



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Conservation of Ecuadorian Amphibian Diversity and Sustainable Use of its Genetic Resources		
Country:	Ecuador	GEF Project ID:	5534
GEF Agency:	UNDP	GEF Agency Project ID:	5314
Other Executing Partner:	Ministry of Environment (MAE)	Submission Date: Re-Submission Date:	April 23, 2015 May 19, 2015
GEF Focal Area :	Biodiversity	Project Duration (Months)	60
Name parent program	NA	Agency Fee (\$):	259,056

A. FOCAL AREA STRATEGY FRAMEWORK

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas	Output 2. New protected areas (2) and coverage (2,200) of unprotected threatened species (4).	GEF TF	301,672	4,412,607
BD-4	Outcome 4.1: Legal and regulatory frameworks, and administrative procedures established that enable access to genetic resources and benefit sharing in accordance with the CBD provisions	Output 4.1. Access and benefit-sharing agreement (1) that recognizes the core ABS principles of Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT) including the fair and equitable sharing of benefits	GEF TF	2,425,236	9,803,517
Total project costs				2,726,908	14,216,124

B. PROJECT FRAMEWORK

Project Objective: Ecuador implements integrated emergency actions to conserve the diversity of amphibians of Ecuador and use its genetic resources in a sustainable way

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount	Co-financing
1. Emergency actions to ensure the survival of highly endangered amphibian species of Ecuador for conservation and bio-prospecting purposes	TA	1.1. Highly endangered harlequin and poison frogs rescued from areas impacted by mining and conserved in captive breeding facilities. Rescue locations and species include: <ul style="list-style-type: none">• Azuay: <i>Atelopus nanay</i>• Morona Santiago and Zamora Chinchipe, Cordillera del Condor: <i>Atelopus</i> sp. nov. <i>aff. palmatus</i> and <i>Dendrobates condor</i> 1.2 Critical habitat of 4	1.1 <u>Ex situ conservation through breeding actions to protect 3 highly endangered amphibian species;</u> <ul style="list-style-type: none">- Ecuadorian Institutions dedicated to amphibian conservation equipped to maintain genetically viable populations;- Collection and rescue of amphibian species at high risk of extinction through expeditions in key amphibian habitats areas of imminent large-scale mining; transfer of individuals to captive breeding facilities for safeguarding;- Maintenance and <i>ex situ</i> management of genetically viable populations (> 20 breeding pairs) of each species in captive breeding facilities. 1.2. <u>In situ conservation of critical habitats</u>	GEF	770,500	9,040,369

Project Objective: Ecuador implements integrated emergency actions to conserve the diversity of amphibians of Ecuador and use its genetic resources in a sustainable way

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount	Co-financing
		Ecuadorian amphibian species at high risk of extinction (<i>Atelopus coynei</i> , <i>Atelopus sp. aff. longirostris</i> , <i>Atelopus balios</i> and <i>Atelopus nanay</i>) legally protected in 2 new Decentralized Autonomous Government (GAD) reserves (in Carchi and Guayas) and 1 existing protected area of the PANE (Cajas National Park in Azuay).	<p><u>of 4 unique species at high risk of extinction in GAD reserves and PANE through:</u></p> <ul style="list-style-type: none"> - Critically threatened habitats of target amphibian species identified; technical, and regulatory assessment determine conservation potential and needs in priority provinces (Azuay, Carchi and Guayas); - Negotiations with authorities of priority Decentralized Autonomous Governments (GADs) to detail and formally establish reserves; - Management plans that include comprehensive conservation plans for target species developed for (i) new reserves with support from the MAE and with participation of GAD authorities; and for targeted habitat in the Cajas National Park - Brokerage of agreements on a) GAD reserves and support for their creation and integration in the National System of Protected Areas (SNAP) and b) budget allocation for implementation of amphibian conservation plans in all 3 PAs. 			
2. Discovery of active compounds derived from the skin secretion of Ecuadorian amphibians with potential applications in biomedicine	TA	<p>2.1 Amphibian genetic resources under research for biomedical applications; and access to genetic resources of amphibians granted to an Ecuadorian University or Research Institution through a framework contract for research purposes.</p> <p>2.2. Four lead compounds characterized and one new small protein (peptide) synthesized and pharmacologically tested from the skin secretions of 4 amphibians: (<i>Agalychnis spurrelli</i>, <i>Cruziohyla calcarifer</i>, <i>Hypsiboas picturatus</i> and <i>Atelopus nanay</i>).</p> <p>2.3 Technology transfer improves the bio-prospecting research capacity of Ecuador and advances in science knowledge on peptides from skin secretion of 4 species amphibians, (10</p>	<p><u>2.1 Institutional procedures completed to foster amphibian bio-prospecting research.</u></p> <ul style="list-style-type: none"> - Completion of third-party agreement between IKIAM Regional Amazonic University and Queen's University; request by IKIAM to MAE for access of genetic resources for non-commercial use; expedited review of application by MAE and assessing body. <p><u>2.2 Research on skin secretions for new peptides with bioactive properties from four species of Ecuadorian amphibians:</u></p> <ul style="list-style-type: none"> - 100 peptides isolated; 10–15 peptides molecularly characterized; and at least 4 peptides functionally characterized from target frog skins; - Libraries of cDNA constructed to identify genetic precursors of 4 species; - Pharmacological activity proven of at least one synthetic peptide. <p><u>2.3. Technical and scientific capabilities for bio-prospecting improved in Ecuador through:</u></p> <ul style="list-style-type: none"> - Young professionals trained at graduate level through agreements and grants provided by SENESCYT at Queen's University of Belfast (Molecular Therapeutics Group of the School of 		733,704	3,566,591

Project Objective: Ecuador implements integrated emergency actions to conserve the diversity of amphibians of Ecuador and use its genetic resources in a sustainable way

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount	Co-financing
		<p>publications in peer review scientific journals).</p> <p>2.4 Genetic resources of Ecuadorian amphibians at high risk of extinction conserved for bio-prospecting and conservation purposes:</p> <ul style="list-style-type: none"> - Tissues of 50% of Ecuadorian amphibian species¹; - Skins (with chemical compounds) and germ cells of ~ 40% (~ 70 of Ecuadorian amphibians on the IUCN Red List; - Cryopreserved sperm samples tested and proven viable for reproductive use 	<p>Pharmacy) or other Universities;</p> <ul style="list-style-type: none"> - Ecuadorian bio-prospecting laboratory equipped with appropriate technology. <p>2.4 BioBanking of genetic resources of Ecuadorian amphibians strengthened through improved capacity of the Ecuadorian Amphibian Life Bank with technology transfer (cryopreservation) for storing tissues, skin, and sperm, which includes: (i) Bio-Banking methodologies (e.g. cryopreservation) for amphibian conservation improved in Ecuadorian institutions (scientists and conservation managers trained); (b) Genome resources of endangered amphibians safeguarded in the Ecuadorian Amphibian Life Bank.</p>			
3. Institutional strengthening for the implementation of biodiversity conservation measures and sustainable use of its genetic resources in Ecuador, using amphibians as a pilot case study.	TA	<p>Measures for the conservation and sustainable use of strategic resources of amphibians implemented at national and local levels in Ecuador by:</p> <p>3.1 Nagoya Protocol ratified and regulations on ABS updated; model ABS agreements and contractual clauses for different taxa defined; policy for amphibian conservation measure included in permit processes for development projects</p> <p>3.2. Capacities of national agencies for ABS implementation improved as measured by ABS Capacity Development Scorecard (baseline 35 target 49)</p> <p>3.3. Increased awareness of citizens about ABS and the need to preserve the country's amphibian diversity and its genetic</p>	<p>3.1. National and local frameworks aligned for conservation and sustainable use of genetic resources of amphibians:</p> <ul style="list-style-type: none"> - Alignment of ABS regulations with D 391/ Nagoya/ ITPGR / Convemar; - Strategic Action Plan for Ecuadorian amphibians updated and implemented by MAE; - Case-study on guidelines & ABS agreements - Economic assessment of Ecuadorian amphibians as a strategic resource and mainstreaming this analysis into national policies as options for economic strategies and models <p>3.2 Improved capacities of National Competent Authority and related agencies on ABS, including procedures and Prior Informed Consent & Mutually Agreed Terms by:</p> <ul style="list-style-type: none"> - Upgrading the MAE genetic resources unit to a multidisciplinary team of at least five people including 2 technicians. - Unified Environmental Information System (SUIA) of MAE improved to systematize and expedite ABS permitting processes; - Training of 25 staff on processing access applications; negotiating ABS agreements; monitoring and tracking to ensure 	GEF	952,850	870,693

¹ As of January 2015, 546 amphibian species have been recorded in Ecuador, distributed across three groups: Anuros (represented by frogs and toads) comprise 514 species, Salamanders (Caudata order) comprise 8 species, and Caecilians (Gymnophiona order) comprise 24 species.

Project Objective: Ecuador implements integrated emergency actions to conserve the diversity of amphibians of Ecuador and use its genetic resources in a sustainable way

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount	Co-financing
		resources.	<p>compliance.</p> <p>3.3 <u>National information improved and available for effective decision making on protection and sustainable use of genetic resources of endangered amphibian</u> through:</p> <ul style="list-style-type: none"> - IUCN Red List of Ecuadorian Amphibians updated to include vulnerability analysis with threat indices for climate change, habitat destruction/loss, pathogens, and rarity; - Centro Jambatu platform interconnected and exchanging information on amphibians with MAE; - Information on amphibians accessible online and Citizen science project launched to increase the updating of records (and related information) of amphibian species in Ecuador - factsheets for 100% of Ecuador's amphibians completed and published on CJ and ABS-CH portals; - Communication Strategy focused on: Decision-makers, Communities, Socio Bosque, and SNAP 			
4. Monitoring and Evaluation					140,000	0
			Subtotal		2,597,054	13,477,653
			Project Management Cost		129,854	738,471
			Total Project Cost		2,726,908	14,216,124
NOTE: The Project Management Costs listed above are included within the components identified in the co-financing letters.						

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$).

