Funding Proposal

FP019: Priming Financial and Land-Use Planning Instruments to Reduce Emissions from Deforestation

Ecuador | United Nations Development Programme (UNDP) | Decision B.14/17

27 September 2016

GREEN CLIMATE FUND

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Funding Proposal

Version 1.1

The Green Climate Fund (GCF) is seeking high-quality funding proposals.

Accredited entities are expected to develop their funding proposals, in close consultation with the relevant national designated authority, with due consideration of the GCF's Investment Framework and Results Management Framework. The funding proposals should demonstrate how the proposed projects or programmes will perform against the investment criteria and achieve part or all of the strategic impact results.

Project Title:	Priming Financial and Land-Use Planning Instruments to Reduce Emissions from Deforestation
Country/Region:	Ecuador
Accredited Entity:	United Nations Development Programme
Date of Submission:	V1: 3 December 2015; V2: 15 June 2016; V3: 29 July 2016; V4: 25 August 2016; V5: 9 Sept 2016

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Note to accredited entities on the use of the funding proposal template

- Sections **A, B, D, E** and **H** of the funding proposal require detailed inputs from the accredited entity. For all other sections, including the Appraisal Summary in section F, accredited entities have discretion in how they wish to present the information. Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other project documents such as project appraisal document.
- The total number of pages for the funding proposal (excluding annexes) is expected not to exceed 50.

Please submit the completed form to:
fundingproposal@gcfund.org

FP-UNDP-090916-5768

A.1. Brief Project / Programme Information			
A.1.1. Project title		Priming Financial and Land-Use Planning Instruments to Reduce Emissions from Deforestation	
A.1.2. Project or programme		Project	
A.1.3. Country		**Ecuador**	
A.1.4. National designated authority		Mrs María Victoria Chiriboga - Undersecretary of Climate Change (Focal Point), Ministry of Environment	
A.1.5. Accredited entity		United Nations Development Programme (UNDP)	
A.1.5.a. Access modality		☐ Direct ☒ International	
A.1.6. Executing entity / beneficiary		**Executing Entity**: The Ministry of Environment (MAE) is the executing entity responsible for overall implementation of this project. The Ministry of Livestock, Agriculture, Aquaculture and Fisheries (MAGAP) is a Responsible Party, responsible for implementation of sub-component 2.1. Three Water Funds – the Fund for Water Protection (FONAG), the Regional Fund for Water (FORAGUA), and the Water Fund for the Protection of the Paute River Watershed (FONAPA) – are Responsible Parties, responsible for the implementation of sub-component 3.2 in their respective jurisdictions. Other national entities will support implementation: the Ministry of Foreign Trade, the Ministry of Finance, the Internal Revenue Service (SRI), the National Secretariat for Planning and Development (SENPLADES), local governments (GADs), and line ministries responsible for applicable Policies and Measures (PAMs) to reduce GHG emissions from deforestation. UNDP will draw upon relevant partners, including the UN-REDD partnership, for technical expertise as needed and in full agreement with the Government of Ecuador. **Beneficiaries**: approximately 1,106,000 total beneficiaries in the project intervention area, including forest sector stakeholders, agricultural and livestock producers, forest-dependent communities, and indigenous peoples.	
A.1.7. Project size category (Total investment, million USD)		☐ Micro (≤10) ☒ Medium (50<x≤250)	☐ Small (10<x≤50) ☐ Large (>250)
A.1.8. Mitigation / adaptation focus		☒ Mitigation ☐ Adaptation ☐ Cross-cutting	
A.1.9. Date of submission		V1: 26 November 2015; V2: 15 June 2016; V3: 29 July 2016; V4: 25 August 2016; V5: 9 Sept 2016	
A.1.10. Project contact details	Contact person, position	Helen Negret, Regional Technical Advisor Pierre Yves Guedez, Regional Technical Advisor	
	Organization	United Nations Development Programme (UNDP)	
	Email address	helen.negret@undp.org pierre-yves.guedez@undp.org	
	Telephone number	+507 3024500	
	Mailing address	UNDP, UN House, Building 129, Muir Street, City of Knowledge, Clayton, Panama City, Panama.	

A.1.11. Results areas *(mark all that apply)*

Reduced emissions from:

☐ Energy access and power generation
(E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)

☐ Low emission transport

(E.g. high-speed rail, rapid bus system, etc.)

☐ Buildings, cities and industries and appliances
(E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)

☒ Forestry and land use
(E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)

Increased resilience of:

☐ Most vulnerable people and communities
(E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)

☐ Health and well-being, and food and water security
(E.g. climate-resilient crops, efficient irrigation systems, etc.)

☐ Infrastructure and built environment
(E.g. sea walls, resilient road networks, etc.)

☐ Ecosystem and ecosystem services
(E.g. ecosystem conservation and management, ecotourism, etc.)

A.2. Project / Programme Executive Summary (max 300 words)

Ecuador is finalizing its REDD+[1] readiness process[2]. A Forest Reference Emission Level (FREL) was submitted and technically assessed by the UNFCCC in 2015[3] and a REDD+ Action Plan (REDD+ AP[4]) has been approved. The Action Plan presents the policies and measures prioritized to address the drivers of deforestation[5]. It has a national scope and includes the 5 REDD+ activities. It is designed to support the national objective of achieving zero net deforestation by 2020.

The GCF project will co-finance the REDD+ AP by providing targeted investment to control agricultural expansion into forest areas; optimize existing financial, economic mechanisms to implement agricultural and livestock production practices that reduce deforestation; align land-use zoning plans with national climate change-related targets; strengthen restoration, conservation and sustainable production in vulnerable watersheds; redesign public credit lines to orient them towards sustainable agricultural production practices; promote tax incentives for REDD-supportive activities; and strengthen purchasing policies for deforestation-free commodities, their certification and traceability.

The emission reductions that Ecuador will achieve by implementing its REDD+ AP during the GCF project's lifetime (2017-2021) will be assessed in 2018, 2020 and 2022, through the Biennial Update Reports to the UNFCCC[6], with reference to the FREL.

A.3. Project/Programme Milestone

Expected approval from accredited entity's Board (if applicable)	October 2016
Expected financial close (if applicable)	N/A
Estimated implementation start and end date	Start: January 1, 2017 End: December 31, 2021
Project/programme lifespan	The GCF funds for this project will be disbursed over a period of 5 years, from 2017 to 2021[7].

[1] REDD+:"Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries": For more information see http://redd.unfccc.int/
[2] http://redd.unfccc.int/
[3] http://redd.unfccc.int/files/submission_frel_ecuador.pdf
[4] See Annex IIc: National REDD+ Action Plan.
[5] In this document, 'reduce deforestation' is used as short-hand for all 5 REDD+ activities, which are all included in the national REDD+ AP, and 'analysis of drivers of deforestation' is used as short-hand for 'analysis of drivers of deforestation and forest degradation, and of barriers to the conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks.
[6] As per the UNFCCC Warsaw Framework: http://redd.unfccc.int/fact-sheets/redd-mrv-and-results-based-payments.html
[7] The lifespan of the project, understood to be the period over which direct benefits take place, matches the estimated lifetime of the longest-lived investment facilitated by the project: 20 years for the infrastructure in the collection centres and for the full transition of some of the production practices based on agro-forestry implemented under Component 2. Given that this is a national policy, MAE and MAGAP will continue providing assistance in the areas where the project will be executed even when the GCF project is completed. Also, UNDP is open to supporting post-project implementation and/or monitoring of results during the project lifespan, provided there is more guidance from the GCF Board on what is expected, including details on how many years after project closure this support is to be carried out, and what form it will take.

B.1. Description of Financial Elements of the Project / Programme

1. The cost of implementing the REDD+ AP in Ecuador is estimated at USD 250 million by 2025. The GCF input of USD 41.17 million will cover 16.4% of the total financial requirements. The co-finance leveraged by the GCF project stands at USD 42.84 million, while other complementary financing sources under joint programming stand at USD 74.76 million. Together, these sources of finance represent USD 158.77 million, and contribute approximately 63% of the total estimated cost of implementation of the REDD+ AP.

2. The justification for requesting a grant and not a loan from the GCF for this proposal is based on the following elements. First, the project financial evaluation[8] reveals that the project is not financially viable (see annex XII, 'Economic Analysis', for the full financial evaluation of the project). The simulated project results under the conservative scenario show a negative financial net present value (FNPV) of USD 46.73 million. However, the project is nonetheless highly desirable for society: the project is economically positive, with an economic net present value (ENPV) of USD 181.52 million, an economic internal rate of return (EIRR) of 55.3% and a cost-benefit ratio of 5. This valuation does not consider the inclusion of REDD+ Results-Based Payments (RBPs) since there are uncertainties associated with this mechanism, notably regarding prices, availability of funds and conditions of payments, among others.

3. Second, all project components are targeting risk and information barriers via public framework expenditures. These public framework expenditures include capacity building to overcome public and private actors' knowledge barriers (components 1 and 2 as well as sub-component 3.2); developing, implementing and monitoring climate policies to remove technical, legal and administrative barriers to investment (sub-component 1.4 and component 4); supporting the transition from R&D to commercial roll-out (sub-component 2.1); law enforcement (sub-component 1.2 and 1.3); land-use/spatial planning and mapping (sub-components 1.1, 1.2); and establishing measuring, reporting and verification (MRV) systems (sub-components 2.5 and 4.1). Detailed information on the baseline scenario, including the business as usual allocation of public funding to the proposed activities, the specific barriers, and the support requested of the GCF, are provided for each component and sub-component in Section C.3 of this proposal.

4. Third, given the current state of Ecuador's public finances, these public expenditures can only come from international grants. Indeed, Ecuador is facing a significant reduction in fiscal revenue associated with the April 2016 earthquake, placing serious constraints on the Government's ability to finance environmental programmes. This combination of factors, in addition to the fact that the project is not considered financially viable, mean that a loan would not be an option to finance this project. Furthermore, given current strong budgetary restraints, this grant finance will not displace "business as usual" public finance.

5. The requested investment will strengthen Land Use and Zoning Plans (PDOTs) to include climate change criteria, and will identify land uses appropriate for reducing deforestation and for reforestation. Including these considerations into land-use planning will unlock resources through multi-annual investment projects that are developed using the PDOTs as a basis. This, coupled with strengthened enforcement, will enhance the uptake of land uses that reduce deforestation, promote the reduction of greenhouse gas emissions and catalyse strong socio-economic co-benefits.

6. To facilitate the uptake of these land uses in the short term, project investment will support producers to transition to more sustainable production systems. In order to do so, the project will compensate producers' opportunity costs during the transition / reconversion stage and reduce any adverse economic displacement that may occur. This support will be complemented by the implementation of responsible purchasing policies and the certification and traceability of deforestation-free products, thereby increasing income through access to markets for certified produce in the medium-term. These actions will also correct market failures such as the lack of access to the formal credit market, coverage for loss of profit due to land-use change, and the high costs associated with certification and traceability of deforestation-free products.

7. In non-forest areas identified as critical, and where agricultural production is not considered appropriate in land-use plans, there will be investment in restoration processes to enhance carbon stocks, and in conservation and forest management. In order to catalyse private investment, intervention areas have been selected that coincide with watersheds critical for hydroelectric supply. Supporting reforestation and conservation in these upper river basin areas

[8] Based on the estimate of income and expenditure, financial flows and operating income were programmed to a horizon of 30 years, i.e. until 2044, the model components are linked with the objective of structuring a time trend for each of the main variables that determine the profitability of the programme. The flow of operational results are brought to present value at a discount rate of 6%.

will not only increase carbon stocks but will also reduce the costs associated with sedimentation in hydroelectric facilities. In turn, this will facilitate Ecuador's shift towards cleaner energy, reducing the use of petroleum-based energy generation in the long-term and reducing emissions still further (Section E.1.1). Prioritizing these watersheds will also contribute to secure, sustainable and predictable water flows and will generate indirect benefits for the surrounding populations by improving water quantity and quality.

8. The different proposed project components, with the respective requested GCF funding, are shown in the following table.

Table 1: Financial Elements per project component (GCF grant)[9]

Component	Sub-component	Amount (for entire project) (USD)	GCF funding amount (USD)	Co-financing funding amount (USD)
Component 1: Investment in enabling policies to reduce the drivers of deforestation and its associated emissions	Sub-component 1.1: PDOTs and Life Plans updated and implemented with climate change criteria and actions	4,069,700	1,722,600	2,347,100
	Sub-component 1.2: Local capacity building for supervision of land-use planning and zoning	726,400	726,400	0
	Sub-component 1.3: Strengthening forest control	4,286,423	1,972,000	2,314,423
	Sub-component 1.4: Formal Inter-Institutional Coordination Structures within the framework of PDOTs, Life Plans and land-use zoning	2,328,924	882,000	1,446,924
	Sub-component 1.5: Project management	1,067,726	722,098	345,628
	Sub-total	**12,479,173**	**6,025,098**	**6,454,075**
Component 2: Implementation of financial and economic incentives towards the transition to sustainable production systems in non-forest areas	Sub-component 2.1: Provision of incentives for the sustainable production transition period	19,016,284	9,257,518	9,758,766
	Sub-component 2.2: Promote the coordination and implementation of existing tax incentives that will allow for the transition to sustainable production systems	500,000	500,000	0
	Sub-component 2.3: Support the redesign of public credit lines to reorient them to sustainable production practices	1,321,090	780,000	541,090
	Sub-component 2.4: Responsible public and private procurement for deforestation-free production	1,069,091	560,000	509,091
	Sub-component 2.5: Certification and traceability of deforestation-free products	11,320,497	4,439,726	6,880,771
	Sub-component 2.6: Project management	1,067,726	722,098	345,628
	Sub-total	**34,294,688**	**16,259,342**	**18,035,346**
Component 3: Financial and non-financial mechanisms for restoration, conservation and connectivity	Sub-component 3.1: Strengthen conservation, restoration and forest management processes through the National Socio Bosque Programme	20,157,117	7,768,000	12,389,117
	Sub-component 3.2: Strengthen mechanisms for integrated water	7,655,499	4,470,000	3,185,499

[9] The budget total includes project management costs but excludes the fee of the GCF Accredited Entity.

	resource management (IWRM) in the basins located within prioritized areas			
	Sub-component 3.3: Project management	771,598	722,098	49,500
	Sub-total	**28,584,213**	**12,960,098**	**15,624,115**
Component 4: Implementation of enabling instruments to reduce the drivers of deforestation and its associated emissions	Sub-component 4.1: Support to the implementation of the Warsaw Framework for REDD+ and other operational processes	5,061,492	3,697,995	1,363,497
	Sub-component 4.2: Operationalization of the financial architecture of the REDD+ AP	2,519,911	1,508,110	1,011,801
	Sub-component 4.3: Project management	1,067,726	722,098	345,628
	Sub-total	**8,649,129**	**5,928,203**	**2,720,926**
Total project financing		**84,007,202**	**41,172,739**	**42,834,463**

9. Please see Annex V for the budget breakdown by expenditure type (project staff and consultants, travel, goods, services, etc.) and disbursement schedule.

B.2. Project Financing Information

	Financial Instrument	Amount	Currency	Tenor	Pricing
(a) Total project financing	**(a) = (b) + (c)**	**84.01**	million USD ($)		
(b) GCF financing to recipient	(i) Senior Loans (ii) Subordinated Loans (iii) Equity (iv) Guarantees (v) Reimbursable grants * (vi) Grants *	…… …… …… …… …… 41.17	Options Options Options Options Options million USD ($)	( ) years ( ) years	( ) % ( ) % ( ) % IRR
	** Please provide economic and financial justification in section F.1 for the concessionality that GCF is expected to provide, particularly in the case of grants. Please specify difference in tenor and price between GCF financing and that of accredited entities. Please note that the level of concessionality should correspond to the level of the project/programme's expected performance against the investment criteria indicated in section E.*				
	Total requested (i+ii+iii+iv+v+vi)	41.17	million USD ($)		

(c) Co-financing to recipient	Financial Instrument	Amount	Currency	Name of Institution	Tenor	Pricing	Seniority
	Grant Grant Grant Grant Grant	31.76 8.49 0.68 0.82 1.09	million USD ($)	– Ministry of Environment – Ministry of Agriculture – UNDP and UNEP – FAO – UNDP	( ) years ( ) years	( ) % ( ) % ( ) % IRR	Options Options Options Options

Lead financing institution: Central Government.

10. Co-financing was leveraged during the elaboration of the REDD+ AP and the GCF proposal, and the associated consultation processes. It includes only new and additional resources which have not yet been committed and which are specifically linked to the GCF proposal. This includes funds from a Global Environment Facility (GEF) project, from UNDP, UNEP and FAO, as well as national resources reoriented to co-finance the implementation of the REDD+ AP[10].

[10] Important co-financing from the Ministry of Foreign Trade (USD 5.76 million) is under discussion to support sub-component 2.5 but has yet to be secured through a letter of commitment.

11. In addition to these new and additional resources, it is expected that other very significant co-financing will be leveraged in the near-future to support the implementation of the GCF project. This includes the REDD Early Movers Programme of Germany and Norway, the Forest Investment Programme led by the Multilateral Development Banks, as well as co-financing from the Ministry of Foreign Trade of Ecuador. MAE is presently at an advanced staged of discussion with these initiatives. These new sources of funds will be considered as co-finance for the GCF project once secured, and co-financing letters will be provided.

	Financial Instrument	Amount	Currency	Name of Institution
Complementary financing to recipient	Grant Grant/loans Grant	45[11] 24[12] 5.76	million USD ($)	REM (KFW) FIP (MDBs) Ministry of Foreign Trade

** Please provide a confirmation letter or a letter of commitment in section I issued by the co-financing institution.*

(d)Financial terms between GCF and AE	N/A

B.3. Financial Markets Overview (if applicable)

12. Specific information related to a financial markets overview is provided below under sub-component 2.2, as well as in Annex XIIIf, “Credit allocated by the financial system to the agricultural sector in the Amazon - 2013” and in Annex XIIIg Parts 1-4, “Investment Catalogue for Strategic Projects”.

13. The fee arrangement for the proposed project will be aligned with the GCF Board’s decision on fees, taken at the 11th meeting of the Board. The budget figures presented in this proposal exclude the fee: i.e. the resources required to cover quality assurance and oversight services performed by UNDP over all phases of the project cycle as follows: (i) oversight of proposal development; (ii) appraisal (pre and final) and oversight of project start-up; (iii) supervision and oversight of project implementation; and (iv) oversight of project closure.

[11] Cash
[12] Cash

C.1. Strategic Context

General policy on climate change

14. The Government of Ecuador (GoE) fully acknowledges the impacts of climate change[13] and has adapted its policy and institutional framework to comply with the commitments and principles of the United Nations Framework Convention on Climate Change (UNFCCC). Ecuador ratified the Kyoto Protocol in 1999 as a Non-Annex I (NAI) country and was the first country in the world to adopt the Rights of Nature in its Constitution[14] (2008).

15. In 2009, the Government declared climate change mitigation and adaptation to be a State Policy[15], committing to reducing greenhouse gas emissions as a voluntary act under the UNFCCC, and establishing the institutional structure to direct national climate change policy and action under the Ministry of Environment (MAE). In 2010, the Interinstitutional Committee on Climate Change (CICC), presided over by MAE, was established to coordinate with other Ministries and to facilitate the execution of national policies on climate change and UNFCCC commitments. In 2012, MAE launched the National Climate Change Strategy (NSCC) 2012-2025.

UNFCCC reports

16. Ecuador submitted its Second National Communication[16] in 2011 and is preparing its third. The process of developing National Communications has evolved from a fragmented institutional effort to compile the country's climate change endeavours to one of greater institutional coordination within a detailed agenda based on the National Development Plan ("Plan Nacional para el Buen Vivir") 2009-2013[17].

17. Ecuador's Forest Reference Emission Level (FREL)[18] was submitted to the Convention in December 2014 for technical assessment, as requested by the Warsaw Framework for REDD+. It is based on the most accurate information available for estimating GHG emissions in the LULUCF sector and covers all Ecuador's continental territory. It only includes deforestation and might be updated in the future, following the step-wise approach agreed on in Decision 12/CP.17[19].

18. According to Ecuador's first submitted FREL, on average 130,000 hectares/year were deforested in Ecuador between 1990 and 2000, and 109,000 hectares/year between 2000 and 2008. During this period, 99.4% of the deforested areas were transformed into agricultural areas and less than 0.6% into infrastructure and other uses. The expansion of the agricultural frontier includes crops for local markets and subsistence such as maize; livestock production for dairy products; and commodity production, notably beef, palm oil, cacao and coffee. Average annual emissions from deforestation at the national level were 52.7 $MtCO_2eq$ between 1990 and 2000, and 43.4 $MtCO_2e$ for the period 2000-2008.

National REDD+ Action Plan

19. During the REDD+ readiness process (2012-2016), the direct and indirect drivers of deforestation in Ecuador were analysed from economic, financial, political, social and technical perspectives. Historical patterns of deforestation were identified along with geographical areas with similar (homogeneous) deforestation profiles. Of the 14 areas of deforestation identified, 7 have been prioritized in the REDD+ Action Plan (AP), based on a multi-criteria analysis, including forest coverage, risks of deforestation, potential for increasing carbon stocks, and other non-carbon benefits. (Annex IIe).

[13] Ecuador is susceptible to several climate change impacts including frequent extreme climate events such as: El Niño /La Niña –Southern Oscillation (ENSO), increase in sea-level and the retreat of glaciers, among others; also to external factors with an economy largely dependent on oil exports.
[14] This recognises and respects Nature and the maintenance and regeneration of its lifecycle, structure, changing roles and processes. http://www.asambleanacional.gov.ec/documentos/constitucion_de_bolsillo.pdf
[15] Executive Decree Nº 1815: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAAahUKEwiKh6in2vnIAhWFcT4KHf0MCuo&url=http%3A%2F%2Fwww.planetaverde.org%2Fmudancasclimaticas%2Fdown.php%3Farq%3D231109-110115DECRETO_N1815%255B1%255D.pdf%26pasta%3Dlegislacao_clima&usg=AFQjCNFtXHg0sVbLriM5-35xn8Gnn7Q-sw&sig2=as_4u5eOU_nRe19jt-i1Rg&bvm=bv.106923889,bs.2,d.dmo
[16] http://unfccc.int/resource/docs/natc/ecunc2.pdf
[17] http://www.planificacion.gob.ec/wp-content/uploads/downloads/2012/07/Plan_Nacional_para_el_Buen_Vivir.pdf
[18] https://unfccc.int/files/land_use_and_climate_change/redd/application/pdf/2014_december_frel_submission_ecuador.pdf
[19] http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf

20. Specific national and local-level measures to address deforestation drivers were defined based on a cost efficiency analysis and to minimize social and environmental risks and maximise potential benefits. The list of measures and actions to be implemented to reduce deforestation, degradation and enhance carbon stocks is included in the REDD+ AP (Annex IIc).

21. The REDD+ AP includes the 5 eligible REDD+ activities and has five components: i) land-use zoning and institutional management policies; ii) transition to sustainable production systems (outside forests); iii) forest management / increased forest value (inside forests); iv) restoration and connectivity; and v) monitoring, safeguards and knowledge management[20]. Ecuador is developing a system to report on how the Cancun safeguards agreed under the UNFCCC are being addressed and respected during the implementation of the Policies and Measures (PAMs) prioritized in the REDD+ AP (detailed in Section F).

Land-use planning policy

22. Decentralized Autonomous Governments (GADs) are responsible for formulating Development and Land-use Plans (PDOTs), and ensuring their complementarity with one another and with existing Plans in the various levels of government[21]. These regional, provincial and local PDOTs seek to align and harmonize strategic development decisions on human settlements, economic and production activities, and natural resource management with the characteristics of land in their territories through guidelines for land-use[22]. PDOTs are also the main input for the allocation and regulation of land use, land-use change and occupation at a cantonal and/or district level, and are required to prepare public investment plans, budgets and other management instruments. Life Plans are also a relevant land-use management tool, as they are formulated by indigenous people located in important areas of forest. Life Plans must be incorporated within the PDOTs for them to be officially recognized.

Transforming agricultural production

23. The agriculture, livestock, hunting and fishing sector is a key element of the national economy, accounting for 7.2% of total GDP. The area dedicated to agriculture covers 7.3 million ha (see Annex XIIIe)[23]. Permanent crops represent 20% of the total agricultural surface. Sugarcane, banana and African oil palm are the principal crops at the national level. The increased production of palm oil and other agricultural commodities has provided important revenue to the country but increased production has been mostly through geographical expansion (and forest encroachment) rather than increased yields. If this expansion continues, encroachment into primary forest will increase.

24. The Amazon region accounts for 17% of the total agricultural surface, of which grasslands (cultivated and natural) cover 1.1 million ha and permanent crops 131,400 ha. The livestock sector is dominated by beef cattle (with 5.1 million head) and swine (with 1.2 million head). 15% of the national total of beef cattle are in the Amazon. Despite having opportunity costs below US$ 5/tCO_2e, the livestock sector has registered an increase in grassland surface cover in the last 10 years[24].

25. Low productivity is the main challenge to the production of dairy and meat. Large areas of land are occupied, grasslands are poorly utilized, and CO_2e emissions per milk or meat unit are inversely proportional to the level of productivity.

26. The Agenda for Transforming Production in the Amazon (ATPA[25]) is a key policy that targets subsistence farmers seeking to "convert current agricultural production activities in the Amazon to agro-production systems that are

[20] MAE (2015), *REDD+ Ecuador Action Plan*. Ministerio del Ambiente. Programa Nacional Conjunto ONU REDD+ Ecuador.
[21] The Constitution and the Organic Code of Territorial Organization, Autonomy and Decentralization (COOTAD) establishes that the GADS should develop PDOTs. http://www.ame.gob.ec/ame/pdf/cootad_2012.pdf
[22] The Organic Code for Planning and Public Finance (COPLAFYP22, Art.43 and 44) defines the PDOTs: http://www.finanzas.gob.ec/wp-content/uploads/downloads/2015/03/COPFP.pdf
[23] Results from INEC (2013), *Survey on Continuous Agricultural Surface and Production*.
[24] Leguia, D., y Moscoso, F. (2015), *Medidas y Acciones REDD+ Ecuador: Aplicación del enfoque paisaje y flujo / stock*. Programa Nacional Conjunto ONU REDD Ecuador y Ministerio de Ambiente del Ecuador. Quito, Ecuador.
Vera, A., & Berrezueta, L. (2010), *Desarrollo de sistemas silvopastoriles para rehabilitar pastizales en la zona norte de la región amazómica del Ecuador*. Quito, Ecuador: INIAP / MAGAP.
[25] The ATPA integrates a set of MAGAP projects and programmes including: i) Land Project and SIGTIERRAS: Farm Integrated Plan Management and Land Allocation to Communities; ii) Coffee and Cocoa Reactivation Project; iii) Aquaculture; iv) 2KR Support Project for

sustainable from economic, social, cultural and environmental perspectives" through both certification and traceability of deforestation-free products. It also aims to transform 300,000 hectares of grassland to *chacra* systems; semi-intensive and intensive agroforestry systems, silvo-pastoral systems and forestry systems[26].

27. ATPA promotes productive transformations from traditional to sustainable in 5 sectors: i) cattle ranching practices (pasture land/grassland) to *chacra* (high density of timber trees – up to 86 per ha), ii) semi-intensive agroforestry (medium density of timber trees – up to 30 per ha), iii) intensive agroforestry (low density of timber trees – up to 20 per ha) for Robusta coffee, Arabica coffee, or cacao and timber, fruit and medicinal herbs, iv) silvo-pastoral systems for milk or meat, or forestry systems, and v) aquaculture. The transition period from conventional to sustainable production is estimated to be 1-3 years. During this period, income is significantly reduced and can fall to zero.

28. The willingness of smallholders to adopt sustainable practices is affected by reluctance to change, high perceived risk of failure, and low value placed by farmers on future returns. At a higher discount rate, the present value of returns to productive transformation falls substantially and with it the farmer's interest to engage in the process. High discount rates among poor farmers, from 8% to upwards of 25%, are well documented in the literature[27,28]. In this context, farmers will continue with existing practices rather than assume the risks of failure in exchange for future returns of little present value to them. A grant that covers farmers' lost profit is a better suited instrument, given that it minimizes the risks assumed by the farmer and provides immediate returns. Technical assistance is key to supporting farmers to overcome the reluctance to change.

Product certification

29. Ecuador has two existing product certification schemes: (i) 'Marca País' is a national-level initiative launched by the Ministry of Foreign Trade that seeks to promote high-quality products for export; (ii) 'Punto Verde' is a national-level certification scheme launched by MAE that recognizes good environmental practices in the industrial and service-providers sectors. 'Marca Pais' does not yet have certification criteria for cacao, coffee or palm commodities and their related by-products. 'Punto Verde' encourages the public and private sectors to employ new and better production and service practices. It serves as a tool to promote competitiveness in industry and services, committing them to protect and conserve the environment. To support the transformation of agricultural practices, the GCF project will help to develop deforestation-free criteria and traceability mechanisms for 'Marca Pais' and 'Punto Verde', and farmers will be supported in having their products certified and marketed under these labels.

Finance mechanisms for agriculture

30. In Ecuador's Amazon Region, agricultural financing comes mainly from the former National Development Bank (BNF), now BanEcuador[29]. In 2013, the total amount of loans was US$ 76.1 million, of which the BNF contributed 73% of total funding, followed by funding from Credit and Savings Cooperatives amounting to 17.2%, as well as private banking contributions of 8.3% and the National Financial Corporation (CFN) of 1.5%. From the total credit operations for the agricultural sector, the amount conferred to the Amazon region represents 3.6%, which is equivalent to 0.08% of GDP (Annex XIIIf). However, credits from key financial institutions, tax concessions and financial incentives for agriculture do not fully incorporate criteria for ensuring sustainable production practices or production based on non-timber forest products. A recent analysis shows that 27 different tax and financial incentives are directly or indirectly related to palm oil production in the agriculture sector, without considering the effects they have on deforestation, degradation or conservation of carbon stocks[30]. Additionally, these funding mechanisms are not linked to land-use zoning decisions. Thus, there is a disconnect between finances supporting production practices and the objectives of the REDD+ AP.

production infrastructure in communities; v) Livestock; vi) Technological Innovation, as a technical assistance for implementation; and vii) Production chains. See http://www.produccion.gob.ec/transformacion-productiva/

[26] *Chacra* is a smallholder farm system and combines a number of crops and non-timber forest products (NTFPs). ATPA targets are 10% conversion to improved agroforestry systems; 38% semi-intensive agroforestry; 10% intensive agroforestry; 28% silvopastoral systems; and 13% forestry systems.

[27] Chomitz 2006, Ninan and Sathyapalan 2005, Naidoo and Adamowicz 2006

[28] GEF (2006), *The Role of Local Benefits in Global Environmental Programmes*, Evaluation Report 30. GEF Evaluation Office, Washington, D.C.

