CLIMATE INVESTMENT FUND (CIF)

INVESTMENT PLAN

Ecuador

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Content

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ACRONYMS

- AGROCALIDAD — Agro-Quality Assurance Agency of the MAG (for its acronym in Spanish)
- AME — Association of Ecuadorian Municipalities (for its acronym in Spanish)
- ARCSA — National Regulatory Agency of Health Surveillance and Control (for its acronym in Spanish)
- ATPA — Agenda for Productive Transformation in the Amazon (for its acronym in Spanish)
- BIESS — *Banco del Instituto Ecuatoriano de Seguridad Social* (Bank of the Ecuadorian Institute of Social Security)
- BNDES — *Banco Nacional de Desarrollo Económico y Social de Brasil* (Brazilian Development Bank)
- BNF — *Banco Nacional de Fomento* (currently, BanEcuador) (National Promotion Bank)
- CAF — Andean Development Corporation (for its acronym in Spanish)
- CIF — Climate Investment Fund
- CONAFIPS — National Corporation for Popular Finance (for its acronym in Spanish)
- CORPEI — Corporation for the Promotion of Exports and Investments (for its acronym in Spanish)
- *CRE* — *Constitution of the Republic of Ecuador*
- CSO — Civil society organization
- CSPO — Certified Sustainable Palm Oil
- DGM — Dedicated Grant Mechanisms for Indigenous People and Local Communities
- EAP — Economically active population
- EECA — Central Experimental Station of the Amazon (for its acronym in Spanish)
- *ESF-SB* — *Socio Bosque Strategy of Financial Sustainability* (for its acronym in Spanish)

- ESPOCH Escuela Politécnica de Chimborazo (public university)
- ESPOL Escuela Politécnica del Litoral (public university)
- FAO Food and Agriculture Organization of the United Nations
- FIP Forest Investment Program
- F&PV Forests and protective vegetation
- GAD Decentralized Autonomous Government (for its acronym in Spanish)
- GADPS Decentralized Autonomous Government for the Province of Sucumbíos (for its acronym in Spanish)
- GDI Gender Development Index
- GDP Gross domestic product
- GEF Global Environment Fund
- GHG Greenhouse gases
- GII Gender Inequality Index
- GNI Gross national income
- HCVAs High Conservation Value Attributes
- HDI Human Development Index
- IDB Inter-American Development Bank
- IEPI Ecuadorian Institute of Intellectual Property (for its acronym in Spanish)
- IEPS National Institute for the Popular and Solidarity Economy (for its acronym in Spanish)
- IHDI Inequality-adjusted Human Development Index
- IICA Inter-American Institute for Cooperation on Agriculture (for its acronym in Spanish)
- INABIO National Biodiversity Institute (for its acronym in Spanish)
- INBAR International Network for Bamboo and Rattan
- INEC National Institute of Statistics and Censuses (for its acronym in Spanish)
- INEN Ecuadorian Institute for Standardization (for its acronym in Spanish)
- INIAP Institute for Agricultural Research (for its acronym in Spanish)
- *IP* *REDD+ AP Implementation Plan*

- IPLCs Indigenous peoples and local communities
- ITCs Indigenous Territorial Circumscriptions
- KfW KfW Development Bank (for its acronym in German)
- LGBTI Lesbian, gay, bisexual, transgender and intersex people
- LULUCF Land use, land-use change and forestry
- MAE Ministry of Environment of Ecuador (for its acronym in Spanish)
- MAG Ministry of Agriculture and Livestock (for its acronym in Spanish)
- MAGAP Ministry of Agriculture, Livestock, Aquaculture and Fisheries (for its acronym in Spanish)
- MDBs Multilateral development banks
- MIES Ministry of Economic and Social Inclusion (for its acronym in Spanish)
- MINTUR Ministry of Tourism (for its acronym in Spanish)
- MIPRO Ministry of Production (for its acronym in Spanish)
- MRV Monitoring, reporting and verification
- MSP Ministry of Public Health (for its acronym in Spanish)
- NBD National Biodiversity Directorate
- *NBS* *National Biodiversity Strategy (2015-2030)*
- NCI Nature and Culture International
- NEA National Executing Agency
- NEC National Executive Council
- NEF National Environmental Fund
- NFC National Finance Corporation
- NFD National Forestry Directorate
- NFE National Forestry Evaluation
- NGO Non-governmental organization
- NTFPs Non-timber forest products
- *OCE* *Organic Code on the Environment*
- PDOT Territorial Land-Use Plan (for its acronym in Spanish)

- *PNRF* *National Afforestation and Reforestation Plan* (for its acronym in Spanish)
- PRF National Forestry Restoration Program (for its acronym in Spanish)
- Pro-Ecuador Institute for the Promotion of Exports and Investments of Ecuador (for its acronym in Spanish)
- PSB Socio Bosque Program (for its acronym in Spanish)
- PUCE *Pontificia Universidad Católica del Ecuador* (private university)
- *REDD+ AP* *Ecuador REDD+ Action Plan, Forests for Good Living*
- REDD+ WG REDD+ Working Group
- RIA Amazonian Indigenous REDD+ (for its acronym in Spanish)
- RSPO Roundtable on Sustainable Palm Oil
- R&D Research and development
- SAF Forest Administration System (for its acronym in Spanish)
- SCC Undersecretariat for Climate Change (for its acronym in Spanish)
- SEMOP Follow-up, Monitoring and Processes Information System (for its acronym in Spanish)
- SENPLADES National Secretariat for Planning and Development (for its acronym in Spanish)
- SENESCYT National Secretariat for Higher Education, Science and Technology (for its acronym in Spanish)
- SERCOP Public Works Contracting Service (for its acronym in Spanish)
- SIP Stakeholder Involvement Plan
- SIS REDD+ Safeguards Information System (for its acronym in Spanish)
- SNAP National System of Protected Areas (for its acronym in Spanish)
- SNCF National Forest Control System (for its acronym in Spanish)
- SPN Undersecretariat for Natural Heritage (for its acronym in Spanish)
- SUIA Unique Environmental Information System (for its acronym in Spanish)
- UBN Unsatisfied basic needs
- UNCTAD UN Conference on Trade and Development
- UNDP United Nations Development Programme

- UNEP United Nations Environment Programme
- *UNFCCC* *UN Framework Convention on Climate Change*
- UNL Universidad Nacional de Loja (for its acronym in Spanish)
- WAP Working-age population
- WB World Bank
- WTS Wood Tracking System
- ZHDP Zones of homogeneous deforestation processes

Glossary of Terms

Bioadventure(*bioemprendimientos* in Spanish)	Bio-venture are initiatives associated with the sustainable use of biodiversity. They contribute to increasing the value of the standing forest, favoring the sustainability of the areas under conservation through the generation of new jobs and sources of income for the rural populations involved. Bio-venture represent an opportunity for biodiversity-rich countries to guide innovation and knowledge towards the development of products derived from physical, chemical, biochemical or biological transformations of biodiversity, with high added value and which, in the future, can become substitutes for petroleum products or non-renewable resources. They constitute a first link to bioeconomy.
Ecuador REDD+ Action Plan, Forests for Good Living[1] ***(REDD+ AP)***	Ecuador's strategy to reduce the incentives and factors that promote deforestation and degradation, and to increase incentives for the conservation, management, restoration and sustainable use of forest resources. It is Ecuador's *National REDD + Strategy*. The *REDD+ AP* defines the set of measures and actions that Ecuador has established as priorities to reduce and mitigate the main causes of deforestation and forest degradation.
REDD+ AP Implementation Plan (IP)	A plan to implement the *REDD+ AP* As of the date of this report, there are fifteen documents that, together, make up a portfolio of investment projects for measures and actions to address the causes of deforestation and forest degradation. *IPs* are prepared based on the logic of an investment project, with the following contents: background, objectives, implementation strategies (geographical prioritization, schedule, institutional arrangements, detailed budget, potential sources of financing), identification of co-benefits, social and environmental risks, actors and partners for implementation, social and environmental safeguards,

[1] This is the complete name of the document, hereinafter *REDD+ AP*, or simply "action plan for REDD +.".

	gender approach, monitoring and sustainability strategies.
Socio Bosque Program (PSB, for its acronym in Spanish)	Emblematic program of the Government of Ecuador (GoE) that seeks the consolidation of voluntary schemes for the conservation of forests, *páramos* (high altitude grasslands) and mangroves, by their owners or concessionaires, through the signing of agreements by which they commit to conserve them and, in exchange, receive an economic incentive for each hectare. Socio Bosque has been implemented since 2008 and people from almost all the indigenous nationalities of Ecuador are part of it. It has approximately 1.5 million hectares under conservation, which adds to the Ecuadorian protected areas the equivalent of 25% of the National System of Protected Areas (SNAP). This program benefits 180,000 people and, as of the date of this report, approximately USD 65 million had been invested since its inception.
Zones of homogeneous deforestation processes (ZHDPs)	Zones that group cantons whose population, agricultural and environmental dynamics are similar and have homogeneous patterns (causes) of deforestation.