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	MAE	Cash	3,454,119
National Government	MAE	In kind	499,479
National Government	IKIAM	Cash	1,937,325
Local Government	GAD Carchi	Cash	10,000
Local Government	GAD Carchi	In kind	42,628
Local Government	GAD Guayas	Cash	18,471
Local Government	GAD Guayas	In kind	41,473
Local Government	ETAPA	Cash	2,892,535
Local Government	ETAPA	In kind	264,350
Private Sector	Molecular Therapeutics laboratory of Queen's University	In kind	2,000,000
NGO/Private	Centro Jambatu	Cash	1,708,000
NGO/Private	Centro Jambatu	In kind	1,000,000
GEF Agency	UNDP	Cash	54,538
GEF Agency	UNDP	In kind	166,462
NGO/Private	Amaru	Cash	108,350
NGO/Private	Amaru	In kind	18,394

Total Co-financing	14,216,124
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D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY NA

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEF IF	BD	Ecuador	2,726,908	259,056	2,985,964
Total Grant Resources				2,726,908	259,056	2,985,964

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	60,000	1,200	61,200
National/Local Consultants	741,917	1,749,151	2,491,068

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF²

1. The final project design is aligned to the original PIF; it preserves its main objective, strategy and structure. However, small adjustments were made to the project framework based on field visits, studies and discussions with project partners and key stakeholders during the PPG, aiming to improve precision in outputs and indicators so as to best achieve the outcomes and the overall objective.

PIF	Project Document (ProDoc)
Two of the species initially identified in the PIF - <i>Atelopus exiguus</i> (<i>in situ</i> and <i>ex situ</i>) and <i>Hyloマンtis psilopygion</i> (bioprospection)	These were replaced by <i>Atelopus nanay</i> , a priority species that can provide an important case study to show impacts and interactions across all 3 interventions (<i>in situ</i> , <i>ex situ</i> and bioprospecting) due to both its vulnerability and conservation interest as the only species in the <i>Atelopus</i> genus to be found in the Andean highlands, and because of the possible presence of biomedically-significant peptides found in its skin.
Output 1.1 stated “Highly endangered harlequin, glass, marsupial and poison frogs rescued...”	This has been updated to “Highly endangered harlequin and poison frogs rescued...” based on PPG confirmation of target species to be addressed through this project. See Section VI Part II in the Project Document for further details.
Output 1.1 considered Mirador, Fruta del Norte and Panantza-San Carlos located in the Cordillera del Cóndor (southeastern part of Ecuador) and Quimsacocha situated in the Western Cordillera of the Andes Mountains in the Azuay province for <i>ex situ</i> conservation.	<i>Ex situ</i> conservation efforts have been adjusted per species location based on recent reports; this output will focus on Zamora Chinchipe in the Cordillera del Condor.

² For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

PIF	Project Document (ProDoc)
Output 1.2 Municipal Reserves	<p>The SNAP established a subsystem for Decentralized Autonomous Government (GAD) reserves, open to all three levels of GAD (Provincial, Municipal and Parrish). The Municipal GADs mentioned in the PIF were unable to commit to the project, partly due to their lack of technical capacity in conservation and establishing/managing conservation areas. Consequently, the project will work with Provincial GADs that have committed to conserving the critical habitat of the highly endangered amphibian species prioritized by the project. These Provincial GADs are crucial partners in the project as they already have conservation units and technical capacity established, and as such provide a higher probability of sustainability post-project, as well as replication in other areas within the provinces. The new Guayas Provincial GAD reserve will benefit from the experience and capacity of an existing provincial system of conservation - in fact the GAD Provincial system will take charge of the delimitation and signage of the new reserve (as part of their co-financing contribution). Meanwhile, the Carchi Provincial GAD will provide technical support, a technician for the new reserve and offices, as well as cash for the Management Plan.</p> <p>Finally, both Provincial GADs have expressed interest and political will to ensure the two new reserves are eligible for integration in the SNAP. Furthermore, the Municipality of Cuenca has demonstrated both capacity and formal interest, so the project will pursue the possibility of replication at this level later on.</p>
Output 2.1 suggested a direct permit for access to genetic resources by Queens University	A national public university/institute will need to establish a third-party agreement with Queens University and then apply to MAE for access to genetic resources for research purposes so as to pursue this research in cooperation with Queens University. Initial conversations with MAE, Ikiam and Queen's University have begun the negotiation process for a third-party agreement between IKIAM Regional Amazonic University and Queen's University. Once this agreement is formalized, IKIAM will submit a request to MAE for access of genetic resources for non-commercial use.
Output 2.3 mentioned that the Genome Bank will preserve cDNA libraries (complementary DNA obtained from mRNA) of the 4 species targeted for bioprospecting research, preserving genetic sequences coding for proteins and peptides as subjects of study in the bioprospecting component.	This was eliminated because long term storage of cDNA is not possible because they are susceptible to degradation. Furthermore, it is not necessary to store clones after their sequences have been analyzed. Instead, the project will support the cryopreservation of sperm samples as well as the testing of viability for reproductive use, ultimately supporting <i>ex situ</i> conservation efforts.
Output 3.1 states that the project will support “Socializing the importance of Nagoya Protocol to a wide audience (civil society, NGOs, industry, academia,	The MAE has already facilitated a widespread socialization process through the development and presentation of technical and legal information targeted at

PIF	Project Document (ProDoc)
various governmental, indigenous, etc.).”	national authorities and stakeholders, explaining the importance of ratifying the Nagoya Protocol and the need to implement Decree No. 905. Consequently, it is believed that the National Assembly now has the political will to ratify the Protocol, and is expected to do so during the project's lifetime. As such, the Communication Strategy in Output 3.3 will focus on stakeholder-specific strategies as a cost-effective way of inciting change. The groups to be targeted by this strategy are: Decision-makers; SNAP; Socio Bosques; Communities. See ProDoc Outcome 3 for more detailed information.
The SIB Genetic Resources Module was in Output 3.3	This was moved to Output 3.2 to reflect the improved capacity in dealing with ABS issues, which, among other things, includes the effectiveness and efficiency of approving permits and procedures related to Genetic Resources. As such, the title of Output 3.2 has been adjusted to “Improved capacities of National Competent Authority and related agencies on ABS, including procedures and Prior Informed Consent & Mutually Agreed Terms”. Furthermore, the SIB will be absorbed by the Unified Environmental Information System (SUIA), thus all references to the SIB have been replaced by SUIA.

A.1. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.: N/A

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities. N/A

A.3. The GEF Agency’s comparative advantage: N/A

A.4. The baseline project and the problem that it seeks to address: The Project Document contains expanded information and analysis regarding the baseline project and problem issues. This represents a strong and well-reasoned platform for project implementation. However, the baseline project and core challenges identified during project preparation were not substantially different from those identified in the original PIF.

A.5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project: N/A

A.6. Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

Risk	Rank	Mitigation strategy
Numbers of individuals collected for captive breeding programmes and <i>ex situ</i> collections are insufficient to maintain genetically viable populations and provide the basis for future bioprospecting. Key factors for the	Medium to Low	Emergency expeditions will be carried out by professionals with extensive field experience using local guides in inventory teams prioritizing areas with high compliance to habitat requirements for target species (<i>Atelopus nanay</i> , <i>Atelopus</i> sp. nov. aff. <i>palmatus</i> and <i>Dendrobates condor</i>). Captivity programmes will build on the proven experience of the Centro Jambatu and Amaru Amphibian Rescue Center. Amaru Center has conducted several attempts to reproduce <i>Atelopus nanay</i> and currently has 40 froglets in varying degrees of the maturation process, thus providing important lessons to replicate in the project's <i>ex situ</i> interventions. These 2 rescue centers will be further strengthened to ensure work under high standards of biosecurity and control of hazards to reduce mortality from accidents and to optimize breeding and feeding mechanisms, in accordance with the established <i>Ex situ</i> Protocol (see Project Document, Section IV Part II).

Risk	Rank	Mitigation strategy
reproduction and maintenance of captive breeding species cannot be identified		
Extreme effects of chytridiomycosis and climate change accelerate impacts to amphibian populations at risk of extinction	Medium	<p>The project strategy has been designed to pre-empt this risk recognising the synergistic relationship of climate change and chytridiomycosis underlying amphibian decline- namely it will support an integrated strategy that combines emergency collection, and captivity breeding integrated with enhanced <i>in-situ</i> conservation. Chytridiomycosis is nearly impossible to be controlled in nature. Nevertheless, it can be completely removed from specimens in lab conditions. This is one of the key activities to be carried out as part of the <i>ex-situ</i> conservation activities of Component 1. Furthermore, one of the project's approaches is to increase <i>in situ</i> conservation and thus maintain genetically viable and increasing populations and hence increase the likelihood of survival. Also, under component 3 the project is increasing the monitoring of amphibians so as to have a clearer idea of where they are; that together with the vulnerability index; the new and clearer guidelines on how to conserve in situ and the addition of economic studies to show potential gains should all lead to increasing populations <i>in situ</i> and gain having larger populations that may help in the fight against chytridiomycosis.</p> <p>In addition, project actions will develop vulnerability indexes that incorporate climate data to guide priority action for amphibian conservation. This will be coordinated with relevant programs and projects that generate climate information including <i>Adaptation to Climate Change through an Effective Water Governance in Ecuador</i> which gathers climate data that is relevant to endangered and/or endemic amphibian species.</p>
Skin secretions of target species for bioprospecting studies do not contain new peptides to test bioactive activity and advance ABS contracts	Medium	<p>There is high probability of discovering new peptides in target species but there is also a chance that these would be similar to those found in other amphibians and even in mammals. Also peptides with commercial use could be perhaps 1% of those discovered. Given this uncertainty as a first step the application in preparation is for scientific, non-commercial research on the chemical compounds of the 4 species to advance understanding of the biological function in the human body and in amphibians. This will provide data of paramount importance to understand Ecuadorian amphibian genetic resources; provide improved techniques and enhance local capacities to find new compounds when other species are studied. If a peptide of commercial value is identified during the project a second application would be prepared. As legal bio-commerce activities the certification of origin is guaranteed for the target research species so the Ecuadorian government will have a strong case to negotiate ABS contracts.</p>
Lack of qualified candidates apply for scholarships to pursue graduate-level studies in bioprospecting and ABS-related topics	Medium	<p>Bioprospecting is a priority area, as emphasized in Ecuador's National Plan for Good Living, and as such the government is committed to supporting its development through programmes such as scholarship grants. However, there is a perceived risk that not all grants are filled because there is a tendency for students to seek more traditional studies. The project will support SENESCYT's efforts to promote scholarship opportunities. Interaction with national universities and research centers throughout the project's implementation is expected to generate interest in qualified candidates. Furthermore, the project will promote SENESCYT's call for proposals for a Prometeo expert in themes of bioprospection to bring at least one expert to a national institution to share experiences in bioprospecting and thereby transfer technical and scientific capacity, as well as generate interest in students.</p>
Construction of Hydroelectric Plant in Carchi Province	Low	<p>The possible construction of a hydroelectric plant in Carchi is low as current plans do not imply a direct threat or impact on target species. The project will coordinate with MICSE and MAE throughout the lifetime of the project to ensure construction does not impact on endangered species' habitat. Furthermore, the experiences developed through the implementation of <i>in situ</i> conservation will better define conservation measures that are expected to be included in environmental licensing procedures for development and extractive activities.</p>
Lack of political will to ratify the Nagoya Protocol	Medium	<p>Ecuador signed the Nagoya Protocol in 2011 and is in the process of negotiating its ratification. While there is no guarantee of its ratification during the lifetime of the project, Outcome 3 will support the updating the regulations on ABS associated with the Protocol.</p>
Lack of political will and funding hinders	Low	<p>Through the project's work on economic values of amphibian ABS and awareness raising of potential benefits from this in the future, GADs (parish, municipal and/or provincial) will be</p>