[29] https://www.bnf.fin.ec/index.php?option=com_content&view=article&id=592%3Alogica-de-trabajo-de-banecuador-sera-en-territorio-&catid=27%3Anoticias-principales&lang=es

[30] UNEP Finance Initiative and Ministry of Environment of Ecuador. *Fiscal policy in the Palm Oil Sector and its Implications for REDD+ in Ecuador*, Quito, December 2014.

Finance mechanisms for forestry

31. There are several baseline initiatives that provide funding for conservation and forest restoration. These include:
    - The Natural Protected Areas Heritage of Ecuador (PANE), which represents 20% of the country's land area in 51 public protected areas, covering 5 million ha of terrestrial land including large forested areas.
    - Socio Bosque Programme (SBP), which provides financial incentives to individual and community landowners who voluntarily commit to conserve native forests for a 20-year period. Since 2008, SBP has signed 2,748 agreements with 34,973 families, reaching 173,233 beneficiaries and covering an area of 1.4 million ha of tropical forests. It is expected to add approximately 200,000 ha of forest per year until 2020[31]. SBP is of great relevance for the Amazon, particularly for indigenous lands that make up 88% of the sub-region. SBP also includes incentives for restoration and sustainable forest management.
    - The National Forest Restoration Plan 2014-2017, which will reforest approximately 568,000 ha by 2017, followed by an expected 100,000 ha per year. This plan and the SBP, while important, do not guarantee the achievement of national REDD+ results due to the risk of displacement of emissions to forest areas not covered by them and because they are not implemented across all priority forest areas.

Hydroelectric potential and energy transformation

32. Ecuador's water availability (~20,700 m^3/person/year) far exceeds the world average (1,700 m^3/person/year)[32]. Host to the main tributaries of the Amazon River and with the highest concentration of rivers per square kilometre in the world, Ecuador has great potential for hydroelectric generation. However, Ecuador's electricity generation is currently largely based on oil. A recent public policy[33] seeks to transform the energy mix to produce more than 90% of electricity from hydroelectric power by 2017, resulting in avoided emissions of up to 8 million tCO_2e/year. Thirteen hydroelectric projects are located in the REDD+ AP's target areas and their watersheds will benefit from the implementation of measures prioritized in the REDD+ AP. Actions to reduce deforestation[34] in upper watersheds will contribute to maintaining water quality and quantity[35], thus helping to ensure the flow of water required for clean energy generation while simultaneously contributing to the objectives of the REDD+ AP.

33. Several planned projects/programmes will co-finance the proposed GCF project. These include:
    - The UNDP-implemented, GEF-financed proposal (2016-2020) for 'Integrated management of multiple-use landscapes with high conservation value for the sustainable development of the Ecuadorean Amazon Region'. To be executed by MAE, this project seeks to catalyse the transformation of planning, management and land use in the Amazon Special Territorial Constituency (CTEA) by building a governance framework based on a landscape approach and optimizing ecosystem services and people's welfare.
    - Climate Change Vulnerability Analysis for Hydroelectric Centres (CHECC)[36] is an adaptation project aimed at integral management and conservation of paramos, forests and protective vegetation as well as anthropic ecosystems in the major water basins of key hydroelectric plants (Coca Codo Sinclair, Delsitanisagua and Quijos) to reduce vulnerability to climate change.
    - Targeted Support projects (2016-2017) supported by the UN-REDD Programme to: i) facilitate REDD+ processes and promote effective stakeholder participation, including the elaboration of the safeguard information system (SIS); and ii) support the implementation of a National Forest Monitoring System (NFMS).

34. Furthermore, very important initiatives are being designed in conjunction with the GCF proposal and are fully aligned with the PAMs outlined in the REDD+ Action Plan, thus providing valuable complementary funding. These include:

[31] http://sociobosque.ambiente.gob.ec/node/44
[32] SENAGUA *et al*. 2009
[33] Article 15 of the Constitution indicates that the State shall promote the use of environmentally clean technology and non-polluting and low-impact alternative energy in the public and private sectors. The Electrification Master Plan 2013-2022 energy policy (Annex XIIIk) is consistent with this provision.
[34] REDD+ M&A that can improve water regulation include measures for the reduction of deforestation and forest conservation; technological change in timber extraction focusing in reducing impact; fire control; rehabilitation of degraded forests; and the introduction of agroforestry in areas currently used for conventional and extensive agriculture (WCMC 2014; PNC ONUREDD+ Ecuador 2014).
[35] Forests contribute to the water cycle by retaining, storing and providing water and moisture. Additionally, forests filter water and thus maintain its quality by acting as a physical barrier against the movement of sediments and precipitation impacts (Echavarría 1999). Forest cover combined with soil have a key regulation role in the water cycle, especially in areas with steep slopes (WCMC, 2014).
[36] http://suia.ambiente.gob.ec/centrales-hidroelectricas

- The Forest Investment Programme (FIP) (2016-tbd) supports Ecuador's REDD+ efforts by providing upfront bridge financing for readiness reforms and public and private investments to address the underlying drivers of deforestation and forest degradation and barriers to doing so, while taking into account opportunities to increase forests' resilience to climate change and contribute to multiple benefits
- The REDD Early Movers (REM) Programme (2016-tbd) is a global programme designed to reward the most advanced countries in REDD+ readiness. By providing financial support for the REDD+ interim phase, REM aims to assist in closing funding gaps. REM will provide support to Ecuador through financial contributions and targeted technical assistance.

C.2. Project / Programme Objective against Baseline

35. Under the BAU scenario, Ecuador will not implement the PAMs prioritized in the REDD+ AP at scale due to a number of constraints, including domestic resource limitations and the still-uncertain future of RBPs under the UNFCCC. The barriers to be targeted by the GCF project are described in detail under each sub-component outlined in Section C.3, based on a typology presented in the Climate Focus and Climate Policy Initiative paper, "Three Tools to Unlock Finance for Land-Use Mitigation and Adaptation"[37]. This typology identifies i) viability barriers, ii) risk barriers, and iii) information barriers.

36. The GCF project's activities are targeted to address these barriers in order to unlock finance for forest and land-use mitigation:

a) Targeting viability barriers (arising from costs that exceed revenues, deterring private sector investment) by increasing / creating / protecting revenues: e.g. through preferential market access (public and private purchasing policies), direct payments (subsidies) and payments for environmental services.

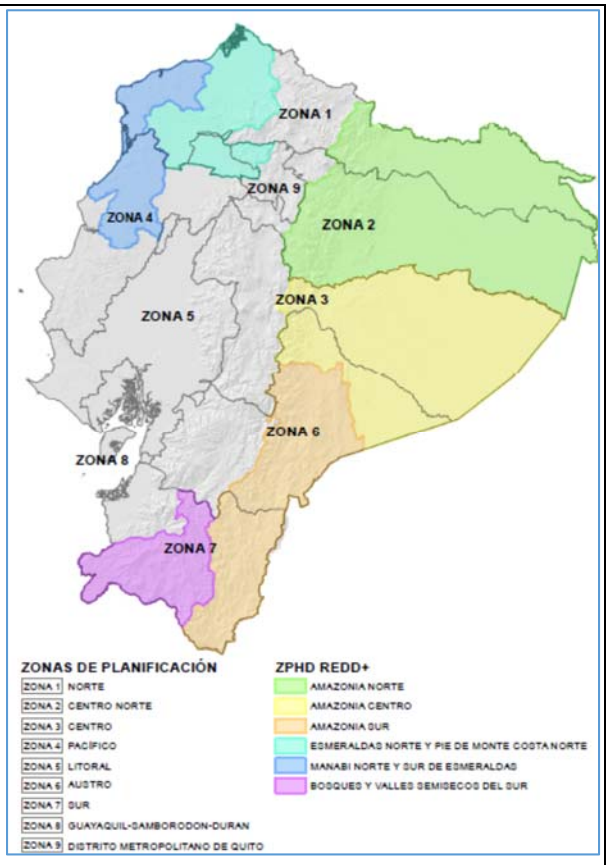
b) Targeting viability and risk barriers (where technological, political, financial or market risks prevent public or private investment) by reducing (public and private sector) costs through different measures. Traditional instruments include investment grants to reduce private investment needs, concessional loans to reduce the cost of capital, and tax breaks.

c) Targeting risk and information barriers (where lack of knowledge or institutional capacity prevent investment) via public framework expenditures. Public framework expenditures include capacity building for overcome public and private actors' knowledge barriers; developing, implementing and monitoring climate policies to remove technical, legal and administrative barriers to investment; R&D; law enforcement; land-use/spatial planning and mapping; building MRV systems; and developing demonstration projects.

[37] http://unfccc.int/resource/docs/natc/ecunc2.pdf

37. Sub-optimal implementation of the REDD+ AP will undermine its emission reduction potential and the sustainability of results achieved. The GCF project seeks to provide targeted investment to overcome constraints and ensure the implementation of top priorities in four components as a first phase to laying the foundation for the implementation of the entire REDD+ AP over time and through a variety of funding strategies.

38. The REDD+ AP focuses its intervention in different areas as follows: i) those with high threat of deforestation due to livestock and agricultural expansion; ii) those representing conservation gaps: i.e. areas of forests that are not under any conservation policy and are located near main highways and zones of greatest agricultural expansion; iii) protected areas and their buffer zones; iv) areas with high socioeconomic benefits (water regulation, poverty reduction, biodiversity conservation); and v) those where hydroelectric and mining projects are located. Based on these criteria, the REDD+ AP and the GCF project will target the Amazon (Northern, Central and Southern Amazon) and Southern Dry Forests (Zones 1, 2, 3 and 6: see adjacent map). This covers a total of 7 provinces and 38 cantons, and represents 4,935,638 ha, of which 1,530,817 ha are protected areas, 1,037,272 ha are grasslands under intensive systems and 2,500,687 ha are forest areas under some threat of deforestation and/or fall within conservation gaps. The GCF project will cover 20% of the total area prioritized in the REDD+ AP.



39. Land-use planning and zoning processes are compulsory in Ecuador. However, to be successfully implemented they need robust enforcement mechanisms. This is of particular concern in areas where commodities are expanding, opportunity costs are high and subsidies are insufficient to promote compliance with land-use restrictions. The GCF project will support the elaboration, implementation and participatory enforcement of land-use plans in the 38 cantons included in the area of intervention.

C.3. Project / Programme Description

40. Based on the analysis of the direct and underlying causes of deforestation in Ecuador, the project will contribute to the implementation of the PAMs outlined in the REDD+ AP for the first five years (2017-2021). Background analysis and feasibility studies related to the PAMs and to be supported by the GCF are provided in annexes, including:

- Analysis of the drivers of deforestation (including agricultural expansion as the principal driver and the interventions identified in the REDD+ AP): Annex IIc
- Opportunity cost analysis: Annex IId, Part 1
- Cost-benefit analysis: Annex IIb, Part 2
- Prioritization of geographical areas: Annex IIe
- REDD+ AP Finance Strategy: Annex IIf
- Economic analysis: Annex XII
- Detailed budget for the GCF project, including co-financing: Annex XII
- Summary of consultations in the development of the National Action Plan: Annex XIIIa

Project components and target area

41. In accordance with Ecuador's REDD+ AP, the project will contribute to transforming current agricultural production systems to ones with low levels of emissions from deforestation and will also engender behavioural shifts through a market approach. It will focus on four geographical areas: Northern, Central and Southern Amazon, and Southern Dry Forests (Zones 1, 2, 3 and 6) (see Section C.2 and Annex IX). The project will ensure that reducing emissions from deforestation: i) enhances the main environmental and social benefits of the REDD+ AP; ii) coordinates the territorial

approach with national policies and objectives, including the production transformation agenda, sustainable energy policy and natural heritage governance policy; and iii) integrates a set of national initiatives with the objectives of the current proposal (see Section C.5. for more details).

Table 2: Summary of interventions

Component / Sub-component	Type of intervention	Target geographical / land-use areas	Beneficiaries	Estimated average amount per beneficiary
Component 1	Technical assistance and capacity building for PDOTs, Life Plans and forest control activities	GCF project entire intervention area (Amazonia and Northern Loja Province)	Local governments and indigenous communities	Not applicable
Sub-component 2.1	Incentives and capacity building for sustainable production through support for production kits	Converted forest-areas owned by smallholder farmers in the Amazon region, adjacent to large forest areas	Individual smallholder farmers practicing subsistence agriculture, and local production organizations	USD 450 (cost of each kit)/ha/year for three years – for agroforestry systems USD 344 (cost of each kit)/ha/year for three years – for silvo-pastoral systems Benefiting 1,500 smallholder families
Sub-component 2.2	Technical assistance and capacity building to remove barriers for sustainable production systems	Converted forest-areas owned by smallholder farmers in the Amazon region, adjacent to large forest areas	Individual smallholder farmers practicing subsistence agriculture, and local production organizations	Not applicable
Sub-component 2.3	Technical assistance and capacity building to redesign existing public credit lines with favourable financial conditions for sustainable production practices	Converted forest-areas owned by smallholder farmers in the Amazon region, adjacent to large forest areas	Individual smallholder farmers practicing subsistence agriculture, and local production organizations	Not applicable
Sub-component 2.4	Technical assistance and policy support to promote deforestation-free commodities	GCF project entire intervention area (Amazonia and Northern Loja Province)	Individual smallholder farmers practicing subsistence agriculture, and local production organizations	Not applicable
Sub-component 3.1	Incentive payments through MAE's Socio Bosque Programme project portfolio to predetermined areas and beneficiaries	Forested areas in GCF project intervention area	Indigenous communities and smallholders	USD 25-35/ha/year Benefiting up to 25000 families
Sub-component 3.2	Incentives via existing restoration projects supported by 3 Water Funds (FONAG, FORAGUA, FONAPA), to predetermined areas and beneficiaries	Water Funds' targeted watersheds in GCF project intervention area	Rural communities in the watershed areas	USD 280,000 per Water Fund per year
Sub-component 4.1	Technical assistance and capacity building to monitor REDD+ implementation nationally	National	All REDD+ stakeholders Indirectly	Not applicable
Sub-component 4.1	Technical assistance and capacity building to operationalize REDD+ Action Plan	National	REDD+ stakeholders Indirectly	Not applicable

Component 1. Investment in enabling policies to address drivers of deforestation and reduce associated emissions

42. This component will strengthen land-use planning policies to include land uses and measures identified spatially and thematically in the REDD+ AP as relevant to reducing deforestation in the project target areas. It will strengthen local government and community capacities for implementation and enforcement.

43. As the Amazon contains large areas of Indigenous Lands, the GCF project will also support the upgrading and implementation of Life Plans and ensure, through inter-institutional coordination, their incorporation into the PDOTs of the Autonomous Decentralized Governments (GADs). MAE will enter into agreements with indigenous peoples (Ips) and communities, Afro-Ecuadorian people and Montubio people to support land-use zoning and reinforce existing forest areas, local capacity building, and strengthen forest control. Actions in Indigenous Lands will be undertaken only in those Lands where the respective Indigenous Peoples have indicated willingness to participate.

44. Specific sub-components and related activities are presented below. Detailed activities and associated budget lines are presented in Annex XIIb.

Sub-component 1.1: PDOTs and Life Plans updated, taking into account climate change mitigation and adaptation dimensions, and implemented

Table 2: Summary of sub-component 1.1

Baseline Scenario	PDOTs were developed and approved in 2015 and are valid until 2019. PDOTs must be updated every year. So far, MAE has invested USD 25,000 to support the development of 6 climate change plans for 6 GADs. These plans will be included in the actualization of their PDOTs; however, only one of these GADs is in the prioritized REDD+ area.
Barriers	Information barriers: Lack of information to include climate change and deforestation considerations in the PDOTs: e.g. carbon stocks of forests and their contribution to national CC targets and to the generation of multiple benefits; alternative options for production to reduce forest loss, etc. Information recently generated through the REDD+ readiness process has not yet been disseminated widely to local planning authorities.
Specific activities supported by GCF to overcome barriers (why grants are needed)	Targeting information barriers via public framework expenditures. Capacity building for local authorities to include deforestation and climate change considerations in PDOTs in the cantons included in the area of intervention. Updating and implementing PDOTs (provincial and municipal) and Life Plans (to be presented in 2019), as well as land-use zoning at a sub-national level to identify and protect forest areas that should not be subject to agricultural expansion in the cantons included in the area of intervention.
Co-finance (leverage of public and private finance) and for what purposes	MAGAP: USD 1.91 million for ATPA to develop mechanisms for information management, tenure and land use that allow for integrated farm management plans, including map of current land use at scale of 1:100,000 for planning and production zoning plans, geo-referenced database with information from the project beneficiaries' properties, and interdisciplinary technical teams trained to accompany beneficiaries. MAE: USD 0.4 million for the Achuar Nationality, and USD 0.042 million for Coca Codo Sinclair hydroelectric facility to include variable climate change in the planning process in at least 3 GADs within two years; and to include variable climate change in the planning process of at least 1 GAD within two years.
Complementary finance under joint programming	REM: USD 0.65 million for MAE Action Plan and MAGAP to support land legalization programme to support the implementation of the REDD+ AP. FIP: USD 5 million.
Leading Entity & Support Entity for implementation	MAE SCC, MAGAP, GADS.

45. In 2019, the PDOTs will be officially reviewed by the National Secretariat for Planning and Development (SENPLADES). This institution has authority over matters of national planning and fiscal budget expenditure, and will align national and sectoral resources and programmes with the revised PDOTs, thus optimizing funds for their implementation.

46. The GCF project will update 18 PDOTs (12 municipal, 6 provincial) and 5 Life Plans[38]. The PDOTs will be updated to reflect information, measures, actions and monitoring related to climate change and reducing emissions from deforestation. Activities within the PDOTs include, for example, water supply, residues management, irrigation, production infrastructure development, and support for the regularization of land tenure. Sub-component 1.1 will also support the implementation of off-farm measures prioritized in the 18 PDOTs[39]. Finally, this sub-component will cover

[38] http://www.planificacion.gob.ec/wp-content/uploads/downloads/2012/07/Plan_Nacional_para_el_Buen_Vivir.pdf
[39] https://unfccc.int/files/land_use_and_climate_change/redd/application/pdf/2014_december_frel_submission_ecuador.pdf

skills trainings for technical staff and improved coordination across associated institutions. Following a needs assessment, ATPA-MAGAP will develop a training plan adapted to local needs.

47. Based on information provided by the Units of Planning and Coordination of the Ministries of Environment and Agriculture, as well as the Annual Budget Planning (ABP) of the local offices of MAE and MAGAP, the cost for elaborating a PDOT is typically USD 5,000-10,000 in the case of municipal PDOTs, USD 10,000-20,000 for provincial PDOTs, and USD 5,000-8,000 for the Life Plans in indigenous territories. Each PDOT is context-specific and therefore the measures and actions prioritized will vary significantly from one PDOT to the other. Activities included usually in a PDOT are related to water supply, residues management, irrigation, production infrastructure development, etc. The GCF funds will only be used to finance activities directly related to climate change and reduction of deforestation as detailed in the REDD+ AP, such as sustainable forestry management, non-timber forest production, monitoring of REDD+ M&As to be able to report against REDD+ performance indicators included in the PDOTs, as well as support for the regularization of land tenure. The average cost of implementing these PDOTs is around USD 150,000-200,000 for life plans, USD 500,000 for municipal GADs and USD 800,000-1 million for provincial GADs

Sub-component 1.2. Local capacity building for supervision of land-use planning and zoning
Table 4: Summary of sub-component 1.2

Baseline Scenario	While existing PDOTs include some environmental information, they do not include specific actions for GHG emissions reduction. MAE has invested in the publication and promotion of guidelines for GADs on how to include climate change in local planning but these are not yet applied. When PDOTs apply this guidance, oversight for the implementation of recommendations and actions related to reducing emissions from deforestation will be required, and capacity for oversight will need to be strengthened.
Barriers	Information barriers: Lack of capacity to supervise land-use planning and zoning at the local level, particularly of recommendations for reducing deforestation. This is largely due to lack of knowledge about the concept, use of PDOTs for addressing REDD+ measures and lack of practical experience in their supervision.
Activities supported by GCF to overcome barriers (why grants are needed)	– Targeting information barriers via public framework expenditures. – Capacity building for peoples, nationalities and organizations for the supervision and implementation of Life Plans in the 38 cantons included in the area of intervention.
Leading Entity & Support Entity for implementation	MAGAP and MAE.

48. Sub-component 1.2 will strengthen local capacity to successfully implement land-use zoning, which is of particular importance in areas where the production of commodities is expanding. Additionally, it will help ensure that REDD+ measures and actions result in emission reductions. Focused on non-government stakeholders such as indigenous communities, farmers and local civil society, the capacity building will be oriented towards the supervision and the implementation of the PDOTs to be elaborated under sub-component 1.1.

Sub-component 1.3. Strengthening forest control
Table 5: Summary of sub-component 1.3

Baseline scenario	MAE has invested fiscal funds in forestry control activities since 2012. However, under the baseline scenario, forestry management is characterized by the following: – A short-term vision shaped by the following factors: i) forest management processes are inconsistent with species' natural regeneration rates; ii) challenges related to property rights which weaken investment opportunities in the forest; and iii) insufficient data regarding the physical-mechanical properties of species – Outdated cycle and diameter data – Low traceability – Low dissemination of regulations
Barriers	Information barriers: Lack of capacity to implement forest control: regulation, protocols, experience in implementation, lack of knowledge of the regulations. Viability and risk barriers: Costs of strengthening forest control are greater than the benefits. REDD+ RBPs could change this, but have not yet been actualized.
Activities supported by GCF to overcome barriers (why grants are needed)	– Targeting information barriers via public framework expenditures. – Updating logging cycles as well as minimum cutting diameters by species. – Assisting the implementation of traceability processes in the cantons included in the area of intervention. – Supporting the dissemination and uptake of the Forest Traceability System, through communication campaigns in the cantons included in the area of intervention.
Co-finance (leverage of public and private finance) and for what	MAE: • USD 0.9 million for a system of traceability of forest products.

	• USD 1.4 million for local surveillance and monitoring systems strengthened to support enforcement of land-use plans and sustainable agriculture, livestock and forestry regulations in the CTEA.
Complementary finance under joint programming	REM: USD 2 million for forestry control measures and support for the governance of nationally-owned forest lands.
Leading Entity & Support Entity for implementation	MAE's Sub-secretary of Natural Patrimony (SPN)

49. Ecuador has a rigorous forest control system; however, efforts to improve traceability and enforcement are still needed. Through this sub-component, the GCF project will support the implementation of traceability processes included in the REDD+ AP, namely: a) the definition of specific regulations for traceability; b) the development of protocols for certification of origin; c) the strengthening of the Forest Administration System tools (SAF) to meet the technological and institutional requirements needed for traceability; d) the development of species identification catalogues and the enhancement of the checkpoints' effectiveness; and e) a specific monitoring mechanism for illegal timber extraction. Lessons from the implementation of this sub-component will be systematized and will contribute to the improvement of new regulations for sustainable forest management, including timber and non-timber forest products.

50. In order to achieve traceability, the project will contribute to the involvement of local communities in the control measures implemented by MAE. This will include the implementation of community monitoring of forest and wildlife, which will reduce the risk of leakage (displacement) of illegal deforestation between areas. Along with community monitoring, scientific research will be coordinated with leading academic institutions in the country to foster the generation of information on logging cycles, species, minimum cutting diameters by species and other relevant factors for forest monitoring. This information will provide feedback to improve forest control measures.

51. Co-financing for this sub-component includes USD 0.9 million from the Government, and USD 1.4 million from GEF, which is focused on strengthening local surveillance and monitoring systems to support enforcement of land-use plans and sustainable agriculture, livestock and forestry regulations in the CTEA.

52. Furthermore, USD 2 million from REM will support forestry control measures and support for the governance of nationally-owned forest lands.

1.4 Formal inter-institutional coordination structures within the framework of land-use plans, life plans and land-use zoning.

Table 6: Summary of sub-component 1.4

Baseline Scenario	No defined structure or system exists for inter-institutional coordination around land-use zoning. A number of institutions share responsibilities for forest and land management at all levels (national, provincial, cantonal, parochial), creating overlapping responsibilities and ineffective planning processes. Enhanced coordination is needed both between national institutions and GADs and among GADs.
Barriers	Information barriers: A lack of cross-sectoral knowledge of relevant policies contributes to the lack of capacity to conduct inter-institutional coordination. Budget barriers: There are no resources allocated to inter-institutional coordination within the annual investment plan of Government institutions.
Activities supported by GCF to overcome barriers (why grants are needed)	– Targeting information barriers via public framework expenditures. – Creation/strengthening of inter-sectoral, inter-institutional and multi-level coordination systems/structures for the provision of coordinated national sectoral programmes in accordance with land-use zoning. The system will ensure: 1) relevant stakeholders are aware of their roles and responsibilities and have the necessary information/capacity to fulfil their respective roles; 2) effective participation of production stakeholders, GADs, indigenous territories and sectorial ministries; and 3) fora for enhanced coordination and communication related to the implementation of the proposed activities.
Co-finance (leverage of public and private finance) and for what	MAE: USD 1.4 million: National multi-sectoral coordination and policy strengthened to support sustainable production in multiple-use landscapes by: a) facilitating the implementation of coordination mechanisms foreseen in the Constitution; b) strengthening regulations on forest conservation and land use to mainstream guidance for sustainable production of non-timber forest products (NTFPs) and deforestation-free production of palm, coffee, cocoa in high value conservation forests; and c) strengthening of national capacities for regulation enforcement.
Leading Entity & Support Entity for implementation	MAE and MAGAP.

53. The GCF project will complement the technical activities undertaken in the territories through the provision of specific support to improve inter-institutional agreements. The project will support coordination mechanisms between institutions and existing funds (ATPA, CC, Patrimony, Marca Pais, GADS, SBP, Water Funds, etc.), and with SENPLADES planning and budgeting processes. Co-financing includes USD 1.4 million from the GEF-Amazonia project, which will be focused on national multi-sectoral coordination and strengthening policy to support sustainable production.

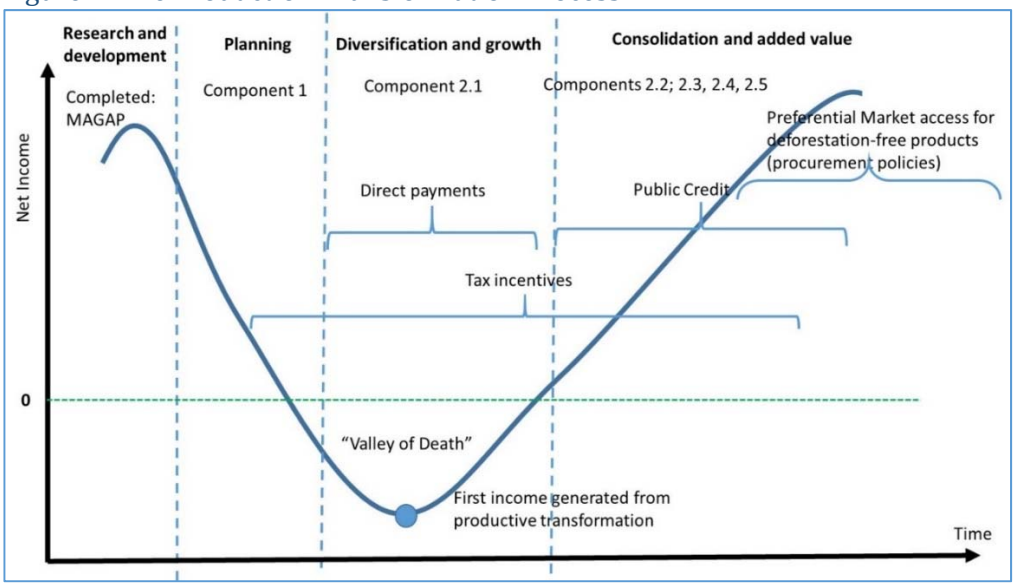
Component 2. Financial and economic incentives for the transition to sustainable production systems in non-forest areas

54. Component 2 supports the Agenda for Transforming Production in the Amazon (ATPA). In the early stages of production transformation, livestock producers need resources and advice to transition from non-environmentally sustainable production practices to more sustainable models. Sustainable production practices are expected to become economically viable only once the transition is complete and new practices are fully in effect. However, producers frequently fail during this transition due to lack of adequate investment, reduced income during the transition period and limited access to the formal financial sector. The objective of sub-component 2.1 is to provide an economic incentive to support livestock producers during the transition to more sustainable production, in order to offset the reduction of income expected during the transition from a conventional to sustainable process, thus allowing the new production system to grow and consolidate while improving farmers' living conditions. This incentive takes the form of a direct payment to the producer to compensate for the loss of income during the transition period, until the production system becomes economically viable and sustainable.

55. Grants provided to farmers are necessary despite the fact that the transition to sustainable production will eventually generate revenue. This is due to the very risk-averse nature of beneficiaries and the prevailing culture of resistance to change described in Section C.1 and documented during the consultation process of the ATPA and REDD+ AP. The risks perceived by farmers creates a gap/barrier which impedes their integration into credit/guarantee-based financial schemes. The direct grant payment to farmers will only be temporary (6 months to 1 year) to overcome this investment barrier and will serve to subsequently integrate these producers into more conventional and private sector-driven financial schemes.

56. GCF sub-components 2.2, 2.3, 2.4 and 2.5 will address the information barriers, the viability barriers for the producers, and the risk barriers related to the absence of traceability systems to support certification. These activities will address the perception that the costs of certification for the individual private producer outweigh the benefits (especially for small producers) that currently impede the development of fairer value chains for deforestation-free products. The barriers faced by smallholders to transform production practices are well described in the literature (Salcedo & Guzmán, 2014) (Mejia & Pacheco, 2013) (Pokorny, *et al*., 2012).

Figure 1: The Production Transformation Process



Source: MAGAP-ATPA

57. At the end of the production transformation process, public investments are no longer needed and producers will have permanently changed their production practices. However, in reality not all producers are at the same stage of transformation, so the implementation of the various sub-components will overlap in time.

58. Important background and feasibility studies related to Component 2 are available in the annexes:
- Cost-benefit analysis and estimation of opportunity costs: Annex IId Part 1 to Part 3.
- Economic analysis: Annex XII.
- Surface area under agricultural production: Annex XIIIe.
- Investment catalogue for strategic projects: Annex XIIIg Part 1 to Part 4.
- Credit provided by the financial system to the agricultural sector in the Amazon-2013: Annex XIIIf.
- The National Strategy for the Transformation of the Productive Matrix, presented in Annex XIIIr Part 1 and Part 2.
- Feasibility study analyzing financial and economic incentives, and their alternatives: Annex XIV, including an explanation of the transition period from conventional production practices to sustainable production, detailed process of transition, duration of this period, beneficiaries, compensation amount per beneficiary and the calculation methodology.