Section 1. Description of the country and sector context

1.1 General context of the country

Geography and biodiversity

Ecuador is located in South America. It borders Colombia to the north, Peru to the south and to the east, and the Pacific Ocean to the west. Because of its territorial sea, it also has a maritime border with Costa Rica. Ecuador is one of the seventeen megadiverse countries in the world, as its plant biodiversity represents 7.68% of the vascular plants registered on the planet (García *et al.*, 2014; Bisby *et al.*, 2012; Neill and Ulloa, 2011, in MAE, 2016: 41); 18,198 species of flora have been registered, of which 17,748 are native and 4,500 are endemic (León-Yánez *et al.*, 2011, in MAE, 2016). Up to 2011, 2,433 new plant species were reported, of which 1,663 are also new for science (Neill and Ulloa, 2011, in MAE, 2016). The country has 91 ecosystems –of which 65 are forested, 14 are herbaceous and 12 are shrubs– that cover an area of 15,333,562 ha (59.8% of the national territory). Of this 91 ecosystems, 24 are in the Coast, 45 are in the Andes, and 22 are in the Amazon (MAE, 2012).

Socioeconomic context

Ecuador is the eighth largest economy in Latin America (PWC, 2016: 20). It has a population of 16,624,002 inhabitants,[2] 50.4% of whom are women. Its territory amounts to 256,370 km^2. During the period from 2007-2014, the country had a good economic performance that was reflected in a 4.3% growth of its gross domestic product (GDP), generated mainly by high oil prices and considerable external financing flows (World Bank, 2016). This, coupled with income redistribution and expansive social policies, allowed poverty to decrease from 37.6 to 22.5%, and the Gini coefficient was reduced from 0.54 to 0.47 in that same period (World Bank, 2016).

The country's main natural resources are oil and fishery and forest resources (PWC, 2016). For 2015, the productive sectors that contributed most to the country's GDP were: manufacturing (12.3%), trade (10.2%), oil-mining (9.6%), construction (9.9%), agriculture-forestry and fishing (8.9%) [Banco Central del Ecuador *(*Ecuador's central bank), 2017b].

During 2015 and 2016, the country faced a process of economic slowdown and contraction due to the fall in oil prices, the appreciation of the dollar and the effects of a 7.8-magnitude earthquake that occurred in April 2016 and caused the death of more than 600 people, 80,000 victims and the loss of infrastructure for more than three billion dollars.[3] From this account, the country is going through a complex period full of challenges, so it must adapt its economic structure to the new international context. However, Banco Central del Ecuador, in its publication of macroeconomic statistics of June

[2] Information provided by the National Institute of Statistics and Censuses (INEC, for its acronym in Spanish) and updated to November 15, 2016. For more information, visit: http://www.ecuadorencifras.gob.ec/estadisticas/.

[3] See: http://www.andes.info.ec/es/noticias/cifra-proyectada-reconstruccion-tras-terremoto-ecuador-podria-aumentar.html.

2017, indicates that the economy evidenced reactivation signs by showing growth in the last three quarters.[4]

According to the *Human Development Report 2017*, published by the United Nations Development Programme (UNDP), Ecuador is located in the group of countries with a high level of development; between 2010 and 2015, the country has climbed 7 places to number 89. According to the components of the Human Development Index (HDI), life expectancy at birth is 76.1 years, average schooling is 8.3 years and the gross national income (GNI) per capita is USD 10,536.

The aforementioned UNDP report also presents two indicators to measure gender equality within the HDI: the Gender Development Index (GDI), which measures the three basic dimensions of human development, health, education and control over economic resources; and the Gender Inequality Index (GII), which measures the loss of potential human development due to the inequality between female and male achievements in terms of reproductive health, empowerment and the labor market.

In the case of the GDI, Ecuador is among the countries with a high level of equality, a classification that it shares with Uruguay and Colombia among the Latin American countries analyzed, and with countries with a higher level of development, such as Norway, Australia and Canada, among others. In the case of the GII, the country obtains a value of 0.391, which places it in the average of countries with high human development in Latin America.

Labor market

The overall employment rate,[5] in June 2017, was 95.5% (INEC, 2017), which represents an annual increase of 0.8% over June 2016. On that same date, the gross employment rate[6] was of 65.6% at national level, 1.3% higher than the rate on June 2016.[7] Appropriate national employment[8] was 40.1% of the economically active population (EAP), which in the urban area was 49% and, in the rural area, 22.3%. Quito was the city with the highest rate of suitable employment (63.1%). For men, the rate stands at 47% and, for women, at 30.9%, which represents a percentage difference of 16.1% (INEC, 2017).

In June 2017, the unemployment rate was 4.5% of the EAP, which is a decrease from the same period of the previous year, when the indicator stood at 5.3%. The rate for urban population was 5.8%, compared to 1.9% in the rural area. With regards to unemployment by sex, 5.9% of women in the EAP were unemployed, while among men, unemployment was 3.5% (INEC, 2017).

29.8% of employees are affiliated to General Insurance, while 56.6% have no affiliation. Of the total number of people with employment, 47.9% is employed in the formal sector, while 45% is employed in

[4] See: https://www.bce.fin.ec/index.php/component/k2/item/776.

[5] Indicates what proportion of the total active people is actually employed, including employees and independents.

[6] Employed population/working-age population (WAP).

[7] Statistically significant variation according to INEC.

[8] Employed people who earn income equal to or above the minimum wage, work 40 hours or more a week, regardless of the desire and availability to work additional hours. Also included in this category are employed people who earn income equal to or above the minimum wage, work less than 40 hours, but do not wish to work additional hours (INEC, 2017).

the informal sector. The average labor income of an employed man is USD 355, while USD 278 is the income for an employed woman. The agriculture and fisheries branch of activities concentrates the largest share of employment, with 28.6% of the total of workers; it is followed by commerce, with 17.9%, and manufacturing, with 10.7% (Table 1) (INEC, 2017).

Table 1. Percentage of workers by branch of activity

Branch of Activity	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	Jun-15	Dec-15	Mar-16	Jun-16	Sept-16	Dec-16	Mar-17	Jun-17
Agriculture, livestock, hunting and fishing	28.5%	27.6%	27.9%	27.4%	24.8%	24.4%	26.6%	25.0%	28.1%	27.2%	26.8%	25.6%	29.3%	28.6%
Trade	19.5%	19.6%	20.4%	19.9%	18.3%	18.9%	18.4%	18.8%	17.8%	18.3%	18.7%	19.0%	17.9%	17.9%
Manufacturing (including oil refinery)	10.6%	11.1%	10.5%	10.6%	11.4%	11.3%	11.2%	10.6%	10.3%	10.8%	10.8%	11.2%	10.3%	10.7%
Teaching and health	7.5%	8.3%	7.9%	8.0%	7.6%	6.8%	6.9%	7.1%	6.9%	6.9%	7.2%	6.9%	6.5%	6.6%
Accommodation and food services	4.5%	4.4%	4.9%	5.1%	5.3%	5.5%	5.6%	6.1%	6.6%	6.1%	6.4%	6.5%	6.1%	6.5%
Construction	6.9%	6.5%	6.1%	6.3%	7.6%	7.4%	7.5%	7.3%	6.2%	6.5%	6.8%	7.1%	6.7%	6.3%
Transport	4.7%	5.1%	5.6%	5.6%	5.5%	5.9%	5.5%	6.2%	5.8%	6.0%	5.7%	5.7%	5.9%	5.8%
Professional, technical and administrative activities	3.6%	3.7%	4.0%	4.4%	4.6%	4.3%	4.3%	4.5%	4.4%	4.5%	4.8%	4.2%	4.1%	4.2%
Public administration, defense, mandatory social security	3.1%	3.5%	3.8%	3.7%	4.0%	4.4%	4.1%	4.4%	4.2%	4.0%	3.7%	4.2%	3.6%	4.0%
Other services	4.1%	4.2%	3.5%	3.5%	4.1%	3.8%	3.7%	3.9%	4.2%	4.1%	3.9%	3.9%	4.0%	3.7%
Domestic service	3.4%	2.9%	2.3%	2.5%	3.1%	3.3%	2.7%	2.7%	2.5%	2.7%	2.6%	2.8%	2.8%	2.8%
Mail and communications	1.5%	1.3%	1.1%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.0%	1.0%	0.9%	1.0%
Financial services activities	0.8%	0.8%	1.1%	0.9%	1.1%	1.0%	0.9%	0.8%	0.7%	0.7%	0.5%	0.6%	0.6%	0.8%
Oil and mines	0.5%	0.6%	0.5%	0.5%	0.7%	0.8%	0.7%	0.7%	0.6%	0.7%	0.4%	0.6%	0.7%	0.7%
Electricity and water supply	0.7%	0.6%	0.6%	0.5%	0.8%	1.0%	0.6%	0.7&	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: INEC (2017)

The services sector brings together the largest number of women, the majority of whom are engaged in activities such as domestic service (94.1%), social and health services activities (68.3%), hotels and restaurants (65.8%), and education (61.9%). In contrast, the majority of men are engaged in activities such as construction (94.7%), transport (89%), fishing (88.6%) and agriculture (69.2%) (INEC *et al.*, 2014).