Risk	Rank	Mitigation strategy
GAD authorities to conserve amphibian species at risk of extinction		more favorable for conserving amphibians. The mechanism for GADs to do this is through creating reserves. While the costs associated with creating and managing GAD reserves is not fully known, or funding sources, the project will address this by providing support for the development of the management plans and the attendant financial sustainability plan (business plan). This will be complemented by linking GADs to the GEF/UNDP PA finance project that is developing legal frameworks and financial mechanisms that could help define funding sources. Furthermore, the Ecuadorian Constitution requires that the National Government provide funding for all PA within the SNAP - including GAD PAs – so the project is committed to supporting the new Provincial GAD reserves through the integration process for the SNAP so that by project end they are formally recognized as pertaining to the SNAP.

A.7. Coordination with other relevant GEF financed initiatives:

2. The project will work closely with a number of related initiatives including several funded through the GEF. Amongst others these include:
 3. *GEF-UNDP Support to the updating NBSAP* in particular reference to integrating and coordinating activities of the proposed amphibians bioinformatics platform into the institutional strengthening and CHM Tools under development in that project.
 4. *GEF-UNDP Sustainable Financing of Ecuador's National System of Protected Areas (SNAP)* to jointly define strategies to establish set-asides where emergency actions are required and to support the sustainability of municipal set aside. As mentioned in Output 1.2, close coordination with this project will be maintained to identify and broker potential funding mechanisms for reserves as complementary measures to potential ABS benefits that could be developed post project if bioprospecting for commercial purposes results in these reserves.
 5. *GEF-UNDP Advancing Landscape Approaches in Ecuador's SNAP to Improve Conservation of Globally Endangered Wildlife* where synergies can be expected in overlapping geographical areas of interest for *in situ* conservation outside the PANE- and where it will work with set-up of municipal and private reserves. Although the target species and taxa are very different lessons exchange on the reserves and set asides will be sought in annual meetings and programming exercises. *Small Grants Program (SGP)* implementation of community projects to improve agricultural practices in protected areas and sensitive ecosystems can provide crucial lessons learned regarding methodology for engaging local communities in conservation interventions. While current SGP areas do not overlap with critical habitats of the project's target species, there may be a potential opportunity for replication regarding critical habitat conservation later on during the project's lifetime.
 6. Coordination will also be sought with GEF-FAO's project *Mainstreaming of the use and conservation of agrobiodiversity in public policies in three provinces in the Andean Highlands* for lessons learned on agreements and administrative procedures that may be relevant for ABS.
 7. At the regional level, the GEF-UNEP project *Strengthening the Implementation of Access to Genetic Resources and Benefit Sharing Schemes in LAC* concluded during the PPG, however, valuable lessons were learnt and several meetings held in the region, which allowed the exchange of information and contributed to strengthening the national capacities for the development of regulatory frameworks as tools for Prior Informed Consent and the fair and equitable sharing of benefits. In particular, the different model contracts are available through the GEF regional project on ABS Capacity Building, and serve as examples for the completion of the Ecuadorian model.
 8. Since Ecuador will be ratifying the Nagoya Protocol shortly, it was selected as one of the countries to benefit from the global ABS project: *Strengthening human resources, legal frameworks and institutional capacities to implement the Nagoya Protocol*. Under this project, Ecuador may access up to US\$350,000 to cover key outcomes and outputs outlined under each of the three components of the global project. These components are: 1) Strengthening the legal, policy and institutional capacity to develop national ABS frameworks; 2) Building trust between users and providers of genetic resources to facilitate the identification of bio-discovery efforts; and 3) Strengthening the capacity of indigenous

and local communities to contribute to the implementation of the Nagoya Protocol. This global ABS project is currently undergoing the project preparation phase in Ecuador and will focus on the identification of key outcomes and outputs not covered by the project “*Conservation of Ecuadorian Amphibian Diversity and Sustainable Use of its Genetic Resources*” and that have a synergistic effect *vis-a-vis* this project and other ABS investments. Project activities of the global ABS project are likely to commence in January 2016.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1. Describe how the stakeholders will be engaged in project implementation.

9. The following is a brief introduction of the main project stakeholders. Section IV Part V of the Project Document provides more details, along with a description of their main roles both in PA management and in the proposed project. The reduction and/or elimination of barriers will depend on adequate communication among stakeholders and on the level of participation in the work to be shared by those involved in implementing the project:

- To address the limited capacity to deliver the extreme measures for the conservation of amphibians (*Barrier 1*), it is necessary to involve the following key stakeholders: (i) MICSE; (ii) MAE; (iii) MRNNR; (iv) SENPLADES; (v) SNGP; (vi) SENAGUA; (vii) CONGOPE; (viii) AME; (ix) GAD; (x) citizenry/communities; (v) Centro Jambatu; and (vi) Amaru Amphibian Rescue Center.
- To meet the challenges that could arise from insufficient technology and local capacity for research and genetic resource conservation of amphibians (*Barrier 2*), the additional main actors involved include: (i) SENESCYT; (ii) National Institute of Biodiversity (INB); (iii) IKIAM Regional Amazonic University; (iv) Queens University; and (v) private sector.
- Additionally, to meet the challenges that could arise from weak institutional and regulatory capacity for conservation and sustainable use of genetic resources (*Barrier 3*), the additional main actors involved include: (i) INB; (ii) ABS Assessing Bodies (IEPI, INIAP, SENESCYT, INP, Secretariat of Policy Management); (iii) IUCN; and (iii) compatible projects.

B.2. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

10. The project objective is to provide conservation to amphibians in the short term and explore bio-prospecting as a potential future driver of this conservation as it could provide monetary and non-monetary benefits to communities, and thereby eventually generate global environmental benefits in the long-term.

11. Due to the highly endangered state of amphibians, the project will embark on 2 conservation strategies: ex situ and in situ. These ex situ and in situ conservation interventions are not expected to generate direct monetary benefits to communities within the lifetime of the project. Indeed, rescue of highly endangered species targeted for ex situ will not generate any payment and collection of specimens will be under a non-commercial permit for research. Similarly for in situ, monetary benefits are not likely in the lifetime of the project because even if peptides are found with potential medical application, the full development of a product and the return of monetary benefits would be beyond the lifetime of the project.

12. However, the project will provide non-monetary benefit at all different levels, e.g. communities knowing they have highly endangered and unique species and that these may one day lead to future revenue. In this sense, the project emphasizes the value of the existence of the amphibian species; amphibians have the potential to represent significant existence and option values. The first, i.e. existence value, is derived from saving highly endangered amphibian species from extinction. The second, i.e. option value, is even more important. By advancing the know-how for bio prospecting on amphibians in Outcome 2 (as well as the Genome Bank containing skins of 50% of Ecuadorian amphibians, and cryopreserved sperm proven viable for reproductive uses) and by developing the capacities for ABS negotiations, the project will conserve highly significant option values. It is expected that these option values could lead to enormous socio economic benefits for the country and communities. Indeed, as explained in more detail in Section 1, Part 1.4, under the National Plan for Good Living’s strategy to transition to an economy based on knowledge and social and

technological innovation, Genetic Resources have begun to attract attention as a potentially powerful sector to be developed and prioritized within the national production matrix. Many poor communities coincide with amphibians' habitats, making them prime candidates for benefitting from an institutionalized ABS framework and the strategic positioning of Genetic Resources within the national production matrix.

13. In addition, the economic study will provide more information on the values (monetary and option) of amphibian genetic resources and further drive potential ABS deals. As Ecuador's amphibians are highly endangered and 50% fall outside existing protected areas, the project's approach builds on ABS principles in which bio-prospecting plays a key role as a driver for conservation by rendering incentives to conserve biodiversity in specific locations - in this case GAD Reserves; through amphibian rescue actions and in the long-term through the negotiation of monetary and non-monetary benefits derived from potential products. The project will update and implement the Strategic Action Plan for Ecuadorian amphibians re-enforcing conservation *in situ* and *ex situ* delivering GEBs over a larger range of amphibian species and their habitats. It will also undertake an economic assessment of Ecuadorian amphibians as a strategic resource and mainstream this into national policies to provide alternative options for economic strategies and models reducing the need for emergency actions in the future and sustaining the GEB value of existing amphibian populations *in situ*. Similarly by improving capacities of the National Competent Authority and related agencies on Prior Informed Consent & Mutually Agreed Terms, the project will increase the delivery of GEBs in future bioprospecting negotiations. Finally, by strengthening the ABS framework in Ecuador in general, the project will provide an effective conservation mechanism for this megadiverse country, laying the foundation for generating further GEBs over the long term while safeguarding sustainable development options for the future.

14. Finally, it is important to emphasize the fact that the project will be replicating lessons learnt throughout the SNAP, particularly through GAD reserves and PANE. The project's efforts to link with the GEF-UNDP PA finance project and Socio-Bosques also means that eventually owners, communities, and other stakeholders of these PAs could receive benefits.