2.1 Provision of incentives to transition towards sustainable production

Table 7: Summary of sub-component 2.1

Baseline Scenario	Large areas (300,400 ha) will require changes in land use to achieve the REDD+ Strategy objectives. One of the core competencies of MAGAP is technical assistance, which represents a non-monetary incentive for the producer. ATPA invested USD 895,776 in technical assistance in 2015. ATPA technical assistance also includes working with producers to develop integrated management plans (IMPs). IMPs have typically focused on traditional approaches and do not fully integrate information on climate change or REDD+. However, information generated in the IMP provides a baseline on which the GCF project will identify types of incentives needed for the transition stage (the "valley of death") from a conventional system to support sustainable production systems that are aligned with the updated PDOTs and REDD+ PAMs. Baseline studies undertaken by ATPA will also be used. These include the following studies that have been used in the design of the GCF proposal: • Funding mechanisms for the implementation of incentives under the Production Transformation Agenda Amazon.

	• Tax incentives for sustainable production restructuring in the Amazon. • Study of Amazonian producers who develop livestock activities and / or maintain grazing on their farms. • Native forest species nursery associations to recover the native flora and supply sustainable agroforestry systems in degraded pastures. ATPA has identified the need for direct payment of incentives to cover the transition stage. These are USD 500 for each property managed under agroforestry systems and USD 650 for each property managed under silvo-pastoral systems. It has also designated qualified staff to supervise IMPs on the ground. The budget for 32 field technicians and 13 central office specialists in 2015 was USD 895,776. However, these baseline scenario resources are insufficient to take incentives to scale and significant barriers will remain, thereby limiting the contribution of ATPA to REDD+ targets.
Barriers	In the early stages of production transformation, small producers need resources and advice to transform their production practices. Viability barriers: Agricultural practices are expected to become economically sustainable only once the transition is complete and new practices are fully functioning, requiring a) additional investments that are not available; b) reduced income during the transition period. Risk barriers: The formal financial sector is unwilling to provide resources because of the high level of uncertainty associated with a change in production. Producers are unwilling to take on loans to engage in production transformation due to perceived risks. Information barriers: Cultural reluctance to change, lack of information on new practices and lack of trust in their feasibility reduces uptake of the practices by farmers.
Activities supported by GCF to overcome barriers (why grants are needed)	Targeting viability and risk barriers by reducing private sector costs through investment grants to reduce private investment needs.
Co-finance (leverage of public and private finance) and for what	MAGAP: USD 1.33 million to support technical staff. MAE: • USD 3.72 million for land use and management plans implemented in priority landscapes; strengthening extension services for the sustainable production and landscape approach; training programmes for communities and small, medium and large producers on best practices and standards for market access; and support to producers to access inputs, technology and other services for production. • USD 4.72 million for Coca Codo Sinclair hydroelectric facility, introducing sustainable management systems in 300 hectares of farms over the next five years; CHECC DELSITANISAGUA for silvo-pastoral systems; CHECC QUIJOS introducing sustainable management systems on 100 hectares of farms in the next five years.
Complementary finance under joint programming	REM: USD 1.85 million for the design of an implementation mechanism of the National REDD+ AP (incorporation of REDD+ criteria in ATPA).
Leading Entity & Support Entity for implementation	MAGAP

59. The primary beneficiaries will include individuals and local production organizations. Women's organizations and indigenous peoples will be encouraged to participate in the incentive plan. The incentive will be coordinated with an Integrated Farm Management Plan, ensuring compliance with land-use planning and zoning requirements, including criteria for good environmental practices. The incentive will be delivered through ATPA under an inter-institutional agreement between MAE and MAGAP. MAGAP will be the implementing entity and will verify beneficiaries' compliance with the new sustainable production system over time. The agreement will establish the conditions and criteria to be met by the beneficiaries.

60. The opportunity cost and the incentives to be paid have been assessed during the consultations with local farmers and stakeholders, considering the loss of the original producers' income from livestock compared to sustainable production systems. Data gathered for this proposal shows that USD 142/ha is needed to offset the opportunity cost of business as usual production. Nonetheless, opportunity cost calculations have some limitations which should be taken into account. First, opportunity cost may be an inappropriate valuation – for example, in the case of illegal logging and other illegal activities that result in deforestation. Second, it may be inadequate in terms of understanding what payments are needed to halt deforestation. Therefore, additional incentives (for instance, production kits for improved farming or silvo-pastoral systems and technical support) are needed in order to overcome the above-mentioned barriers. MAGAP has defined the required incentives and associated costs as part of the plans for integrated farm management

considering different incentive ranges per productive reconversion. For agroforestry, USD 450/ha per year for up to three years is required; for silvo-pastoral lands, USD 344/ha per year for up to three years is required.

61. The delivery of new incentives will be subject to compliance with the IMP, and monitored by the extension units of MAGAP. This extension system is responsible for monitoring MAGAP activities at the provincial level and is already institutionalized, which guarantees its long-term permanence.

62. A monitoring and evaluation scheme will be established between the provincial directors of MAGAP and the project coordination team in the central office. The provincial office will be responsible for developing an intervention schedule for each farm to continuously monitor activities. A baseline will be set prior to implementation and provision of incentives. This information will serve as the comparison point for monitoring the results indicated in all four components of the GCF project. The expected results of this transition, and hence the impact of the incentive, will be measured over time, depending on the type of crop (short cycle, biennials, perennials, forest). An average of three years is estimated for a transition process to be complete (see Annex XIIIu and the Feasibility Study section for more details)

63. Co-financing for this sub-component comes from fiscal resources (central Government budget for MAGAP, national public banking which provides credits for agricultural production, and local governments' budgets) and external funds (international cooperation and private national investments).

2.2 Promote the coordination and implementation of existing tax incentives that will allow for the transition to sustainable production systems

Table 8: Summary of sub-component 2.2

Baseline Scenario	Ecuador has not developed financial terms and instruments such as: i) concessional loans (senior and subordinate); ii) equity; and iii) guarantees, to deploy to specific climate change projects and programmes. Each financial institution (CFN, Ban Ecuador, CONAFIPS and the Water Funds) has its own financial terms and instruments to address agriculture and other programmes. Current financial programmes do not include specific incentives to encourage producers to move towards sustainable production. Two studies[40] have been undertaken that identify existing tax incentives that may be modified in order to support the transition to sustainable production systems but implementation is impeded in the baseline scenario by a number of barriers - see below.
Barriers	Information barriers: – Lack of capacity to implement existing tax incentives by the Internal Revenue Service. – Lack of knowledge about green taxation and impacts of taxation on deforestation by the Internal Revenue Service. – Lack of knowledge of green tax incentives on the part of beneficiaries.
Activities supported by GCF to overcome barriers (why grants needed)	Targeting information barriers via public framework expenditures: The potential beneficiaries of these environmental tax exemptions will be fully informed and provided with capacity building for accessing these incentives. The staff of the Centre for Fiscal Studies will be trained on issues of green taxation.
Leading Entity & Support Entity for implementation	MAGAP and SRI (Internal Revenue Service).

64. A framework agreement between SRI and MAE will be signed to promote the coordination and application of existing tax incentives that will allow the transition to sustainable production systems or work in favour of the environment and, more specifically, to reduce deforestation. The alignment of existing incentives with REDD+ will be assessed to reduce transaction costs and facilitate their application to change the behaviour of economic agents or for production to be changed to more sustainable systems. The potential beneficiaries of these environmental tax exemptions will be fully informed about and capacitated to access these incentives. The staff of the Centre for Fiscal Studies will be trained on issues of green taxation.

65. Existing incentives offered to producers in Ecuador related to agriculture, land use and forestry have been analysed for their alignment with the purpose of implementing sustainable production systems (under the ATPA) and they have been classified as:
    - Incentives that do not require modification but must be coordinated to support ATPA implementation.
    - Incentives that do require modification to support the goals of ATPA and are feasible to modify in the short term.

- Incentives that do require modification to support ATPA but are not feasible to modify in the short term.

66. Following this classification, a series of options to modify incentives have been identified:

- 6 incentives associated with MAGAP grant programmes to support the agricultural sector at national level could be coordinated with the implementation of ATPA to prioritize producers who have IMPs in the Amazon region. Additionally, these MAGAP incentives should seek to complement the actions being implemented by SBP.
- 5 tax exemptions or deductions offered by SRI could support the process of restructuring the agricultural sector since they can have an impact on the choice of cleaner production technologies. In this case, it is important that MAGAP and SRI undertake a joint effort to simplify processes so that small farmers can benefit from these exemptions or deductions.
- 7 incentives that can be modified in the short term are related to concessional credit lines or agricultural insurance. Through technical assistance, the project will support:
    - Changing conditions for credit approval so that the proposed use of the credit is in line with IMPs.
    - Developing criteria that allow farmers with approved IMPs to access more favourable financial conditions (term and grace period).
    - Modifying tax incentives to align with sustainable production reconversion. This, though, requires amendments to the Tax Code, approved in the National Assembly, so is unlikely to take place in the short term.

2.3 Support the redesign of public credit lines to reorient them to sustainable production practices

Table 9: Summary of sub-component 2.3.

Baseline	In Ecuador's Amazon Region, agricultural financing comes mainly from the former National Development Bank (BNF), now Ban Ecuador. In 2013, the total amount of loans was US$ 76.1 million, of which the BNF contributed 73% of total funding, followed by funding from Credit and Savings Cooperatives amounting to 17.2%, as well as private banking contributions of 8.3% and the National Financial Corporation (CFN) of 1.5%. From the total credit operations for the agricultural sector, the amount conferred to the Amazon region represented just 3.6%, which is equivalent to 0.08% of GDP (see Annex XIIIf). Current financing programmes do not include specific incentives or conditions to encourage producers/farmers to adopt sustainable practices. Rather, they consist of mechanisms such as collateral loans to producers that put their entire operation and property at risk if the producer does not generate financial returns in the immediate term.
Baseline investment	US$ 76.1 million
Barriers	Information barriers: – Lack of capacity to implement credit lines that are conducive to encouraging producers/farmers to adopt sustainable practices. – Lack of knowledge of the deforestation impact of existing credit lines.
Activities supported by GCF to overcome barriers (why grants are needed)	– Redesign of existing lines of credit for productive transformation and to introduce REDD + criteria into existing credit lines. – Capacity building to financial institutions on technical criteria for establishing new credit lines that promote sustainable production practices and monitoring. – Promotion and uptake support for the designed public credit lines. – Strengthening the capacity of MAGAP to provide technical assistance to producers in project proposal formulation to access the new credit lines.
Co-finance (leverage of public and private finance) and for what	MAE: USD 0.54 million for credit systems for deforestation-free production in high-value conservation forests, training programmes for key financial institutions (banks) to develop deforestation-free investment portfolios and improve assessment of loans for sustainable production in High-Conservation Value Forest (HVCF) or degraded areas, and support for small producers and alternative products (e.g. NTFPs and ecotourism).
Leading Entity & Support Entity for implementation	MAGAP and Ban Ecuador.

67. Existing credit lines available in the short term for conversion to sustainable agricultural practices are:

- CFN's Emergency Programme for the Agriculture and Livestock Sector credit line: the minimum applicable amount is USD 50,000 and the line covers a maximum of 80% of the total agriculture or livestock project budget. Both individuals and associations/cooperatives already accredited by MAGAP are eligible.
- CFN's agroforestry credit line: the minimum applicable amount is USD 50,000 and maximum USD 2 million. The interest rate varies from 7.5% to 8.5% over a 20-year term.
- Services, Commerce and Production Credit (ex-BNF).

- Purchase of production land (ex-BNF).
- National Guarantee Fund.
- Agricultural Insurance.

68. However, these financial support programmes do not include specific incentives to encourage producers to move towards sustainable production. This is due to capacity and information barriers of the public financial institutions to develop appropriate frameworks and financial products to support sustainable production at a reasonable cost for the financial institution. Barriers include information on sustainable agricultural technologies, lack of information on emerging international niche markets for deforestation-free commodities as well as information on the prospects created by the 'Marca Pais' initiative, lack of knowledge of Government efforts for creating an enabling environments through land-use planning and integrated farm management plans.

69. The GCF project aims to address these information barriers by providing capacity building to the financial institutions so that they can adjust financial products available to the agricultural sector so that they are more favourable for producers and encourage them to adopt sustainable production systems. GCF resources will not be used to capitalize credit lines.

70. All of the adjusted and new financial products must include criteria to improve productivity in already-deforested areas in line with land-use planning and IMPs. With regard to livestock, the transformation of production will integrate economic, ecological, technological and institutional elements to convert marginally profitable and unsustainable pastures to other agricultural uses (preferably agroforestry systems). The GCF project will support the development of criteria to improve productivity and sustainability of production processes.

71. While sub-component 2.1 will provide incentives to support smallholders during the transition to sustainable production, sub-component 2.3 will support more favourable systems to adjust public credit lines so that, once the transition is made, smallholders can access additional funding as needed to continue and expand new production processes in the future. The combined action of sub-components 2.1 and 2.3 will increase both the scale and the temporal reach of the production transformation process.

72. The capacities of financial institutions and MAGAP to monitor the use of credit for sustainable production systems will be strengthened. MAGAP technicians and financial advisors, together with the smallholder farmers, will define credit needs as part of the IMP methodology. This information is passed to the credit unit in MAGAP's central office which will, in turn, pass this information to Ban Ecuador and other credit agents to evaluate the financial feasibility of the credit.

2.4 Promote public and private procurement of deforestation-free products

Table 10: Summary of sub-component 2.4

Baseline Scenario	Most existing fiscal and financial incentives are geared towards the producer (supply-side) and very few focus on consumers of agricultural commodities (demand-side). The number of public and private purchasers in Ecuador committed to the procurement of sustainable commodities is limited, and this is mainly due to a lack of awareness and lack of procurement policies for deforestation-free commodities in the procurement processes of public and private entities.
Barriers	Viability barriers for the producer: There is currently limited market demand for deforestation-free products. Demand is necessary to induce private investment in deforestation-free commodity production. Information barriers on the demand side (both public and private): There is currently a lack of knowledge about responsible purchasing policies and certification in general and an even greater information gap when it comes to the concept of deforestation-free commodities. There is also a lack of mechanisms to efficiently connect producers and buyers.
Activities supported by GCF to overcome barriers (why grants are needed)	– Targeting viability barriers by creating private producer revenues: Increase the number of public and private purchasers in Ecuador committed to the procurement of sustainable commodities. – Targeting information barriers via public framework expenditures: Knowledge exchanges on procurement policies for deforestation-free commodities will be financed, both in the public and private sector, to promote the inclusion of responsible purchasing criteria of certified deforestation-free products in the procurement processes of an ever-growing number of public and private entities. An inter-institutional cooperation agreement will be signed between MAE and SERCOP to promote the inclusion of responsible purchasing criteria and certified deforestation-free products in all public procurement processes.

Co-finance (leverage of public and private finance) and for what	MAE: USD 0.51 million: policies and instruments for market access to deforestation-free commodities (coffee, cocoa, palm and livestock (north and south Amazon)), including traceability models and systems, tools to determine and promote the demand for products from deforestation-free commodities (sourcing guidelines, business cases), and connecting buyers of sustainable products (palm oil, coffee, beef, cocoa) with producers.
Leading Entity & Support Entity for implementation	MAE, MAGAP and SERCOP.

73. The GCF project will increase the number of public and private purchasers in Ecuador committed to the procurement of sustainable commodities. It will do so by implementing 2 different activities:

- 2.4.1 Policy advice and promotion of best practices in sustainable commodities production.
- 2.4.2 Dissemination of public policies for responsible procurement, including creation of material for awareness-raising, training and communication on policies on deforestation-free procurement.

74. Knowledge exchanges on procurement policies for deforestation-free commodities will be financed, both in the public and private sector, to promote the inclusion of responsible purchasing criteria for certified deforestation-free products in the procurement processes of an ever-growing number of public and private entities. An inter-institutional cooperation agreement will be signed between MAE and the National Public Procurement Service (SERCOP) to promote the inclusion of responsible purchasing criteria and certified deforestation-free products in all public procurement processes.

75. In order to incentivize private sector entities to undertake sustainable procurement, MAGAP promotes sustainable procurement by linking producers to markets through the organization of markets and fairs, and by supporting producers with the implementation of the Alternative Markets methodology. All of these initiatives are undertaken in close coordination with ATPA. To date, these mechanisms have been better promoted in the highlands; therefore, this proposal will strengthen these initiatives in the selected areas in the Amazon Region, thus creating opportunities for Amazon products.

76. In addition, funds will be directed to developing a new Certificate of Origin for Amazonian products coming from diversified systems of deforestation-free production. The certification will be promoted among local supermarkets to ensure commercialization of these products. A marketing campaign through mass media will take place to promote their consumption.

77. Co-financing for this sub-component comes from the GEF AMAZONIA (USD 0.51 million) project and is focused on policies and instruments for market access to deforestation-free agricultural commodities (coffee, cocoa, palm and livestock (north and south Amazon).

2.5 Certification and traceability of deforestation-free products

Table 11: Summary of sub-component 2.5

Baseline Scenario	ATPA and its related integrated management plans support farmers to transition to deforestation-free production. They are complementary to the 'Marca País' (Country Brand) and the MAE 'Punto Verde' certification schemes, but are currently uncoordinated with them. They are necessary to allow the domestic and international, public and private sectors to purchase deforestation-free products. They are particularly important for farms located close to forest areas with high potential risk of deforestation. For domestic markets, there is no national standard available to certify that the commodities produced through the Integrated Farm Management Plans are deforestation-free, or forest-friendly, and to ensure their traceability. This has to be integrated into the support provided by ATPA, and will focus initially on the following commodities: livestock, cocoa, coffee, forestry, fruits and medicines. The Ministry of Foreign Trade is already committed to working on four commodities: fine aroma cocoa, flowers, tuna and shrimp. In the GCF project, the cocoa sector will be the starting point for collaboration. For international markets, there is no standard available in Ecuador. Nor is there yet a standard for the creation and granting of the 'Marca Pais' label for palm, coffee, cacao and their by-products. Additionally, Ecuador does not yet have specific commodities platforms or private-public partnerships for promoting deforestation-free or deforestation-friendly productions.
Barriers	Information barriers: The lack of certification traceability of products impedes the procurement of deforestation-free products. Current private certification schemes cannot guarantee that supply chains are deforestation-free.

	Risk barriers: The absence of traceability systems to support certification translates into a perception that the costs of certification for the individual private producer outweigh the benefits (especially for small producers).
Activities supported by GCF to overcome barriers (why grants are needed)	Targeting information barriers through public expenditures: – For exports, the project will work on the development of national standards associated with the 'Marca País' certification for coffee, cocoa and palm oil. – For domestic demand, a national standard will be promoted for the supply of deforestation-free production according to Integrated Farm Management Plans. Additionally, private-public partnerships will be encouraged for the establishment of deforestation-free commodities platforms. – The project will also support supply and demand studies and analyses linked to agroforestry (coffee, cocoa, and milk, timber and non-timber forest products), while at the same time creating marketing strategies for each specific sectoral brand (coffee, cocoa and palm oil) within the broader Country Brand. – It will also support the construction of two Collection Centres that are needed as part of the traceability processes, price differentiation and the improvement of the production supply. Targeting viability barriers by increasing/creating/protecting private producer revenues: The project will work with the Ministry of Foreign Trade to increase exports of deforestation-free commodities within the framework of the 'Marca País' initiative, promoting the differentiation of the exportable supply of Ecuadorean commodities through appropriate country and sectoral brand marketing strategies. This marketing effort should improve foreign market access for private producers, thus creating new revenues or protect existing market share by increasing the appeal of existing products. Targeting risk barriers by reducing private sector certification costs: Moving upscale from farm-level certification to a landscape-level certification with 'Marca Pais' shifts the certification burden from the producer, thereby generating economies of scale and greatly reducing transaction costs. For the certification and traceability of deforestation-free production, the Under Secretariat of Natural Heritage (SPN) will design and pilot processes for forest-friendly certification which will create synergies with the National Forest Monitoring System.
Co-finance (leverage of public and private finance) and for what	MAGAP: USD 5.26 million for implementation of a national campaign to promote the consumption of Amazonian products and the strengthening of at least 8 supply chains (coffee, cacao, fruits, medicines, NFTB, aquaculture products, meat and milk). MAE: USD 1.62 million: decentralized institutional structures strengthened for management and surveillance of sustainable production in MULs.
Co-finance under discussion	USD 5.78 million from Ministry of Foreign Trade (MCE) for the Project Marca País Café (Coffee Country Brand)
Leading Entity & Support Entity for implementation	MAGAP, MAE and MCE.

78. This sub-component will promote certification and traceability in the supply chain to enable national and international buyers (domestic and external demand) to identify producers of deforestation-free goods, thus generating a differentiation in prices or an improvement in market access[41]. For exports, the project will work on the development of national standards associated with the 'Marca País' (Country Brand) certification for coffee, cocoa and palm oil. For domestic demand, a national standard will be promoted for the supply of deforestation-free production according to Integrated Farm Management Plans. Additionally, private-public partnerships will be encouraged for the establishment of deforestation-free commodities platforms. The project will also support supply and demand studies and analyses linked to agroforestry (coffee, cocoa, and milk, timber and non-timber forest products), while at the same time creating marketing strategies for each specific sectoral brand (coffee, cocoa and palm oil) within the broader Country Brand. It will also support the construction of two Collection Centres that are needed to contribute to the traceability processes, price differentiation and the improvement of the production supply.

79. This sub-component will support the inclusion of deforestation-free certification in ATPA support to the production of various commodities, such as: livestock, cocoa, coffee, forestry, fruits, medicines, among other Amazon products. The project will directly affect at least 57,430 hectares, in grassland and upper basin areas, particularly close to forest areas with high potential risk of deforestation.

80. Furthermore, the GCF resources will also be complemented by the GEF Amazonia project work on the implementation of certification and traceability models in deforestation-free products (i.e. the MAE's 'Punto Verde'), promoting demand for such products and spaces to connect buyers and producers of deforestation-free goods.

[41] Results from INEC (2013), *Survey on Continuous Agricultural Surface and Production*.

81. Finally, the project will work with the Ministry of Foreign Trade to increase exports of deforestation-free commodities within the framework of the 'Marca País' initiative, promoting the differentiation of the exportable supply of Ecuadorean commodities through appropriate country and sectoral brand marketing strategies. The project will develop standards for the creation and granting of the 'Marca Pais' label for each commodity sector (palm, coffee, cacao and their by-products), and support the development of marketing strategies for selected markets. These standards will be based on the criteria (including environmental) provided by the Ministry of Foreign Trade. They will be developed together with the private sector and will define the guidelines that industry will have to follow to obtain the 'Marca Pais' label. The Ministry of Foreign Trade is already committed to working on four commodities: fine aroma cocoa, flowers, tuna and shrimp. In this project, the cocoa sector will be the starting point for collaboration.

82. For the certification and traceability of deforestation-free production, the Under Secretariat of Natural Heritage (SPN) will define the criteria, standards and processes for forest-friendly certification. This will be done through internal coordination meetings, minutes of agreements and the establishment of a critical road map for compliance. Agricultural products must sign an agreement with MAGAP and Ministry of Industry and Productivity (MIPRO). For the establishment of platforms for deforestation-free goods, private-public partnerships will be fostered according to the criteria formulated by the MAE and the corresponding sectoral authorities.

83. The GCF project plans the construction or restructuring of two collection centres that will be installed in the northern Amazon and Central-South Amazon. Construction or restructuring will depend on the results of a study to be commissioned for that purpose; this study will define the exact location, crop-type, size, construction costs and other technical specifications that will be within the guidelines established by the MAGAP in its technical specifications document for collection centres. However, to give an idea of approximate size, collection centres are typically built in a 2,000 to 3,000 m^2 area, including all the utilities for its correct functioning. The implementation period and the total cost of these centres, including the study, has been estimated as USD 1,300,000 each, as shown in Annex XIIb.

84. In order to define the best possible location for the construction of the infrastructure, the GADS and the architects will take into account the local land-use plans, options to maximize the social and economic benefits of the infrastructure, options to reduce costs (such as costs of transportation to be incurred by the producers) and potential negative impacts of the construction. The architect and the GADs will complete an environmental impact assessment, as requested by national regulation (TULAS), which will ensure, for instance, that management of water and waste are compliant with the requirements of the GADS and MAE. The architect will then prepare the ToR for the construction itself, which will underline the obligations to be taken into account during construction, such as the need to use local workers and material, and to be compliant with national legislation related to labour. An entity in charge of the oversight of the construction will be hired, and will monitor the compliance with these issues as well as the technical dimension of the construction. The budget for the construction includes funds requested for the feasibility and technical studies (architectural, environmental impact assessment), the permits, the construction itself (materials, workforce), the oversight, the capacity building for the staff in charge of operating the centres and the costs of operation, and the maintenance of the centres.

85. MAGAP, through AGROCALIDAD (the entity in charge of monitoring the quality of agricultural and livestock products), will monitor the farms of beneficiaries with the IMPs to ensure that the traceability of products is verified. In the case of certifications, MAGAP will support beneficiaries to comply with all requirements of the different certifications that are linked to this proposal, such as 'Marca Pais'.

Component 3. Financial and non-financial mechanisms for restoration, conservation and connectivity

86. Restoration and conservation actions for connectivity play a central role in reducing emissions from deforestation, ensuring conservation and enhancing carbon stocks. The project will target forest areas that are currently not governed under any conservation policy but are important for enhancement of forest carbon stocks, biodiversity, water conservation and agroforestry. To address this, the project will pursue two principal lines of action: (i) strengthening (SBP) and (ii) optimizing Water Funds. These actions are complementary to Component 2 and will cover 86,000 additional hectares in the SBP (68,000 ha for conservation and 18,000 ha for restoration). The actions aimed at strengthening forest control

and technical assistance will contribute to the gradual transition towards sustainable forest management within the programme areas (1.4 million hectares).

3.1 Strengthen conservation, restoration and forest management processes driven through the Socio Bosque Programme

Table 12: Summary sub-component 3.1

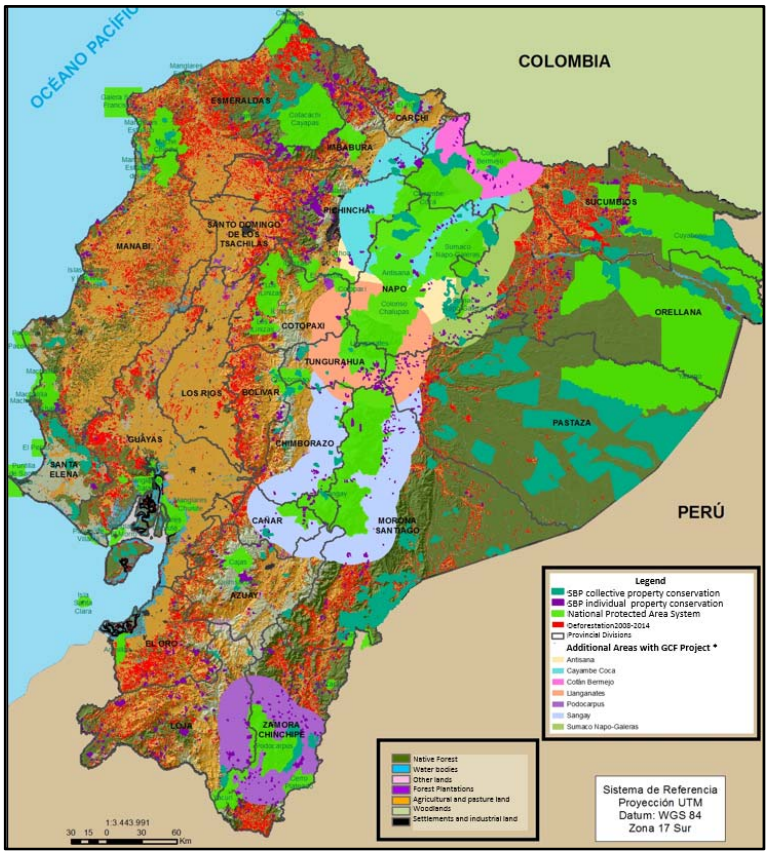
Baseline	SBP provides financial incentives to individual and community landowners who voluntarily commit to conserve native forests for a 20-year period. Since 2008, SBP has signed agreements covering an area of 1.4 million ha of tropical forests. It is expected to add approximately 200,000 ha of forest per year until 2020. Additionally, SBP includes incentives for restoration and sustainable forest management. SBP invested about USD 6.2 million in 2015 in financial incentives to individual and community landowners; however, its geographical scope is still limited and needs to be scaled-up and better coordinated with ATPA actions.
Barriers	Viability barriers for local communities: The costs of conservation for the individual private producer or community outweigh the benefits (there are no direct revenues from forest conservation). Risk barriers for the Government: Uncertainty as to whether or not REDD+ results-based payments will materialize in the future, providing the finance needed to make SBP sustainable in the medium to long run. With current resources and the projection of cuts due to the Government's fiscal constraints, the expansion of SBP to areas needed to deliver the emission reductions foreseen by the REDD+ AP will not occur, undermining the effectiveness of this financial instrument in delivering emission reductions.
Activities supported by GCF to overcome barriers (why grants are needed)	– Targeting viability barriers by increasing private producer and/or community revenues: SBP provides financial incentives to individual and community landowners who voluntarily commit to conserve native forests for a 20-year period. – Targeting risk barriers by reducing the costs of SBP for the Government. By financing the expansion of SBP, the GCF project will help expand coverage to areas that are threatened by deforestation.
Co-finance (leverage of public and private finance) and for what	MAE: – USD 5.7 million for MAE's Reforestation Programme – USD 1.1 million to implement native forest conservation projects in six provinces, including Orellana, Napo and Morona Santiago. – USD 0.87 million for incentives to strengthen systems and capacities to optimize the access to, and distribution of, SBP community incentives. – USD 4.72 million: Coca Codo Sinclair hydroelectric facility to enrich 11,952 hectares of native forest species in the contributing sub-basins in the next five years; CHECC DELSITANISAGUA for conservation and restoration of protected areas; CHECC QUIJOS to increase by 350 hectares the surface areas that are protected to contribute to the regulation of the hydrological cycle over the next three years.
Complementary finance under joint programming	REM: USD 5.54 million for long-term financing of between 30-35 existing SBP agreements with community partners (conservation); 30-35 agreement for the next three years (restoration); and support sustainable forest management through technical assistance and technology transfer (outside forest). FIP: USD 12.5 million.
Leading Entity & Support Entity for implementation	MAE's SPN.

87. SBP's main objective is to support conservation of forests through direct payments to small-scale farmers for not deforesting their lands. Over the last 20 years, SBP has supported socio-economic projects including tourism, handicrafts marketing and promotion of Amazon crops, among others. Alternative livelihoods have enabled SBP participants to keep standing forest on their lands and thus have directly contributed to the REDD+ objectives. To date, SBP has worked in the areas that have been prioritized in the national REDD+ AP, but not at sufficient scale. The purpose of sub-component 3.1 is thus to support the expansion of SBP outside of its former areas of intervention, specifically in areas that are under threat of deforestation and that have been prioritized in the REDD+ AP. This includes areas in the eastern foothills of the Andes Mountains. These forests are important to water regulation in the Amazon watershed and resilience to climate change, and provide soil/sediment stabilization and water resources for the generation of hydroelectric power, as well as maintain the proper quantity and quality of water for human consumption. In addition, the project will also prioritize National Protected Area System (SNAP) buffer zones in areas threatened with deforestation and degradation that are valuable for maintaining and enhancing carbon stocks and preserving ecosystem services related to water provision.