Illiteracy and education

The illiteracy rate is 7.5%, with a higher incidence in rural areas (12.25%) than in urban areas (3.75%), and among women (7.7%) with respect to men (5.8%); of this account, the group of rural women is the one with the highest illiteracy, with 14.2%. It should be noted that illiteracy is declining, as shown by the data by age: among the population between 15 and 24 years of age, the percentage of illiterates is reduced to 1.5% (INEC *et al.*, 2014).

The basic schooling rate is 94.5%, the schooling rate at high school level is 55%, and the higher education rate is 59.1%. Women have lower presence than men in basic schooling; however, they outnumber men in high school and higher education.

1.2 Importance and current situation of the forest sector

Socioeconomic and environmental relevance of the forest sector

Regarding the contribution of the forestry sector to the economy of the country, it is worth indicating that the national accounts incorporate it in two aggregates: a) silviculture/extraction of wood, and b) wood production/manufacture of wood products. Both categories contributed 1.63% of the GDP (Banco Central, 2017a) in 2015, which reflects a decrease in participation in the last eight years, since in 2007 they represented 2.3% of the GDP (Viteri, 2010), a value in which they had fluctuated since 1998 (Lascano, 2008). Additionally, according to the Institute for the Promotion of Exports and Investments of Ecuador (Pro-Ecuador, for its acronym in Spanish), by January 2017 the forestry and processed products sector contributed 2.93% of non-oil exports. These are led by the production of banana and plantain, with 30.83%; shrimp, with 18.75%; fishing, with 13.2%; flowers and plants, with 7.18%; agroindustry, with 4.31%; metalworking, with 4.01%; and, processed foods, with 2.96%. The latter sector is followed by the forestry sector.

However, national macroeconomic accounting does not capture the full contribution of the forestry sector to the GDP and the Ecuadorian economy, since the country's forests support productive activities such as agriculture, hydropower, irrigation, tourism and the supply of firewood, food and medicines, contributing directly and significantly to the provision of livelihoods for local populations. Additionally, forests provide environmental services such as the regulation of hydrological flows, soil protection, carbon fixation and biological diversity, which help mitigate vulnerability to climate change and natural disasters. According to Viteri (2010), 8% of the Ecuadorian EAP directly depends on productive forestry activity and, if the main environmental services provided by the sector are valued, its contribution to the economy of the country could even exceed USD 43 billion (approximately, 43% of the GDP). A large percentage of this amount (98%) comes mainly from the environmental service of water generation and regulation, both for the purposes of hydroelectric generation and for human, industrial and agricultural consumption (Lascano, 2008). However, it is worth noting that the quantification of option values derived from the use of biodiversity (biotechnology), or existence values, was not incorporated in the aforementioned economic valuation exercise, so the contribution could be even higher.In addition to the economic, social and environmental importance of forests, these are of cultural relevance, since they constitute sacred sites and elements of the worldview of many indigenous peoples and communities in Ecuador.[9] In effect, forest ecosystems represent an intrinsic, cultural and spiritual value for the communities, peoples and nationalities of the country, so their conservation has a direct influence on it.[10]

[9] According to the Integrated System of Social Indicators of Ecuador (SIISE, for its acronym in Spanish), fourteen nationalities and eighteen indigenous peoples, Afro-Ecuadorians and Montubios, live in the country. Each one has its own forms of organization and customs, and twelve languages are spoken that are part of the Ecuadorian identity and the historical and cultural heritage of the country. See: http://www.siise.gob.ec/siiseweb/PageWebs/glosario/ficglo_napuin.htm.

[10] The Inter-American Development Bank (IDB) presented, in September 2017, in the city of Quito, the results it obtained on socioeconomic and socio-cultural evaluation studies of the Socio Bosque Program. The study indicates that this conservation initiative obtains widely positive results in its cultural impacts, which reflects the importance and high correlation that exists between forest conservation and indigenous peoples.

Current situation of the forest sectorBy 2014, the total area of native forests in Ecuador was 12,753,387 ha, of which 74% was in the Amazon region (MAE, 2016: 17). The rest of the surface was distributed between the regions of the coast and the mountains (about 2,015,234 and 1,331,566 hectares, for 16 and 10%, respectively) (MAE, 2016: 40). The National Forestry Evaluation[11] (NFE) has established nine types of forests in Ecuador: a) dry Andean forest; b) pluviseasonal dry forest; c) Andean montane evergreen forest; d) Andean piedmont evergreen forest; e) Andean evergreen forest of Andean brow; f) Amazonian lowland evergreen forest; g) Chocó lowland evergreen forest; h) mangrove; i) *moretales* (giant palm swamps).

The agricultural census carried out in the year 2000 shows the predominance of private property over the other forms of ownership of agricultural land. Thus, 94.5% of Ecuador's agricultural land (11,680,469 ha) is privately owned (including legal and natural persons) and 4.9% (602,862 ha) is communally owned (indigenous, Afro-Ecuadorian and Montubios). Only 0.6%, that is, 73,261 ha, is made up of land from public institutions (Sipae, 2011).

In regards to forest lands, approximately six million hectares of forest are within indigenous communal lands,[12] which represents 54% of the national territory. The majority of these lands are found in the Ecuadorian Amazon (SENEPLADES, 2013c). There is also a significant overlap between indigenous territories and other land designations, such as protected areas and protective forests.[13] More than 25% of the priority areas for conservation are located in indigenous territories (Bertzky *et al*., 2011).

On the other hand, according to the Ministry of Agriculture and Livestock (MAGAP,[14] for its acronym in Spanish, 2016) there are high levels of under and overutilization of the land adequate for pastures.

[11] The NFE was a project of the Ministry of Environment of Ecuador (MAE, for its acronym in Spanish), which generated primary information about the state of the forest resource in the country; executed between 2009 and 2013, it was the first evaluation carried out by Ecuador in this dimension. Results can be obtained at: http://www.ambiente.gob.ec/evaluacion-nacional-forestal-del-ecuador-enf/. The MAE plans to initiate an update in 2018.

[12] In Ecuador, there is legal possibility to create indigenous territories [called indigenous territorial circumscriptions (ITCs, for their acronym in Spanish)] as special regimes for reasons of environmental, ethnic or cultural conservation. In this sense, parishes, cantons or provinces made up mostly of indigenous, Afro-Ecuadorian, Montubio or ancestral communities, peoples or nationalities may adopt this special administration regime after a consultation approved by at least two thirds of the valid votes [Articles 60, 242 and 257 of the *Constitution of the Republic of Ecuador* (*CRE*)]. However, at the time of preparing this report (August 2017), no ITCs had yet been established; what exist are properties or territories that have been legalized and, through public deeds, have been granted to indigenous communities with different levels of organization (grassroots communities, associations, federations or nationalities). Additionally, the *CRE*, in Article 57, acknowledges that community lands are imprescriptible, inalienable, not subject to seizure and indivisible.

[13] According to Article 6 of the *Forestry and Conservation of Natural Areas and Wildlife Law*, protective forests and vegetation are considered "[...] those plant formations, natural or cultivated, that meet one or more of the following requirements: a) Have as main function the conservation of soil and wildlife; b) Are located in areas that allow control of torrential pluvial phenomena or the preservation of hydrographic basins, especially in areas of low rainfall; c) Occupy mountain brows or areas adjacent to water sources, streams or reservoirs; d) Constitute wind-breaking or protection barriers to protect the balance of the environment; e) Are in hydrological-forestry research areas; f) Are located in strategic areas for national defense; and, g) Constitute a factor for the defense of natural resources and infrastructure works of public interest."

[14] As of June 2017, this ministry changed its name, from Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP) to Ministry of Agriculture and Livestock (MAG, for its acronym in Spanish).

Indeed, in four of the seven planning zones in which the National Secretariat for Planning and Development (SENPLADES, for its acronym in Spanish) has divided the country, excluding the metropolitan regions of Quito and Guayaquil (see Map 1), the levels of land use appropriate for pastures exceed 30% only in three zones (4, 6 and 7) (Table 2), while in zone 5 overuse reaches 55%. This shows conflicts in the use of land, so a change in the current models of livestock exploitation and productive reconversion will be necessary.