B.3. Explain how cost-effectiveness is reflected in the project design:

15. In line with the GEF Council's guidance on assessing cost-effectiveness of projects (Cost Effectiveness Analysis in GEF Projects, GEF/C.25/11, April 29, 2005), the project development team has taken a qualitative approach to identifying the alternative of best value and feasibility for achieving the project objective:

a) Selection of different conservation strategies: The *ex situ* and *in situ* interventions are designed to be cost-effective pilots for conserving critical habitat of priority endangered amphibian species. These small-scale initiatives offer large-scale returns and lessons for replication at the national scale. In particular, the GAD reserves established through the *in situ* interventions of this project will serve as models for promoting this new sublevel of PAs within the SNAP. By establishing capacity and experience in the integration process of GAD PAs within the SNAP, it is expected that the integration process of other GAD reserves will be more efficient, thereby allowing for more timely access to federal resources associated with SNAP recognition and ultimately closing priority conservation gaps. This also holds true for Socio Bosques, as the project expects that through the training in biological monitoring, private landowners will recognize the benefits of conservation of critical habitat for amphibians, and be motivated to join Socio Bosques so as to access the restoration program resources.

b) Selection of species: Two of the species targeted through *ex situ* conservation are found in Morona Santiago and Zamora Chinchipe along the Cordillera del Condor. As such, the project will focus search and rescue efforts on one area of the country rather than several, distant areas, thereby ensuring cost-effective use of time, human and monetary resources. The overlapping of distribution areas of species targeted for *in situ* conservation allows for measures to have a larger impact. For example, the GAD reserve to be established in Carchi covers an area of coexistence of *Atelopus coynei* (Coyne harlequin frog) with *Atelopus* sp. (aff. *longirostris*) (Harlequin frog). Furthermore, the bioprospecting potential of *Atelopus nanay* could produce future monetary benefits that would feed back into the Cajas National Park, thereby supplementing the PA's financial sustainability programme, and further supporting *in situ* and *ex situ* conservation.

c) Selection of sites: The project will establish 2 new GAD reserves in Carchi and Guayas Provinces to close

gaps in coverage of critical habitats for highly endangered amphibian species. The Provincial GADs already have Reserve Management Units established and technical capacity to manage conservation areas, and as such provide a higher probability of sustainability post-project, as well as replication in other areas within the provinces. Furthermore, the project will work in 1 PA that already has a conservation management structure and can also be replicated throughout PANE. Cajas National Park already has PES schemes so the application of an ABS scheme could be plausible in the future. Additionally, the project is also coordinating with Socio Bosque, which has resources for biological monitoring and conservation/restoration which will also improve replication by providing incentives for members to engage in amphibian conservation, as well as attract new members.

d) Physical facilities: The expansion of Centro Jambatu and Amaru Amphibian Rescue Center for the purposes of *ex situ* conservation was deemed more cost-effective than building a separate national rescue center from zero. The existing collaboration between Centro Jambatu, MAE and a variety of universities and research centers around Ecuador and the world will allow for timely and cost-effective implementation of project components, not only in *ex situ*, but also in the establishment of the Genome Bank and bioprospecting laboratory. While IKIAM Regional Amazonic University is under construction, the establishment of a small functional branch lab at Centro Jambatu is a cost-effective option to foster the development of national technical capacities. Furthermore, once IKIAM is fully-functional, Centro Jambatu's branch laboratory will continue to serve as an important back-up and complementary site.

e) Selection of Universities/Research Institutes for bioprospecting: One of the lines of research of the IKIAM Regional Amazonic University is the bioprospecting of amphibians, and therefore it plays an important role in supporting implementation, especially in Outcome two of the project. Involvement of IKIAM is also cost-effective due to the number of qualified scientists who will provide technical support and participation in a number of lines of action. The Queen's University of Belfast is an internationally-recognized premier research institution on bioprospecting and as such will be in charge of carrying out research on the skin secretions of amphibians in order to synthesize chemical compounds to be analyzed by bio-medicine professionals. Queens will also play a decisive role in transferring technologies and building research capacities in the field of amphibian bioprospecting.

16. Cost effectiveness will also be monitored as an integral part of the monitoring and evaluation process. The project budget provides for independent financial auditing on a yearly basis.

17. Finally, cost effectiveness is ensured through a prescribed project management process that will seek the best-value-for-money. UNDP rules as well as MAE rules employ a transparent process of bidding for goods and for services based on open and fair competition and selection of best value and best price alternatives. Procurement will be managed by UNDP in coordination with MAE to ensure the application of all effective regulations. An independent committee is utilized for all procurement of personnel and selection of contractors.

C. DESCRIBE THE BUDGETED M & E PLAN:

18. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF Regional Coordination Unit in Panama. The Logical Framework Matrix (in Section II) provides impact and outcome indicators for project implementation along with their corresponding means of verification. The TT tool is going to be used as one of the main instruments to monitor progress. The M&E plan includes: inception report, project implementation reviews, quarterly operational reports, a mid-term and final evaluation, etc. The following sections outline the principal components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities (table below). The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Meeting following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Project start:

19. A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the

project results and to plan the first year annual work plan. The Inception Workshop will address a number of key issues including:

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- e) Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

20. An Inception Workshop report will be a key reference document and will be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

- Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared by the Project Coordinator to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

21. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

22. UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle:

23. The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (insert date). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project:

24. An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

25. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

26. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing:

27. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Audit Clause

28. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Communications and Visibility Requirements

29. The project will comply with UNDP's Branding Guidelines, which can be accessed at: <http://intra.undp.org/coa/branding.shtml>.

30. Specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>.

31. Amongst other requirements, these guidelines describe when and how the UNDP and the logos of donors to UNDP projects are used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The [GEF logo](http://www.thegef.org/gef/GEF logo) can be accessed at: <http://www.thegef.org/gef/GEF logo>

32. Full compliance will also be observed with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"), which can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf.

33. These guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. These Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements will be similarly applied.

Table 1. Project Monitoring and Evaluation Plan and Budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project staff time</i>	Time frame
Inception Workshop & associated arrangements	<ul style="list-style-type: none"> ▪ PM ▪ UNDP CO ▪ UNDP GEF 	Indicative cost: 5,000	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO ▪ Service contract to arrange/run workshop and produce report 	Indicative cost 0	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ PM will oversee the hiring for specific studies and institutions, delegate responsibilities to relevant team members, and ▪ Support from International consultant- sets up long term M+E Plan 	To be finalized in Inception Phase and Workshop. Indicative cost 10,000	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Regional Advisor and PM ▪ Measurements by regional field officers and local IAs ▪ Local consultant to support M+E 	To be determined as part of the Annual Work Plan's preparation. Indicative cost 15,000	Annually prior to APR/PIR and to the definition of annual work plans
APR/PIR; GEF-4 Biodiversity Tracking Tool; METT	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	Indicative cost: 0	Annually
Steering Committee Meetings and relevant meeting proceedings (minutes)	<ul style="list-style-type: none"> ▪ PM ▪ UNDP CO 	Indicative cost: 2,000	Following Project IW and subsequently at least once a year
Quarterly status reports	<ul style="list-style-type: none"> ▪ Project team 	Indicative cost: 0	To be determined by Project team and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	Indicative cost: 3,000	To be determined by Project Team and UNDP-CO
Project Publications (e.g. technical manuals, field guides)	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	Indicative cost: 5,000	To be determined by Project Team and UNDP-CO
Mid-term External Review	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 30,000	At the mid-point of project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-CO 	Indicative cost: 30,000	At the end of project implementation

Type of M&E activity	Responsible Parties	Budget US\$ Excluding project staff time	Time frame
	<ul style="list-style-type: none"> ▪ UNDP-GEF RCU ▪ External Consultants (i.e. evaluation team) 		
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	Indicative cost: 0	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF RCU (suggested formats for documenting best practices, etc) ▪ End of Project Event 	Indicative cost: 5,000	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team 	Indicative cost: 20,000 (average \$4,000 per year)	Yearly
Visits to field sites (UNDP staff travel to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF RCU (as appropriate) ▪ Government representatives 	Indicative cost: 15,000 (3-4 visits per year)	Yearly
TOTAL INDICATIVE COST Excluding project team staff time and UNDP staff and travel expenses		US\$ 140,000	

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

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S): : (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Lorena Tapia Nuñez	Minister of Environment, GEF OFP	Environment	August 8, 2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Adriana Dinu, UNDP-GEF Executive Coordinator.		May 19, 2015	Helen Negret, Regional Technical Advisor	(507) 302-4508	helen.negret@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Objective	Indicator	Baseline	Target	Means of Verification	Risks & Assumptions
Project Objective: Ecuador implements integrated emergency actions to conserve the diversity of amphibians of Ecuador and use its genetic resources in a sustainable way	1. Increase in additional hectares of habitat critical for conservation of target amphibian species that is under legal protection thereby closing conservation gaps.	<ul style="list-style-type: none"> • 0 ha of premontane humid forest conserved in GAD reserves • Conservation gap is 8,328 hectares³ 	<ul style="list-style-type: none"> • 2,200 ha <i>premontane humid forest</i> conserved in GAD reserves • Conservation gap reduced by 25% 	Creation ordinance of new Protected Areas (PAs)	<ul style="list-style-type: none"> • Search & rescue of sufficient individuals of each gender • Rescued individuals remain healthy in captivity • Relevant governments entities continue to show willingness to adopt policy measures for amphibian conservation • Capacity strengthening efforts in MAE continue including the completion of the centralized data management system and necessary policies to ensure the exchange of
	2. Replication of <i>in situ</i> amphibian conservation measures tested by project further reducing conservation gaps	<ul style="list-style-type: none"> • 0 PA within SNAP • 0 Socio Bosque 	<ul style="list-style-type: none"> • At least 1 PA within SNAP • At least 1 Socio Bosque (hectares to be measured once replication sites determined) 	<ul style="list-style-type: none"> • Project reports • Management plans 	
	3. Number of amphibian species on updated IUCN red list <ul style="list-style-type: none"> • under successful captive breeding • with cryopreserved sperm samples viable for reproductive • with skins or secretions preserved in the Ecuadorian Amphibian Genome Bank (EAGB) 	<ul style="list-style-type: none"> • 18 rescued and maintained <i>ex situ</i> • 0 species • 0 	<ul style="list-style-type: none"> • 20 rescued and under successful captive breeding programmes • At least 1 sample from 2 target species • Approx. 70 (40%) 	Centro Jambatu & Amaru websites PA reports	
	4. Increase in the flow of resources to amphibian conservation/ABS	<ul style="list-style-type: none"> • TBD –based on the findings of the case study and economic valuation 	<ul style="list-style-type: none"> • 10% increase from case study base line • By midterm case study and baselines established 	Case study report and annual budgets of relevant institutions	
	5. Degree of compliance in environmental licensing with regards to official guidelines on amphibian conservation in sites prioritized in the National Strategic Plan	<ul style="list-style-type: none"> • 0% 	<ul style="list-style-type: none"> • 100% once official • By mid-term guidelines defined • By Year 4 guidelines made official in secondary Norm 	<ul style="list-style-type: none"> • MAE reports and audits • Guidelines • Ministerial accord 	
	6. % Reduction in processing times for Collection Permits, Framework Contracts, and Access Contracts	<u>Processing times:</u> <ul style="list-style-type: none"> • Collection Permits: 2 weeks to 6 months. • Framework Contracts: 2 months 	<u>Processing times:</u> <ul style="list-style-type: none"> • Collection Permits: 1 week • Framework Contracts: 1 month • Access Contracts: in 	<ul style="list-style-type: none"> • Genetic Resources Module published online via SUIA portal • Approval reports 	

³ A gap analysis of critical habitat covered within the Natural Protected Areas Heritage of Ecuador (PANE) calculates that 8,328 hectares of critical habitat to the project's target species (*A. balios*, *A. coynei* and *Atelopus sp. aff. longirostris*) are unprotected.