88. To strengthen conservation, restoration and forest management processes driven through SBP, criteria and activities between the SCC and the SPN will be defined and implemented using the information generated by the UN-

REDD Joint National Programme. In SNAP buffer zones, IMPs and Life Plans will be used to guide interventions in coordination with the National Directorate of Biodiversity. SBP will be the mechanism to reach out to beneficiaries located in prioritized areas. Both conservation and restoration of ecosystem services will be included in Life Plans and IMPs in these areas to enable the transition to sustainable production systems. Furthermore, ecosystem services will generate fundamental co-benefits, such as water regulation, food supplies, biodiversity production and soil conservation; these will drive agroforestry systems and sustainable forest management.

89. Today, SBP is keeping under conservation 1.5 million hectares of forests, moors and other vegetation, benefiting 187,634 people annually. By the end of 2015, SBP had signed 2,775 agreements, including 2.562 individual, 190 collective and 23 mangrove agreements. The GCF project, through sub-component 3.1, will expand SBP's support to farmers for conservation of critical forests prioritized in the REDD+ AP. This will be done in three main areas: a) North zone – buffer areas of the national protected areas Cofan-Bermejo, Cayambe Coca, Antisana and Zumaco- Napo Galeras. (78.000 ha approx.) b) Central zone – buffer areas within Pastaza Watershed between Llanganates and Sangay national park (30.000 ha approx.). c) South zone – buffer areas of Podocarpus national park and SB conservation areas along the provinces of Loja and Zamora (65.000 ha approx.), as described in the map below.



Map 1: Future SBP areas of intervention, to be supported by GCF

90. These activities will complement sub-component 2.1, implemented through MAGAP's ATPA, which focuses on incentivising farmers in areas adjacent to forests that have already been converted to sustainable production practices. Both ATPA and SBP are complementary and contribute to the ultimate objective of REDD+, to reduce emissions from deforestation. The GCF project will support inter-institutional coordination through the alignment of incentives.

91. In terms of sustainability, SBP has been prioritized by SENPLADES, the authority in matters of national planning and fiscal budget expenditure. As the budget for SBP is prioritized in the national budget, its sustainability is ensured. Nevertheless, SBP is also attractive for international financing given that it delivers a range of environmental and social benefits. It is anticipated that a fraction of future RBPs will be channelled to SBP, further consolidating its sustainability.

3.2 Strengthen mechanisms for integrated water resource management (IWRM) in the watersheds located within prioritized areas

Table 13: Summary of sub-component 3.2

Baseline	There are 5 operational non-commercial Water Funds, and three of them, selected for the GCF project, are located in the 6 areas prioritized by the REDD+ AP; FONAG in Quito, operating since 2000; FONAPA in Río Paute, since 2008; and FORAGUA, since 2009. The Water Funds are trust funds, established by different water users within a certain geographical area of common interest. In all the funds, a large majority of constituents are public agencies, such as municipal water utilities, state-owned hydropower entities and municipalities themselves. Contributions to the trust funds are mostly public, and a few private constituents provide smaller contributions. Steering Boards of the Funds are composed of all constituents, and take all major decisions on budgets, expenditures, priorities, hiring of technical implementation teams in a Technical Secretariat, etc. The Funds can be supported via two different and complementary mechanisms. The first, capitalization of the Funds, comes from financial contributions by the Fund's Constituents, both public and private entities. The returns on capital are invested in projects and programmes for the protection, conservation, restoration and revaluation of water resources and watersheds in their geographical areas of intervention. The second mechanism has been created to allow other institutions, such as international donors which cannot legally capitalize a fund, to directly support the implementation of projects in the watersheds without having to channel their resources via the Funds themselves. The GCF support will follow this second support modality: the GCF funds will not capitalize the Water Funds but will, instead, contribute to implementation of conservation and restoration projects undertaken by the Water Funds, and aligned with the PAMs defined in the REDD+ AP. FONAG is a trust fund that has been operating since January 2000. The equity capital of FONAG draws from financial contributions from the Fund's Constituents, which are public and private companies as well as NGOs. The returns on capital are invested in projects and programmes for the protection, conservation, restoration and revaluation of water resources and watersheds supplying the Metropolitan District of Quito. The following 5 programmes are supported by the Fund: Communications programme for the dissemination of information relating to the protection of water resources; Programme for recovery of vegetation cover through afforestation, reforestation and restoration; Environmental education programme, 'Water Guardians', contributing to the development of a new culture of water use among children and youth; Programme for water management in the upper basin of the Guayllabamba River and its direct areas of influence; and the programme for sustainable water conservation areas, which contributes to the sustainable management of the buffer zones of the Antisana Ecological Reserve (REA), the Cayambe Coca Ecological Reserve (PNCAY) and Cotopaxi National Park (PNC). FONAPA is a trust fund established in 2008, which aims at the conservation, protection, preservation and restoration of water resources and the ecological environment of the Paute River water basin through income generated by its assets, which are sourced from contributions of the constituents and through donations. The Fund´s constituents are private and public institutions, NGOs and the Municipal GADs (local governments) of the Paute and Gualaceo cantons. The Paute River Basin is one of the most important in the country, in which 18 sub-basins flow towards the main hydroelectric generation complex in Ecuador. The contributions to the trust fund are calculated according to the water use and the category of the water user. Entities and people who do not use water in their management or production processes make a voluntary contribution. The programmes funded through FONAPA are: the Programme for protection, conservation and recovery of water resources and the ecological environment; Monitoring and research programme; Sustainable economic alternatives programme; and the Programme for environmental education and training. FORAGUA is a trust fund created in 2009 by 5 Municipal Governments (GADs), the Nature and Culture International Corporation, and the National Finance Corporation. These institutions contribute to the fund which, in turn, uses its financial returns to support programmes and projects for the conservation, protection and recovery of environmental services and biodiversity of fragile ecosystems in Loja, El Oro and Zamora Chinchipe provinces. The financial contributions from the GADs come from environmental taxes. FORAGUA supports the following programmes and projects: the protection of water resources for the conservation of biodiversity - financial mechanisms to protect water basins in Ecuador; reforestation projects in areas of hydrological importance; training and capacity building programmes; a project to implement a network of meteorological stations; a hydro-meteorological monitoring project in paired basins; and restoration of degraded areas, among others.
Baseline investment	The three selected Water Funds (FONAG, FORAGUA and FONAPA) spend approximately USD 6 million per year for conservation, capacity building and restoration activities. Each Fund manages roughly between 1.5 to 3 million to implement around 5 to 6 programmes and projects as described above.
Barriers	Viability barriers for the beneficiary: The costs of conservation for the individual private producer or community outweigh the benefits. There are no direct revenues from forest conservation in key watersheds. Information barriers for the financiers: The lack of knowledge about the operations of Water Funds impedes the flow of resources from hydro producers to agricultural producers and local communities.

Activities supported by GCF to overcome barriers (why grants are needed)	– Targeting viability barriers by increasing private producer and/or community revenues: Grant funds will be made available to implement specific climate change mitigation activities. – Targeting information barriers through public expenditures to create an enabling regulatory environment for water users to channel resources towards agricultural producers and local communities, thus ensuring long-term sustainability. – Inter-institutional cooperation agreements will be signed with the municipal GADs with jurisdiction in these river basins. This will assist in the definition of technical and legal criteria for issuing environmental legal ordinances and determining economic financial contributions by water consumers. – The project will evaluate economic benefits and producer surplus, analyze willingness to pay and determine financial contributions in the water tariff for hydroelectric plants, mining and water consumers.
Co-finance (leverage of public and private finance) and for what	MAE: USD 3.2 million for sensitizing and strengthening capacities in local government and communities on climate change issues, controlling erosion processes and sediment flows, and aligning socioeconomic development of the watersheds with water resource preservation and conservation of biodiversity.
Complementary finance under joint programming	REM: USD 3 million for design of REDD+ AP implementation mechanisms and inclusion of REDD+ objectives and measures in Water Funds. FIP: USD 12.5 million.
Leading Entity & Support Entity for implementation	MAE's SPN and SENAGUA.

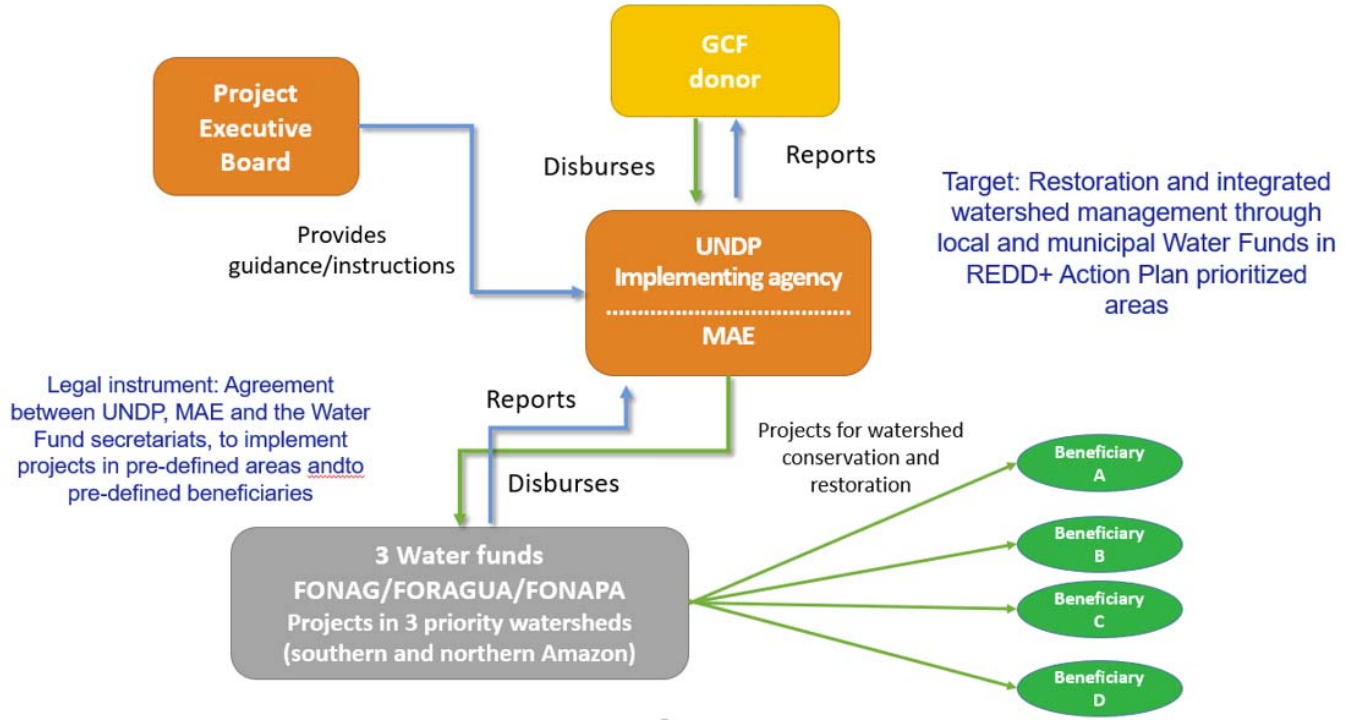
92. This sub-component involves strengthening existing financial schemes FONAG, FONAPA and FORAGUA. These mechanisms promote integrated water resource management in the upper watersheds located in the eastern foothills of the Andes, in Paute river basin and in Loja Province (see Baseline in Table 13 for details). These Funds already have a legal basis, financial structure and criteria for the development of their activities. These financial mechanisms are important as they provide resources for forest management and restoration action, thus contributing to avoided deforestation and enhancement of forest carbon stocks. The mechanism foreseen in this proposal is to strengthen three existing Funds' capacity to implement their existing portfolios in predefined areas and incorporate local authorities in the development of financial structures for development of conservation activities and management of watersheds.

93. The added value of GCF investment is to support the Funds to increase the number of projects in the prioritized REDD+ areas, through the implementation of policies and measures as defined by the REDD+ AP, and following the criteria of the Funds. The GCF project aims to inject additional funds in order to overcome information barriers and strengthen financial mechanisms through specific studies on willingness to pay of contributors in water supply billing (activity 3.2.1), a strategy for integration of related financial mechanisms (activity 3.2.3), and grants to implement specific climate change mitigation activities (activity 3.2.2).

94. Hence, Sub-component 3.2 is specifically focused on protecting forests in watersheds, which contributes directly to component 4, "Conservation and Restoration", of the REDD+ AP, which sets actions for biodiversity conservation, management of water resources and ecosystems, and restoration and reforestation. Sub-component 3.2 is then clearly focused on mitigation activities, as defined by the UNFCCC; it also contributes to adaptation needs, but these are framed as 'co-benefits'.

95. The Funds will undertake monitoring of quality and quantity of water, reforestation, ecosystems restoration, sustainable management of forests, and land-use planning through Technical Secretariats which coordinate this work with the Parish GADs and other members of the Water Funds. Specific agreements will be signed with the Water Funds or Parish GADs, which will establish the kind of activities that will be financed by GCF funding. The agreements will also establish monitoring and evaluation mechanisms for the use of the funds and the progress of the activities funded. Figure 1 illustrates the specific arrangement proposed to provide financial support to the Water Funds' conservation and restoration programmes and projects (activity 3.2.2):

Figure 1. Resource flow chart to provide financial support to the water funds' conservation and restoration programmes and projects (Activity 3.2.2)



Component 4. Implementation of REDD+ systems (safeguards and forest monitoring) and REDD+ National Fund

Table 14: Summary of sub-components 4.1 and 4.2

Baseline Scenario	The REDD AP was developed with support from the UN-REDD National Joint Programme, GIZ and others. The first iteration of the FREL was also submitted. This support created the basis for the national forest monitoring and safeguards information systems. This is a sound baseline on which to build but is not sufficient to comply with the Warsaw Framework. Under the baseline scenario, Ecuador is lacking financial resources to co-finance its REDD+ AP and its specific PAMs.
Barriers	Information barriers: – Lack of capacity to implement the Warsaw Framework for REDD+ due to a lack of institutionalization of national forest monitoring and safeguards information systems. – Lack of capacity to operationalize the financial architecture of the REDD+ AP due to a lack of knowledge of international requirements to receive results-based payments. This includes a lack of knowledge of GCF accreditation procedures for national entities.
Activities supported by GCF to overcome barriers (why grants are needed)	Targeting information barriers through public expenditures: – To create the necessary capacity and to institutionalize the national forest monitoring and safeguards information systems – To create a financial architecture to receive and channel results-based payments for REDD+ through a National Entity accredited by the GCF, thus ensuring the long-term sustainability of the REDD+ National Strategy.
Co-finance (leverage of public and private finance) and for what	Sub-component 4.1: – FAO through UN-REDD (USD 0.82 million). – MAE (USD 0.54 million) for strengthening decentralized structures for managing and monitoring sustainable production in sustainable productive landscapes, and specifically the capacity of local governments to support deforestation early warning systems, and monitoring and surveillance linked to the national forest monitoring system. Sub-component 4.2: – UNDP and UNEP through UN-REDD targeted support (USD 0.68 million). – MAE (USD 0.3 million) for strengthening systems and capacities to improve access to, and distribution of, SBP incentives.
Complementary finance under joint programming	Sub-component 4.2: REM: USD 11.15 million for design of the implementation mechanisms for REDD+ AP.

Leading Entity & Support Entity for implementation	MAE's SCC.

4.1 Support the implementation of the Warsaw Framework for REDD+ and other operational processes

96. This sub-component includes investment in the establishment of an integrated information system for the implementation of REDD+, including the NFMS, the GHG inventory system and the Safeguards Information System (SIS), as well as a REDD+ PAMs Registry. These systems exist, but have not been fully institutionalized, are only partially operational, and are not currently interconnected. The project will support the integration of these systems to ensure timely and coordinated efforts among the different institutions in order to facilitate reporting to the UNFCCC.

4.2 Operationalization of the financial architecture of REDD+ AP

97. The Ministry of Environment is currently working on the establishment of a financial mechanism for the operation and management of an Environmental National Fund. The design will include a review of sinking fund arrangements as a mechanism to distribute resources from a variety of sources to cover the costs of implementing environmental initiatives, including REDD+ AP PAMs for reducing emissions from deforestation. The Fund is expected to receive resources from different sources, including international and national investment and potentially results-based payments in the future. This financial mechanism is being designed jointly with the Ministry of Finance. A roadmap has been agreed and is being implemented to ensure concrete agreements by the final quarter of 2016. The design and set-up of the Fund is being supported and funded by the Targeted Support Initiative of the UN-REDD Programme, the Biodiversity Finance Initiative, Central Government and UNDP, among others.

98. GCF funds will be used to support the operationalization of the National Environmental Fund. The project will pilot the distribution of funds through different funding windows and different entities involved in the implementation of the REDD+ AP, such as MAGAP, the GADs, the PSB and the Water Funds. MAE will be responsible for administrative actions related to the establishment of the National Environmental Fund. Note that GCF resources will not be used to capitalize the Fund.

99. GCF funds will also support the creation of an inter-institutional and multi-level coordination platform to ensure proper coordination between management instruments with land-use planning guidelines and the different financial and non-financial incentives. This will include the following entities: MAE (SCC, SPN), MAGAP (ATPA, SSTRA), SRI, SENPLADES, ECORAE, municipal and provincial GADs, production sector enterprises, indigenous peoples and communities. MAE will lead this platform with the support of SENPLADES and the National Secretariat for Policy Management.

100. It is intended that, with support from the GCF project, a national entity will be accredited by the GCF to manage the National Fund to obtain and receive results-based payments. This a key sub-component to ensure the full transition of Ecuador from Phase 2 to Phase 3 of REDD+. Future REDD+ RBPs will in turn be used to co-finance the REDD+ AP, as an iterative process allowing progressive expansion of its coverage and sustainability. This arrangement is consistent with UNFCCC COP Decision 10/CP.19.

C.4. Background Information on Project / Programme Sponsor (Executing Entity)

101. Since the REDD+ AP is a cross-cutting national instrument, there are a number of key sponsors for the GCF project. These can be classified as: the Executing Entity (MAE); Responsible Parties (see Section C.7: MAGAP and three Water Funds (the Fund for Water Protection (FONAG), the Regional Fund for Water (FORAGUA), and the Water Fund for the Protection of the Paute River Watershed (FONAPA)); and other involved institutions (the Ministry of Foreign Trade, the Ministry of Finance, the Internal Revenue Service (SRI), and the National Secretariat for Planning and Development (SENPLADES)).

102. MAE, the executing entity, is the UNFCCC Focal Point, the national environmental authority in charge of forest-related policies and regulations, and the NDA for the GCF. It will lead the project's execution. MAE has four Under-Secretariats, two of which will be instrumental in the project and are the principal sponsors. The Under-Secretariat for

Climate Change is in charge of leading climate change adaptation and mitigation actions in Ecuador, including the promotion of technology transfer, finance and communication mechanisms – which includes the REDD+ Strategy. The Under-Secretariat of Natural Heritage houses the National Forestry Directorate and the National System of Protected Areas (SNAP), as well as the SBP. MAE has successfully implemented a wide range of programmes related to forest management and will provide leadership and support to this project's operations.

103. MAGAP, the Ministry of Livestock, Agriculture, Aquaculture and Fisheries, is responsible for the implementation of sub-component 2.1. MAGAP implements the Agenda for Transforming Production in the Amazon (ATPA), which is a key element of the proposed project.

104. The Fund for Water Protection (FONAG), the Regional Fund for Water (FORAGUA) and the Water Fund for the Protection of the Paute River Watershed (FONAPA) are responsible for the implementation of sub-component 3.2. MAE will sign an inter-institutional agreement with the Water Funds as Responsible Parties, and UNDP will sign a Standard Cooperation Agreement with each Responsible Party. At the request of MAE, and based on a detailed work plan, budget and procurement plan, UNDP will advance cash funds on a quarterly basis, which in turn will report expenses through Funding Authorization and Certification of Expenses (FACE) forms. UNDP will not contribute to capitalization of the Water Funds, nor hold any position in the Water Funds' Governance Boards. The GCF contribution is directed to the implementation of projects and programmes.

105. Other supporting institutions include: the Ministry in charge of the Coordination of Strategic Sectors (MICSE), through the National Secretariat for Planning and Development (SENPLADES), the Ministry of Foreign Trade, the Internal Revenue Service (SRI), the National Financial Corporation (CFN), BanEcuador, and the Decentralized Autonomous Governments (GADs) - regional, provincial cantonal, district and parish.

106. The details of which institutions will be in charge of monitoring certification and traceability is provided in Section C.3, sub-component 2.5. The information related to the experience of the Executing Entity in developing climate change criteria for ensuring sustainable production practices in credits from financial institutions, tax and financial incentives for agriculture is detailed in Section C.3, sub-component 2.3.

C.5. Market Overview (if applicable)

107. While the project does not have a market focus, it will foster the supply of sustainable agricultural products as well as their traceability and certification. In this context, the main market sectors related to the project are summarized below, including a description of barriers for deforestation-free products to achieve access market, the identification of the competitors for the listed products, the pricing structures of deforestation-free products, price controls, subsidies available and government involvement. More detailed information relating to the market overview is available in Annex XV.

108. According to the Third National Agricultural Census, there are 843,000 agricultural production units (APUs), of which 63.5% are small producers characterized mainly for having a production area of less than 5 hectares; 30% of the producers have between 5 and 50 hectares, and the rest are large producing areas. There is a serious issue associated with the distribution of productive land, which is reflected in the APUs, where production areas of less than 5 hectares occupy only 6% of the total national agricultural surface. Likewise, only 68% of small producers have a land title, 5% have access to credit, 95% do not receive technical assistance and only 7% belong to a formal partnership (union or association). The agricultural sector has a traditional structure with low productivity and high levels of poverty, with agricultural workers lacking adequate access to education, health services and overall quality of life.

109. Permanent crops represent 20% of the total agricultural surface, and those with highest production nationwide are sugarcane, banana and African oil palm. Temporary crops represent 13.7% of the agricultural surface, with rice, dry maize and potato the crops with the highest production at national level.

110. African palm oil: The production of African palm oil is concentrated in the provinces of Esmeraldas (49%), Santo Domingo (18%), Los Rios (13%), Pichincha (7%), Sucumbíos (5%), Guayas (3%), Orellana (2,4%), among others. Ecuador is the fifth-largest exporter of palm oil, representing 1.8% of global exports. The primary markets for Ecuadorian Palm Oil are the following: Venezuela, Colombia, the Netherlands, the Dominican Republic, Germany, USA, Spain and

Great Britain. The increase in production has been the result of the expansion of the geographical agricultural frontier instead of the result of increased productivity.

111. Cocoa: The production of cocoa is concentrated in the coastal region, the mountain range and in the Amazon. The provinces of Guayas and Los Rios have the largest production. In Ecuador, two types of cocoa varieties are produced: ´fino de aroma´ and CCN-51. The Ecuadorian cocoa is destined for production of chocolates and other refined products. Ecuador, being the fifth-largest exporter of cocoa in the world, exported a total of 198,777 tonnes of cocoa in 2014, registering USD 6 billion in worldwide exports. Furthermore, Ecuador is the top producer of cocoa ´fino de aroma´, with a share of over 63% of the world market. The objectives of Ecuador's cocoa sector in the next two years are to reach between 280,000-300,000 metric tonnes of exports, and to increase exports to emerging countries such as China. As such, the second component of the GCF project proposal offers an opportunity for the adoption of sustainable practices and the implementation of norms of certification which will increase production and protect the forests which are nearby and which surround the cocoa plantations.

112. Coffee: Two types of coffee are produced: Arabica and Robusta coffee, in the four regions of the country. Arabica coffee can adapt to a large variety of climates in differing ecosystems in all four regions, while Robusta coffee only grows in the tropical humid areas of the Coast and the Amazon, for instance in Los Rios, Santo Domingo de Los Tsachilas, Esmeraldas, Sucumbíos, Napo and Orellana. The area where coffee is produced (grano de oro) comprises 97,687 hectares. Productivity is low due to the prevalence of older coffee plantations, amongst other issues. Coffee exports in 2014 reached 67,907 tonnes. Ecuador represents 0.1% of total worldwide coffee exports. MAGAP is backing a programme to rejuvenate the coffee sector. As such, the second component of the GCF project offers a strategic opportunity for the adoption of sustainable practices and norms of certification, which can incentivize increased production without affecting the forests adjacent to the plantations.

113. The livestock sector: The Coastal and Amazon regions produce meat livestock, while in the mountain range the focus is on the production of milk. In the Amazon region, there are 751,400 cattle head. The livestock sector makes an important contribution to GDP and milk production is one of the most important areas of the agricultural sector. Within the Andean region, Ecuador is the third-largest producer of meat (12%) and the second-largest producer of milk (21%). About 25% of the milk is used for feeding calves. The availability of milk for human and industrial consumption is about 75%, of which 25% is for industrial purposes and 75% is for direct human consumption, local production of cheese and other products.

114. The area devoted to pastures constitutes about 41% of the total land area under agricultural use while the approximate area suitable for the development of pastures corresponds to 16% of the Amazon. The production of beef is concentrated on the coast and in the foothills, accounting for up to 65% to the national production. There is a high risk of expansion of the livestock industry at the expense of forest areas because of high domestic demand and because production has reached its maximum potential in the mountains and in some areas is declining because of soil erosion/degradation on badly-managed farmlands. Through the second component, the GCF project will promote the adoption of more efficient and sustainable practices in order to improve the productivity of livestock in the Amazon region and at the same time reduce the risk of expansion of the agricultural frontier.

115. Smallholders' market access barriers: Several studies have been conducted in Ecuador on barriers for smallholders to access markets under fair terms. Among the most critical barriers the literature describes are high transaction costs of intermediation, lack of technical assistance and capacity building preventing producers from conforming with market requirements, deficiency of institutional arrangements and absence of appropriate financial instruments (Hellin, y otros, 2002) (Cavatassi, y otros, 2009) (Mejia, y otros, 2013).

116. Considerations for marketing deforestation-free products: While cacao and coffee are destined for export markets, the main deforestation drivers such as cattle and palm oil expansion are mainly driven by domestic markets. However, in the future, it is foreseen that further expansion to regional or even international markets will happen. As such, the primary objective of the GCF project is to target the important smallholder production destined to national markets in order to reduce deforestation and degradation whilst improving livelihoods and sustainability. Nonetheless, in parallel the GCF project will explore deforestation-free products for export markets as a foundation to safeguard the future of forests against threats that are highly likely to materialize.

117. Hydropower: Most of Ecuador's electricity supply is from thermal power generation (50%), hydroelectricity (46%) and imported electricity from Colombia (3%). Electricity generation using non-conventional renewable resources (biomass, wind, solar) does not exceed 1% of the total supply. Until 2007, hydroelectric supply was concentrated in 4 large plants in the National Interconnected System: Paute (1.1 MW), Agoyan (156 MW), Pisayambo-Pucara (74 MW) located in the Amazonian slopes; and the central Marcel Laniado (213 MW) in Guayas province. Together, these plants accounted for 90% of the country's hydroelectric generating capacity. These have since been augmented by an additional 12 small, medium and large capacity hydroelectric plants (1-1,100 MW) and 39 small plants belonging to electricity distribution companies, municipalities and private companies. Currently, 8 hydroelectric plant projects are under construction (3,000 MW in total) and will contribute to the medium-term goal of self-sufficiency through clean production, for which the hydraulic component will exceed 90% of the renewable energy production in 2016. However, these predictions rely on steady hydrological resources, which are currently vulnerable to sedimentation and watershed deforestation. As such, the GCF project is crucial to the reliability of HEP as a leading source of clean energy in Ecuador.

C.6. Regulation, Taxation and Insurance (if applicable)

118. The National REDD+ AP has been developed as part of a national policy for climate change mitigation and is embedded in the official planning process of the Government of Ecuador through the National Secretariat of Planning and Development (SENPLADES). This ensures coherence and compliance with national laws and regulations. In addition, the process of developing the REDD+ AP included setting up a robust system of social and environmental safeguards (see Section F.3 for details) that will further determine relevant regulations and compliance needs. These, and UNDP's own Social and Environmental Safeguards, will be closely monitored during implementation.

119. Works, programmes or projects implemented in Ecuador that could cause an environmental impact are subject to an environmental impact assessment by MAE. To do so, the programme must obtain an environmental categorization, which in turn determines the type of environmental permit from the Unified Environmental Information System (SUIA). The types of permits are: a) Certificate (voluntary for minimal risk of environmental impact); b) Registration (required for low risk of environmental impact); or c) Licence (mandatory for medium or high risk of environmental impact). Each type of permit is accompanied by a set of obligations with which the recipient must comply. For the GCF project, a registration will be needed for the activities related to agriculture, and a certificate will be requested for the construction of the Collection Centres, as long as native vegetation is not impacted.

120. Currently all projects in Ecuador are subject to 14% VAT; however, UNDP is currently negotiating with the Government of Ecuador the recovery of this tax, under the Standard Basic Assistance Agreement (SBAA).

C.7. Institutional / Implementation Arrangements

121. The project will be implemented following UNDP's National Implementation Modality (NIM), according to the SBAA between UNDP and the Government of Ecuador (Annex XIIIh), the Country Programme Action Plan (CPAP, Annex XIIIi), and the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP).

122. The national executing entity - also referred to as the national "Implementing Partner" in UNDP terminology or "Executing Partner" in GCF terminology - is required to implement the project in compliance with UNDP rules and regulations, policies and procedures (including the NIM Guidelines). According to the UNDP POPP, an Implementing Partner is "the entity to which the Administrator has entrusted the implementation of UNDP assistance specified in a signed document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in such document." By signing a project document, an implementing partner enters into an agreement with UNDP to manage the project and achieve the results defined in the relevant documents. In addition, an implementing partner may enter into agreements with other organizations or entities, known as **"***Responsible Parties***"**, which may carry out project activities and produce project outputs on behalf of the Implementing Partner. Responsible Parties are accountable directly to the Implementing Partner.

123. In legal terms, project implementation will be governed by the national Government's signature of the UNDP SBAA together with a UNDP project document, which will be signed by the UNDP Country Office in Ecuador and the Implementing Partner.

124. The Implementing Partner for this project will be MAE. MAE will undertake programmatic and administrative-financial control and responsibility for implementing the project, and will be responsible for approving deliverables prior

to their reporting to the GCF by UNDP. MAE will be accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of GCF resources.