Map 1. Territorial planning zones of Ecuador according to SENEPLADES

Source: SENEPLADES (2013)

Table 2. Conflict in the use of land for pastures according to territorial planning zones

	Adequate		Underused		Overused		Without agricultural use		Total	
	ha	Percentage	ha	Percentage	ha	Percentage	ha	Percentage	ha	Percentage
Total nationwide	820,018	26%	1,800,021	58%	419,126	13%	72,206	2%	3,111,370	100%
Zone 1	111,343	22%	289,114	57%	104,348	20%	6,719	1%	511.525	100%
Zone 2	128,667	21%	366,518	61%	85,769	14%	19,845	3%	600,799	100%
Zone 3	92,835	16%	415,635	73%	55,590	10%	3,318	1%	567,379	100%
Zone 4	87,518	42%	75,478	36%	44,953	21%	2,642	1%	210,592	100%
Zone 5	27,926	22%	15,465	12%	79,868	55%	15,473	12%	129,733	100%
Zone 6	241,187	32%	468,761	62%	24,362	3%	17,518	2%	751,858	100%
Zone 7	129,730	39%	167,866	50%	31,892	9%	6,657	2%	336,145	100%
Undefined zones	812	24%	1,184	35%	1,338	40%	4	0%	3,339	100%

Source: MAGAP (2016)

On the other hand, of the four million hectares suitable for forests and reforestation, only 23% is adequately used, while 74% (2.9 million ha) is overused with crops (22%) and pastures (52%) (Table 3).

The seriousness of conflicts in land use is significant in these areas, so the implementation of silvopastoral conversion and promotion actions is considered an urgent matter (MAGAP, 2016).

Table 3. Conflict in the use of land appropriate for forests according to planning zones

	Adequate		Underused		Without agricultural use		Total	
	ha	Percentage	Ha	Percentage	ha	Percentage	ha	Percentage
Total nationwide	952,668	23%	2,935,228	74%	115,590	3%	4,003,468	100%
Zone 1	100,938	16%	505,503	82%	11,727	2%	618,168	100%
Zone 2	125,659	28%	299,049	67%	19,789	4%	444,497	100%
Zone 3	173,548	28%	425,702	70%	10,239	2%	609,489	100%
Zone 4	23,203	6%	377,610	92%	8,972	2%	409,785	100%
Zone 5	82,127	24%	236,584	70%	18,479	5%	336,190	100%
Zone 6	192,659	24%	572,042	72%	29,407	4%	794,108	100%
Zone 7	254,454	33%	510,567	65%	14,842	2%	779,863	100%
Undefined zones	79	1%	8,172	72%	3,135	28%	11,386	100%

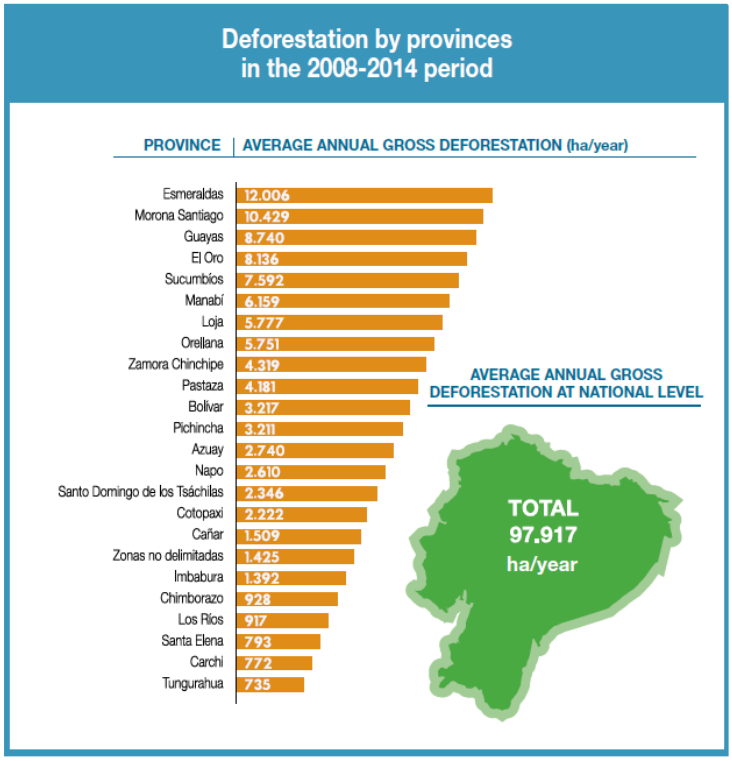
Source: MAGAP (2016)

Between 1990 and 2014, about 2.2 million hectares of natural forest were lost in the country; coverage of native forest decreased from 14,587,771 ha, in 1990, to 12,753,387 ha, in 2014 (MAE, 2016).

Situation of deforestation

When analyzing the situation of deforestation in 2014, it can be pointed out that the ecosystems that have the greatest deforestation are the Amazonian lowland evergreen forest, the Chocó lowland evergreen forest, and the Andean piedmont evergreen forest. The most affected forest ecosystem is the dry Andean forest, where the highest average annual deforestation rates in the country are observed between 2000, 2008 and 2014 (MAE, 2016). The provinces with the highest rate of deforestation in 2008-2014 were Esmeraldas, with 12,006 ha/year, and Morona Santiago, with 10,429 ha/year (see Figure 1). The coastal provinces of Guayas and El Oro also have high rates of deforestation, with 8,740 and 8,136 ha/year, respectively (MAE, 2016).

Figure 1. Gross deforestation by province (2008-2014)



Source: *REDD+ AP*, MAE (2016)

However, according to an intertemporal analysis conducted by the MAE for the years 1990-2000, 2000-2008 and 2008-2014, it is observed that gross and net deforestation in continental Ecuador is decreasing. Thus, Table 4 shows that the gross deforestation rate went from -0.93%, in the period from 1990-2000, to -0.77%, in the period from 2008-2014; and something similar happened with the net rate, which went from -0.65 to -0.37% during the same periods (MAE, 2016).

Table 4. Evolution of gross and net deforestation rates in Ecuador

Period	Average annual gross deforestation (ha/year)	Average annual reforestation (ha/year)	Average annual net deforestation (ha/year)	Annual gross deforestation rate (%)	Annual net deforestation rate (%)
1990-2000	129,943	37,201	92,742	-0.93%	-0.65%
2000-2008	108,666	30,918	77,748	-0.82%	-0.58%
2008-2014	97,918	50,421	47,497	-0.77%	-0.37%

Source: MAE (2016c)

Indeed, as it can be seen in Table 4, the deforestation rate has been decreasing in the last twenty-five years, which according to Castro *et al.* (2013) is explained by the fact that:

a) Agricultural intensification[15] has played a key role in reducing the demand for new agricultural spaces and, through this, deforestation.

b) Land occupation processes (mainly agricultural) that explain deforestation follow different patterns in the different regions of Ecuador; this, according to their levels of intensification of land use and the restructuring of rural employment.

c) Forest heritage conservation policies.

In any case, both agricultural intensification and the different land occupation processes indicate that the rate of deforestation has decreased, although it remains negative, that is, deforestation continues, albeit at a slower rate.

This loss of native forests is one of the main causes for the emission of greenhouse gases (GHG). In fact, according to the national GHG inventory, in 2012 Ecuador issued 80.6 million tCO_2 equivalents (MAE, 2017c), which represents 0.15% of global emissions.[16] Of these emissions, 46.60% belongs to the energy sector, followed by the land use, land-use change and forestry (LULUCF) sector, which represents 25.35% (MAE, 2017c). It should be noted that, in the latter case, deforestation is one of the main causes of emissions.

1.3 Description of the key factors of deforestation and degradation

There are several factors that affect deforestation (see Figure 2), either because they contribute to the degradation of forests that are later replaced by pastures or crops, or because they directly promote the clearing of forests for agricultural production. The main causes of deforestation are:

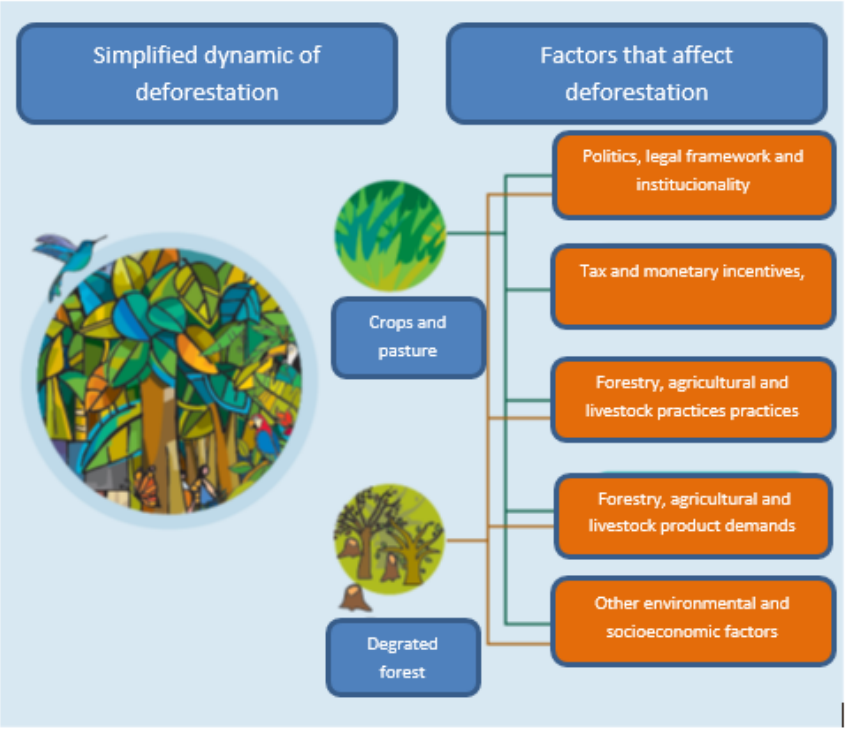
- Direct:
  - Expansion of agricultural areas (Castro *et al*., 2013; MAE, 2016c).
- Indirect:
  - National, regional and local policies linked to development policies in various sectors that generate deforestation (Arias *et al.*, 2013).
  - Lack of clarity in tenure systems and formal land delimitation (MAE, 2016).

