisco. Review of documents and processing of survey findings for GCF's portfolio of 58 projects. Field visits to GCF projects in Ecuador, Peru and Chile. Analysis of findings and recommendations, and drafting of evaluation report in collaboration with other team members.

5-7/2006 Mission Team Leader UNDP – Dhaka, Bangladesh. Formulation of governance and capacity development components for the Chittagong Hill Tracts Development Facility, a US\$ 30 million initiative funded by UNDP, EU and other donors for the sustainable development of the CHT region, targeting indigenous communities and natural resource management. Review of background documents, design of formulation methodology, supervision of a five-person team, field missions in the CHT, and formulation of an integrated technical assessment report and comprehensive program document with modules on community outreach and support systems, environmental protection and management, disaster preparedness, NGO capacity strengthening and skills development for community management.

Annex 8: UNEP Evaluation Quality Assessment

Evaluation Title:

Evaluation of the Project: National Biosafety Framework for Guatemala

All UNEP evaluations are subject to a quality assessment by the Evaluation Office. The quality assessment is used as a tool for providing structured feedback to the evaluation consultants.

The quality of both the draft and final evaluation report is assessed and rated against the following criteria:

	UNEP Evaluation Office Comments	Draft Report Rating	Final Report Rating
Substantive report quality criteria			
A. Quality of the Executive Summary: Does the executive summary present the main findings of the report for each evaluation criterion and a good summary of recommendations and lessons learned? (Executive Summary not required for zero draft)	Final report: Good summary presenting key points		6
B. Project context and project description: Does the report present an up-to-date description of the socio-economic, political, institutional and environmental context of the project, including the issues that the project is trying to address, their root causes and consequences on the environment and human well-being? Are any changes since the time of project design highlighted? Is all essential information about the project clearly presented in the report (objectives, target groups, institutional arrangements, budget, changes in design since approval etc.)?	Draft report: Good overview, changes described and precise presentation of key points. Final report: Overview of context used to anchor conclusions and recommendations	5	5
C. Strategic relevance: Does the report present a well-reasoned, complete and evidence-based assessment of strategic relevance of the intervention in terms of relevance of the project to global, regional and national environmental issues and needs, and UNEP strategies and programmes?	Draft report: Very good analysis based on info provided by EOU and TM Final report: Same as above	5	5
D. Achievement of outputs: Does the report present a well-reasoned, complete and evidence-based assessment of outputs delivered by the intervention (including their	Draft report: Detailed assessment Final report:	5	5

	quality)?			
E.	Presentation of Theory of Change: Is the Theory of Change of the intervention clearly presented? Are causal pathways logical and complete (including drivers, assumptions and key actors)?	Draft report: ToC reconstruction of good quality, slightly over-complex Final report: Same as above	4	4
F.	Effectiveness - Attainment of project objectives and results: Does the report present a well-reasoned, complete and evidence-based assessment of the achievement of the relevant outcomes and project objectives?	Draft report: Yes, good assessment Final report: Same as above	5	5
G.	Sustainability and replication: Does the report present a well-reasoned and evidence-based assessment of sustainability of outcomes and replication / catalytic effects?	Draft report: Yes all dimensions considered Final report: Final report includes links and recommendation for the next project (or rather before the next project is approved)	5	5
H.	Efficiency: Does the report present a well-reasoned, complete and evidence-based assessment of efficiency? Does the report present any comparison with similar interventions?	Draft report: Yes, but no comparisons Final report: Same as above	5	5
I.	Factors affecting project performance: Does the report present a well-reasoned, complete and evidence-based assessment of all factors affecting project performance? In particular, does the report include the actual project costs (total and per activity) and actual co-financing used; and an assessment of the quality of the project M&E system and its use for project management?	Draft report: Good analysis Final report: Same as above	5	5
J.	Quality of the conclusions: Do the conclusions highlight the main strengths and weaknesses of the project, and connect those in a compelling story line?	Draft report: Conclusions highlight key points Final report: Same as above	5	5
K.	Quality and utility of the recommendations: Are recommendations based on explicit evaluation findings? Do recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can they be implemented?	Draft report: R are targeted Final report: Recommendations are actionable and target key specific issues, most of which can be addressed in the follow up project being planned	5	6
L.	Quality and utility of the lessons:	Draft report: Lessons are short but useful	5	5

Are lessons based on explicit evaluation findings? Do they suggest prescriptive action? Do they specify in which contexts they are applicable?	Final report: Same as above		
Report structure quality criteria			
M. Structure and clarity of the report: Does the report structure follow EO guidelines? Are all requested Annexes included?	Draft report: Very good structure Final report: All required annexes have been included	6	6
N. Evaluation methods and information sources: Are evaluation methods and information sources clearly described? Are data collection methods, the triangulation / verification approach, details of stakeholder consultations provided? Are the limitations of evaluation methods and information sources described?	Draft report: Yes good description Final report: Same as above	5	5
O. Quality of writing: Was the report well written? (clear English language and grammar)	Draft report: Good writing style Final report: Same as above	5	6
P. Report formatting: Does the report follow EO guidelines using headings, numbered paragraphs etc.	Draft report: Yes well layouted and formatted report Final report: Same as above	6	6
OVERALL REPORT QUALITY RATING		5.1	5.25

The quality of the evaluation process is assessed at the end of the evaluation and rated against the following criteria:

	UNEP Evaluation Office Comments		Rating
Evaluation process quality criteria			
Q. Preparation: Was the evaluation budget agreed and approved by the EO? Was inception report delivered and approved prior to commencing any travel?	Inception report finalised, ToC revised by EOU		5
R. Timeliness: Was a TE initiated within the period of six months before or after project completion? Was an MTE initiated within a six month period prior to the project's mid-point? Were all deadlines set in the ToR respected?	TE started just before the project ended. Minor delays due the consultants injuring himself.		5
S. Project's support: Did the project make available all required documents? Was adequate support provided to the evaluator(s) in planning and conducting evaluation	Yes, all documents were made available and most stakeholders contributed to the process openly and supportively		6

missions?			
T. Recommendations: Was an implementation plan for the evaluation recommendations prepared? Was the implementation plan adequately communicated to the project?	Yes		6
U. Quality assurance: Was the evaluation peer-reviewed? Was the quality of the draft report checked by the evaluation manager and peer reviewer prior to dissemination to stakeholders for comments? Did EO complete an assessment of the quality of the final report?	Yes, report was peer reviewed and assessment done		6
V. Transparency: Were the draft ToR and evaluation report circulated to all key stakeholders for comments? Was the draft evaluation report sent directly to EO? Were all comments to the draft evaluation report sent directly to the EO and did EO share all comments with the commentators? Did the evaluator(s) prepare a response to all comments?	Yes, ToR shared with TM and stakeholders for comment. Only a few comments received after several reminders.		6
W. Participatory approach: Was close communication to the EO and project maintained throughout the evaluation? Were evaluation findings, lessons and recommendations adequately communicated?	Yes		6
X. Independence: Was the final selection of the evaluator(s) made by EO? Were possible conflicts of interest of the selected evaluator(s) appraised?	Yes, independent and no conflict of interest		6
OVERALL PROCESS RATING: 5.75			

Rating system for quality of evaluation reports

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1

The overall quality of the evaluation report is calculated by taking the mean score of all rated quality criteria.