125. Responsible Parties for this project will be:

- MAGAP, the Ministry of Livestock, Agriculture, Aquaculture and Fisheries, responsible for implementation of sub-component 2.1.
- Three Water Funds – the Fund for Water Protection (FONAG), the Regional Fund for Water (FORAGUA) and the Water Fund for the Protection of the Paute River Watershed (FONAPA) – responsible for the implementation of sub-component 3.2.
- The disbursements will be performed directly from UNDP to the Responsible Parties after approval and authorization of MAE and UNDP, based on the AWP, the procurement plan, and a quarterly report that the Responsible Parties will have to present to the Project Board for revision and approval

126. UNDP shall provide the following project cycle management services:

- Providing financial and audit services to the project.
- Overseeing financial expenditures against budgets.
- Ensuring that activities including procurement and financial services are carried out in strict compliance with UNDP procedures.
- Ensuring that the reporting to GCF is undertaken in line with GCF requirements and procedures.
- Contracting the project mid-term and final evaluations and triggering additional reviews and/or evaluations as necessary and in consultation with project counterparts.

127. UNDP will provide project assurance, supporting the Project Board by carrying out objective and independent project oversight and monitoring functions. UNDP Technical Specialists in the Sustainable Development Cluster at the Regional Centre (in Panama) and the Energy and Environment Unit at the Country Office will be involved as necessary in key project meetings, consultations, events and reviews of technical and other reports.

128. **Project Board:** The Project Board is the project coordination and decision-making body. It will meet semi-annually to review project progress. The responsibility of the Board is to see that project activities lead to the required outcomes as defined in the project document. The Board will oversee project implementation, approve work plans and budgets as supplied by the National Project Manager, approve any major changes in project plans, approve major project deliverables, arbitrate any conflicts which might arise, and be responsible for the overall evaluation of the project. Any significant deviation from original plans will require the subsequent approval of the AE. The make-up and TORs of the Board will be agreed and finalized in the Project Inception Workshop, but will certainly include MAE, UNDP, MAGAP and the three participating Water Funds, as outlined above.

129. The Project Board will be responsible for making executive decisions for the project, in particular when guidance is required by the Project Manager. The Project Board will play a critical role in facilitating inter-ministerial coordination, project monitoring and evaluations by quality-assuring these processes and products, and using evaluations for performance improvement, accountability and learning. In addition, it will approve the appointment and responsibilities of the National Project Manager and any delegation of its project assurance responsibilities. Based on the approved Annual Work Plan, the Project Board will approve any essential deviations from the original plans.

130. In order to ensure UNDP's ultimate accountability for the project results, Project Board decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager. The Board will consist of the following members:

- The Executive Secretary, or the National Project Director as its representative, who will chair the Board. This role will be filled by the highest authority of MAE or his/her delegate.

- A representative of the Senior Supplier, who will provide guidance regarding the technical feasibility of the project. This role will be filled by UNDP.
- A representative of the partner project beneficiaries, who will represent the interests of those who will ultimately benefit from the project and ensure the achievement of project outputs from the perspective of project beneficiaries. This role will be filled by SENPLADES.

131. **National Project Director:** The project will be under the overall leadership of a National Project Director (NPD), who will be a representative of the Under-Secretary of Climate Change of MAE and will be responsible for orienting and advising the National Project Manager (NPM) on Government policy and priorities. The NPM will also be responsible for maintaining regular communication with relevant stakeholders to ensuring that their interests are communicated effectively to the National Project Director.

132. **National Project Manager:** A National Project Manager will run the project on behalf of the Implementing Partner, within the framework delineated by the Project Board, and in compliance with UNDP POPP by:

- Taking responsibility for the strategic management of the project.
- Coordinating and supervising the Annual Work Plans (AWPs) and Procurement Plans as well as the achievement of high-quality results within the specified limits of time and costs.
- Ensuring that activities and inputs are in line with AWPs, the logical framework of the project and also the monitoring of progress towards main goals.
- Maintaining contacts with project partners at the national, state and local level.
- Supervising technical and support team results.
- Providing monitoring, supervision and guidance to the technical teams based in the project areas.
- Acting as the signing authority of requests to UNDP for disbursements of project funds.
- Promoting involvement in, and coordination with, MAE, the Responsible Parties and UNDP.
- Ensuring, with MAE and public organizations related to the project, the achievement of commitments included in the UNDP project document (in line with the country's rules and policies).
- Coordinating and strengthening relations and project actions with national and regional institutions and other relevant stakeholders; as well as establishing strategic alliances with other cooperating agencies and international organizations.
- Acting as the focal point between MAE, UNDP, National Entities and line Ministries.
- Identifying and monitoring project risks and issues

133. **Technical Project Advisors:** Four Technical Project Advisors (TPAs), one for each technical component of the project, will support the National Project Manager with the implementation of the project, providing technical expertise, reviewing and preparing TORs, and reviewing the outputs of consultants and other sub-contractors. They will be hired based on a competitive process. The Technical Project Advisors will:

- Ensure the logistical, administrative and financial effectiveness of the project in each technical area.
- Prepare project reports, work plans, budgets and accounting records.
- Prepare drafts of TORs, technical specifications and other documents.
- Identify and hire consultants and supervise consultants and suppliers.
- Oversee the implementation of project activities in a timely and efficient manner.
- Provide substantive guidelines to organize seminars, workshops and field trips linked to project activities.

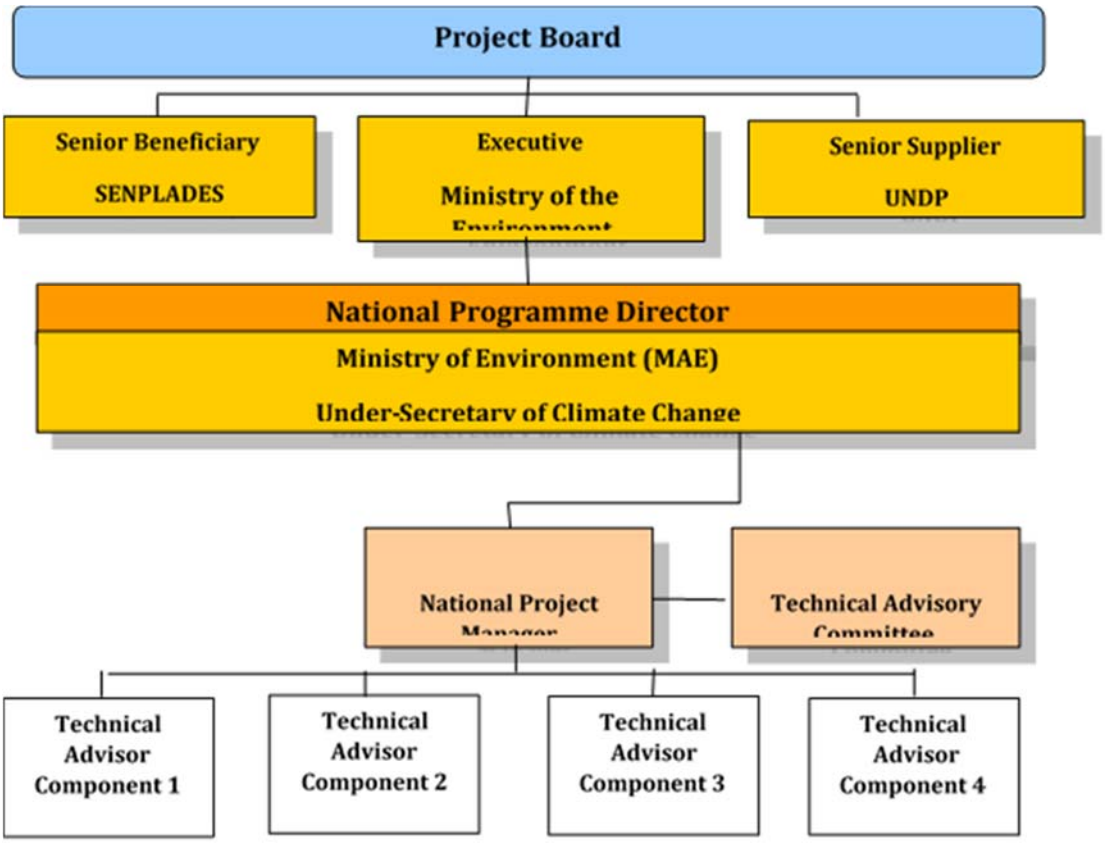
134. The TPAs will produce in a timely fashion inputs for annual work plans and budgets of their components, to be consolidated by the National Project Manager and then presented for approval by the Project Board, and annual progress reports for submission to the Board. The reports will provide details about the progress made, any shortcomings and the necessary adjustments made to achieve project outcomes.

135. **Technical Committee:** The National Project Manager will be advised by a Technical Committee composed of representatives of MAE (the National Project Director), MAGAP-ATPA, UNDP and the extended project technical team,

which will meet on a quarterly basis. The Technical Committee will also advise the NPM on ensuring coordination between the project and other related initiatives and current and emerging projects.

136. **Use of existing human capacities and recruitment of consultants**: multidisciplinary coordination teams from each ministry will develop operational plans and guidelines for implementing the project activities established by the GCF. However, extra staff will be needed for the detailed design, coordination and monitoring in the field. Existing field technicians are already fully tasked with existing projects. Furthermore, not all have the expertise required to perform specific support and studies for this project. Specialized consultants and temporary staff will be needed. This is considered a temporary measure as the GCF project is centred on priming financial measures for implementing the REDD+ strategy and, once these are developed and related capacities strengthened in the relevant institutions, they will be self-sustaining.

Figure 2. Organizational Structure



137. **Property of Equipment and Goods:** Goods and equipment purchased as part of this project will belong to the UNDP Country Office according to the provisions stated in the SBAA signed between the Government of Ecuador and UNDP on January 19, 2005 (See Annex XIIIh), and the following instruments: UNDP policy for NIM projects, financial regulations, and corporate management guidelines on equipment and goods. During the implementation phase, transfer to national beneficiaries will be undertaken in accordance with UNDP procedures and policies, subject to agreement with MAE as the Implementing Partner. Only national organizations will be considered as beneficiaries.

138. **Audit:** According to UNDP's general corporate audit regulations, internal and external audits will be carried out and these costs will be covered by the project. The audit will be performed in accordance with UNDP financial regulations and rules and applicable to audit policies on UNDP and GCF projects. The audit will be conducted by a specialized and certified audit firm. UNDP will be responsible for making audit arrangements for the project in communication with MAE.

UNDP and MAE will provide audit management responses and the National Project Manager and project support team will address audit recommendations.

139. **Learning and knowledge-sharing:** 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, analyse and share lessons-learned that might be beneficial in the design and implementation of similar future projects. There will also be a two-way flow of information between this project and other projects/programmes of a similar focus.

140. **Communications and Visibility Requirements:** The project will comply with UNDP's (see http://intra.undp.org/coa/ branding.shtml), MAE and GCF Branding Guidelines: specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other requirements, these guidelines describe when and how the UNDP and the logos of donors to UNDP projects are used. Specific guidelines on MAE logo use can be accessed at the Corporate Identity Manual. Full compliance will also be observed with the GCF's Communication and Visibility Guidelines. In order to accord proper acknowledgement to the GCF for providing funding, a GCF logo will appear on all relevant project publications, including, among others, project hardware and equipment purchased with GCF funds. Any citation on publications stemming from the project will also accord proper acknowledgment to the GCF.

141. Consistent with Article III of the SBAA, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

142. For an entity to be engaged as an implementing partner or responsible party on a UNDP project, a capacity assessment must be performed. Parties concerned with project formulation and design, particularly the UNDP office, the Government and the institution that will manage the project, must review needed capacities. They first determine which tasks apply to the project. For each applicable task, the parties define any additional measures to ensure that tasks can be performed. The measures must be documented for follow-up action. This may be done, for example, through an action plan, an annex to the project document or through minutes of a design meeting or workshop. Additionally, UNDP assures that its partners are screened against UN Sanctions and Eligibility through a UN Security Council online system that contains a database of possible violators. In addition, UNDP has access to the United Nations Global Marketplace in order to verify if any supplier has been involved in terrorism and corruption. Moreover, UNDP has a policy on Due Diligence and Partnerships with the Private Sector in which a Risk Assessment Tool is applied before any agreement is made. This tool includes the following exclusionary criteria:

- Controversial weapons or their components
- Armaments and/or weapons or their components, including military supplies
- Replica weapons
- Tobacco or tobacco products
- Violations of UN sanctions, UN ineligibility lists or UNDP vendor sanctions list
- Pornography
- Substances subject to international bans or phase-outs, and wildlife or products regulated under CITES
- Gambling (excluding lotteries with charitable objectives)
- Violation of human rights or complicity in human rights violations
- Forced or compulsory labour
- Child labour

C.8. Timetable of Project/Programme Implementation

A timetable of project implementation is provided in Annex X. The details of GCF funding disbursements have been addressed in the Term Sheet. A Disbursement Schedule is included in Annex Va.

D.1. Value Added for GCF Involvement

143. The additionality of this proposal is that it will overcome technological, risk and market barriers that currently impede farmers from adopting sustainable production practices (described in detail in Section C.3 above). Once these barriers are overcome, farmers will implement sustainable practices that are aligned with land-use plans that have taken into account REDD+ related factors. It is envisaged that these practices, supported through a range of financial mechanisms, will enable sustainable incomes for farmers. In turn, the adoption of these practices will contribute to achieving the objectives defined in the national REDD+ AP in terms of emission reductions and should ultimately lead to obtaining results-based payments (RBPs). These RBPs will supplement the available funding to support the REDD+ AP in the long-term.

144. The financial strategy for REDD+ in Ecuador is available in Annex IIf. It provides cost estimates of implementing the REDD+ AP and potential sources of funds and financial mechanisms to finance its implementation. The financial strategy concludes that, given the uncertainty regarding REDD+ RBPs, in addition to the national resources already committed to finance the REDD+ AP, Ecuador should seek to mobilize resources from the FIP (ongoing) as well as from the GCF.

145. Financing provided through the GCF to support the implementation of the REDD+ AP of Ecuador will be absolutely critical. The REDD+ AP includes the most cost-effective PAMs to be implemented at the national and local levels, in prioritized areas affected by deforestation.

146. For **Component 1**, without the support of the GCF sub-national governments would not have the capacity to implement the activities prioritized in the REDD+ AP and GCF proposal. The existing public funding allocation is provided by MAGAP funds from the fiscal budget. However, GCF funding is needed to support local governments' decentralization processes and overcome the barriers detailed in Section C.3. Competency (jurisdiction) on forest and agriculture has been transferred from the central State to sub-national governments. However, they still depend on MAGAP and MAE for technical expertise to manage these two sectors. For the REDD+ AP to be effectively implemented at the sub-national level, further integration of REDD+ measures and actions into the PDOTs is needed, as well as the funds to implement them.

147. For **Component 2**, without GCF support the private sector would not have sufficient incentive to demand and procure deforestation-free products given the high costs associated with the certification of products; and thus many producers committed to the transformation to sustainable production would have to abandon these practices due to loss of income or they would have to access informal financing with its associated risks and high financial costs, which would directly undermine the likelihood of this transition to take place. Further information is provided in Section C.3.

148. For **Component 3**, without GCF support SBP will not be able to expand to new areas within the National REDD+ Action Plan priority areas, and hence its climate change mitigation impacts, and contribution to national targets to reduce deforestation, would be diminished. Existing Water Funds would have limited capacity to develop and implement projects to restore watersheds within the National REDD+ Action Plan priority areas.

149. For **Component 4**, without GCF support Ecuador would not be able to the fully integrate its NFMS or SIS. These systems are part of the requirements of the UNFCCC and the Warsaw Framework for REDD+, and are pre-requisites for any countries willing to access REDD+ Result Based Payments from the GCF or other sources of funds.

150. In general terms, with GCF funding, 16.4% of the financial requirements of the REDD+ Action Plan will be covered (USD 250 million for the period 2016-2025). When the co-financing leveraged and the complementary finance under joint programming is included, an additional 47% will be covered. Without the GCF grant, REDD+ financing would be difficult to acquire, thus leading to slower or non-prioritized execution. By providing incremental funding, the GCF will enable solutions that can shift current win-lose situations to win-win situations, thus leveraging additional national funding for replication in the future. It will also maintain the momentum of REDD+ in the country until conditions for RBPs are in place, catalysing continued and scaled-up implementation of mitigation and reducing deforestation policies and programmes.

D.2. Exit Strategy

151. The expected long-term impact of the REDD+ AP (30 years) is to shift to a low-emission rural development pathway in Ecuador. This will require substantial public investments in the creation of public goods for which grants are required in the short term (2016-2021). A progressively diminishing level of investment will be required in the medium-term to consolidate the institutional and technological changes induced by the project. This level of investment will be maintained in the medium-term by accessing RBPs from REDD+ and channeling these resources towards the successful PAMs. In the long-term, some of the public investments will no longer be needed as markets for commodities and agricultural technology and practices will be permanently transformed. It is most likely that investment in land zoning enforcement and forest monitoring will need to be permanently supported through state budgetary resources. Additionally, the existence of a credible international mechanism to deliver RBPs could attract other sources of funding for this type of investment in the future.

152. Activities to ensure long term sustainability are embedded in the project components as described below:

- For ***Component 1***, investments in reformulating PDOTs in targeted GADs will ensure the inclusion of forest mitigation actions over time, through policies, regulations and actions financed by public funds. The GCF project will contribute directly to start-up processes and to their sustainability over time. The project will also contribute to improving coordination and alignment between PAMs implemented at the national and sub-national levels, in order to better protect the forests. This will result in a paradigm shift and will be supported after project closure by future REDD+ RBPs. It is expected to deliver capacity building among GADs staff in order to reinforce climate change, forestry and land use criteria for future updates to PDOTs and alignment between SENPLADES guidelines and REDD+ AP.

- For ***Component 2***, the GCF contribution aims to overcome financial barriers towards sustainable production by delivering direct incentives to smallholder subsistence farmers. Direct incentives will be made through ATPA, which has a clear mandate to support reconversion from conventional to sustainable production in the long term. These activities will reinforce the proposed project activities, particularly on the demand-side with traceability processes, certification and responsible procurement. The operational and maintenance costs will be covered by the UPAs with the support of additional incentives to be designed during the project to ensure its sustainability. Furthermore, support for the inclusion of environmental criteria in existing credit lines and capacity building to relevant staff will institutionalize procedures to grant future credits with favorable conditions in the long term.

- For ***Component 3***, during the GCF's intervention and beyond, the strategy will be to reduce the incentives' dependency on fiscal funds by linking SBP beneficiaries with other productive activities supported by ATPA; this strategy will ensure a paradigm shift towards sustainable production after GCF intervention. Additionally, GCF project will support SBP through consultancies to define a potential permanent allocation of financial resources that will be collected from hydro-power users as a tariff in accordance with the National Water Resource Use Law as a first step to institutionalizing SBP as a stronger instrument of conservation policy and beneficiary of tax-derived income. Furthermore, SBP expects to receive additional funds from future RBPs and international agencies such as KfW and Agence Française de Développement (AFD), among others, that assure complementary financial support to SBP in the long term.

- For ***Component 4,*** Ecuador intends to use public resources to finance the operational costs of the National Forest Monitoring System, the Safeguards Information System, MRV, capacity building and the management of measures and actions for REDD+. This will ensure the sustainability of these monitoring and information systems over time. The fund will have continuity under the general financial structure of MAE, and it will be replenished by other bilateral and multilateral funds. Other funds, such as KFW-REM, will be channeled through this financial structure. Ultimately the GCF contribution seeks to support the accreditation of a National Entity in charge of the financial mechanism in order to have access to future RBPs

153. Finally, the project management team will provide capacity building for MAE and strategic partners officials directly responsible for the management of this GCF project as well help a national institution to become a GCF Accredited Entity to receive RBPs. This will not only comply with GCF requirements regarding project management, monitoring and evaluation, but will also lay the foundation for ensuring sufficient know-how to continue with key actions post-GCF funding.

E.1. Impact Potential

Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas

E.1.1. Mitigation / adaptation impact potential

Reduced emissions from deforestation: The FREL, adjusted after UNFCCC revision, corresponds to 43,418,126 tCO_2eq/year. The objective of the REDD+ AP of Ecuador is to support the national objective of achieving zero net deforestation by 2020.

154. As per the UNFCCC Warsaw Framework for REDD+, the exact amount of emission reductions that Ecuador will achieve by implementing its REDD+ AP at the national scale, during the lifetime of the GCF project (2017-2021), will be known once the BURs with the REDD+ technical annex are submitted to the UNFCCC, in 2018, 2020 and 2022. These results will be compared with the FREL. This information will be published on the Lima REDD+ Information Hub on the REDD+ Web Platform, in accordance with UNFCCC decision 9/CP.19.

155. The UNFCCC Warsaw framework for REDD+ does not require, nor provide a methodology for, attribution of emission reductions to a specific measure or action or donor. Furthermore, attribution of national emission reductions to a single measure, a single project or a single funding source can be flawed because of the risk of displacement associated with any sub-national implementation of REDD+. Ecuador avoids this risk by implementing REDD+ at the national scale, instead of through isolated sub-national projects.

E.1.2. Key impact potential indicator

Provide specific numerical values for the indicators below.

GCF core indicators	*Expected tonnes of carbon dioxide equivalent (t CO_2 eq) to be reduced (Mitigation only)*	*Annual*	3 $MtCO_2e$
		Lifetime	15 $MtCO_2eq$ (2016 – 2020)[42]
	• *Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);* • *Number of beneficiaries relative to total population, disaggregated by gender (adaptation only)*	*Total*	60,000 direct beneficiaries of the transition to sustainable production across 300,000 ha of grasslands and other landscapes. 390,000 indirect beneficiaries[43].
		Percentage (%)	15.3%
Other relevant indicators	• Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation • Number and level of effective coordination mechanisms • Hectares of land or forests under improved and effective management that contribute to CO_2 emission reductions		

Methodology for the estimation of expected tonnes of carbon dioxide equivalent (tCO_2eq) to be reduced from deforestation

156. UNFCCC Decision 12/CP.17 defines the forest reference emission level/forest reference level (FREL/FRL) for REDD+ to be the benchmark for assessing a country's performance in implementing REDD+ activities, and should be expressed in tonnes of CO_2 equivalent per year. In line with UNFCCC decisions, emission reductions achieved by the

[42] To estimate potential ERs from the project, deforestation is projected based on the basis of Ecuador's official FREL. Gross deforestation is estimated until 2044, considering 2 scenarios: with and without the project. For each scenario, annual emissions are estimated with an average reference carbon value of 100 t/ha. It is assumed that the project will have an influence on 20% of the REDD+ AP prioritized areas. Hence, annual ERs are estimated as: 3,099,304 tCO_2eq / year, and cumulative for the period (2016-2020) as 15,211,981 tCO_2eq.

[43] Total rural population of the Amazon Region in 155,000 ha cultivated and 904,000 of grasslands.

REDD+ AP will be measured against the FREL[44] submitted by Ecuador to the UNFCCC and which has undergone the planned review process according to Decision 13/CP19 (see Section B).

157. Ecuador uses a stepwise approach for the development of its FREL in accordance with Decision 12/CP.17, paragraph 10. The stepwise approach allows Ecuador to improve the FREL by incorporating better data, methodologies and additional reservoirs / pools. The FREL includes: (a) activity data (taken from the Map of Historic Deforestation); (b) emission factors by forest-type (taken from the National Forest Inventory); and (c) carbon content by forest-type. It also includes the construction process of the FREL, including the methodologies used to calculate the emission factors, the annual averages of activity data and the FREL calculation per se.

158. The deforestation activity data used for the construction of the FREL were drawn from a historical time-series of land cover and land-use maps, developed by MAE for 1990, 2000 and 2008. The activity data were estimated following Approach 3 as described in the IPCC Good Practice Guidelines for the LULUCF Sector (IPCC, 2003). This approach takes into account geographically-explicit land use and the land-use change data for estimating activity data. Following this approach, three wall-to-wall maps were generated for the whole country using remote sensing imagery to represent categories of land use for the reference years 1990, 2000 and 2008.

159. To estimate historical emissions, Ecuador proposes to multiply the gross deforestation of each forest-type by the specific emission factors identified in each of the nine land layers. The information about the forest carbon stocks for the 9 types of natural forests were obtained from the results of the National Forest Inventory. The emission factors also assume that the biomass after deforestation is zero. In addition, 100% of the oxidation of the stored carbon in dead wood and the leaf litter is assumed at the time of conversion. These assumptions are used since the information available on the carbon content of land use after deforestation requires further investigation.

160. The stratification by forest-type, activity data and emission factors is consistent with the stratification used in the National Greenhouse Gases Inventory (GHG-I), which will be presented in the First Biennial Update Report Update (BUR) and the Third National Communication on Climate Change of Ecuador.

161. Ecuador has decided to use the average annual GHG emissions estimated for the period 2000-2008 in the context of the FREL proposed for REDD+ payments. Complete information of the FREL submitted to the UNFCCC can be downloaded at the following link: http://redd.unfccc.int/fact-sheets.html.

162. The estimation of potential emission reductions generated by the REDD+ AP is estimated as follows:

- The annual gross deforestation is calculated until 2044 for two scenarios, with and without the programme, using as inputs the reference level and estimates of deforestation of the Natural Heritage Monitoring Unit and the Secretariat for Climate Change.

- For each scenario, annual emissions are estimated, taking as a reference the average value of estimated tonnes of carbon, from the National Forestry Evaluation (see Annex IIg) (133 tC/ha):

$$Emissions\ [tCO2eq] = Def(t) * \frac{tC}{ha} * 3,6667$$

- Once deforestation and annual emissions are estimated, emission reduction are calculated, considering the reference level as a baseline for the calculation. This is expressed as:

$$ER_t = FREL - Emissions_t$$

Where: ER is the emissions reduction; and FREL the Reference Level

Emissions reduction per each Biennial Update Report (BUR) implies:

[44] http://redd.unfccc.int/files/submission_frel_ecuador.pdf

$$ER\ BUR = \sum_{t}^{n} [FREL - ER\ year_t]$$

163. The following discounts are assumed in the estimation of the emission reductions: i) uncertainty of 4%, based on established criteria from the Forest Carbon Partnership Facility (FCPF) (see Annex XIIIq) and the analysis undertaken in this regard by MAE (included in the REDD+ AP Financial Strategy Annex IIf); and, ii) in the case of reserves, a 10% discount is considered, taking into account that the actions in the REDD+ AP account for concrete measures to maintain the carbon stocks.

E.2. Paradigm Shift Potential

Degree to which the proposed activity can catalyse impact beyond a one-off project/programme investment

E.2.1. Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

164. The project will generate a paradigm shift on three levels, as indicated below:

- It will demonstrate that sustainable commodity supply chain initiatives, domestic policies and finance, and international finance for REDD+ can be integrated into a coherent package of PAMs, completely in line with the objective of a central Government Programme – the Agenda for the Transformation of Production in the Amazon, ATPA, which seeks the transition to sustainable production systems through both certification and traceability for deforestation-free products. It will provide a model for these types of engagement such that other developing countries will seek to work with the GCF to co-finance the implementation of their REDD+ National Strategies or Action Plans.

- It will create schemes of payment for environmental services at the local level, in watersheds with HEP facilities that will contribute to co-financing the REDD+ AP and the efforts of reducing deforestation, forest degradation and the related GHG emissions, as well as enhancing conservation and enhancement of carbon stocks.

- It will build confidence in UNFCCC processes by demonstrating the link between Ecuador's successful implementation of its National REDD+ AP and the early achievement of measurable and reportable results, in terms of tCO_2e, that can be eligible for REDD+ Results-Based Payments. As such, it will provide a model for moving from phase 2 towards phase 3 of REDD+[45] that can be replicated by the GCF in its engagement with other countries. These future REDD+ RBPs for initial results in one REDD+ activity (deforestation, as per the FREL submitted to the UNFCCC) will be re-invested into the REDD+ Action Plan to broaden phase 2 investments (both in terms of geography and in terms of REDD+ activities), in an iterative manner. Figure 3 below describes this paradigm shift theory of change in the context of its alignment with the UNFCCC decisions relevant to REDD+.

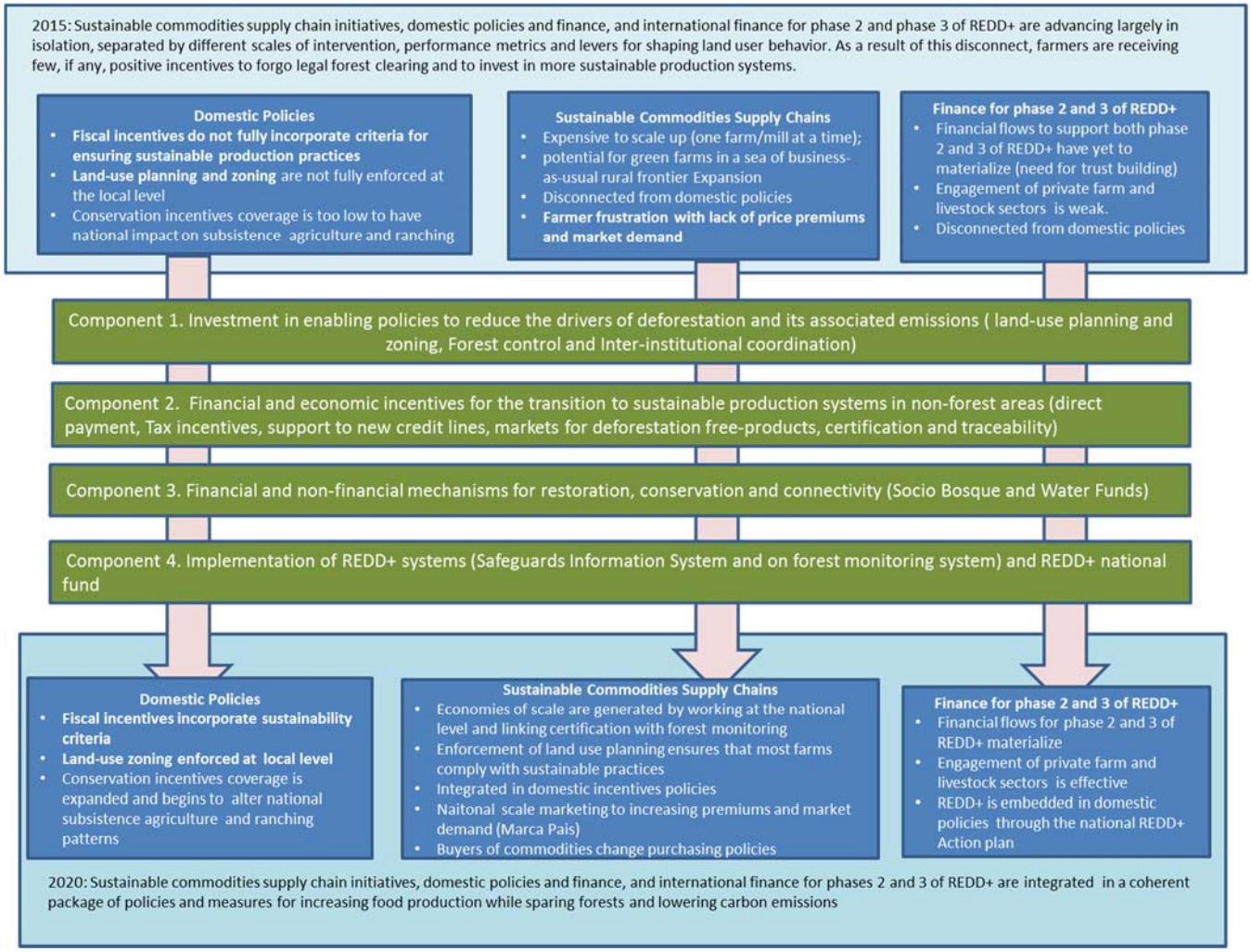
E.2.1. Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

Integrating sustainable supply chain initiatives, domestic policies and finance, and international finance for REDD+

165. The following figure shows how sustainable supply chain initiatives, domestic policies and finance, and international finance for REDD+ have been integrated in the project.