[15] The intensification of agricultural production is understood as the increase in the productivity of the main crops. This is observed from the 1990s, when an intensification of production begins to occur and the per capita productivity index constantly grows. This dynamic continued until 1998, when the "El Niño" phenomenon significantly affected agricultural production. After the crisis at the end of the 20th century that culminated in the dollarization of the country's economy in the year 2000, the agricultural surface decreased slightly and has remained relatively constant in the decade 2000-2010. On the other hand, agricultural productivity recovered at the beginning of 2000 and remained constant until 2006, year after which it began to improve again (Castro *et al*., 2013).

[16] *Intended Nationally Determined Contribution (INDC)*, available at: http://www4.unfccc.int/submissions/INDC/Published%20Documents/Ecuador/1/Ecuador%20INDC%2001-10-2015.pdf.

- Lack of updated zoning of the areas of permanent forest production within the State's Forest Patrimony (MAE, 2014b, Morales *et al.*, 2010, Palacios and Quiroz, 2011).

Figure 2. Factors that affect deforestation



Direct causes of deforestation

The main direct cause of deforestation corresponds to the expansion of agricultural areas (Castro *et al.*, 2013). This statement is related to the document *Análisis de la deforestación en el Ecuador continental 1990-2014 (Analysis of deforestation in continental Ecuador 1990-2014)* (MAE, 2016c), which concludes that for the period 2008-2014 gross deforestation reached 587,506 ha, of which 96.7% (568,404 ha) was transformed to agricultural land; 0.9%, to changes per body of artificial water; 0.7%, to the anthropic zone; 0.8%, to other lands and, finally, 0.8%, to forest plantations (see Table 5).

The MAE also contrasted the results of deforestation with a road map and determined that 90% of the deforestation patches are less than 5 kilometers away from roads. Based on the slope map, it was shown that 57% of deforestation is found in areas with slopes of less than 10 degrees. For this reason, there is greater deforestation in areas of lower slope and less distance to roads, as it is logical, these are more accessible (MAE, 2016).

Table 5. Cover change matrix (2008-2014)

		Cover 2014 (in hectares)							
		Native forest	Agricultural land	Shrub and herbaceous vegetation	Body of water	Anthropic zone	Other lands	Forest plantation	Total
Cover 2008 (hectares)	Native forest	12,450,861	568,404	0	5,506	4,024	4,821	4,750	13,038,367
	Agricultural land	298,584	7,933,028	399,177	46,434	58,154	20,291	75,903	8,831,572
	Shrub and herbaceous vegetation	0	146,316	1,992,609	2,522	3,688	6,959	10,870	2,162,964
	Body of water	3,941	49,920	75	439,561	1,655	10,776	223	506,150
	Anthropic zone	0	0	0	0	177,154	0	0	177,154
	Other lands	0	7,683	22,123	11,081	1,344	77,377	47	119,655
	Forest plantation	0	13.806	9.780	0	123	210	38.278	62.197
	Total	12,753,387	8,719,157	2,423,764	505,104	246,142	120,434	130,072	24,898,060

Source: MAE (2016c). *Analysis of deforestation in continental Ecuador 1990-2014*. Monitoring Unit.

However, deforestation does not happen in the same way throughout Ecuador, since there are processes that establish differences depending on the geographical area where this scourge occurs; from this account, the existence of thirteen zones of homogeneous deforestation processes (ZHDPs) have been defined (Map 2), which group cantons whose population, agricultural and environmental dynamics are similar (Table 6). Therefore, a territorial implementation to reduce deforestation should consider the particularity of each of these zones.

The analysis of regional promoters for ZHDPs and the statistical projections for each of them point to the importance of State policies in the management of land use and coverage. In this sense, the State's development plans, which affect both the opportunity costs of the forest and the demographic dynamics of the country, play a key role in structuring the risk of deforestation (Castro *et al.*, 2013).

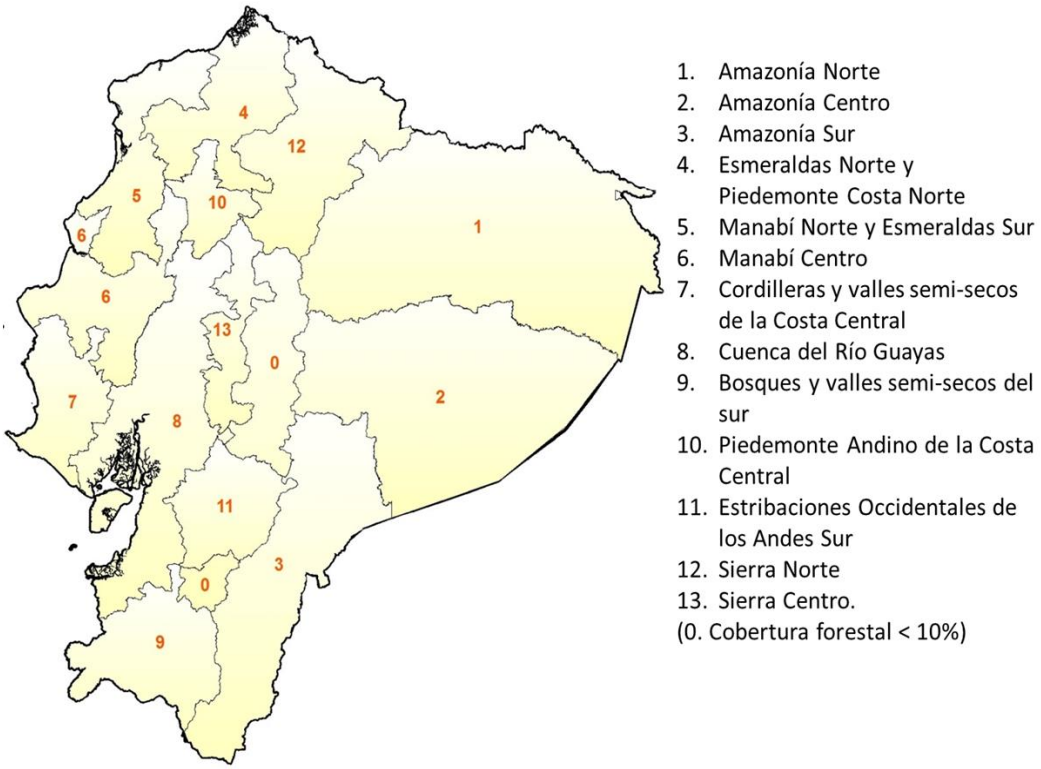
Indirect causes of deforestation

In relation to the indirect (underlying) causes of deforestation, causes linked to national, regional and local policies in various sectors are identified. The *REDD+ Action Plan*[17] has carried out an in-depth

[17] The *REDD+ Action Plan* is Ecuador's strategy for the implementation of REDD+ in the country. This tool seeks to reduce the incentives that promote deforestation and degradation, and increase incentives for the conservation, management, restoration and sustainable use of forest resources. The plan consists of four strategic components: a)

analysis of the factors that affect deforestation, finding variables that range from agricultural practices, fiscal productive incentives, to policies that promote the development of the mining, oil and agricultural sectors, as well as colonization (Figure 2) (MAE, 2016). This is how the deforestation of the northern Amazon has been framed in the processes of agrarian reform/colonization and oil exploitation (Sierra, 2013, Wasserstrom and Southgate, 2013, in MAE, 2016: 50).

Map 2. Zones of homogeneous deforestation processes in Ecuador



Source: Castro *et al*. (2013)

Policies and institutional management for REDD+; b) Transition to sustainable production systems; c) Sustainable forest management; d) Conservation and restoration. Section 1.5 provides more information about this plan.