		<ul style="list-style-type: none"> Access Contracts: more than 2 years 	compliance with established Norm (approx. 6 months)	of Collection Permits, and Contracts	information online
Outcome 1. Emergency actions to ensure the survival of highly endangered amphibian species of Ecuador for conservation and bio-prospecting purposes	7. # of protected areas and hectares of habitat critical for amphibians with specific conservation measures for highly endangered amphibian species legally-recognized and integrated in the SNAP.	<ul style="list-style-type: none"> 0 Provincial GAD reserves declared with focus on amphibian conservation 0 Management Plans include amphibian conservation measures. 	<ul style="list-style-type: none"> 2 Provincial GAD reserves declared with focus on amphibian conservation: <ul style="list-style-type: none"> Carchi PA (1400 ha) Guayas PA (800 ha) 3 Management Plans covering total of 2,961 ha. Critical Habitat include amphibian conservation measures: Carchi PA; Guayas PA and Cajas NP (761 hectares) 	<ul style="list-style-type: none"> Creation ordinances of new PAs Management Plans with Financial Sustainability Programs SNAP reports 	<ul style="list-style-type: none"> Provinces continue to show interest and political will to declare reserves, and complete requirements for formal integration into the SNAP.
	8. Increase in management effectiveness of 3 legally-recognized PAs with conservation measures for highly endangered amphibian species (METT)	METT Score <ul style="list-style-type: none"> Carchi PA: 0 Guayas PA: 0 Cajas NP: 62 	METT Score <ul style="list-style-type: none"> Carchi PA: TBD Guayas PA: TBD Cajas NP: 82 	<ul style="list-style-type: none"> METT applied at midterm and end project 	<ul style="list-style-type: none"> Conservation interventions have a positive impact on PAs and their management
	9. Successful captive breeding programmes measured by: <ul style="list-style-type: none"> # of reproductive events (egg mass) of target species % survival of rescued individuals in captivity 	<ul style="list-style-type: none"> <u># reproductive events</u> <ul style="list-style-type: none"> - <i>Atelopus nanay</i>: 2 - <i>A.sp. aff. palmatus</i> 0 - <i>Dendrobates condor</i>: 0 <u>%survival</u> <ul style="list-style-type: none"> - <i>Atelopus nanay</i>: 66% - <i>sp. aff. palmatus</i>: 0% - <i>Dendrobates condor</i>: 0% 	<ul style="list-style-type: none"> <u># reproductive events</u> <ul style="list-style-type: none"> - <i>Atelopus nanay</i>: 22 - <i>A.sp. aff. palmatus</i>: 20 - <i>Dendrobates condor</i>: 20 <u>%survival</u> <ul style="list-style-type: none"> - <i>Atelopus nanay</i>: 80% - <i>A. sp. aff. palmatus</i>: 80% - <i>Dendrobates condor</i>: 80% 	Centro Jambatu & Amaru reports and websites	<ul style="list-style-type: none"> Collection permits granted within established time frames Rescued individuals remain healthy in captivity

Output 1.1 *Ex situ* conservation through breeding actions to protect highly endangered amphibian species

Output 1.2 *In situ* conservation of critical habitats of unique species at high risk of extinction, *Atelopus coynei*, *Atelopus balios*, *Atelopus* sp. (Aff. *longirostris*), in Decentralized Autonomous Governments (GAD) reserves and *Atelopus nanay* in one existing PANE area.

Outcome 2. Discovery of active compounds derived from the skin secretion of Ecuadorian amphibians with	10. Active compounds ⁴ isolated and structurally characterized (peptides and natural proteins sequenced) from the skin secretions of 4 amphibians: 1= <i>Agalychnis spurrelli</i>	<table border="1"> <tr> <td></td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr> <td>A</td><td>1*</td><td>1*</td><td>0</td><td>0</td></tr> <tr> <td>B</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> A= Active compound isolated and characterized by mass spectrometry (*insulin		1	2	3	4	A	1*	1*	0	0	B	0	0	0	0	<table border="1"> <tr> <td></td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr> <td>A</td><td>25</td><td>25</td><td>25</td><td>1</td></tr> <tr> <td>B</td><td>4</td><td>4</td><td>1</td><td>1</td></tr> </table>		1	2	3	4	A	25	25	25	1	B	4	4	1	1	Laboratory reports, publications	<ul style="list-style-type: none"> Permits and contracts granted for collection and exportation of specimens and
	1	2	3	4																															
A	1*	1*	0	0																															
B	0	0	0	0																															
	1	2	3	4																															
A	25	25	25	1																															
B	4	4	1	1																															

⁴ In this context an active compound is synonymous with peptide or protein.

potential applications in biomedicine	2= <i>Cruziohyla calcarifer</i> 3= <i>Hypsiboas picturatus</i> 4= <i>Atelopus nanay</i>	tropic peptide) B= New peptides molecularly characterized (sequence of amino acids) by molecular cloning and sequencing by mass spectrometry			<ul style="list-style-type: none"> samples within established time frames • Availability of sufficient samples of secretions to perform analyses • Synthetic peptides have biological activity and resemble natural peptides • Sufficient qualified candidates for scholarships • Availability of biological material. • Timely availability of equipment and materials
	11. # of new peptides synthesized and pharmacologically tested from the skin secretions of 4 amphibian species	2	4	Laboratory reports, publications	
	12. # of students with Senescyt scholarships pursuing graduate studies in amphibian bio-prospecting	1 Student	At least 5 Students	Scholarship documents	
	13. Ecuadorian bio-prospecting laboratory equipped with appropriate technology and conducting research on amphibian bio-prospecting	0	At least 1	Reports generated by laboratory	
	14. # of publications in peer review scientific journals on bio-prospecting research on amphibian skin secretions by Ecuadorian Institutions	0	10	Publications	
	15. % Ecuadorian amphibian species ⁵ with tissues preserved in the Ecuadorian Amphibian Genome Bank (EAGB)	0%	50%	Genome Bank catalog accessible on Centro Jambatu's webpage	

Output 2.1 Institutional procedures completed to foster amphibian bio-prospecting research

Output 2.2 Research on skin secretions for new peptides with bioactive properties from four species of Ecuadorian amphibians

Output 2.3 Technical and scientific capabilities for bio-prospecting improved in Ecuador

Output 2.4 BioBanking of genetic resources of Ecuadorian amphibians strengthened

Outcome 3. Institutional strengthening for the implementation of biodiversity conservation	16. Strengthened policy and regulations measured by: <ul style="list-style-type: none">% implementation of the Strategic Action Plan for Conservation of Ecuadorian Amphibians	<ul style="list-style-type: none">0% (draft Strategic Plan, no Action Plan)Nagoya Protocol signed and under discussion in	<ul style="list-style-type: none">20% implementation by MAE of Action Plan (plan approved by Midterm)Nagoya Protocol ratified	<ul style="list-style-type: none">Strategic Plan and Action PlanMAE work plans include components of Action Plan	<ul style="list-style-type: none">Government continues to show political will to align regulatory framework for
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⁵ As of January 2015, 546 amphibian species have been recorded in Ecuador, distributed across three groups: Anuros (represented by frogs and toads) comprise 514 species, Salamanders (Caudata order) comprise 8 species, and Caecilians (Gymnophiona order) comprise 24 species.

measures and sustainable use of its genetic resources in Ecuador, using amphibians as a pilot case study.	<ul style="list-style-type: none"> • Nagoya Protocol ratified • Regulation 905 aligned with national, sub-regional and international legislation⁶ 	<p>National Assembly</p> <ul style="list-style-type: none"> • Regulation 905 not aligned 	<ul style="list-style-type: none"> • Regulation 905 updated and aligned 	<ul style="list-style-type: none"> • Ratification of Nagoya Protocol • Updated/aligned Regulation 905 	<p>genetic resources and ABS with national, sub-regional and international regulations.</p> <ul style="list-style-type: none"> • Training programmes are institutionalized and staff increased • Approval of the norm that defines the procedures for Access Contract for Genetic Resources • The MAE completes the centralized data management system and necessary policies to ensure the exchange of information online.
	17. Improved capacities of national ABS implementing agencies, measured by the ABS Capacity Development Scorecard	<p>ABS Capacity Development Scorecard: 35 3 areas to improve: CR 1: 3⁷ CR2: 14 CR5: 7</p> <p>- <u>Capacity to conceptualize</u>: The institution(s) has financial resources but has limited personnel and expertise.</p> <p>- <u>Capacity to Apply</u>: The ABS institution(s) has weak leadership and provides little guidance.</p> <p>- <u>Capacity to Monitor</u>: The institution(s) has financial resources but has limited personnel and expertise 0% - Genetic Resources Permit Module does not exist in the National Environmental Data base (SUIA)</p>	<p>ABS Capacity Development Scorecard: 49 3 areas improved CR 1: 6 CR2: 19 CR5: 13</p> <p><u>Capacity to conceptualize</u>: - Increased capacity to conceptualize policy and related instruments for ABS, in particular to ensure the rules are more efficient and clear.</p> <p><u>Capacity to Apply</u> - ABS decision-making Institutions have expanded knowledge on ABS issues and ability to act on it.</p> <p><u>Capacity to Monitor</u>: - Improved capacities of ABS Institutions to execute, monitor and evaluate requests for access to genetic resources 100% - SUIA Genetic Resources Permit Module established and producing quality updated reports.</p>	ABS Scorecard	
	18. % Reduction in processing times for Collection Permits, Framework Contracts, and Access Contracts	<p>Processing times:</p> <ul style="list-style-type: none"> • Collection Permits: 2 weeks to 6 months. • Framework Contracts: 2 months • Access Contracts: more than 2 years 	<p>Processing times:</p> <ul style="list-style-type: none"> • Collection Permits: 1 week • Framework Contracts: 1 month • Access Contracts: in compliance with established Norm (approx. 6 months) 	<ul style="list-style-type: none"> • Genetic Resources Module published online via SUIA portal • Approval reports of Collection Permits, and Contracts 	
	19. Increase in awareness on	<ul style="list-style-type: none"> • ABS-CH website does 	<ul style="list-style-type: none"> • > 5% annual increase once 	<ul style="list-style-type: none"> • ABS-CH website 	