[45] Through decision 1/CP.16, Paragraph 73, the UNFCCC COP "Decides that the activities undertaken by Parties [...] should be implemented in phases, beginning with the development of national strategies or action plans, policies and measures, and capacity-building, followed by the implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer and results-based demonstration activities, and evolving into results-based actions that should be fully measured, reported and verified".

Figure 3: Theory of change: Integrated commodities sustainable supply chain initiatives, domestic policies and finance, and international finance for REDD+ phases 2 and 3.



Building confidence in the UNFCCC process

166. The GCF's PMF for REDD+ RBPs is focused on REDD+ results channelled through the UNFCCC process. This is critical in order to build confidence that UNFCCC REDD+ results can make a significant contribution to climate mitigation efforts. What needs to happen between now and 2020 is for:

- Developing countries to gain confidence that they can meet the requirements of the UNFCCC process in order to rapidly obtain and receive RBPs.
- The international community to gain confidence in the quality of results coming through the UNFCCC process through REDD+ implementation (including the Warsaw Framework for REDD+).

167. Through the GCF project, Ecuador will contribute to these two objectives; therefore, the concept also has the specific aim of assisting the GCF to meet the expected results as per its Initial Logic Model and PMF for REDD+ RBPs, and in developing an approach that could be replicated in many other countries currently engaged in REDD+ readiness.

168. Theory of change for scalability and replicability of the proposed project into other sectors, institutions and geographical areas: The National REDD+ Action Plan is already an "umbrella framework", which details all the PAMs to

be implemented at the national level to reduce deforestation, as well as in 7 prioritized sub-national areas. The REDD+ AP could potentially be scaled-up to other geographical areas in Ecuador, depending on availability of adequate and predictable support for all phases of REDD+ implementation (specifically phases 2 and 3), in order to increase its potential impact. The coastal areas of Ecuador, for instance, offer replication potential, as the introduction of sustainable agricultural practices could help to avoid desertification. A detailed theory of change is provided in the first section of the "Supplementary Responses" annex.

169. The project's replicability in other sectors such as transport and energy is conceptually difficult to assess given that these sectors do not currently offer a structured framework equivalent to REDD+ under the UNFCCC. However, it is interesting to note that MAE plans to replicate features of the REDD+ readiness process, such as the national approach, the stakeholder engagement strategy and the combination of national and local consultations, to work on these sectors of energy and transport, through the umbrella initiatives of Clean Mobility and the National Plan of Energy Efficiency.

E.2.2. Potential for knowledge and learning

170. Knowledge Management (KM) systems and tools will be developed, including an online platform that will be part of the Unified Environmental Information System (SUIA), to meet country needs and facilitate the systematization of, and accessibility to, knowledge by decision-makers, technicians, beneficiaries, donors and other relevant stakeholders.

171. Monitoring and evaluation plan and a plan for sharing lessons-learned: Monitoring and evaluation will be the responsibility of MAGAP and MAE. A baseline will be constructed in order to establish an initial point in the implementation action. MAGAP and ATPA already have socioeconomic information from the areas of intervention of the GCF project. Other specific indicators will be defined during inception of the project in order to generate evaluation milestones along the project lifetime.

172. Capacity building based on specific measures and actions is a central focus of Ecuador's REDD+ AP. Therefore, the project will adopt this approach to developing capacities needed for each proposed measure for emissions reduction from deforestation.

173. Support to the PDOTs developed by the GADs and Life Plans of Indigenous Territories involves developing local capacities to enable stakeholders to effectively integrate guidelines on climate change, reduction of deforestation and forest degradation, and the conservation and restoration of ecosystem services in their territorial management.

174. Regarding ATPA, the project will strengthen capacities on issues related to production systems that will allow for greenhouse gas emission reductions in Integrated Farm Management Plans. In addition, the project will also generate forums and options for: i) the exchange of experiences on procurement policies for sustainably-produced raw materials; and ii) awareness, training and communication in polices related to deforestation-free certified procurements.

175. With respect to SBP, the project will strengthen capacities for planning instruments in climate change, reduce deforestation and forest degradation, and maintenance and restoration of ecosystem services.

176. Finally, the project will support the sharing and exchange of experiences among different countries in the region, peer-to-peer learning, and the exchange of best practices and lessons learned from the implementation process and the different planned components.

E.2.3. Contribution to the creation of an enabling environment

177. The implementation of the National REDD+ AP will require a permanent inter-sectoral participatory framework. To facilitate this process, MAE has developed a system for the management of institutional arrangements between MAE and the entities implementing REDD+ AP measures and actions. The system will ensure that stakeholders involved in REDD+ are aware of their roles and responsibilities and have the information and knowledge necessary for proper implementation of the PAMs described in this proposal. The project will enhance inter-institutional coordination fora and options within land use, life plans and land-use zoning frameworks with the aim of creating conditions for effective: i) participation of production stakeholders, GADs, indigenous territories and sectorial ministries; and ii) implementation of the proposed activities in the various project components.

178. The project will enhance the different stakeholder participation mechanisms established by the REDD+ AP. Moreover, the action to support market policy for deforestation-free production will enable participation of public and private stakeholders linked to responsible procurement and certification, and the beneficiaries of the production transition process. The project proposes concrete actions for sustained involvement of implementing stakeholders such as SBP and GADs in conservation and restoration measures, and also of those stakeholders who are part of the production sector and hydroelectric projects. This will ensure that mitigation actions for deforestation reduction also result in indirect effects that contribute to the reduction of emissions through conservation, sustainable agriculture and hydroelectric power generation.

179. Catalyzing the impact at the national and regional levels by developing and implementing deforestation-free supply chains: Ecuador's strategy is to promote what is known as Solidarity-based Popular Economy (EPS), which intends to create markets tailored to the capacities of the smallholder farmer. The EPS seeks to provide links between rural and larger urban areas in Ecuador. Successful implementation of the EPS creates interesting niches for farmers who cannot fully adopt sophisticated technologies or achieve costly certifications. Further, when small and medium enterprises reach advanced stages of industrialization and value-added, the Productivity and Industry Ministry (MIPRO) provides support. The catalytic role played by the GCF project will therefore strengthen the enabling environment for the EPS and MIPRO SME strategies.

E.2.4. Contribution to regulatory framework and policies

See Section C.1 for a comprehensive list of policies that will be supported by the GCF project.

E.3. Sustainable Development Potential
Wider benefits and priorities

E.3.1. Environmental, social and economic co-benefits, including gender-sensitive development impact

180. The GCF project will directly contribute to create an enabling environment to sustainable development by achieving systemic change at the local, national and hopefully international levels, and by including social, economic and environmental co-benefits into the proposed paradigm shift, such as protection of forests, of biodiversity, of the rights and indigenous peoples and local communities, including their ancestral and cultural heritage sites, of watersheds, etc. All the PAMs prioritized in the REDD+ AP and co-financed by the GCF will directly contribute to limit and reduce greenhouse gas emissions from LULUCF in the context of promoting sustainable development.

181. The REDD+ AP places emphasis on the synergies between environmental services and the production and energy matrix, particularly as a strategic consideration in guiding the implementation of funds. Conservation of the Amazon rainforest and its related ecosystem services (CO_2, water, biodiversity and scenic beauty) is vital for the long-term sustainability of the transformation of energy matrix (reliable water for hydropower plants) and the production matrix (gains in livestock, agriculture, cocoa agroforestry systems and added value to products, etc.). In this regard, both conservation and restoration not only maintain and enhance carbon stocks, but also strengthen the potential of the principal environmental co-benefits, given that there is a high correlation between carbon services, biodiversity and water regulation in Ecuador[46].

182. Water regulation: In Ecuador, deforestation has a negative effect on electricity generation due to its impact on water flow regulation. It also impacts rainfall, resulting in a reduction in the amount of water available for hydropower plants and in results in less power generation[47]. Changes in temporal river loads change hydroelectric generation patterns[48], especially in 'run-of-river' plants. The project's area of influence is characterized by a high deforestation threat and the presence of important hydroelectric projects (see Section C.1 for details on conservation and restoration as well as Annex IX for the locations of these areas). Thus, the project's actions taken in these landscapes to reduce deforestation and emissions due to land-use change will also serve to maintain and generate ecosystem services related to water flow

[46]The National Forest Evaluation estimated that the areas with high carbon stocks have a direct relation with biodiversity and water regulation.
[47] Kumar, *et al*. 2011. *Hydropower- Special Report of Renewable Energy*. http://srren.ipcc-wg3.de/report/IPCC_SRREN_Ch05.pdf
[48] Hamlet *et.al* 2010. *Effects of projected climate change on energy supply and demand in the Pacific Northwest and Washington State*. http://www.hydro.washington.edu/pub/hamleaf/promotion/hamlet_CC_2010.pdf

regulation, providing a direct benefit to hydroelectric plants. In economic terms, this benefit represents an average of USD 15 million for the next 30 years (2016-2044)[49].

183. Biodiversity: Ecuador's Amazon forest is one of the world's biodiversity hotspots. The project will take action to reduce deforestation in the buffer zones of protected area (PAs) to improve the conservation of biodiversity in these areas through reducing pressures on the PAs and reducing fragmentation of forest habitat in areas critical for connectivity. These PAs represent a surface of about 272,263 ha currently at risk of deforestation. They are: i) Cayambe Coca Ecological Reserve; ii) Cofan-Bermejo Ecological Reserve; iii) Sumano-Napo-Galeras National Park; iv) Poducarpus National Park; v) Sangay National Park; vi) Llanganates National Park; vii) Colongso Chalupas Biological Reserve; viii) Antisana Ecological Reserva; ix) El Quimi Biological Reserve; x) El Condor Biological Reserve; xi) El Zarza Wildlife Reserve; and xii) Biological Reserve Cerro Plateado. Estimates of the economic impact of these biodiversity benefits are provided in Annex XII. The project will comply with UNDP's Social and Environmental Standards, including Standard 1 on Biodiversity Conservation and Sustainable Natural Resource Management.

184. Poverty: The Economically Active Population (EAP) in the Ecuadorian Amazon is composed of 361,598 people, of whom 140,717 live in urban areas and 220,881 in rural areas[50]. In the Amazon region, there are 14,116 unemployed people (8,141 in urban areas and 5,687 in rural areas) and 72% are between 15 and 34 years old. About 56% of the EAP (202,856 people) are employed in the agriculture, hunting and forestry sector: this sector is a central element of the national economy, both for its contribution to GDP and for employment generation. The population characterization of the area covered by the project is shown in Annex XIIId, indicating values to the beneficiaries of the actions proposed in this project. Please refer to Section E.4.2. for calculation of the expected poverty reduction impact of the project.

185. Social needs: The household income benefits of the project derive from the increase in labour income of the people working in agriculture in the selected territories. The adoption of best practices generates increases in productivity which allow for an immediate increase in production, thus resulting in increased labour income benefits. This will happen in the first year of the project. Benefit is only given in the first period/year, as the project will work under the assumption of indefinite use of the new technology package and, therefore, it does not represent an increase in salary for the second period of the project. A micro-simulation of labour income for individuals who are in the agricultural sector was developed by applying a linear relationship between production increase and benefits to labour income. The aggregate estimated economic benefit in the form of increased household income is USD 4.6 million.

Table 15: Economic Benefits (flows)[51]

	Baseline Per capita household income (total)	Per capita household income with change in income	Benefits (US$)	Benefits (%)
Northern Amazon	1,401,334.8	1,877,816.6	476,481.8	34.00%
Central Amazon	867,608.2	1,572,906.5	705,298.3	81.3%
Southern Amazon	3,419,585.8	6,331,511.5	2,911,925.8	85.2%
Forests and Southern Dry Valleys	3,831,290.8	4,374,828.8	543,538.0	14.2%

186. The effects of having an increased household income per capita on poverty are shown as a reduction of 8-19 percentile points (α = 0) and between 3-11 percentile points on the poverty gap (α = 1)[52]. Further information can be found in Annex XII, Economic Evaluation.

[49] See Annex XII Economic Analysis for more details on water regulation benefits and on how this $15m estimate was calculated.
[50] INEC, December 2014
[51] Source: INEC - ENEMDHUR December 2014, Author: Sebastián Burgos Dávila.
[52] This is calculated using the Foster-Greer-Thorbecke (FGT) indices, which are the most common poverty indices. α is a parameter that distinguishes between the alternative FGT indices. When α is equal to 0, the measure is the headcount ratio, a measure of the incidence of poverty. Poverty depth is measured by the poverty gap, which is obtained with α equal to 1.

Table 16: Difference between actual data and simulated poverty[53]

	Poverty	Poverty	Poverty	Poverty	Poverty	Poverty	Difference	Difference	Difference
	α = 0	α = 1	α = 2	α = 0 Simulated	α = 1 Simulated	α = 2 Simulated	α = 0	α = 1	α = 2
Northern Amazon	53.42	26	15.8	45.03	18.55	10.52	**-8.39**	**-7.45**	**-5.27**
Central Amazon	33.75	16.45	10.32	22.86	10.5	6.3	**-10.9**	**-5.95**	**-4.02**
Southern Amazon	46.67	21.91	12.89	27.64	10.07	5.05	**-19.04**	**-11.84**	**-7.84**
Forests and Southern Dry Valleys	50.87	24.23	13.92	48.7	20.61	11.1	**-2.17**	**-3.62**	**-2.82**

187. Gender: In each of the project components, participatory processes and involvement of stakeholders will be promoted, among them: civil society and indigenous people with an emphasis on equal participation of men and women, and priority groups.[54] In practice, this means: a) greater participation and involvement of women in land-use planning; b) facilitating women producer organizations' access to incentives; c) involvement of women in capacity building processes coherent with their local realities; d) promoting the active participation of women in dialogue spaces, consultation and socialization processes to empower them in decision-making; e) promoting equal participation of men and women in access to property rights, land tenure and natural resources; f) promoting an equitable distribution of the economic benefits that might result from the project between men and women. Ecuador has a favourable regulatory framework for the inclusion and equal participation of men and women. This has led to one of the highest female workforce participation rates (55%) in Latin America[55]. This provides a strong baseline to which the project will contribute through the application of these regulations in its activities, in compliance with Ecuadorean public policies and relevant international treaties. The project will comply with UNDP's Social and Environmental Standards, including Principle 2 on Gender Equality and Women's Empowerment.

188. Human Rights: The benefits relating to human rights, including the right of participation in decision making, the collective rights on ancestral lands, the right to self-selection and the right to free, prior and informed consultation, are detailed in section F.3. Environmental, Social Assessment, including Gender Considerations. The project will comply with UNDP's Social and Environmental Standards, including Principle 1 on Human Rights.

E.4. Needs of the Recipient

Vulnerability and financing needs of the beneficiary country and population

E.4.1. Vulnerability of country and beneficiary groups (Adaptation only)

Not applicable.

E.4.2. Financial, economic, social and institutional needs

189. Economic growth in Ecuador has directly reduced poverty and inequality levels and has increased the size of the middle class. Between 2006 and 2014, poverty measured by income decreased from 37.6% to 22.5%, whilst extreme poverty was reduced from 16.9% to 7.7%. However, the economy remains over-reliant on the oil sector, demonstrated very visibly by the recent sharp decline in oil prices and the appreciation of the US dollar. Reducing this dependency has formed part of the national strategies implemented by the central State. Moreover, the target population in the Amazon Region has the highest poverty and extreme poverty rates in Ecuador (47.7% and 21.8% respectively in 2014).

Economic Needs

190. REDD+ implementation through to 2025 will have an approximate cost of USD$ 250 million. With GCF funding, 16.4% of the REDD+ financial requirement will be covered, and, with complementary funding and co-finance, 63% of the total needs will be covered. The allocation of GCF resources to the REDD+ AP through the present project will trigger the start of the REDD+ AP implementation in Ecuador.

[53] *Ibid*.
[54] According to Ecuador´s Constitution, Article 35, it is understood that priority attention groups include: elderly people, girls, boys and teenagers, pregnant women, people with disabilities, detainees and people with catastrophic or high complexity illnesses. All of them will receive priority and specialized attention in public and private scopes.
[55] http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS

191. An economic evaluation[56] was performed based on the estimation of the project's economic benefits and costs. Flows and operational results are projected over a 30-year timeframe (i.e. up to 2044). This 30-year timeframe is deemed relevant for the GCF project, which seeks a significant and long-lasting change in current land-use patterns as part of low-emission development planning for the long-term. The economic operational flow results are brought to present value with a discount rate of 6%, which is the discount rate commonly applied to analyse social investment projects in Ecuador. The results of the economic evaluation with the project show that the project is economically profitable, given that the ENPV is USD 181.5 million and the EIRR is 55.3%, indicating that the project in the current phase of REDD+ in Ecuador is desirable for society. Further details can be found in the Economic Evaluation annex (Annex XII).

Social Needs: see information provided in Section E.3.

Institutional Needs

192. The GCF project will develop the capacities of GADs to develop land-use plans that include climate change-related information and define land-use zoning to optimize reduced emissions through reduced deforestation and degradation. Sectoral institutions at local and national level will have capacities strengthened through the coordination fora that will be set up and through the linking of the planning and budgetary processes with the updated PDOTs. SENPLADES' strategic involvement in the GCF project will further strengthen this capacity as it leads the planning and budgeting processes. MAGAP will also have capacities strengthened through the specialized expertise and experience gained in the upscaling of sustainable production practices, traceability systems and improved understanding of deforestation-free product markets. The project will also enable MAE to mainstream climate change strategies into the core planning of these institutions. The initial steps have been conducted by MAE in the context of a SENPLADES initiative called: "Visión Ecuador 2035", in which components of climate change were included in the agenda; however, this will be significantly strengthened through the GCF project.

E.5. Country Ownership

Beneficiary country ownership of, and capacity to implement, a funded project or programme

E.5.1. Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs

193. The project is fully aligned with Ecuador's NDC, National Communication to the UNFCCC, REDD+ Action Plan and a suite of domestic policies and strategies – see Section C.1 for details.

E.5.2. Capacity of accredited entities and executing entities to deliver

194. UNDP is one of the world's largest brokers of climate change grants for developing countries, with a current portfolio of US$ 1.34 billion in mitigation and adaptation grant-financed projects in over 140 countries, supported by co-financing of $6.7 billion. The project builds on UNDP's experience and extensive worldwide forest programme which, through a range of partnerships, currently amounts to approximately US $750 million. UNDP's expertise ranges from strengthening forest governance (i.e. the ability of public administrations to sustainably manage forest resources and strengthen accountability for decision-making); developing financial systems and mechanisms to underpin governance (e.g. financial incentives; PES schemes; financial planning and delivery systems, national REDD+ related PAMs); working with the private sector and governments to promote deforestation-free commodity supply chains; ensuring the inclusion of indigenous peoples and civil society in sector decision-making; strengthening the livelihoods of forest-dependent communities, to ensure they are more sustainable and inclusive; and strengthening the management of protected areas, including indigenous and community conservation areas.

195. The project also builds on UNDP's experience as a partner of the UN-REDD Programme and as a delivery partner of the Forest Carbon Partnership Facility (FCPF). Within the UN-REDD Programme, UNDP supports, in particular, indigenous peoples and forest-dependent communities, and has been instrumental in supporting countries to develop national safeguard systems and grievance mechanisms, and developing and applying the principle of Free, Prior, Informed Consent (FPIC) to REDD+. UNDP plays a leading role in supporting countries to develop national REDD+ strategies and action plans that are inclusive and which respond to national development priorities as well as the requirements of the UNFCCC process.

[56] See Annex XII for more details of the economic evaluation including considerations such as the timeframe, discount rate and others.

196. UNDP already has experience in supporting a number of countries to transition into Phase II REDD+ implementation. For example, in Viet Nam, UNDP is the lead facilitating agency for the Norway-funded $30 million Phase 2 UN-REDD Programme. In Indonesia, UNDP provided the platform for the implementation of the $30 million first phase of Norway's $1 billion bilateral REDD+ agreement. In the Democratic Republic of Congo (DRC), UNDP has led the establishment of the National REDD+ Fund, including the development of its investment framework. UNDP is now advising a number of other countries on the establishment of national entities to receive REDD+ RBPs, including Peru, Ecuador, Nepal and Cambodia. UNDP has a team of 35 REDD+ experts supporting more than 40 countries, in regional teams in Panama, Nairobi and Bangkok, backstopped by global technical advisors in New York and Geneva. The team has excellent working relations with key REDD+ donors, such as Norway's International Climate and Forests Initiative team, and is recognized as providing high-quality, trusted technical advice to many of the most rapidly advancing REDD+ countries in the world.

197. The project complements the existing UNDP portfolio in Ecuador and has a direct bearing on the 2015-2018 United Nations Development Assistance Framework[57] (UNDAF) objective of environmental sustainability, resilience and risk management: Outcome 4: "By 2018, support has been provided to strengthening institutional and citizen capacities to promote the rights of nature, create conditions for sustainable, low-emission development, and improve the resilience and risk management facing the impacts".

198. The UNDP Ecuador Country Office was established in 1965. The Environment and Energy Cluster employs three staff, two UN Volunteers, and two contract service holders, and manages a USD 34 million portfolio. UNDP has excellent high-level and operational-level relations with Government counterparts and assisted the Government in developing the NCCS and National Climate Change Plan, as well as the UNFCCC National Communications, the NAP and various climate change mitigation projects elaborated with the support of UNDP. In addition, the project will receive specialized support from Regional Technical Advisors in the UNDP Regional Service Centre in Panama and UNDP Headquarters in New York.

Capacity of MAE as executing entity

199. The Ministry of Environment of Ecuador (MAE) is the national environment authority in charge of designing environmental policies and coordinating strategies, projects and projects for the conservation of ecosystems and the sustainable use of natural resources. It proposes and defines the rules to ensure adequate environmental quality, with development based on conservation and an appropriate use of biodiversity and resources that belong to the country. MAE houses the UNFCCC Focal Point and the GCF NDA.

200. In 2009, Ecuador established the Under-Secretariat of Climate Change under the MAE National Authority for REDD+, which is in charge of leading mitigation and adaptation actions in the country. Its roles and responsibilities include: 1) to lead and coordinate the Policies, Strategies and Regulations concerning climate change; and 2) to coordinate State policy on climate change adaptation and mitigation.

201. MAE is managing a USD 63 million portfolio with an execution rate of 72% through to September 2015 (See Annex XIIIc). The GCF project will build on MAE's experience in sustainable forest management and sustainable land use programmes that currently amount to USD 49 million. MAE's experience includes the development of the REDD+ AP; the development of the FREL endorsed by the UNFCCC; strengthening of the protected areas system in prioritized zones with the corresponding participation of regional and local stakeholders in charge of biodiversity conservation; reduction of land degradation and increasing climate change adaptation capacity and GHG emissions reduction; and governance of issues related to deforestation and the use of land in the Amazon region.

202. In addition to its national portfolio, MAE is currently executing a number of international projects related to the GCF project that collectively amount to USD $257 million.

E.5.3. Engagement with NDAs, civil society organizations and other relevant stakeholders

[57] http://www.un.org.ec/wp-content/uploads/2015/02/MARCO-DE-COOPERACION-NACIONES-UNIDAS-p6.pdf

203. In order to promote and ensure the full and effective participation and support of stakeholders during the REDD+ readiness process and later on during the implementation of the REDD+ AP, the Government, through the REDD+ National Authority, have been implementing a series of complementary actions since 2012.

204. Guidelines on free, prior and informed consent in the context of REDD have been elaborated through a participative process, with guidance from the Office of the United Nations High Commissioner for Human Rights (OHCHR) and the UN-REDD National Programme in Ecuador (see Annex XIIIp).The consultation guidelines will be applied when needed, and before implementing REDD+ measures and actions in all or part of the territories, lands and resources of indigenous peoples, nationalities and communities; Afro-Ecuadoran peoples; and Montubio people and communes, or when their territories, lands and resources are affected or threatened by the implementation of those actions.

205. The National REDD+ AP is the result of extensive consultations that started in 2012 when MAE created a REDD+ Working Group in recognition of the importance of the participation of key national and local stakeholders. Led by MAE, the REDD+ Working Group is composed of one representative from academia; two from the private sector; two from national NGOs; one organisation representing women; one representing young people; and, finally, three organisations representing indigenous groups. Additionally, five working groups involving officials and experts were formed for specific topics and provide advice to the REDD+ Working Group. The degree of participation was high and the REDD+ Work Table provided input, advice and suggestions which set the technical, legal and political basis for the National REDD+ AP.

206. Training and consultations on REDD+ were carried out in priority areas to ensure that a variety of stakeholders were aware of the objectives of the National REDD+ AP and could contribute to its design and future implementation. A total of 2,878 people were trained, of whom 976 were women. Many more were consulted in over 40 workshops carried out all around the country. The consultations led to the development of the priority PAMs that will be implemented under the GCF project, as well as their spatial prioritisation (see maps in Annex IX). Participants included public officials (Regional Autonomous Governments, provincial AME and MAGAP officials) and civil society (national and international NGOs, universities, and community organisations), as well as representatives of indigenous peoples (Kichwa, Shuar, Achuar, Saparas, SHIWIAR, Cofan, Siona, etc.). A detailed summary of all consultations carried out in the process of developing the National Action Plan is provided in Annex XIIIa. Additionally, a meeting of the REDD+ working group was convened on July 6, 2015 to validate that the GCF project is indeed aligned with the priorities outlined in the REDD+ AP and for which the extensive consultations have taken place. The minute of this meeting are annexed to the funding proposal.

207. The GCF project will be implemented under UNDP's National Implementation Modality (NIM), which is explicitly designed to ensure domestic stakeholders and systems are used to strengthen national ownership, accountability and capacity development. The project will comply with UNDP's Social and Environmental Standards, including requirements related to stakeholder engagement and free, prior, and informed consent; as well as Standard 6 on Indigenous Peoples.

E.6. Efficiency and Effectiveness

Economic and, if appropriate, financial soundness of the project/programme

E.6.1. Cost-effectiveness and efficiency

208. The project promotes cooperation and complementarity with public sector projects that are being implemented or are under negotiation, thus creating integration. Also, the project will promote public policies that allow the private sector to adopt procurement policies for deforestation-free and environmentally responsible products, thus creating access to markets and price differentiation.

209. The project design and budget builds on more than six years of preparation for REDD+ and sustainable forest management. This provided official and validated information and a comprehensive set of studies that facilitated the quantification of the measures and actions in this proposal. These studies include, among others, the assessment of the drivers and agents of deforestation; the forest reference level from deforestation; studies on multiple environmental and social benefits; opportunity costs of land-use change; and the costing of REDD+ implementation. These have allowed Ecuador to design a REDD+ AP with concrete and costed measures and actions that are ready for implementation.

210. UNDP, as the GCF accredited agency, will ensure transparency and the proper use of the allocated resources, according to the approved document, by using multi-annual and annual planning tools defined under the project

governance structure. In addition, Ecuador has the legal and institutional framework to ensure accountability and transparency in the management of funds, based on results, subject to planning and complementarity with the mobilized co-financing for this initiative, generating savings, optimizing resources and creating synergies for a sustainable forest management.

E.6.2. Co-financing, leveraging and mobilized long-term investments (mitigation only)

211. With the USD 41.17 million investment from the GCF, USD 41.83 million will be leveraged from a range of institutions, including the National Government. This corresponds to a 1:1 ratio in resource leverage.

212. While not directly leveraged by GCF funding, complementary financing sources under joint programming are being mobilized from the KFW-REM, FIP and the Ministry of Foreign Trade, and currently stand at USD 74.76 million.

213. The project will also enable further leverage of investment in the long term. In terms of fiscal resources, the NCCS, and its associated REDD+ AP, is being executed by MAE, financed by tax resources from the State's General Budget. Moreover, as part of REDD+ implementation the possibility of creating an entity that will take over REDD+ management at a technical and operational level is currently being explored. Finally, to ensure closure of the financing gap, Ecuador will maintain an active role in international fora that will allow the country to access climate financing on appropriate terms for the country and on a competitive basis compared with other available financing.

E.6.3. Financial viability

214. Economic and financial rate of return, with and without the GCF support: please refer to Annex XIIb. Taking into account the high level of uncertainty related to REDD+ results-based payments (price, volumes of emissions reduction, availability of RBP funds, conditions of access, etc.), potential RBPs as revenues are not considered, and thus a financial evaluation is not applicable.

E.6.4. Application of best practices

215. Expansion of agriculture and ranching is the main driver of deforestation in Ecuador. If farmers' livelihoods are improved through productivity, if quality increases on existing farmland, and if barriers are created to avoid expansion of the agricultural frontier (land zoning, social control, traceability, etc.), then farmers will have much less incentive to clear new land. The project will support a number of agricultural practices through various means (incentives, agricultural extension services, support to associations, and access to markets). In all cases, the project will ensure that best practices are applied. Best practices for cacao production, cattle ranching, recuperation of grasslands, silvo-pastoral and agricultural systems are summarized below:

- **Cacao produced using modern techniques integrated within the traditional 'chacra' system.** *Chacra* (the local word for a smallholder farm system) combines a number of crops as well as non-timber forest products (NTFPs). It a resilient and diversified production system, but productivity is low and often fails to provide smallholders with adequate income to lift them out of poverty. The best practice is to integrate cacao into the *chacra* system, which will increase productivity to produce double or even more, and will provide better prospects than monoculture because cacao can be complemented by other crops. The introduction of timber shade trees can also benefit the *chacra*, growing into a significant asset over a lifetime and bringing considerable revenue from the sale of timber in the long-term.

- **Improved traditional cattle ranching practices.** Livestock production is usually very inefficient, both in the case of large and small producers. Many farmers have only one cattle head per hectare, and cattle typically compact lands and overgraze, significantly reducing grassland productivity (impeding the regeneration of fresh grass). The best practice that will be supported by the project is to divide the participating farms into many (20, 30 or more) small lots and circulate the cattle daily, as well as to improve the quality of grass with improved varieties and fertilization. In this way, cattle will not overgraze and compact land, and will gain weight more rapidly and produce better quality milk. Ranchers can sustain up to 4-5 head of cattle per hectare with this system.