This shows that policies to promote agricultural production in Ecuador have been characterized by a planning and ordering that have not adequately considered the social, economic and environmental features of the regions (Morales *et al.*, 2010, MAGAP, 2016). Growth has been spontaneous and, in the best of cases, it has been planned at the level of local governments, but not at the country level or in accordance with national development objectives (Morales *et al.*, 2010, ATPA 2014). On the other hand, it has also been pointed out that a strengthening of forest control is necessary, as long as it is accompanied by a change in the forest regulation model (MAE, 2014b).Table 6. Comparative summary of the main characteristics of the ZHDPs

		Cover 2014 (in hectares)							
		Native forest	Agricultural land	Shrub and herbaceous vegetation	Body of water	Anthropic zone	Other lands	Forest plantation	Total
Cover 2008 (hectares)	Native forest	12,450,861	568,404	0	5,506	4,024	4,821	4,750	13,038,367
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	Anthropic zone	0	0	0	0	177,154	0	0	177,154
	Other lands	0	7,683	22,123	11,081	1,344	77,377	47	119,655
	Forest plantation	0	13.806	9.780	0	123	210	38.278	62.197
	Total	12,753,387	8,719,157	2,423,764	505,104	246,142	120,434	130,072	24,898,060

Source: Castro *et al.* (2013)

The lack of clarity in tenure systems and formal delimitation of land has also been identified as an underlying cause of deforestation. In spite of the advances that the country has had in this area, there are still forest lands without titles of property or in conflict, which, together with the demand for wood, causes an illegal exploitation of the forests of rural areas (MAE, 2017c). This scenario also weakens the opportunities for investment in the forest, since the lack of legal certainty over forest-covered land discourages production and conservation.

Another cause strongly linked to deforestation is the lack of an updated zoning of the areas of permanent forest production within the State's Forest Heritage,[18] which promotes processes of integral

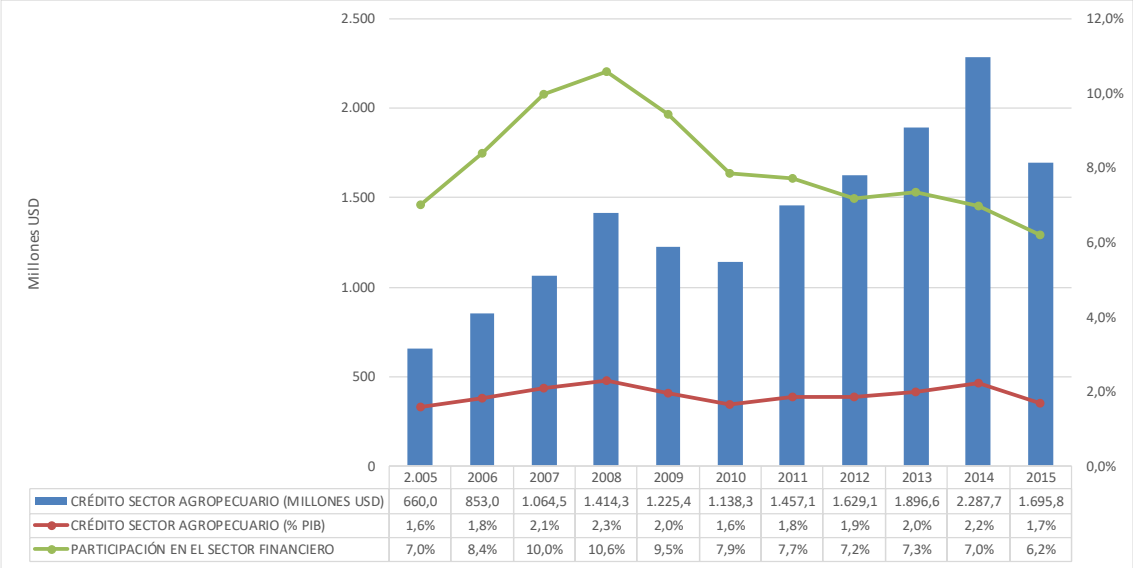
[18] According to the *Forestry and Conservation of Natural Areas and Wildlife Law* (2004), the State's Forest Heritage corresponds to "[...] forest lands that, in accordance with the Law, are its property, the natural forests that exist in them, those cultivated on its behalf and the wild flora and fauna; the forests that have been planted or will be planted on State land, except for those that were planted by settlers and commoners on land in their possession." Also part of this heritage are "[...] the lands of the State, marginal for agricultural or livestock exploitation [...] the lands that are in a natural state and that for their scientific value and their influence on the environment, for conservation of the ecosystem and species of flora and fauna, should be maintained in the wild, and the mangroves, even those that exist

forest management, in addition to establishing a real delimitation between the areas of competence of the MAE and the MAG to allow adequate forest control (MAE, 2014b, Morales *et al.*, 2010, Palacios and Quiroz, 2011).

On the other hand, in the country, the credit policy has been linked to the traditional agricultural promotion policy –addressed above–, which unfortunately has encouraged the non-sustainable use of land. On average, for the period 2005-2015, the volume of credit granted by the national financial system[19] to the agriculture, livestock, silviculture and fishing sector amounted USD 1,392.9 million per year, equivalent to 1.9% of the GDP, which represented 8.1% of the total credit of the financial sector (Graph 3). Thus, it can be observed that the amount of loans had an important growth, going from USD 660 million in 2005 to USD 1,695 million in 2015.

Also, in 2013 the total estimated amount of fiscal and monetary incentives for the agricultural sector was USD 1,450.36 million, equivalent to 1.55% of the GDP. The main incentives for the agricultural sector were, first, tax concessions, with a share of 40.71% of the total, followed by subsidized loans granted by BanEcuador [formerly known as Banco Nacional de Fomento *(*National Promotion Bank)] and the National Financial Corporation (NFC), with 28.9%, and direct subsidies, with 2% (MAE, 2016).

Figure 3. Volume of loans for the agricultural sector



	2.005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CRÉDITO SECTOR AGROPECUARIO (MILLONES USD)	660,0	853,0	1.064,5	1.414,3	1.225,4	1.138,3	1.457,1	1.629,1	1.896,6	2.287,7	1.695,8
CRÉDITO SECTOR AGROPECUARIO (% PIB)	1,6%	1,8%	2,1%	2,3%	2,0%	1,6%	1,8%	1,9%	2,0%	2,2%	1,7%
PARTICIPACIÓN EN EL SECTOR FINANCIERO	7,0%	8,4%	10,0%	10,6%	9,5%	7,9%	7,7%	7,2%	7,3%	7,0%	6,2%

Source: MAE (2017b)

on private properties, are considered State property and cannot take part in trade, are not susceptible to possession or any other means of appropriation, and they can only be exploited through a granted concession."

[19] It includes private and public financial institutions, does not include savings and credit cooperatives. Banco del Instituto Ecuatoriano de Seguridad Social [Bank of the Ecuadorian Institute of Social Security (BIESS, for its acronym in Spanish)] is not included among public institutions.

In 2015, BanEcuador granted USD 28,823,974 in loans for agriculture, livestock, silviculture and fisheries; 43.9 and 6.3% of these loans were destined to the cattle breeding and cacao and coffee cultivation sub-sectors, respectively. BanEcuador's loans seek to promote productive activities and almost half of those that support agricultural activities are directed to livestock, which is precisely the use of land that replaces natural forest areas in a greater proportion (MAE, 2017b).

Credit lines are not oriented towards production in diversified systems, but rather focus on a single species, which is why they end up promoting monoculture. Loans encourage agricultural practices that are one of the main causes of deforestation. Therefore, if their granting made it mandatory to comply with certain environmental conditions related to sustainable practices, it would contribute to the reduction of deforestation and to more sustainable production (MAE, 2016).

For this reason, the *REDD+ Action Plan* proposes obtaining resources through loan programs and agricultural funds that establish conditions based on sustainable production, that do not contribute to deforestation and that, rather, allow the implementation of REDD+ measures and actions (MAE, 2016). To this end, the MAE has prepared the document *Análisis y propuestas para contribuir a que los servicios financieros de la banca fomenten la producción sostenible y libre de deforestación* (*Analysis and proposals to contribute so that the financial services of the bank promote sustainable and deforestation-free production)* (MAE, 2017b), which includes valuable information on the development of the private and public financial sector in regards to this issue, an analysis of the demand and supply of financing available for sustainable agricultural production, progress that has been made to make improvements to the credit and financing regulations of BanEcuador, and manuals for green credit lines in this same financial institution.

1.4 Trends in forest resources

Deforestation projections for each ZHDP suggest, as a whole, that the fall of deforestation in Ecuador will continue in the current decade. The annual deforestation projection for the 2008-2020 period is 214.8 km^2 per year, that is, it would be 70% less than in the previous period. However, it is important to note that this amount is reached because the models project a reversal of the process in two zones: Central Manabí (ZHDP-6) and in the semi-dry forests and valleys of the south (ZHDP-9). In both cases, mainly due to a redistribution of the population (Castro *et al.*, 2013). In the first, signs of a forest transition began to be observed during the first decade of the 21st century and, in the second, deforestation fell by more than 50% during the period, compared to the previous decade. If these two zones are not taken into account, deforestation in Ecuador would reach approximately 310 km^2 per year. In contrast, projections suggest that deforestation in the northern Amazonia will show an incremental trend, mainly due to the drop in transport costs and improvement of agricultural income (Castro *et al.*, 2013).