⁶ e.g. National Plan for Good Living, Decree 391, Nagoya Protocol, ITPGR, CONVEMAR

⁷ CR 1: 3 Capacity to conceptualize and formulate policies, laws, strategies and programmes;

CR2: 14 Capacity to implement policies, legislation, strategies and programmes;

CR5: 7 Capacity to monitor, evaluate, report and learn

	<p>amphibian conservation as measured by</p> <ul style="list-style-type: none"> • Increase in users accessing ABS-CH Platform • Increase in records of amphibians from unofficial sources 	<p>not have a user counter</p> <ul style="list-style-type: none"> • 317 records of 107 species from 40 members of the Science Citizen portal 	<p>interconnected platform established</p> <ul style="list-style-type: none"> • > 5% annual increase once interconnected platform established and connected to Science Citizen portal 	<p>online</p> <ul style="list-style-type: none"> • Amphibian factsheets available online via ABS-CH portal and Centro Jambatu website 	
Output 3.1. National and local frameworks aligned for conservation and sustainable use of genetic resources of amphibians					
Output 3.2 Improved capacities of National Competent Authority and related agencies on ABS, including procedures and Prior Informed Consent & Mutually Agreed Terms					
Output 3.3 National information improved and available for effective decision making on protection and sustainable use of genetic resources of endangered amphibians					

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Comments	Response	Reference
GEF Secretariat N/A – no pending issues on Review Sheet		
STAP 1. First, it is not clear how elements of what is being proposed actually fit within BD -1, Improve the sustainability of protected area systems. Peripherally or incidentally perhaps, through the eventual generation of alternative sources of financing for PAs. But in the present, the creation of municipal reserves or ex situ conservation efforts cannot be seen as something that makes the national system of PAs more sustainable. The creation of set asides does not equate to increasing the sustainability of protected area systems.	<p>Ecuador has invested significantly in the establishment of State Protected Areas (PA) on public land through the Natural Protected Areas Heritage of Ecuador (PANE) which now covers 19.6% of the country's land area in 49 public PAs which cover 5,014,993 ha of terrestrial and 14,252,770 ha of marine area. The PANE is part of a National System of Protected Areas (SNAP) which also includes protected forests, private, and GAD (provincial, municipal and parish) protected areas, all of which could play an important role in protecting critical habitats. The Ecuadorian legal framework provides Decentralized Autonomous Governments (GAD) of all levels (Provincial, Municipal and Parish) the authority to establish PAs to preserve and maintain natural heritage within its territory and the legislative powers to establish related ordinances, orders and resolutions, but their contribution is still limited due to information-gaps and accessibility on priority habitats for critically endangered species and lack of technical support and guidance on how to create and maintain set-asides.</p> <p>The project will support long-term viability of globally significant biodiversity in Ecuador by protecting critical habitat, closing gaps in ecosystem coverage, and engaging additional actors in conservation efforts through a two pronged strategy for <i>in situ</i> conservation. The first will create new reserves in areas that are not protected and incorporating them into the SNAP, thereby promoting the Decentralized Autonomous Government (GAD) Reserve model to strengthen the National System of Protected Areas (SNAP); and the second will improve conservation of amphibians in an existing PANE that can be replicated to other PAs, and thereby increase sustainability.</p> <p>A gap analysis of critical habitat covered within the Natural Protected Areas Heritage of Ecuador (PANE) calculates that 8,328 hectares of critical habitat to the project's target species (<i>A. balios</i>, <i>A. coynei</i> and <i>Atelopus sp. aff. longirostris</i>) are unprotected. The Project will help close these gaps by conserving at least 2,200 hectares of premontane humid forest in GAD conservation areas: (a) 1400 ha in Carchi Province and (b) 800 ha in Guayas Province along the border of Azuay Province. The Ecuadorian legal framework provides GADs the authority to establish PAs to preserve and maintain natural heritage within its territory. Moreover, the project will support compliance of the GAD Reserves with MAE guidelines for integration in the SNAP by project end by guiding the required Study of Management Alternatives; Creation Ordinance; and the Management Plan, including a Program for Financial Sustainability that considers the costs of conservation derived from the experiences generated from the project <i>in situ</i>.</p> <p>By supporting the new GAD reserves through the SNAP integration process, it is expected that procedural issues will become easier and other GAD Reserves will be encouraged to follow suit. The replication of conservation areas with a focus on amphibian conservation and their inclusion within the SNAP will ultimately contribute to the closure of gaps in the coverage of critical ecosystems as identified in the</p>	ProDoc Outcome 1; GEF Eligibility/Policy Conformity; Sustainability; Replicability

Comments	Response	Reference
<p>Secondly, it is paradoxical, and disturbing, that while mining is moving ahead, with full knowledge of its impacts, including on endangered amphibian and other biodiversity, this project attempts to conserve it in a reactionary and emergency manner. Avoidance of the need to do this of course would have been the preferred option.</p>	<p>SNAP's 2013 evaluation of priority areas for protection and conservation, and contribute to the sustainability of the SNAP.</p> <p><i>Ex situ</i> conservation is an emergency solution that recognizes the dual reality of certain species. While the project will work to increase the effectiveness of conservation of critical habitat <i>in situ</i> of selected species, there are others that are in imminent danger of being lost due to mining activities already under development. Both approaches will be used to reduce the impact of future development projects on amphibian conservation. For <i>in situ</i>, the project will define best approaches to habitat conservation; management plans and cost for protection in new reserves. Similarly, the best practices and costs of <i>ex situ</i> conservation will be determined. This, together with the results of an economic valuation, will be used to better define the trade-off when future environmental licenses are processed. In some cases, this may result in not going ahead with projects; in others where impacts can be mitigated, this information will be used to ensure that the correct measures and costs are included in mitigation plans linked to the EIA process.</p> <p>To <i>optimize</i> this approach, the project will coordinate with the MAE's Deputy Secretariat of Environmental Quality to consider the inclusion of additional requirements aimed at the conservation of species in <i>ex situ</i> conditions when environmental licenses for extraction activities are issued. Additionally, the project could approach the Ministry of Natural Resources Non-Renewable regarding the inclusion of additional safeguard mechanisms in the environmental management plans of concession companies to ensure the conservation of amphibian species, and thereby bolster the Ministry's Sustainable Mining Strategy. Through the TULAS (Unified Text of Environmental Legislation), Environmental Impact Assessments (EIA) can require protocols for the protection and conservation of amphibians as a pre-requisite for the emission of an environmental license. In particular, the project will suggest adjustments to the EIA guidelines to consider the loss of economic value associated with genetic resources, i.e. management plan budgets to include these costs as offsets to the costs of implementing the conservation strategies to be tried and tested in Outcome 1.</p>	<p>Outcomes 1 and 3</p>
<p>Thirdly, since many amphibian species are endemic, and in the absence of information on their environmental tolerances and specific habitat requirements, the success of their desired eventual reintroductions remains a question mark.</p>	<p>Indeed, the complexity of reintroduction does depend on improved information on environmental tolerances and specific habitat requirements. To address this, the project has included a strong emphasis on defining correct protocol for monitoring and training of PA practitioners, of Socio Bosques and communities to undertake biological monitoring. This will provide not only a clearer idea of where each species is found but also on their conditions. With this information, the planning of potential reintroductions in the future becomes more feasible. As such, the project will document findings from biological monitoring to determine habitat preferences to be incorporated in management plans for habitat enrichment and restoration efforts to increase the chances of survival of the species targeted through <i>in situ</i> conservation. Additionally, amphibians are associated with water sources, therefore, the project will ensure the Management Plans include stakeholder participation mechanisms to engage local farmers and promote agricultural practices that use fewer agrochemicals. It is expected that through the GAD reserve, best practices will be mainstreamed in local development activities, so as to ensure a safer environment for both amphibians and humans.</p> <p>Finally, the project's goal of maintaining 20 pairs of each target species through <i>ex situ</i> conservation measures will ensure genetic viability of each population and bodes well for conserving species in critical risk of extinction. The <i>ex situ</i> populations established through the project are expected to provide animals</p>	<p>ProDoc Outcomes 1 and 3; Sustainability</p>