- **Silvo-pastoral systems.** The proposed best practice is to transform unproductive cattle producers into much more productive timber producers, where cattle revenues provide farmers with a constant cash-flow while the trees grow. Trees Provide shade to the cattle, reduce heat stress, maintain soil moisture and allow grass to grow faster in some instances. In summary, silvo-pasture systems provide the opportunity to simultaneously reduce encroachment by raising efficiency on existing farms, and also to reforest production landscapes.

- **Agroforestry systems**: The proposed best practice is for tomate de árbol, granadilla, bananas, plantain, citrus, mango, avocado, coffee, cocoa and palm production to be made more sustainable by diversification through the use of native shade tree species. The shade trees can provide fertilization in the case of leguminous tree species, such as guabo (*Inga edulis*)[58].

- **Recuperation of grassland**. Man-made grasslands can be turned into productive silvicultural or agricultural land for timber, palm oil, coffee or cocoa plantations. As grassland will often be compacted, the best practice is to use tractors to loosen the soil structure before planting crops or trees.

E.6.5. Key efficiency and effectiveness indicators

GCF core indicators	Estimated cost per t CO_2 eq, defined as total investment cost / expected lifetime emission reductions (mitigation only)	
	(a) Total programme financing	US$ 84,007,202
	(b) Requested GCF amount	US$ 41,172,739
	(c) Expected lifetime emission reductions over time	15.2 $MtCO_2eq$
	(d) Estimated cost per tCO_2eq (d = a / c)	US$ **5.53 / tCO_2eq**[59]
	(e) Estimated GCF cost per tCO_2eq removed (e = b / c)	US$ **2.71 / tCO_2eq**
	Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (mitigation only)	
	The project is expected to leverage USD US$ 43m in a five-year period, which will allow the initial implementation of the REDD+ National Action Plan in certain areas of the country (disaggregation of co-financing is provided at the beginning of the funding proposal). Besides, the Government of Ecuador is in an advanced stage of negotiations with the REDD Early Movers Programme of Germany and Norway as well as the Forest Investment Programme and the Ministry of Foreign Trade, which bring the total volume of finance to be leveraged by the proposed project to USD 158.77 m.	
Other relevant indicators (e.g. estimated cost per co-benefit generated as a result of the project/programme)		The project has an ENPV of USD 181.5 million; an EIRR of 55.3%; and a cost/benefit ratio of 5.

[59] Studies undertaken in Ecuador indicate that the estimated cost per tCO_2 can vary significantly depending upon the national development scenario (i.e. basically the financial and economic capacity of the Government and of the economic stakeholders to implement their respective policies and plans), the level of ambition of the country to reduce its emission from deforestation at the national level, the opportunity costs which are affected by external factors, and the transaction and implementation costs.

F.1. Economic and Financial Analysis

216. The financial analysis for all components can be reviewed in Annex XIIb, tab EVAL FINANC.

217. Justification for a grant: see information already provided under Section B.1

218. The project has identified four economic benefits that have been quantified for the economic evaluation:

- Greenhouse gas emission reductions (direct benefit). The value of emission reductions from deforestation is estimated based on potential future revenues associated with REDD+ results-based payments, valued at a conservative international prices of USD 5 per tCO_2 eq.
- Water regulation (co-benefit). The main effects of the project are a change in the amount of precipitation in general and locally, as well as changes to the temporal patterns of the flows and reduced sedimentation. These have numerous positive impacts on hydro-electrical production capacity which have been estimated.
- Biodiversity (co-benefit). The project will greatly contribute to habitat conservation, which is key for biodiversity. The value of nature tourism benefits flowing to the project areas was used as a proxy for the value of these biodiversity benefits. The geographical area included in the calculation are the areas of project intervention in buffer zones around protected areas that are at risk of deforestation (17,200 ha).
- Poverty reduction (co-benefit). This is mainly achieved through increases in agricultural productivity and its impact on household income per capita (see Section E.4.2).

219. The economic evaluation is positive; results show that the project is economically profitable, since the ENPV is USD 181.5 million, the EIRR is 55.3% and the cost/benefit ratio is of 5. See Annex XII for details.

220. For sensitivity modelling, variations in the total costs and the total economic benefits have been combined inversely: i.e. where economic benefits are increased by 5%, total economic costs are reduced by the same proportion, and this exercise is performed with percentage variations up to 25%. This facilitates comparison of best and worst case scenarios. In all scenarios, the economic results of the project are positive.

Table 17: Economic evaluation sensitivity analysis

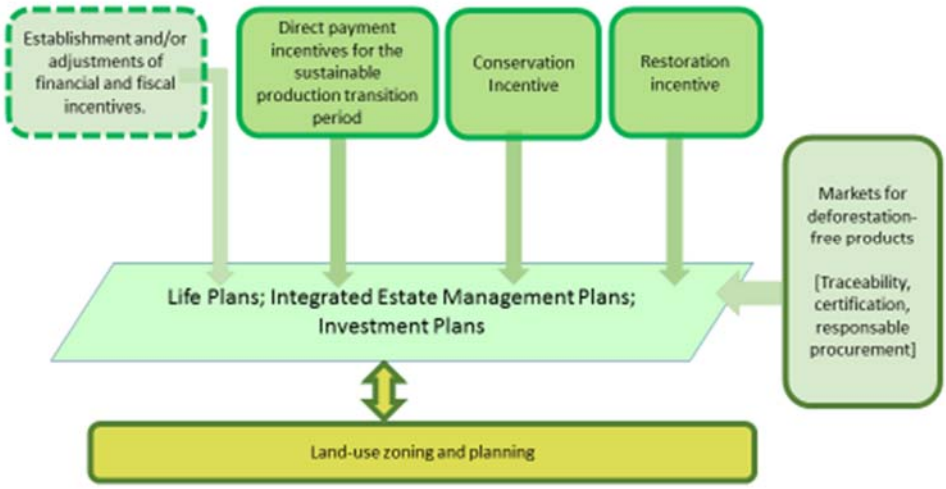
SENSITIVITY	ENPV	EIRR	B/C
-25% benefits +25%Total cost	114,200,416	30.8%	3.08
-20% benefits +20%Total cost	127,665,517	35.0%	3.42
-15% benefits +15%Total cost	141,130,618	39.4%	3.80
-10% benefits +10%Total cost	154,595,719	44.3%	4.20
- 5% benefits + 5% Total cost	168,060,820	49.6%	4.65
- 0% benefits + 0% Total cost	181,525,921	55.3%	5.14
+ 5% benefits - 5% Total cost	194,991,022	61.4%	5.68
+10% benefits -10% Total cost	208,456,123	67.9%	6.28
+15% benefits -15% Total cost	221,921,224	75.0%	6.95
+20% benefits -20% Total cost	235,386,325	82.6%	7.70
+25% benefits -25% Total cost	248,851,426	90.8%	8.56

F.2. Technical Evaluation

221. The REDD+ Action Plan was developed using a landscape approach that seeks to provide tools for allocating and managing land to achieve social, economic, and environmental objectives in areas where agriculture and other productive land uses compete with environmental goals[60]. The Plan prioritizes areas of intervention and PAMs according to the following criteria: i) potential to address the drivers and agents of deforestation and barriers to regeneration; ii) potential environmental and social benefits; iii) alignment with development guidelines (PDOTs, Life Plans, national policies and programmes); and iv) potential to fill conservation gaps.

222. A detailed analysis of deforestation dynamics carried out during the REDD+ readiness phase identified 14 distinct geographical areas which displayed similar (homogeneous) processes of deforestation. Seven of these areas were prioritized for intervention based on the above-mentioned criteria. For each of these areas, specific PAMs have been prioritized to respond to these dynamics. In all cases, the following PAMs were deemed relevant: i) zoning and land-use planning; ii) strengthening forest control (enforcement of forest laws); iii) transforming production; and iv) harmonization of intra- and inter-sectoral policies at different levels (national and sub-national).

Figure 5: Integration of incentives in project implementation



F.3. Environmental, Social Assessment, including Gender Considerations

223. The project will implement priority PAMs identified in the REDD+ AP. Social and Environmental Safeguards were developed for the REDD+ AP in accordance with UNFCCC standards and aligned with national and international legislation as per the Cancun Agreement, Paragraph 2 of Annex I, Decision 1/CP.16. These safeguards were considered in designing this GCF proposal and will be applied during implementation. They are detailed in Annex IIb. All project activities are in line with national environmental regulations relevant to protected areas and natural resource management. In addition, UNDP's Social and Environmental Standards will be applied throughout the project cycle. A draft Social and Environmental Screening Procedure is presented in Annex VI; this it will be revised and will include an associated Environmental and Social Management Framework (ESMF) for the project.

224. In line with UNFCCC decisions[61], Ecuador has a Safeguard Information System (SIS) for REDD+ to manage information on how safeguards are addressed and respected, according to the country's needs and capacities. Reporting

[60] For more details on the landscape approach see: Sayer J.A. *et al* (2013), *Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses.* Proceedings of the National Academy of Sciences (PNAS) available at: http://www.cifor.org/nc/online-library/browse/view-publication/publication/4136.html

[61] Countries interested in implementing REDD+ should prepare a system for providing information on how the safeguards are being addressed and respected, depending on their respective national circumstances and capacities. This system, together with the submission of a summary of the most recent information on how the safeguards have been addressed and respected, are the items needed for accessing results-based payments for REDD+ activities. Guidance on how to submit the safeguard information is given in Decisions 2/CP.17 and 12/CP.19.

on the SIS's addressing of safeguards is based on implementation and monitoring of PAMs by the REDD+ M&A Management System and the tools that will be fostered by it for meeting REDD+ objectives. Likewise, the SIS will be linked to other key stakeholders and institutions for safeguard reporting by the time of the GCF project.

225. See Section E.5.3 for details of the extensive stakeholder engagement and safeguards that underlie the GCF project. See Section G.1 for a risk assessment, including environmental, social and gender risks.

226. The REDD+ AP and the GCF project include important gender considerations. These are described in Section 3.1 and include a series of actions to increase women's participation, strengthen capacities and promote the effective participation of women and youth in production transformation. The GCF project will strengthen the Ministry of the Environment's support for the implementation of these considerations and advance gender equality and the empowerment of women in Ecuador.

227. Ecuador has signed several international instruments justifying the relevance of incorporating the gender approach into the REDD+ Action Plan (REDD+ AP). It has also incorporated the principle of equality and non-discrimination set forth in these instruments in its internal regulations. One of the most relevant of these is Principle 20 of the Rio Declaration on Environment and Development (1992), which recognizes that women play an essential role in the management of the environment and development, internalized in Ecuadorean law through the Environmental Management Law (1998)[62].

F.4. Financial Management and Procurement

228. The financial management and procurement of this project will be guided by UNDP financial rules and regulations, available here: https://info.undp.org/global/documents/frm/Financial-Rules-and-Regulations_E.pdf. Further guidance is outlined in the financial resources management section of the UNDP Programme and Operations Policies and Procedures available at https://info.undp.org/global/popp/frm/Pages/introduction.aspx. UNDP has comprehensive procurement policies in place as outlined in the 'Contracts and Procurement' section of UNDP's Programme and Operations Policies and Procedures (POPP). The policies outline formal procurement standards and guidelines across each phase of the procurement process, and they apply to all procurements in UNDP. See here: https://info.undp.org/global/popp/cap/Pages/Introduction.aspx.

229. The project procurement plan is provided in Annex Vc.

230. The project will be implemented following the National Implementation Modality (NIM) following NIM guidelines available here: https://info.undp.org/global/documents/_layouts/WopiFrame.aspx?sourcedoc=/global/documents/frm/National%20Implementation%20by%20the%20Government%20of%20UNDP%20Projects.docx&action=default&DefaultItemOpen=1

- Under NIM, UNDP advances cash funds on a quarterly basis to the implementing partner (executing entity) for the implementation of agreed and approved project activities, in accordance with UNDP standard policies and the NIM Guidelines. The implementing partner reports back expenditure via a financial report on quarterly basis to UNDP. Scheduled audits are performed during the project cycle as per UNDP assurance/audit plans, on the basis of the implementing partner's risk rating and UNDP's guidelines. A scheduled audit is used to determine whether the funds transferred to the implementing partner were used for the appropriate purpose and in accordance with the work plan. A scheduled audit can consist of a financial audit or an internal control audit.

- UNDP provides a variety of assurance activities which will comprise of (but not be limited to): (1) *Periodic on-site reviews (spot checks)* of the IP's financial records of cash transfers. These may be performed by qualified UNDP staff or third party service providers; (2) *Programmatic monitoring* of activities supported by cash transfers, which provides evidence regarding the state of project implementation and use of the GCF resources; and (3) *Scheduled and special audits (financial or internal control)* of the IP's financial records and financial management systems of internal controls related to the project. All details are available here: https://info.undp.org/global/popp/frm/Pages/Harmonized-Approach-to-Cash-Transfers.aspx

[62] http://www.quitoambiente.gob.ec/index.php?option=com_docman&task=doc_download&gid=230&Itemid=59&lang=es

- UNDP prepares and reports financial statements in full accordance with the International Public Sector Accounting Standards (IPSAS). Full compliance with IPSAS was achieved effective January 2012. IPSAS was mandated by General Assembly Resolution 60/283 and is considered best practice in accounting for public sector and not-for-profit organizations.

- The National Implementing Partner will have contractual obligations to ensure compliance with UNDP's financial regulations and rules, including procurement policies. Procurements performed by the Government implementing partner will follow Government procurement rules provided they are assessed as not being inconsistent with UNDP procurement rules. Oversight will be performed by UNDP.

231. UNDP will ascertain the national capacities of the implementing partner by undertaking an evaluation of capacity following the Framework for Cash Transfers to Implementing Partners (part of the Harmonized Approach to Cash Transfers - HACT). All details are available here: https://undg.org/wp-content/uploads/2015/02/2014-UNDG-HACT-Framework-English-FINAL.pdf

232. A Disbursement Schedule tied to specific disbursement periods and project milestones is included in Annex Va; see also Annex XIIb, tab SCHEDULE.

G.1. Risk Assessment Summary

233. Given that the project has an explicit focus on forest conservation through best-practice landscape management, the risk of adversely affecting conservation values is limited. However, because of the work with communities and indigenous peoples in areas of critical habitats and given the external factors prevalent in the Amazon, the overall project risk has been rated as **Moderate** and measures have been designed to ensure risks are kept to a minimum.

234. The design of the project builds on the comprehensive safeguards determined for the National REDD+ AP that comply with Warsaw guidance. Furthermore, a commitment to active and effective participation by local stakeholders and indigenous communities through effective multi-level landscape governance will limit the potential for human rights abuses and negative impacts on marginalized communities. The Government of Ecuador and UNDP have a history of collaboration in the areas of conservation and sustainable development, and the project is firmly in line with constitutional and national development objectives that mitigate the risks identified, establishing a strong platform for cooperation and limited risk. Financial and operational risks have also been identified and specific mitigation measures incorporated into the design accordingly. The following describes the risk factors and mitigation measures detailed in Annex VI.

G.2. Risk Factors and Mitigation Measures

Please describe financial, technical and operational, social and environmental and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures.

Selected Risk Factor 1

Description	Risk category	Level of impact	Probability of risk occurring
The project will be developed in an area where there is a high proportion of indigenous populations with important cultural heritage and also poor rural farmers and communities. It aims to bring together these stakeholders with differing levels of resources and power through a multi-level governance framework for land use planning and management and also the development of financial mechanisms. The project could lead to adverse impacts on enjoyment of the human rights of the affected population and particularly of marginalized groups because duty-bearers might not have the capacity to meet their obligations in the project or because rights-holders might not have the capacity to claim their rights.	Social and environmental	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			

Significant progress has been observed in Ecuador in terms of respect and promotion of human and indigenous rights, as illustrated by the recent release of a Ministerial Decree 128[63] on Free, Prior and Informed Consultation (FPIC). Yet it is still unclear if all the rights holders have a full understanding of their rights, and if the Government has the full capacity and experience to comply with its obligations. However, the GCF project represents an excellent opportunity to promote human rights principles in Ecuador and contribute to their implementation at the local and national levels. The probability of this risk is low as the project will implement priority actions that have been identified and agreed upon by multiple stakeholders through a participatory process that defined the REDD+ AP and in which rights and obligations of duty bearers were specifically discussed. Nonetheless, specific actions have been included to improve the capacities of duty bearers and rights holders. Amongst others, this includes implementing Ministerial Decree 128 guidelines for FPIC during the proposed land planning processes and, with specific reference to indigenous people, project activities in their lands will be implemented on a voluntary basis. Where needed, specific training of local and national representatives of the Government as well as rights holders on their rights and redress mechanisms will be provided to ensure their implementation. Other measures are detailed in Annex VI, as well as Sections E.2.2 and E.5.3, and include: (i) supporting the continuity of the REDD + multi-stakeholder roundtable; (ii) setting up a system of information on how safeguards are addressed and promoted in the context of REDD in the country; (iii) setting appropriate grievance procedures/mechanisms to provide channels for concerned stakeholders and applying the UNDP Stakeholder Response Mechanism (SRM), in case no other mechanism exists at the local, regional or national level. A comprehensive Environmental and Social Impact Assessment will be undertaken before potential impacts occur, to assess the potential impacts further and develop more detailed mitigation measures and plans.

Selected Risk Factor 2

Description	Risk category	Level of risk	Risk Probability
The project will develop land-use plans to reduce the pressure on forest areas and increase protection of key forest fragments in the production landscape. Some of these land-use plans may place restrictions on existing and future land uses. Although the project does not envisage physical displacement, land-use restrictions may increase the possibility of economic displacement, especially for poorer and marginalized individuals who may not have resources to change current production practices.	Social and environmental	Medium (5.1-20% of project value)	Low

Mitigation Measure(s)

The project includes specific actions to address this risk. First, land-use planning will only take place through participatory processes and support will be given for the inclusion of representatives of marginalized groups. Second, financial mechanisms will be set up through the project to support the transition to new land uses to compensate opportunity costs during the conversion stage, thereby reducing any adverse economic displacement. This includes supporting incentive payments in the short-term and strengthening supply chains of deforestation-free produce to increase income in the medium-term. These mechanisms target different groups of stakeholders, including small-scale farmers and communities. In addition, SBP will be strengthened by the project. This is an existing incentive that provides resources to communities and indigenous people, many of whom are amongst the poorest and most vulnerable in society. A comprehensive Environmental and Social Impact Assessment will be undertaken before potential impacts occur, to assess the potential impacts further and develop more detailed mitigation measures and plans.

Selected Risk Factor 3

Description	Risk category	Level of risk	Risk Probability
The project activities will take place within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas and indigenous people's lands. It will support land-use planning in these areas, sustainable harvesting of forest and reforestation, as well as planning, regulation and enforcement in other areas where, to a large extent, economic activity such as farming, harvesting and grazing has expanded with little control. Unless this takes into account sustainable practices and harvesting limits as well as climate-resilient interventions, this	Social and environmental	Medium (5.1-20% of project value)	Low

[63] http://www.pnc-onureddecuador.org/biblioteca-virtual-onuredd/politicas-e-instrumentos-para-la-implementacion-de-redd/99-acuerdo-ministerial-128.html

may adversely affect conservation values of these areas and/or increase vulnerability to CC of production sectors and local communities.			
Mitigation Measure(s)			
The focus of the project is precisely on maintaining areas of high conservation value forest and project components are designed specifically to address causes and drivers of deforestation and forest degradation to avoid adverse impacts on conservation values and mitigate climate change impacts. The project will generate changes in the forms of production in non-forest areas adjacent to Protected Areas and indigenous lands to ensure they are free from deforestation. The different production models and critical areas were identified in the REDD+ Action Plan based on a large number of detailed feasibility studies, available as part of Annex II, and include geographically-explicit identification of required actions to reduce deforestation across the landscape in each province and a detailed analysis of the costs and benefits of implementing these actions. Maps based on these feasibility studies are provided in Annex IX. A safeguards and MRV system for REDD+ will be implemented to guide land use in these selected landscapes to those activities and practices that do not harm forests and their ecosystem goods and services. This includes the definition of sustainable harvesting and management, drawing from the best practices outlined in Section E.6.2. A second measure will be to ensure that access to credit and availability of a range of fiscal and economic incentives for sustainable climate-resilient production follow the recommendations of the REDD+ AP and are monitored by the safeguards. A third measure will be to develop market mechanisms focused on the demand-side for deforestation-free products to contribute to this paradigm shift towards sustainable deforestation-free production. A comprehensive Environmental and Social Impact Assessment will be undertaken before potential impacts occur, to assess the potential impacts further and develop more detailed mitigation measures and plans.			
Selected Risk Factor 4			
Description	Risk category	Level of risk	Risk Probability
Operational Risk: The project depends on actions of multiple stakeholders, ranging from different national line ministries, local governments and agricultural producers and communities. Sub-optimal coordination, duplication and overlap of responsibilities between and within the different levels may undermine implementation.	Technical and operational	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
The project has been designed to address this risk. Component 1 includes the strengthening of inter-institutional coordination mechanisms. Land-use planning will be undertaken through participatory processes and will specifically address overlapping responsibilities and roles. Furthermore, to ensure delivery of project resources the project will include a focus on the scale-up of existing finance instruments – for example, SBP and MAGAP – with operational and clear responsibilities support to farmers. Also, inter-institutional agreements for coordination between participating institutions will be established, as outlined in Section C.3, as well as setting-up dialogue and decision-making mechanisms, and engaging key stakeholders at all levels (see Section E.5.3 for more details).			
Selected Risk Factor 5			
Description	Risk category	Level of risk	Risk Probability
Financial Risk: This is not a direct risk for the project; however, uncertainties with regard to future REDD+ results-based payments is a potential risk for the full implementation of the National REDD+ AP	Financial	Low (<5% of project value)	Low
Mitigation Measure(s)			
The GCF and co-finance investments in financial instruments, together with the provision of know-how to producers for sustainable production and the enforcement of land-use zoning, will trigger changes in land uses. The financial risk associated with this is low. However, the sustainability of the REDD+ National Action Plan in the future rests on triggering the RBPs envisaged under the UNFCCC REDD+ process. If RBPs fail to materialise, the financial sustainability of the Action Plan will be at risk. Nonetheless, the project will minimize these risks through the market transformation and the introduction of REDD+ concepts into national financial incentives and measures, thus providing financial sustainability to at least some of the PAMs enacted. Furthermore, as indicated in Section E.2.1, the GCF project will contribute to building confidence in the UNFCC REDD+ process, not only further reducing this risk but also assisting the GCF to meet the expected results as per its Initial Logic Model and PMF for REDD and RBPs. Nonetheless, UNDP will closely monitor the			

progress relating to RBPs in the international context and incorporate relevant measures into the project strategy and implementation as needed.

Selected Risk Factor 6	**P**otential risks associated with land tenure in the project area		
Description	Risk category	Level of risk	Risk Probability
Potential risks associated with land tenure in the project area.	Social and legal	Low (<5% of project value)	Low

Mitigation Measure(s)

Ecuador has a new land law that ensures the rights of farmers and indigenous population. Ecuador has one of the highest rates of indigenous land titling in the region. However, some of the UPAs still need titling updates since part of, or the entire, property are overlapping with other land uses or other properties. To some extent, the Government has provided technical capacities to overcome this barrier, but financial resources are still needed to complete the land allocation and regulation at the national level. In the case of the targeted communities, ATPA has developed a component named "Proyecto Plan Tierra" which is executed by the Under-Secretariat of Land Regulation but this is still in its very early stages and support is expected from the GCF project to move it forward.

Other Potential Risks on the Horizon

- High rate of rotation of officials within the Government.
- Re-definition of Government priorities due to strategic initiatives in the Amazon (mining, oil extraction and/or hydroelectric projects).
- Unpredicted climate change impacts and/or natural disasters can occur (e.g. ENSO, volcanic eruptions, droughts, etc.).

H.1. Logic Framework.

Please specify the logic framework in accordance with the GCF's Performance Measurement Framework under the Results Management Framework.

H.1.1. Paradigm Shift Objectives and Impacts at the Fund level[64]						
Paradigm shift objectives						
Shift to low-emission sustainable development pathways	The project will engender a shift to a low-emission sustainable development pathway by addressing one of the main emission sources of greenhouse gas emissions in Ecuador – that from deforestation and forest degradation. The project will develop a set of financial and market instruments for sustainable use of land through supply chain initiatives, domestic policies and finance. These measures are priorities outlined in the National REDD+ AP for 2016-2020.					
Expected Result	**Indicator**	**Means of Verification (MoV)**	**Baseline**	**Target**		**Assumptions**
				Mid-term (if applicable)	Final	
Fund-level impacts						
M4.0 Reduced emissions from land use, reforestation, reduced deforestation, and through sustainable forest management and conservation and enhancement of forest carbon stocks	Emission reduction (tCO_2e) as a result of REDD+ AP Cost per tCO_2e	BUR REDD+ information hub. Mid-term and final evaluation reports to have dedicated sections on CO_2 emission reductions Forest Reference Emissions Level (FREL) submitted to UNFCCC	43.4 million tCO_2e emissions per year.	N/A	15 million tCO_2eq (cumulative) emissions reduced between 2016-2020 USD 5.53 average per tCO_2e	**Success factors (or risks):** • Gross deforestation reduction is maintained **Hypotheses:** • If the reduction in gross deforestation that has been observed in recent years is reversed, then results may be smaller than anticipated

[64] Information on the Fund's expected results and indicators can be found in its Performance Measurement Frameworks available at the following link (Please note that some indicators are under refinement): http://www.gcfund.org/fileadmin/00_customer/documents/Operations/5.3_Initial_PMF.pdf

H.1.2. Outcomes, Outputs, Activities and Inputs at Project/Programme level						
Expected Result	**Indicator**	**Means of Verification (MoV)**	**Baseline**	**Target**		**Assumptions**
				Mid-term (if applicable)	**Final (2020)**	
Project / programme outcomes	**Outcomes that contribute to outcomes**					
M5.0 Strengthened institutional and regulatory systems	5.1 Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation 5.2 Number and level of effective coordination mechanisms	PDOTs Life Plans Ministerial Agreement	PDOTs include some environmental information but do not include actions for GHG emissions reduction. Life Plans include environmental information, but not actions for GHG emissions reduction. One institutionalized mechanism for a national dialogue on climate change: Inter-institutional Committee on Climate Change (CICC).	N/A	At least 4 land-use planning instruments (PDOT, life plans) linked to land-use zoning and climate change mitigation objectives. At least 2 national mechanisms institutionalized and working (CICC and one related to deforestation-free commodities).	**Success factors (or risks):** • Continued political will from the institutions and stakeholders involved. **Hypotheses:** • Lack of political will may slow the development or impede the approval or implementation of land-use plans.
M9.0 Improved management of land and forest	9.1 Hectares of land or forests under improved and effective management that contributes to CO_2 emission reductions	Socio-Bosque Programme (SBP) Agenda for Transforming Production in the Amazon (ATPA) MRV-REDD+ (NFMS)	SBP has 1.4 million ha under conservation. 4.1 million ha for forest sustainable management. SBP has 102,000 ha under restoration programmes.	N/A	140,000 additional hectares for conservation. 140,000 additional hectares for sustainable forest management. At least 15,000 additional hectares for restoration programmes	**Success factors (or risks):** • Continued political will from the institutions and stakeholders involved. • New investments in strategic projects are

						aligned with the PDOTs and Life Plans in the intervention areas. **Hypotheses:** • Lack of political will may slow the development or impede the approval or implementation of land-use plans. • If strategic public and private investments are not aligned with PDOTs and life plans, then these instruments will lose credibility and effectiveness.
Project / programme components	**Outputs that contribute to components**					
Component 1: Investment in enabling policies to reduce the drivers of deforestation and its associated emissions.	Number of strengthened land-use planning instruments and life plans that have included climate change mitigation policies and actions. At a national level, "Contents and Processes Guide for the formulation,	• National Territorial Strategy • PDOTs • Life Plans • Integrated Farm Management Plans	• At a national level, the "Contents and Processes Guide for the formulation development and land-use plans in provinces, cantons and parishes" does not include CC guidelines: 0 • Provincial PDOTs: 0 • Cantonal PDOTs: 0 • Life Plans: 0	N/A	• At a national level, the "Contents and Processes Guide for the formulation development and land-use plans in provinces, cantons and parishes" will include CC guidelines.	**Success factors (or risks):** • Political will from the highest authorities of the involved institutions and stakeholders.

	development and land-use plans in provinces, cantons and parishes" • Provincial PDOT • Cantonal PDOT • Life Plans Number of legal coordination instruments at a national and territorial level for REDD+.	• Ministerial Agreement No. 137-2014 of MAE establishes CC criteria to be included in the PDOTs.	There are legal coordination instruments at a national and territorial level, but not for REDD+.		• Provincial PDOTs: 6 • Cantonal PDOTs: 12 • Life Plans: 5 • At least 5 legal coordination instruments at a national and territorial level for REDD+. • At least 6 inter-institutional agreements institutionalized and working at a national and territorial level.	• GADs and communities update their PDOTs and Life Plans. **Hypotheses** • Lack of political will may slow the development or impede the approval or implementation of land-use plans • If PDOTs and life plans are not update as planned, there will be no opportunity to include CC criteria.
Component 2: Implementation of financial and economic incentives towards the transition to sustainable production systems in non-forest areas.	Area (ha) transformed to sustainable production systems in deforested areas. Number of products with deforestation-free certification and traceability. Existence of a national service for contracts (SERCOP) resolution that includes and prioritizes the procurement of deforestation-free products.	Integrated Farm Management Plans reported in the MAGAP. Land-use statistics in the agricultural sector –National Institute of Statistics and Census (INEC). Responsible procurement policies.	Grassland: • Northern Amazon: 20,890 ha. • Central Amazon: 4,105 ha. • Southern Amazon: 82,374 ha. • Southern Dry Forests and Valleys: 4,273 ha. Organic Coffee certificate. SECOP resolution does not exist.	N/A	At least 57,430 ha converted to sustainable production systems in the project's prioritized areas. At least 4 products will have deforestation-free certification. Existence of a SERCOP resolution: "purchase volumes will be measured to know the impact of this measure". 60,000 direct beneficiaries have	**Succes factors (or risks)** • Producers maintain their commitment to the transformation to sustainable production. • Will from private businesses to commit to responsible purchasing. **Hypotheses**

	Number of beneficiaries transiting successfully to sustainable production systems in deforested areas.	Environmental criteria for the Marca País Empresas programme with RSPO certification. SERCOP Resolution			transitioned to sustainable production	• Given that participation is voluntary, if producers do not participate or abandon their commitment prior to consolidating the transition, then gains will be limited or impermanent. • If private companies do not commit to responsible purchasing, then there will be no demand-side incentives for producers and improved practices will remain highly dependent on Government incentives and policies.
Component 3: Financial and non-financial mechanisms for restoration, conservation and connectivity	Number of hectares under conservation incentives in priority areas with high threat of deforestation and potential to generate social and environmental co-benefits. Number of hectares under restoration incentives in priority areas with high threat of deforestation and potential to generate water regulation co-benefits.	SBP registration and investment plans. Forest National Monitoring System reports. Registration in REDD+ Measures and Actions System. Water Funds registration.	SBP has 1.4 million ha under conservation. 4.1 million ha for sustainable forest management. SBP has 120,000 ha under restoration agreements.	N/A	Additional 34,000 ha for conservation. 140,000 additional ha for sustainable forest management. At least 15,000 additional ha for restoration programmes.	**Succes factors (or risks)** • There is demand from forest owners to access conservation, sustainable forest management and restoration programmes. **Hypotheses:**