The analysis of regional promoters for the ZHDPs, and the statistical projections for each one, point to the importance of State policies in the management of land use and coverage. State development plans, which affect both the opportunity costs of the forest and the demographic dynamics of the country, play a key role in structuring the risk of deforestation (Castro *et al.*, 2013). Specifically, it would be possible to reduce deforestation, especially in those ZHDPs with high levels of expansion of the area for agricultural use (South Amazonia, Central Manabí and central mountain range) through policies that promote agricultural intensification in general, and livestock in particular. In them, medium and small farmers

have not had the capacity to invest to increase their agricultural yields. In comparison with other countries, Ecuador has a wide margin to improve agricultural productivity and, thus, gradually reduce the unnecessary expansion of the agricultural frontier and, therefore, deforestation (Castro *et al.*, 2013).

In addition, deforestation risk models clearly demonstrate that actions aimed at protecting remaining forest have a key impact on their conservation in some areas of the country. The establishment of national protected areas or areas under private and community conservation with the Socio Bosque Program, from the MAE, and protective forests, by local governments, has been a deterrent to deforestation, especially in the Andean area. This suggests that a policy that promotes protection actions can yield significant results in the process of reducing deforestation, particularly in areas with few remaining native forest (Castro *et al.*, 2013).

On the other hand, there are still gaps regarding the factors that control deforestation in Ecuador. Thus, for example, it is not known with precision if these are associated with large individual owners (>50 ha) or with the coordinated or accidental association of several or many medium or small agricultural producers. In some ZHDPs, the expansion of medium patches was caused by medium and large producers, for example, palm growers, but in other zones this relationship is not so clear. The implications for the management of deforestation in these scenarios are important. In fact, large producers are the ones that cause the most deforestation, the greatest added value would be in working especially with this type of producer that can act as a single large deforestation agent (Castro *et al.*, 2013).

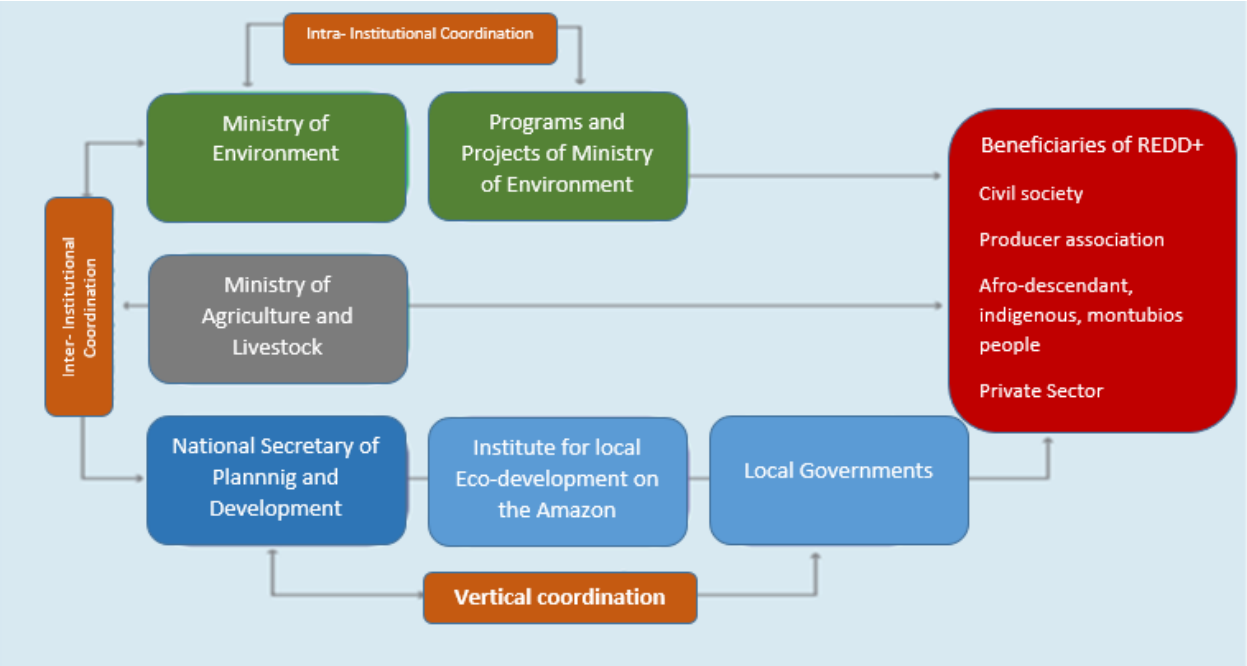
Finally, an additional consideration to estimate the future situation of forests corresponds to regeneration and reforestation, since for the period from 2008-2014 the MAE identified that 298,584 ha have changed from agricultural lands to forests (see Table 5), while only 75,903 ha became forest plantations. This implies that regeneration constitutes an important potential for the increase of carbon reservoirs. However, there are no studies that accurately identify the factors or conditions that led to the decision made 15 or 30 years ago for these changes to occur, which is a topic that should be investigated more, although, due to its importance, the natural regeneration of forests should be an important issue (Castro *et al.*, 2013).

1.5 Description of forest governance mechanisms

Given the transversal and multidisciplinary nature of climate change, and taking into account the environmental and social aspects that fall within the forestry sector, Ecuador relies on an intersectoral and interinstitutional framework that allows it to address the causes of deforestation and implement the REDD+ strategy. Figure 4 shows the presence of the following institutions:

- The Ministry of Environment of Ecuador (MAE) is the national environmental authority and, therefore, the authority in terms of climate change management, responsible for coordinating the State's action to comply with national objectives and international commitments on the issue. Additionally, it executes projects in its areas of competence (conservation, protected areas, restoration).
- The Ministry of Agriculture and Livestock (MAG) is the national authority of the agricultural sector and, therefore, has competence over the main variables that generate pressure on forests.

Figure 4. Relevant institutional framework linked to the forestry sector for the implementation of the REDD+



Source: MAE (2016)

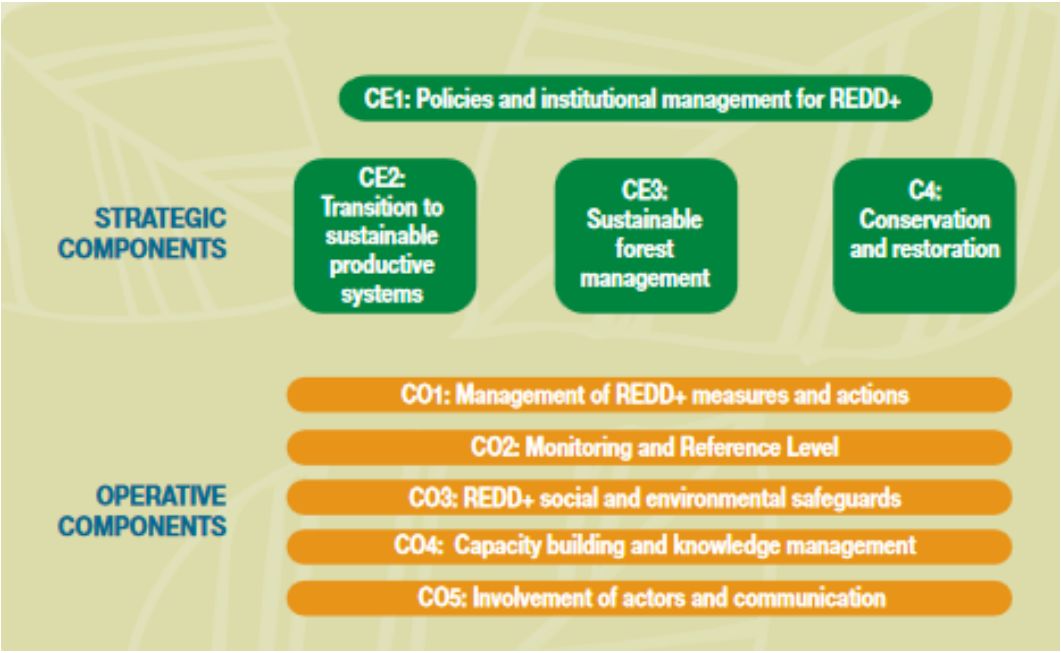
- The National Secretariat for Planning and Development (SENPLADES) is the entity responsible for planning development in the country; its opinions are binding for the establishment of development indicators and goals, as well as for budget allocation.
- The Instituto para el Ecodesarrollo Regional Amazónico (Institute for Amazonian Ecological Development), whose purpose is to promote sustainable development and execute sustainable strategic projects in the Ecuadorian Amazon, is in charge of managing part of the oil revenues that by law must be reinvested in the region. In recent years, its actions have been focused on the integration of fluvial, terrestrial and aerial networks within the region; the identification and promotion of tourism demand; the improvement of productivity and marketing channels of the Amazonian production.
- Decentralized autonomous governments (GADs), which correspond to local governments at its three levels: prefectures (provinces), municipalities (cantons) and parish boards (parishes) in the rural sector.