Comments	Response	Reference
<p>2. Overall, the proposal is structured in a coherent and consistent manner, with clear alignment among the levels. The objective as presented may be too ambitious and grandiose. Since the project focuses on selected amphibian species, this could be reflected in the objective phrasing.</p>	<p>for the reintroduction to natural habitats in the long-term (post-project).</p> <p>The project is targeting 3 sets of species selected for their potential to provide maximum contribution for each conservation strategy:</p> <ul style="list-style-type: none"> • <i>Ex situ</i> criteria emphasizes highly endangered species and the urgency and potential to safeguard them with two long-term goals in mind: i) conserve highly endangered species that form a part of Ecuador's wealth in biodiversity; ii) maintain stable, genetically viable captive-bred populations that will eventually be subject to bioprospecting without harming native populations. • <i>In situ</i> criteria emphasized the species that a) are highly endangered and yet also have a high potential for conserving populations <i>in situ</i>; b) can provide important lessons on how to do habitat restoration; c) have previously-rescued "founding" individuals in Centro Jambatu and/or Amaru Amphibian Rescue Center that can provide lessons learned from experience garnered through their rescue and captivity; and d) could be a source of individuals for bioprospecting in a further distant future at which point all the details and processes for negotiating resources would be in place and ABS could truly provide resources for PA management. • <u>Bio-prospecting</u>: a) Species that already have a high potential for potentially commercial products, thereby providing an opportunity within the life of the project to make tangible progress toward optimizing technology transfer and developing potential examples for permits, agreements for return of benefits, etc.; b) species that are already being bred for biotrade so there is no risk of reducing their native populations <i>in situ</i>. <p>Rescue locations and species include: <i>Atelopus nanay</i> (Azuay); <i>Atelopus</i> sp. nov. <i>aff. palmatus</i> (Morona Santiago and Zamora Chinchipe, Cordillera del Condor); <i>Dendrobates condor</i> (Morona Santiago and Zamora Chinchipe, Cordillera del Cónedor).</p> <p><i>In situ</i> conservation will focus on the establishment of 2 new GAD reserves (Carchi and Guayas) and the strengthening of management effectiveness through amphibian-conservation measures in Cajas National Park (PANE -Azuay) focusing on <i>Atelopus coynei</i>, <i>Atelopus</i> sp. <i>aff. longirostris</i>, <i>Atelopus balios</i> and <i>Atelopus nanay</i>.</p> <p>Ultimately, the information generated through these interventions, as well as the updated amphibian factsheets and formalization of the Strategic Plan for the Conservation of Ecuadorian Amphibians in Risk of Extinction, Action Plan and associated financial plan (see Outcome 3) will indeed impact all amphibians in the long term.</p>	ProDoc, Project Rationale (Section I, Part 2.1) and in detail in Section IV, Part II
<p>3. The globally important biodiversity of the country is presented rather well but the expected GEBs of this project are presented rather weakly (par. 27). More expansion and specificity will be required moving forward.</p>	<p>Ecuador has 546 species of amphibians (9% of the global amphibian diversity) and 43% of these are found only in this region of the world. Thus putting in place a framework for effective conservation of this biodiversity will deliver significant global environmental benefits (GEBs). As Ecuador's amphibians are already highly endangered and many fall outside existing protected areas, the proposed project approach builds on ABS principles in which the bio-prospecting partnership between the University of Queens and the Government of Ecuador plays a key role as a driver for conservation by rendering incentives to conserve biodiversity in specific locations - in this case GAD Reserves; through amphibian rescue actions and in the long-term through the negotiation of monetary and non-monetary benefits derived from potential products.</p>	ProDoc Part 2.4 Incremental Reasoning and GEB

Comments	Response	Reference
	<p>Under Outcome 1, setting up GAD reserves will deliver GEBs through <i>in situ</i> conservation of threatened species conserving critical habitat of endangered harlequin frogs (<i>Atelopus coynei</i>, <i>A. balios</i>, <i>A. sp.</i> (aff. <i>Longirostris</i>) in montane forest in the headwaters of Chinambí river (Eastern mountain range, Carchi province), in the headwater basins of river Tamarindo (Guayas Province). These reserves will afford improved conservation to other species in addition to the endangered amphibians and thus generate a broader range of GEBs. As a secondary measure GEBs will also be provided through the rescue of highly endangered harlequin and poison frogs populations in areas of the Cordillera del Condor (Zamora Chinchipe Province) impacted by mining and through their conservation in captive breeding facilities. Without immediate captive management as a stopgap component of an integrated conservation effort, hundreds of amphibian species could become extinct.</p> <p>Outcome 2 of the project aims at creating Inter-Institutional agreements for technology transfer and capacity building which are key to enhance the research and development capabilities of the provider country in compliance with Articles 22 (Capacity) and 23 (Technology Transfer, Collaboration and Cooperation) of the Nagoya Protocol. The advances in R&D capabilities of the Ecuadorian institution to identify potential products from 4 amphibian species (<i>Agalychnis spurrelli</i>, <i>Cruziohyla calcarifer</i>, <i>Hypsiboas picturatus</i> and <i>Atelopus nanay</i>) will not deliver GEBs per se. Rather these are means to reach ABS agreements between users and providers which will render monetary and non-monetary benefits that will assist in the conservation of the tropical montane rain forests, through the establishment and maintenance of protected areas be these GAD reserves, areas already in the PANE or community lands (see Outcome 1). The advances in R&D capabilities of Ecuadorian institution will also enable conservation of genetic resources of Ecuadorian amphibians at high risk of extinction, safeguarding these for future bio-prospecting agreements and conservation purposes. These include the tissues of 50% of Ecuadorian amphibian species and skins and germ cells of ~ 70% of Ecuadorian amphibians on the IUCN Red List.</p> <p>Outcome 3 provides a third approach that complements both the delivery of GEBs in the short and medium term as well as enable the long-term approach through bio-prospecting. The project will update and implement the Strategic Action Plan for Ecuadorian amphibians re-enforcing conservation <i>in situ</i> and <i>ex situ</i> delivering GEBs over a larger range of amphibian species and their habitats. It will also undertake an economic assessment of Ecuadorian amphibians as a strategic resource and mainstream this into national policies to provide alternative options for economic strategies and models reducing the need for emergency actions in the future and sustaining the GEB value of existing amphibian populations <i>in situ</i>. Similarly by improving capacities of the National Competent Authority and related agencies on Prior Informed Consent & Mutually Agreed Terms, the project will increased the delivery of GEBs in future bioprospecting negotiations.</p> <p>Finally, by strengthening the ABS framework in Ecuador in general, the project will provide an effective conservation mechanism for this megadiverse country, laying the foundation for generating further GEBs over the long term while safeguarding sustainable development options for the future.</p>	

Comments	Response	Reference
4. The baseline is a little spotty but that is understandable and will be addressed during the PPG as stated.	The Project Document contains expanded information and analysis regarding the baseline project and problem issues. This represents a strong and well-reasoned platform for project implementation. However, the baseline project and core challenges identified during project preparation were not substantially different from those identified in the original PIF.	ProDoc Section 1
5. Barrier 1 refers to lack of capacity to undertake "extreme" measures for conserving amphibians. What precisely does this refer to? Ex situ conservation?	Yes, the term "extreme" measures refers to ex situ conservation in recognition of the imminent threats to certain species and the need for immediate, emergency rescue interventions. For many endemic species of amphibians conservation <i>ex situ</i> is the only means to maintain viable populations given current threat levels. Captive colonies represent a crucial element of survival plans for a particular species	ProDoc, Barrier 1
6. The description of stakeholders is comprehensive and the definition of risks is appropriate. The description of the ABS aspects is thorough and cautious. One wild card of course is the risk of climate change, acting in concert with other threats, in particular chytridiomycosis. It is more than likely that over the next few decades it will only increase, and depending on the project sites, it could have catastrophic effects on remaining amphibian populations. The eventuality of this happening should be factored into the project's further development to a greater degree, although they are both mentioned as factors of relatively low concern in the ex-situ conservation activities.	<p>The project strategy has been designed to pre-empt this risk recognising the synergistic relationship of climate change and chytridiomycosis underlying amphibian decline- namely it will support an integrated strategy that combines emergency collection, and captivity breeding integrated with enhanced in-situ conservation. Chytridiomycosis is nearly impossible to be controlled in nature. Nevertheless, it can be completely removed from specimens in lab conditions. This is one of the key activities to be carried out as part of the ex-situ conservation activities of Component 1. Furthermore, one of the project's approaches is to increase <i>in situ</i> conservation and thus maintain genetically viable and increasing populations and hence increase the likelihood of survival. Also, under component 3 the project is increasing the monitoring of amphibians so as to have a clearer idea of where they are; that together with the vulnerability index; the new and clearer guidelines on how to conserve <i>in situ</i> and the addition of economic studies to show potential gains should all lead to increasing populations <i>in situ</i> and gain having larger populations that may help in the fight against chytridiomycosis.</p> <p>In addition, project actions will develop vulnerability indexes that incorporate climate data to guide priority action for amphibian conservation. This will be coordinated with relevant programs and projects that generate climate information including <i>Adaptation to Climate Change through an Effective Water Governance in Ecuador</i> which gathers climate data that is relevant to endangered and/or endemic amphibian species.</p>	ProDoc, Part 2.3 Risks
Germany Germany approves the	National universities and research institutions play a crucial role in this project, particularly in the bioprospecting and Genome Bank interventions in Outcome 2. Amongst these is PUCE and IKIAM	ProDoc Part 1. Context;

Comments	Response	Reference
<p>following PIF in the work program but asks that the following comments are taken into account:</p> <ul style="list-style-type: none"> • In line with GEF's Strategic Goal #4, Germany would like to emphasize that national universities and research institutions (for example the "Pontificia Universidad Católica del Ecuador" PUCE) shall be taken much more into consideration as important stakeholders and that ongoing processes and legal technical instruments shall be strengthened. 	<p>Regional Amazonic University. Engagement with PUCE is of particular interest to the project regarding its experience related to its Framework Contract with MAE for access to genetic resources for non-commercial use. The Ecuadorian government has stated in the National Plan for Good Living that bio-knowledge – including bioprospecting - is a strategic tool for national development in medium and long terms. With this in mind, the Ecuadorian government is investing in higher education and scientific research through the creation of new Universities and research centres, including the city of knowledge Yachay and Ikiam Regional Amazonic University, that will develop scientific research focused on the sustainable use of Ecuadorian biodiversity and technological research. The Ecuadorian government is also investing in human resources through a scholarship program. Hundreds of Ecuadorian students are pursuing postgraduate studies in the best Universities around the world, acquiring experience and knowledge in a whole range of different areas, including bioprospecting, with the expectation that this will drive the development of higher education and scientific research towards a sustainable use of Ecuadorian biodiversity. Discovery of active compounds derived from amphibian skin secretions will be led by the Molecular Therapeutics Laboratory of Queens University which has advanced technology and qualified personnel for this specific bioprospecting research. In doing so, it will build the capacities of Ecuadorian graduate students and local research institutions with the eventual transference of technology and training described in Output 2.3. The role of national public university/institutes will be strengthened and promoted as they are crucial in the acquisition of a direct permit for access to genetic resources. Indeed, a national public university/research institute will need to establish a third-party agreement with Queens University and then apply to MAE for access to genetic resources for research purposes so as to pursue this research in cooperation with Queens University. Furthermore, the project will benefit from the establishment and implementation of a bioprospecting laboratory at Ikiam Regional Amazonic University, as well as promote capacity transfer to other national universities and research institutes.</p>	<p>Outcome 2</p>
<ul style="list-style-type: none"> • Further elaboration is needed to describe how to reduce pressure on vulnerable species and ecosystems and how to ensure sustainability, including financial sustainability, taking into account more clearly conservation issues and climate change (GEF's Strategic Goal #1). 	<p>The establishment and inclusion of additional reserves within the SNAP will ultimately contribute to the closure of gaps in the coverage of critical ecosystems as identified in the 2013 evaluation of priority areas for protection and conservation. In particular, a gap analysis of critical habitat covered within the PANE calculates that 8,328 hectares of critical habitat of the project's target species (<i>A. balios</i>, <i>A. coynei</i> and <i>A. sp. (aff. longirostris)</i>) are unprotected. The Project will help close these gaps by conserving at least 2,200 hectares of premontane humid forest in the 2 new GAD conservation areas: (a) 1400 ha in Carchi Province and (b) 800 ha in Guayas Province along the border of Azuay.</p> <p>To increase the chances of survival of the species targeted through in situ conservation, the project will document findings from biological monitoring to determine habitat preferences to be incorporated in management plans for habitat enrichment and restoration efforts. Additionally, amphibians are associated with water sources, therefore, the project will ensure the Management Plans include stakeholder participation mechanisms to engage local farmers and promote agricultural practices that use fewer agrochemicals. It is expected that through the GAD reserve, best practices will be mainstreamed in local development activities, so as to ensure a safer environment for both amphibians and humans.</p> <p>The project will achieve long-term financial sustainability through the design and implementation of legal and policy changes so that potential monetary benefits generated from genetic resources are distributed</p>	<p>ProDoc, Part 2.6 Sustainability</p>