						• Given the voluntary nature of the programmes, if there is low demand to enrol, the results will be lower than expected.
Component 4: Implementation of enabling instruments to reduce the drivers of deforestation and its associated emissions.	Number of coordination mechanisms for managing instruments that include land-use planning and zoning guidelines in GADs and indigenous territories.	• Environmental Information System-SUIA. • National Forest Monitoring System (SNMF). • Safeguards Information System (SIS).	• SNMF is operational but not yet institutionalized. • SIS conceptualized and methodologically designed. • FREL from deforestation constructed and presented to the UNFCCC for the technical evaluation. • A technical REDD+ Annex to the BUR is being developed.	N/A	• SNMF operational and institutionalized. • Information summary about corresponding safeguards presented to the Convention. • FREL and emission reduction results evaluated by the Convention and published in the Information Hub.	**Success factors** (or risks) • Resource availability for REDD+ RBPs in compliance with the Warsaw Framework for REDD+. **Hypotheses:** • If RBPs for REDD+ do not materialize, the implementation of the Warsaw Framework requirements will no longer have a purpose.
Outputs	**Description**		**Activities**		**Description**	
1.1 PDOTs and Life Plans updated and implementation with CC criteria and actions.	This output will support the update and implementation of PDOTs (provincial and municipal) and Life Plans in indigenous territories, to be presented in 2019; and to land-use zoning at a sub-national level to strengthen forest areas that should not be used for agricultural expansion. In the update and implementation of PDOTs, Life Plans and Land-use zoning, equal gender participation will be promoted, as well as		1.1.1 Financial resources for technical assistance in updating and implementing land-use planning instruments.		Funding for integrating CC criteria in PDOTs and Life Plans; this includes: CC and deforestation information; establishment of REDD+ measures and actions; inclusion of REDD+ performance indicators in PDOTs; support for the regularization of land tenure. 23 consultancies are expected: 12 municipal PDOTs; 6 provincial PDOTs and 5 Life Plans.	

	respect for indigenous peoples' and communities' rights.		
1.2. Local capacity building for supervision of land-use planning and zoning.	In this output monitoring processes for PDOTs and land-use zoning will be promoted, involving stakeholders with particular emphasis on women and priority groups' participation. Additionally, capacity building actions to second and third degree indigenous people's organizations and nationalities will be implemented, to supervise and guide the implementation of Life Plans. The successful implementation of land-use zoning will be particularly important in areas where there is an expansion in the production of commodities. It will also ensure that REDD+ measures and actions result in emissions reductions.	1.2.1 Staff and consultants; maps; staff mobilization to develop PDOTs and Life Plans. 1.2.2 National and territorial workshops within the MAE and MAGAP institutional framework.	Different types of stakeholders need training: public officials for the development of PDOTs; indigenous community leaders and representatives for Life Plans (workshops, mobilization, training material, instructors, equipment, etc.). 5 technicians are expected to be hired and a total of 4 workshops per year, of five days each for approximately 20 people, will be implemented.
1.3 Strengthening forest control	This output will contribute to the implementation of the social forest and wildlife control approach; it will involve all stakeholders in the surveillance chain as co-responsible subjects in forest sustainable management. By implementing social forest and wildlife control, the risk of leakage from activities related to deforestation will be reduced.	1.3.1 Technical assistance in forest control. 1.3.2 Vehicles and equipment for supervision and monitoring (GPS, systems, vehicles, among others). 1.3.3 Infrastructure for integrated forest control centres.	Funds will be earmarked for technical assistance for the involvement of stakeholders in the forest control chain. A consultancy for the design of social forest control will be hired. Minimum equipment will be given to strengthen forest control. 2 vehicles will be acquired for each one of the four areas of intervention (ZHPD), as well as other equipment such as GPS.
1.4 Formal Inter-Institutional Coordination Structures within the framework of land-use plans, life plans and land-use zoning.	With this output, the development of inter-sectoral, inter-institutional and multi-level coordination systems will be supported, for the provision of coordinated national sectoral programmes in accordance with land-use zoning. Regarding inter-institutional coordination for Life Plans in indigenous communities and nationalities, existing internal governance mechanisms will be respected.	1.4.1 Staff for the promotion and monitoring of multi-level inter-institutional agreements. 1.4.2 Coordination workshops within formal institution structures.	One technician for each of the inter-institutional coordination platforms will be hired (there are expected to be 3 platforms). 1 technician per each province to facilitate the inter-institutional and inter-sectoral coordination (6 provinces) and 1 technician to provide national oversight. 4 workshops of the inter-institutional platforms will be funded; it is expected that these platforms will meet 3 times a year.

	Inter-institutional coordination formal structures will be accompanied by other interested civil society organizations.		4 meetings of regional platforms will be funded, to be held 3 times a year.
2.1 Provision of incentives for the sustainable production transition period.	This output corresponds to direct payments to producers to compensate for loss of income during the transformation process to sustainable production, so that the practices associated with the conversion are not abandoned and there is a commitment to maintain such practices over time. Potential beneficiaries of this activity will be individuals and community-based organizations associated with the Ministry of Social Development. Access by women's and indigenous people organizations to this incentive will be encouraged. Moreover, this incentive is conditional on the MAGAP Integrated Farm Management Plan, and compliance with the requirements for land-use planning and zoning, including criteria for good environmental practices.	2.1.1 Financial resources for direct payments.	Approximately USD 155 per converted hectare, for an approximate total of 57,430 hectares.
2.2 Promote the coordination and implementation of existing tax incentives that will allow for the transition to sustainable production systems.	In this output, the application of current tax incentives in favour of the environment or that will allow for the transition to sustainable production systems will be promoted. This will be supported by an analysis of existing incentives and their alignment with REDD+, to reduce transaction costs and facilitate their application in order to change behaviours of economic agents or to redirect production towards more sustainable systems. In addition, this output will support the dissemination and awareness of these tax incentives to potential beneficiaries. Finally, staff of the Fiscal Studies Centre will have their capacities strengthened and sensitized on issues of green taxation.	2.2.1 Staff and consultants to assess and define the alignment of tax exemptions with REDD+ and the design of a manual for the implementation of incentives aligned with REDD+. 2.2.2 Resources for personnel mobilization, information generation, to facilitate discussion and awareness-raising amongst the beneficiaries. 2.2.3 Acquisition of specialized literature on green tax.	Consultancies for assessing the alignment of current tax incentives with REDD+ will be funded. These consultancies will also determine the application of these taxes in order to influence - or strengthen - the inclusion of a CC mitigation element in such incentives. Moreover, capacity building in the Fiscal Studies Centre on issues of green taxation for decision making will be funded. 3 studies on the impact of tax incentives will be conducted (Income Tax, Value Added Tax and Rural Lands Tax). 3 workshops on the analysis and dissemination of results will be conducted for 50 people, lasting one day each.

			200 books on CC finance and green taxation will be bought for the Fiscal Studies Centre of the SRI.
2.3 Support the redesign of existing public credit lines with favourable financial conditions for sustainable production.	This output involves support institutions to redesign public credit lines to reduce the risk associated with the transition to sustainable production. In this context, it is intended that BanEcuador and CFN remove barriers to provide credits for the agricultural sector contribute to the transition to sustainable production systems and to improve productivity, in order to reduce deforestation in the country and its associated emissions. The output will support studies on the impact of existing credit lines, to include CC-related criteria.	2.3.1 Redesign of existing lines of credit for productive transformation and to introduce REDD + criteria into existing credit lines 2.3.2 Capacity building to financial institutions on technical criteria for establishing new credit lines that promotes sustainable production practices and monitoring 2.3.3 Promotion and dissemination of designed public credit lines. 2.3.4 Strengthen staff capacities in MAGAP for technical assistance in the submission of projects.	6 consultants hired to design and modify credit lines. At least four documents on financial instruments (incentives and credit lines) will be drafted, printed and disseminated as communication materials for small-scale farmers. 1 training workshop per year for at least 50 officials of MAGAP will be funded, so they can provide technical assistance in the presentation of projects to be financed by the CFN. Training workshops to officials from financial institutions (3) to provide technical assistance on criteria for granting credits for sustainabkle production and monitoring
2.4 Responsible public and private procurement for deforestation-free production	This output aims to increase the number of public and private buyers in Ecuador who are committed to the sustainable supply of raw materials. Spaces for the exchange of deforestation-free commodity procurement policies will be financed, both in the public and private sectors, to promote the inclusion of responsible purchasing criteria for certified deforestation-free products in procurement processes. Similarly, there will be a close work with SERCOP to incorporate lists of deforestation-free products into public procurement policies.	2.4.1 Hiring local and international consultants, experts in procurement policy to provide goods and services for sustainable production. 2.4.2 Materials and awareness-raising activities for training and communication of procurement policies of certified deforestation-free products.	4 consultancies will be hired for the following: regulatory framework of deforestation-free public procurement policies for timber, cocoa and livestock. There will be 4 workshops, one day each for 50 people, for the dissemination of public policies for responsible purchasing the public and private sector.
2.5 Certification and traceability of deforestation-free products.	This output seeks to promote certification and traceability in the supply chain to enable national and international buyers to identify the producers of deforestation-free goods. This will result in price differentiation.	2.5.1. Consultancies for market studies (supply and demand). 2.5.2 Consultancies for including standards for certification and the design of traceability processes.	Activities will be financed under the project Marca Pais, which is executed by the Foreign Trade Ministry, for the certification and traceability of these products (cocoa, coffee and palm).

	In addition, there will be development of national standards associated with Marca Pais for coffee, cocoa and palm oil (external demand). Agricultural products will have a national standard for the supply of deforestation-free products in the Integrated Farm Management Plan (domestic demand). Correspondingly, public-private alliances will be facilitated for the establishment of deforestation-free raw materials platforms. Finally, this output will support studies on sectoral supply and demand, linked to agroforestry systems (coffee, cocoa, milk, timber and non-timber forest products). Strategies for branding promotion will be developed.	2.5.3 Consultancies for branding strategies. 2.5.4 International promotion of Marca País (cocoa, coffee and palm). 2.5.5 Consultancies for analysing the willingness to pay in the agricultural sector for a minimal differential price. 2.5.6 Infrastructure for cocoa collection centres.	Activities under the ATPA framework will be financed for certification and traceability of agricultural products. 2 consultancies will be hired for the development of studies and analysis on sectoral supply and demand for deforestation-free products (coffee and palm). 2 consultancies will be hired for developing a promotion strategy and a sectoral brand (cocoa, coffee and palm). 1 consultancy will be hired for the international promotion of products (coffee and RSPO palm). 5 consultancies will be hired for the development of studies on the willingness to pay for deforestation-free products (coffee, cocoa, milk, timber and non-timber forest products).
3.1 Strengthen conservation, restoration and forest management processes driven through the Socio Bosque Programme.	This output will strengthen the processes driven by the SBP within the project intervention area, prioritizing SNAP buffer zones. Both conservation and restoration of ecosystem services form part of Life Plans and Integrated Farm Management Plans, which in turn are instruments that enable the transition to sustainable production systems. These ecosystem services will generate fundamental co-benefits to drive agroforestry systems and sustainable forest management, such as water regulation, food supplies and various products from biodiversity, soil conservation, among others.	3.1.1 Financial resources for conservation incentives through the SBP. 3.1.2 Delivery of incentives for restoration through the SBP. 3.1.3 Technical assistance to strengthen the implementation of the new forestry law in the process of farm management within priority areas, including SBP land. 3.1.4 Studies of physical and mechanical properties of wood in order to encourage the use of non-commercial species in forests.	Conservation incentives will be supported with USD 30 per hectare for approximately 13,600 hectares. Restoration incentives will be supported with USD 272 per hectare for approximately 18,000 hectares. 5 technicians will be hired to strengthen the SBP forest management processes. 1 consultancy will be hired for the study of physical and mechanical properties of wood species in forests.
3.2 Support financial mechanisms for integrated water resource management (IWRM) in the	This output involves strengthening existing financial schemes that promote integrated water resource management in upper watersheds located in the eastern foothills of the Andes, in the Paute basin and Loja province.	3.2.1 Studies on consumer and producer surplus for determining economic contributions from hydroelectric plants, mining and water consumers. 3.2.2 Financial resources for grant funds for IWRM in the prioritized basins.	6 consultancies will be hired to develop studies on willingness to pay for determining economic contributions in water tariffs. It is estimated that there will be 2 studies per Water Fund.

basins located within prioritized areas.	This output will also support assessments of economic benefits and consumer and producer surplus for determining the economic contributions from hydroelectric plants, mining and water users. Additionally, it will support the definition of an integration strategy for financial mechanisms articulated to such economic contributions. In addition, grant funds for conservation and maintenance of upper watersheds in priority areas will be disbursed.	3.2.3 Integration strategy for financial mechanisms coupled to economic contributions to IWRM.	A contribution of USD 280,000 per year to implement policies and measures that contribute to the implementation of the REDD+ AP under the 3 Water Funds. 1 consultancy will be hired for developing an integration strategy for financial mechanisms.
4.1 Support to the implementation of the Warsaw Framework for REDD+ and other operational processes.	This output includes investment for an integrated information system for REDD+ implementation, including the national forest monitoring system, GHG inventory system, safeguards information system and measures and actions for REDD+ management system. Regarding SIS specifically, its inclusion in the MAE platform will be for sharing transparent information on the approach to safeguards in REDD+, including dispute resolution.	4.1.1 Support to the implementation of the National Forest Monitoring System. 4.1.2 Support to the implementation of the REDD+ safeguards information system.	Estimated transaction cost of $0.5 per tCO_2eq in the project. This will cover the hiring of different consultancies, information systems, etc. to support the implementation of the National Forest Monitoring System and SIS implementation. The hiring of 1 coordinator and 8 technicians to monitor the traceability system. Coordinator: Will manage communication between the National Forest Directorate and SUIA to ensure the implementation of the traceability system and will manage field personnel for traceability on the field. Technicians (8) and IT Technicians (2): To support in the programming and development of traceability software and its maintenance Forestry technicians (6): Supervision for the correct use of forestry resources; Control of illegal logging; Scheduled and random audits to individuals or programmes involved in wood production.
4.2 Operationalization of the financial architecture of the REDD+ AP.	This output will support the operation of the REDD+ AP financial mechanism. Additionally, it includes support for piloting the distribution of funds through different funding windows and different entities involved in the implementation of the REDD+ AP, such as MAGAP, the GADs, the PSB and the Water Funds.	4.2.1 Technical staff for operationalization of the Fund for piloting the distribution of funds through different funding windows and different entities involved in the implementation of the REDD+ AP.	Estimated transaction cost of $0.5 per tCO_2eq in the project. This will cover Financial specialists for the operationalization of the Fund: 1 Senior Coordinator and 8 technical financial specialists (1 per actor/sector) for the duration of the project.

H.2. Arrangements for Monitoring, Reporting and Evaluation

235. Project-level monitoring and evaluation will be undertaken in compliance with the UNDP POPP and the UNDP Evaluation Policy.

Monitoring and Evaluation Plan

236. The M&E Plan will be conducted in accordance with UNDP and GCF procedures by the project team and the UNDP Country Office (UNDP CO). The Logical Framework Matrix provides impact and outcome indicators for project implementation, along with their corresponding means of verification. The M&E plan includes: an inception report, project implementation reviews, a mid-term review and final evaluation, etc. The following sections outline the principal components of this plan. The project's M&E 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

237. A Project Inception Workshop will be held within the first 2 months of project start, involving those with assigned roles in the project organization structure, the UNDP Country Office and, where appropriate/feasible, UNDP regional technical policy and technical advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership of the project results and to plan the first year annual work plan. The Inception Workshop will address a number of key issues including:

- To assist all partners to fully understand and take ownership of the project.
- To detail the roles, support services and complementary responsibilities of UNDP Country Office (CO) and Regional staff vis à vis the project team.
- Discussion on the roles, functions and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms.
- Based on the project results framework, finalization of the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provision of a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The M&E work plan and budget will be agreed and scheduled.
- Discussion of financial reporting procedures and obligations, and arrangements for annual audit.
- Planning and scheduling of project Board meetings. Roles and responsibilities of all project organization structures will be clarified and meetings planned. The first project Board meeting will be held within the first 12 months following the inception workshop.
- 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.

Annual Project Report

238. This key report is prepared by the Project Technical Advisors, consolidated by the Project Manager and approved by the Project Board to monitor progress made since project start and, in particular, for the previous reporting period.

239. The APR 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 component (annual).
- Lessons learned/good practices
- Annual Work Plan and other expenditure reports
- Risk and adaptive management

240. The Project Manager will ensure that the indicators included in the project results framework are monitored annually well in advance of the Project Implementation Report (PIR) submission deadline and will objectively report progress. The annual PIR will be shared with the Project Board and other stakeholders. The UNDP CO will coordinate the input of the National Designed Authority and other stakeholders to the PIR. The quality rating of the previous year's PIR will be used

to inform the preparation of the next PIR. The final project PIR, along with the terminal evaluation report and corresponding management response, will serve as the final project report package.

Periodic Monitoring through site visits

241. The UNDP Country Office 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 will be prepared by the CO and UNDP Regional Office and will be circulated no less than one month after the visit to the project team and Project Board members. In addition, MAE will conduct visits to project sites periodically and field visit reports will be prepared.

Mid-term of project cycle

242. The project will undergo an independent mid-term review at the mid-point of project implementation. The mid-term review will determine progress being made towards 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 final MTR report will be available in English.

End of Project

243. An independent Final Evaluation will take place three months prior to the closure of the project, undertaken in accordance with UNDP and GCF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term review, 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.

244. The Final Evaluation will also provide recommendations for follow-up activities and requires a management response. The final report will be cleared by the UNDP CO and the UNDP Regional Technical Advisor, and will be approved by the Project Board. The UNDP CO will include the planned project terminal evaluation in the UNDP CO evaluation plan, and will upload the final terminal evaluation report in English and the management response to the public UNDP Evaluation Resource Centre and the MAE Evaluation Office of Projects and Projects.

245. During the final 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.

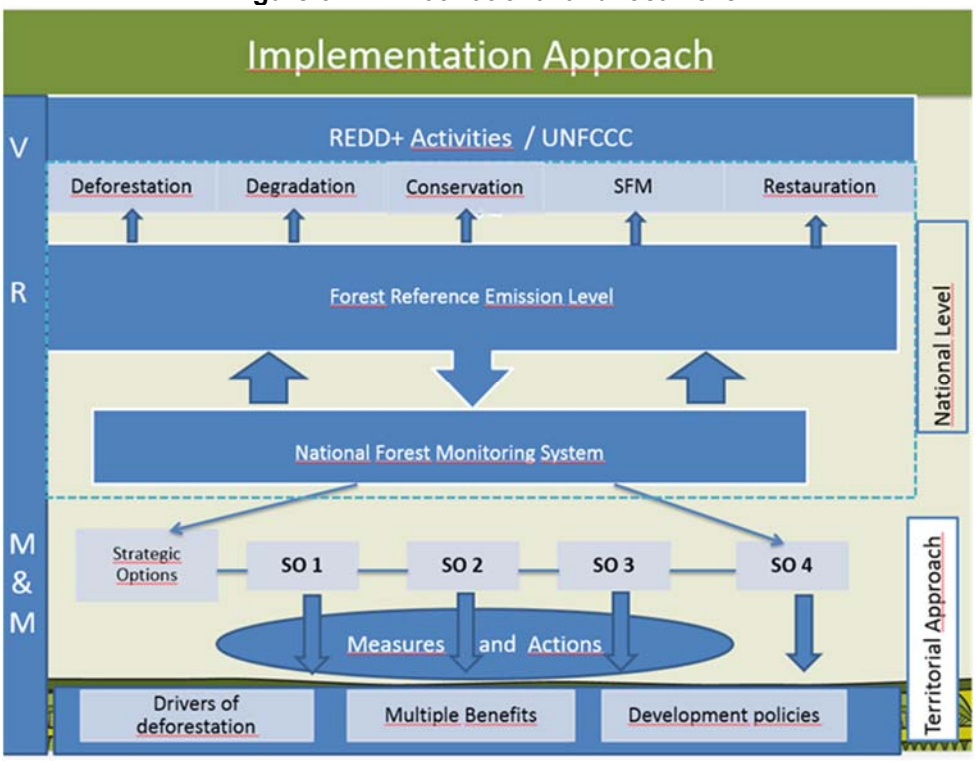
246. The UNDP CO will support the Project Manager as needed, including through annual supervision missions. The UNDP CO is responsible for complying with UNDP project-level M&E requirements as outlined in the UNDP POPP. Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP Regional Technical Advisor as needed. The project target groups and stakeholders, including the National Designed Authority, will be involved as much as possible in project-level M&E. The UNDP CO will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations.

247. The National Forest Monitoring System (SNMF)[65] is an important part of the Directorate of Natural Heritage Monitoring (DMPN) structure, as it is a robust and transparent system that provides information for the design and implementation of land-use management policies, forest governance and natural resource management. In the context of REDD+ activities, the SNMF will allow the monitoring and reporting of such activities, incorporating monitoring and MRV processes. Its main function is to have periodic information on results achieved through national measures and actions, linked to conservation, sustainable forest management and restoration, for strengthening forest governance, as well as provided measurable, reportable and verifiable data for international estimations and reports on forest emissions and absorptions.

[65] http://www.pnc-onureddecuador.org/pnc-onuredd/resultado-1-sistema-nacional-de-informacion-y-monitoreo-forestal.html

248. Under the management of MAE, through the Under-Secretariat of Climate Change, the SNMF will be linked to the national GHG inventory system (SINGEI) and the BUR (Biennial Update Report) for reporting emissions to the UNFCCC, possibly at the end of 2015[66].

Figure 6: MRV at national and local level



Source: Plan de Acción REDD+. PNC ONU REDD+ Ecuador. MAE.

[66] The BUR, including the GHG inventory, will be presented by Ecuador in December 2015 to the UNFCCC.

I. Supporting Documents for Funding Proposal

- ☒ NDA No-objection Letter
- ☒ Feasibility Study
- ☒ Integrated Financial Model that provides sensitivity analysis of critical elements (xls format, if applicable)
- ☒ Confirmation letter or letter of commitment for co-financing commitment (If applicable)
- ☒ Project/Programme Confirmation/Term Sheet (including cost/budget breakdown, disbursement schedule, etc.) – *see the Accreditation Master Agreement, Annex I*
- ☒ Environmental and Social Impact Assessment (ESIA) or Environmental and Social Management Plan (If applicable)
- ☒ Appraisal Report or Due Diligence Report with recommendations (If applicable)
- ☒ Evaluation Report of the baseline project (If applicable)
- ☒ Map indicating the location of the project/programme
- ☒ Timetable of project/programme implementation

File Name	Description
File name: FP-UNDP-241115-5768-Annex I	*Annex I NDA No Objection Letter*
File name: FP-UNDP-241115-5768-Annex IIa	*Annex IIa Feasibility Study*
File name: FP-UNDP-241115-5768-Annex IIb Part 1	*Annex IIb Part 1 Feasibility Study: Safeguards Information System for REDD+*
File name: FP-UNDP-241115-5768-Annex IIb Part 2	*Annex IIb Part 2 Feasibility Study: Safeguards Information System for REDD+*
File name: FP-UNDP-241115-5768-Annex IIb Part 3	*Annex IIb Part 3 Feasibility Study: Safeguards Information System for REDD+*
File name: FP-UNDP-241115-5768- Annex IIc	*Annex IIc Feasibility Study: National REDD+ Action Plan*
File name: FP-UNDP-241115-5768-Annex IId Part 1	*Annex IId Part 1 Feasibility Study: Opportunity Cost Analysis and potential income flows from REDD+*
File name: FP-UNDP-241115-5768-Annex IId Part 2	*Annex IId Part 2 Feasibility Study: Cost-Benefit Analysis REDD+ Ecuador*
File name: FP-UNDP-241115-5768-Annex IId Part 3	*Annex IId Part 3 Feasibility Study: Estimation of opportunity costs.*
File name: FP-UNDP-241115-5768-Annex IIe	*Annex IIe Feasibility Study: Ecuador prioritized REDD+ areas*
File name: FP-UNDP-241115-5768-Annex IIf	*Annex IIf Feasibility Study: National REDD+ Action Plan Finance Strategy*
File name: FP-UNDP-241115-5768-Annex IIg	*Annex IIg Feasibility Study: National Forestry Evaluation*
File name: FP-UNDP-241115-5768-Annex IV	*Annex IV Confirmation letters*
File name: FP-UNDP-280716-5768-Annex Va	*Annex Va Term Sheet*
File name: FP-UNDP-280716-5768-Annex Vb	*Annex Vb Total Budget and Workplan*
File name: FP-UNDP-090916-5768-Annex Vc	*Annex Vc Procurement Plan*
File name: FP-UNDP-241115-5768-Annex VI	*Annex VI Environmental and Social Impact Assessment (ESIA)*
File name: FP-UNDP-090916-5768-Annex VIb	*Annex VIb Environmental and Social Management Framework*
File name: FP-UNDP-241115-5768-Annex VII	*Annex VII Appraisal report (LPAC and Due Diligence)*
File name: FP-UNDP-241115-5768-Annex VIII	*Annex VIII Evaluation report of the baseline project*
File name: FP-UNDP-241115-5768-Annex IX	*Annex IX Map*
File name: FP-UNDP-241115-5768-Annex X	*Annex X Timetable of project implementation*

File name: FP-UNDP-241115-5768-Annex XI	*Annex XI Project confirmation*
File name: FP-UNDP-290716-5768-Annex XII	*Annex XII Economic Analysis*
File name: FP-UNDP-090916-5768-Annex XIIb	*Annex XIIb Economic Analysis*
File name: FP-UNDP-241115-5768-Annex XIIIa	*Annex XIIIa Additional Background Information: Summary of consultations carried out in the context of the development of the National Action Plan*
File name: FP-UNDP-241115-5768-Annex XIIIb	*Annex XIIIb Additional Background Information: Forest Reference Emission Level revised by the UNFCCC*
File name: FP-UNDP-241115-5768-Annex XIIIc	*Annex XIIIc Additional Background Information: MAE Project Portfolio 2015*
File name: FP-UNDP-241115-5768-Annex XIIId	*Annex XIIId Additional Background Information: Population Characterization for the Project*
File name: FP-UNDP-241115-5768-Annex XIIIe	*Annex XIIIe Additional Background Information: Surface area under agricultural production*
File name: FP-UNDP-241115-5768-Annex XIIIf	*Annex XIIIf Additional Background Information: Granted credit by the financial system to the agricultural sector in the Amazon-2013*
File name: FP-UNDP-241115-5768-Annex XIIIg Part 1	*Annex XIIIg Part 1 Additional Background Information: Investment Catalogue for Strategic Projects*
File name: FP-UNDP-241115-5768-Annex XIIIg Part 2	*Annex XIIIg Part 2 Additional Background Information: Investment Catalogue for Strategic Projects*
File name: FP-UNDP-241115-5768-Annex XIIIg Part 3	*Annex XIIIg Part 3 Additional Background Information: Investment Catalogue for Strategic Projects*
File name: FP-UNDP-241115-5768-Annex XIIIg Part 4	*Annex XIIIg Part 4 Additional Background Information: Investment Catalogue for Strategic Projects*
File name: FP-UNDP-241115-5768-Annex XIIIh	*Annex XIIIh Additional Background Information: Standard Basic Assistance Agreement*
File name: FP-UNDP-241115-5768-Annex XIIIi	*Annex XIIIi Additional Background Information: Country Programme Action Plan*
File name: FP-UNDP-241115-5768- Annex XIIIj	*Annex XIIIj Additional Background Information: Acronyms*
File name: FP-UNDP-241115-5768- Annex XIIIk	*Annex XIIIk Additional Background Information: Electrification Master Plan 2013-2022*
File name: FP-UNDP-241115-5768-Annex XIII(l) Part 1	*Annex XIII (l) Part 1 Additional Background Information: Ecuador Energy Balance*
File name: FP-UNDP-241115-5768-Annex XIII(l) Part 2	*Annex XIII (l) Part 2 Additional Background Information: Ecuador Energy Balance*
File name: FP-UNDP-241115-5768-Annex XIII(l) Part 3	*Annex XIII (l) Part 3 Additional Background Information: Ecuador Energy Balance*
File name: FP-UNDP-241115-5768-Annex XIIIm	*Annex XIIIm Additional Background Information: National Biodiversity Strategy*
File name: FP-UNDP-241115-5768-Annex XIIIn	*Annex XIIIn Additional Background Information: National Restoration Plan*
File name: FP-UNDP-241115-5768-Annex XIIIo	*Annex XIIIo Additional Background Information: The Natural Heritage Governance Policy for the Good Living Society 2013-2017*
File name: FP-UNDP-241115-5768- Annex XIIIp	*Annex XIIIp Additional Background Information: Natural Heritage Governance Policy for the Good Living Society 2013-2017*
File name: FP-UNDP-241115-5768-Annex XIIIq	*Annex XIIIq Additional Background Information: National Consultation Guide for REDD+*
File name: FP-UNDP-241115-5768-Annex XIIIr Part 1	*Annex XIIIr Part 1 Additional Background Information: National Strategy for the Transformation of the Productive Matrix*

File name: FP-UNDP-241115-5768-Annex XIIIr Part 2	*Annex XIIIr Part 2 Additional Background Information: National Strategy for the Transformation of the Productive Matrix*
File name: FP-UNDP-241115-5768-Annex XIIIs	*Annex XIIIs Additional Background Information: REDD+ Working Group Guidelines*
File name: FP-UNDP-241115-5768-Annex XIIIt	*Annex XIIIt Additional Background Information: Forest and Gender - diagnostic for REDD+*
File name: FP-UNDP-200616-5768-Annex XIIIu	*Annex XIIIu Summary of the Feasibility Studies Conducted for Component 2*
File name: FP-UNDP-200616-5768-Annex XIIIv	*Annex XIIIv Market Analysis: Main Agricultural Activities for Smallholders' Income Generation*
File name: FP-UNDP-280716-5768-Annex XIIIw	*Annex XIIIw Justification of no On-Granting*
File name: FP-UNDP-090916-5768-Annex XIIIx	*Annex XIIIx Minutes of the meeting of the REDD Platform on the GCF proposal*
File name: FP-UNDP-280716-5768-Annex XIVa	*Annex XIVa Response Matrix*
File name: FP-UNDP-241115-5768-Annex XIVb	*Annex XIVb Additional Background Information: Supplementary Responses to GCF Review Comments*
File name: FP-UNDP-241115-5768-Annex XV	*Annex XV Additional Background Information: Market overview*