Comments	Response	Reference
	<p>equitably to the State and places of origin. Crucial to this will be the results of the economic valuation and case studies that will nourish the alignment process of the ABS legal framework in Outcome 3. In addition, the project will support the development of financial sustainability programmes within the Management Plans of the 2 new GAD reserves to be established in Outcome 1. These reserves will test the potential, determine standards and build capacities for revenue generating activities related to genetic resources and ABS. Through Outcome 3, the project aims to ensure the legal framework is in place to guarantee the return of profit generated from genetic resources to the communities that conserve the habitat critical to the species' survival, thereby creating a sustainable cycle.</p> <p>Furthermore, project actions will develop vulnerability indexes that incorporate climate data to guide priority action for amphibian conservation. This will be coordinated with relevant programs and projects that generate climate information and lessons learned, including recommendations from <i>Adaptation to Climate Change through an Effective Water Governance in Ecuador</i> regarding climate data that is relevant to endangered and/or endemic amphibian species.</p>	
<ul style="list-style-type: none"> The aspects of benefit sharing shall include the development of distribution mechanisms which also benefit the local population. Germany strongly recommends coordination and cooperation with existing projects working in conservation of biodiversity (for example GIZ working in continental conservation gaps, municipal protected areas, National Biodiversity Strategy, implementation of the Nagoya Protocol, sustainable use of biodiversity, etc.). 	<p>The project will work closely with a number of related initiatives including several funded through the GEF.</p>	ProDoc, Part 2.5 Policy Conformity and Linkages
<ul style="list-style-type: none"> The financial contributions of the partner entities shall be formally confirmed before endorsement of the final project. 	Co-financing letters are included in this submission package.	Section IV, Part XII
Japan <ul style="list-style-type: none"> We appreciate formulation of this project. It is desirable 	The alignment of national ABS regulations will take into consideration all relevant national, subregional and international policies and protocols, including the Articles associated with Nagoya Protocol so as to be prepared to implement it upon its ratification.	ProDoc Outcome 3

Comments	Response	Reference
<p>that the update of the regulations on ABS described in the expected outcome 3.1 (Nagoya Protocol ratified and regulations on ABS updated and model ABS agreements and contractual clauses for different taxa) will be highly relevant and in line with Article 6 Clause 3 of the Nagoya Protocol. The implementation of this project is expected to develop good practices of ABS in Ecuador and contribute to the effective implementation of the Nagoya Protocol.</p>		
<p>USA</p> <ul style="list-style-type: none"> • We concur with the STAP review that the Global Environmental Benefits section of this proposal needs significant improvement. In particular, additional detail should be added on how the activities in the proposal (especially the creation of institutional procedures for bioprospecting research with the University of Queens and research on skin secretions for new peptides with bioreactive properties) generate global benefits. Finally, we underline the importance of the inclusion of indigenous peoples as stakeholders in this project. 	<p>Ecuador has 546 species of amphibians (9% of the global amphibian diversity) of which 42% are found only in this region of the world. This biodiversity is highly endangered and the critical habitat of many species is found outside existing protected areas. The project will deliver significant global environmental benefits (GEBs) by establishing an institutional, policy and capacity framework for effective conservation of this biodiversity by building on ABS principles in which the bio-prospecting partnership between national academic and research institutions such as Iquiam Regional Amazonic University (through a partnership with the University of Queens) and the Government of Ecuador plays a key role as a driver for conservation by rendering incentives to conserve biodiversity in specific locations - in this case 1 existing PANE in Azuay and 2 new Decentralized Autonomous Government (GAD) Reserves in Carchi and Guayas; through amphibian rescue actions and genome bank; and in the long-term through the negotiation of monetary and non-monetary benefits derived from potential products.</p> <p>Under Outcome 1, the project will deliver GEBs through <i>in situ</i> conservation to close gaps in coverage of critical habitats of 4 Ecuadorian amphibian species at high risk of extinction (<i>Atelopus coynei</i>, <i>Atelopus</i> sp. aff. <i>longirostris</i>, <i>Atelopus balios</i> and <i>Atelopus nanay</i>) by establishing 2 new GAD reserves in montane forest in the headwaters of Chinambí River (Eastern mountain range, Carchi province) and in the headwater basins of Tamarindo Rivera (Guayas Province), as well as enhancing ongoing conservation work in 1 existing protected area of the PANE (Cajas National Park in Azuay). These reserves will afford improved conservation to other species in addition to the endangered amphibians and thus generate a broader range of GEBs. As a secondary measure, GEBs will also be provided through the rescue of highly endangered harlequin and poison frogs populations in areas of the Cordillera del Condor (Zamora Chinchipe Province) impacted by mining and through their conservation in captive breeding facilities. Without immediate</p>	<p>ProDoc Part 2.4 Incremental Reasoning and GEB; Part 2.2 Outcome 3</p>

Comments	Response	Reference
	<p>captive management as a stopgap component of an integrated conservation effort, hundreds of amphibian species could become extinct. Rescue locations and species include:</p> <ul style="list-style-type: none"> • Azuay: <i>Atelopus nanay</i> • Morona Santiago and Zamora Chinchipe, Cordillera del Condor: <i>Atelopus</i> sp. nov. aff. <i>palmatus</i> and <i>Dendrobates condor</i>. <p>Outcome 2 of the project aims at creating Inter-Institutional agreements for technology transfer and capacity building which are key to enhancing the research and development capabilities of the provider country in compliance with the Nagoya Protocol's Articles 22 (Capacity) and 23 (Technology Transfer, Collaboration and Cooperation). The Ecuadorian government is investing in higher education and scientific research through the creation of new Universities and research centres (e.g. Yachay city of knowledge and Ikiam Regional Amazonic University), that will develop scientific research focussed on the sustainable use of Ecuadorian biodiversity and technological research. However, neither of these institutions have the technical and technological know-how to fulfill their mission. Through a third-party agreement with Ikiam Regional Amazonic University, Queens University will play an important role in helping form this know-how so as to establish an essential R&D resource for the country. Without this support and participation, the project's impact would be limited as well as Ecuador's capacity to develop bioprospecting and genome banking. This scenario also provides an important testing ground for implementing the permit/licensing mechanisms of the GR module. The advances in R&D capabilities of the Ecuadorian institutions (i.e. Ikiam Regional Amazonic University) to identify potential products from 4 amphibian species (<i>Agalychnis spurrelli</i>, <i>Cruziohyla calcarifer</i>, <i>Hypsiboas picturatus</i> and <i>Atelopus nanay</i>) will not deliver GEBs per se. Rather these are means to reach ABS agreements between users and providers which will render monetary and non-monetary benefits that will assist in the conservation of the tropical montane rain forests, through the establishment and maintenance of protected areas be these GAD reserves, areas already in the PANE or community lands (see Outcome 1). The advances in R&D capabilities of Ecuadorian institution will also enable conservation of genetic resources of Ecuadorian amphibians at high risk of extinction, safeguarding these for future bio-prospecting agreements and conservation purposes. These include:</p> <ul style="list-style-type: none"> - Tissues of 50% of Ecuadorian amphibian species ; - Skins (with chemical compounds) and germ cells of ~ 40% (~ 70 of Ecuadorian amphibians on the IUCN Red List; - Cryopreserved sperm samples tested and proven viable for reproductive use <p>Outcome 3 provides a third approach that complements both the delivery of GEBs in the short and medium term as well as enables the long-term approach through bio-prospecting. The project will update and implement the Strategic Plan for the Conservation of Ecuadorian Amphibians in Risk of Extinction, Action Plan and associated financial plan, thereby reinforcing <i>in situ</i> and <i>ex situ</i> conservation and delivering GEBs over a larger range of amphibian species and their habitats. It will also undertake an economic assessment of Ecuadorian amphibians as a strategic resource and mainstream this into national policies to provide alternative options for economic strategies and models reducing the need for emergency actions in the</p>	

Comments	Response	Reference
	<p>future and sustaining the GEB value of existing amphibian populations <i>in situ</i>. Similarly by improving capacities of the National Competent Authority and related agencies on Prior Informed Consent & Mutually Agreed Terms, the project will increase the delivery of GEBs in future bioprospecting negotiations.</p> <p>Furthermore, while the target species are not associated with any traditional knowledge or indigenous communities, the project will develop and implement a communication strategy directed at the different levels of stakeholders in each of the components. Targeted information exchange meetings amongst various institutions and government bodies at various levels (Executive, National Assembly, Council of Citizen Participation, Decentralized Autonomous Governments, Indigenous Peoples and Nationalities, Afroecuadorians, Mantubios, Academia, and other interested stakeholders) will promote the implementation and further socialization of the Nagoya Protocol. This strategy will be aligned with the updated Strategic Plan for the Conservation of Ecuadorian Amphibians in Risk of Extinction and its accompanying Action Plan, as well as promote tools for monitoring and complaints, ultimately increasing awareness of citizens on ABS, and the need to preserve the country's amphibian diversity and its genetic resources.</p>	

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁸

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: 91,324			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent Todate</i>	<i>Amount Committed</i>
Baseline and technical analyses to further identify and cost the actions to be included in the FSP.			
Analysis of national and local capacities and consultations for finalizing the FSP details and its implementation arrangements.	91,324	80,966	10,358
Development of feasibility analysis, budget and key project design elements			
Total	91,324	80,966	10,358

⁸ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.