On the other hand, on November 7, 2016, the country approved *Forests for Good Living* (*Bosques para el buen vivir)*. *The REDD+ Action Plan, Forests for Good Living (REDD+ AP)*,[20] which seeks to reduce the incentives that promote deforestation and degradation, as well as to increase incentives for the conservation, management, restoration and sustainable use of forest resources. The *REDD+ AP* is another example of the favorable environment that Ecuador presents for the implementation of REDD+, since having a national REDD+ strategy is one of the requirements demanded by the *Warsaw Framework for REDD+*. The plan, as can be seen in Figure 5, consists of four strategic components and

[20] Available at: http://suia.ambiente.gob.ec/redd.

five operational components that seek to promote mitigation and adaptation actions to climate change that point to the convergence of the country's environmental and development agendas.[21]

Figure 5. Strategic and operational components of the Ecuador *REDD+ AP*



Source: MAE (2016)

In 2015, Ecuador also presented its Forest Reference Emission Levels to the United Nations Framework Convention on Climate Change (UNFCCC).[22] The country has also made progress in the development of the National Forest Control System (SNCF, for its acronym in Spanish) and the Safeguards Information System (SIS). In 2017 the Summary of Information on Safeguards for REDD+ of Ecuador was submitted to the UNFCCC and the Technical Analysis of the Technical Annex for REDD+ concluded the same year, hence, Ecuador has completed the REDD+ preparation phase and it is the second country worldwide to be eligible for REDD+ Results Based Payments.

Also, Ecuador has two important incentive programs: the National Incentive Program for the Conservation of the Natural Heritage "Socio Bosque" (commonly called the "Socio Bosque Program," PSB) and the National Forestry Restoration Program (PRF, for its acronym in Spanish), executed by the MAE. The first is promoted since 2008, almost all the indigenous nationalities of Ecuador participate in it and it has approximately 1.5 million hectares under conservation, which adds to the protected areas the equivalent of 25% of the National System of Protected Areas of Ecuador. The PSB benefits 180,000 people and, at the time of writing this report, about USD 65 million had been invested since its inception.

[21] For more information on *REDD+ AP*, visit: http://suia.ambiente.gob.ec/redd.

[22] To see document, visit: http://redd.unfccc.int/submissions.html?country=ecu.

The PRF, on the other hand, is more recent and was executed with force between 2014 and 2015. It consists of a nonrefundable direct economic transfer to the sectional governments that the Ecuadorian State provides to disburse part of the costs incurred in the establishment and maintenance of areas under restoration for conservation purposes.

Due to the fiscal problems that the Government of Ecuador went through between 2015 and 2016, both programs suspended the transfer of incentives in 2016; the PSB was reactivated in 2017, but the PRF went through an evaluation stage, has not made new disbursements and is going through a redesign phase.

Secondly, the country has several spaces for dialogue that have promoted the involvement of various sectors (civil society, indigenous peoples and local communities) in the progress and debates in forestry and REDD+ [REDD+ Working Group (REDD+ WG), working groups, training workshops in the territories, among others].

Finally, the country has also developed a National Forest Control System in recent years that has allowed it to generate information for the construction of a baseline that has been reflected in the presentation to the*UNFCCC*, in 2015, of the Forest Reference Emission Levels due to deforestation. This baseline for the period 2000-2008 shows progress in reducing GHG emissions in the forestry sector. It is worth noting that Ecuador was the second country worldwide to present this reference level and the first to include information on the entire national territory. For this reason, the National Forest Control System is the country's monitoring, reporting and verification (MRV) tool.

Section 2. Identification of GHG reduction opportunities

Four potential lines of intervention have been identified, grouped into actions within and outside forests that can be financed by the Forest Investment Plan (FIP). These actions would be implemented jointly in three zones of homogeneous deforestation processes (ZHDPs) where the necessary synergies can be produced to achieve evident and quantifiable impacts in the reduction of deforestation and forest degradation. In addition, they would facilitate the optimization of the funds available from the FIP, since a regional execution allows financial resources to yield more than an intervention at the national level.

2.1 Opportunities within forests

a) Control and traceability

Strengthen the control actions of wood transport flows and the Wood Tracking System (WTS) at national level. This system has been in design for the last few years and is in the final phase of formalization by the MAE. It seeks to ensure the legality of the source of wood resources and be complementary to the National Forest Control System (SNCF) that the MAE has implemented since 2006. The system is executed through the National Forestry Directorate (NFD), through the following components (Añazco *et al.*, 2010):

- Forest verification in the field to forest use plans and programs.
- Control of the mobilization of forest and wildlife products.

- Control of native forest use.
- Forestry advisory in the development of plans and programs for forest exploitation to small farmers of the Ecuadorian Amazon and the northwestern region of Ecuador, incorporated in 2012 (MAE, 2012).
- Management of the Forest Administration System (SAF, for its acronym in Spanish).

The WTS will be progressively implemented both in its geographical coverage (in three phases by regions, up to its implementation nationwide) and in its biophysical scope: It will start with the wood from the native forest and then include forest plantations, agroforestry systems, natural regeneration and non-timber. With the system in operation, access to certification for sawn or round timber for national and international markets will be facilitated, which, combined with other actions related to market assurance (for example, the imposition of a certification of origin requirement in the purchase of wood by the public sector), will allow the strengthening of sustainable forest management in the country, which will affect:

- Reduction of levels of commercialization of illegal wood. People who want to expand the agricultural frontier illegally sell their forests to intermediaries; with the implementation of the system they will not be able to do it due to the impossibility that the loggers will have to commercialize this wood.
- Consolidation of legal timber markets. The tracking system will eliminate or reduce the possibilities of "bleaching" illegal timber, thus reducing incentives and options for traders to buy timber without a certificate of origin. In this way, there will be greater incentives for owners to make an effective forest management, since it will allow them to access the markets.
- Increase in the extension of areas under conservation, because in some places where legal timber production costs are very high (due to the distance, among others), owners will have a greater incentive to place those areas in programs that allow them to receive incentives for conservation, such as the PSB.

In this sense, the *REDD+ AP* of Ecuador has prepared three related implementation plans[23] that will allow the FIP to focus its efforts on:

- Support the implementation of the WTS, both in its escalation as well as in its geographical and biophysical coverage, and in its link with public and private purchases.
- Together with industry, develop a program of certified suppliers of deforestation-free, sustainable products.
- Promote certification processes for sustainable management of timber and non-timber forest products through REDD+ standards.[24]

[23] These plans are: a) *REDD+ AP Implementation Plan (REDD+AP IP) of measures and actions for the traceability and certification of legal origin and compliance with forest management; b) REDD+ AP IP of measures and actions for responsible production and procurement of wood forest products from deforestation-free forests; c) REDD+ AP IP of measures and actions for the control of deforestation and degradation of native forests.*

[24] It refers to the fulfillment of the seven environmental and social safeguards of the *REDD+ AP*: a) The complementarity or compatibility of the measures with the objectives of the national forestry programs and of the conventions and international agreements on the matter; b) The transparency and effectiveness of national forest governance structures, taking into account national legislation and sovereignty; c) Respect for the knowledge and rights of peoples, communities and nationalities, taking into consideration international obligations relevant to

- Support processes of certification of origin and traceability of sustainable forest products.
- Support national regulations that favor the purchase of deforestation-free and sustainable certified products in public companies and GADs.
- Support the promotion of public purchases of legal timber, with its certification of origin, through a campaign for the dissemination and promotion of the purchase of legal timber among public institutions.

Therefore, the FIP will have inputs that can be used as a basis for the approach of the activities in the required scales, according to the place where they are executed, in such a way that synergies with the *REDD+ AP* are achieved.

b) Value chains of products associated with the forest

The MAE has designed, as part of its *REDD+ AP*, an *Implementation Plan (IP) for the Promotion of Bio-venture* that would be executed mainly through the Socio Bosque Program (PSB, for its acronym in Spanish).

Bio-venture are initiatives associated with the sustainable use of biodiversity that contribute to increasing the value of standing forest, favoring the sustainability of areas under conservation through the generation of new jobs and sources of income for rural associated populations (MAE, 2017).

Bio-venture are an opportunity for countries rich in biodiversity to direct innovation and knowledge towards the development of products derived from physical, chemical, biochemical or biological transformations with a high added value and which, in the future, can become substitutes for petroleum products or non-renewable resources, constituting a first link towards bioeconomy and a circular economy (MAE, 2017).

The *Implementation Plan for the Promotion of Bio-venture* consists in the strengthening of related initiatives that already exist in Ecuador and that have been developed by participants in the PSB (especially indigenous communities), as well as the strengthening of other efforts promoted by projects such as Andean Biotrade (initiative of the United Nations Conference on Trade and Development, UNCTAD),[25] GADs, NGOs and universities.

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national circumstances and legislation, and bearing in mind that the United Nations General Assembly has approved the *United Nations Declaration on the Rights of Indigenous Peoples*; d) The full and effective participation of the interested parties, particularly the indigenous peoples and local communities, in the actions mentioned in paragraphs 70 and 72 of *Decision 1/CP.16*; e) The compatibility of the measures with the conservation of natural forests and biological diversity, ensuring that the actions specified in paragraph 70 of *Decision 1/CP.16* are not used for the conversion of natural forests, but that they serve to promote the protection and conservation of these forests and the services derived from their ecosystems, and to promote other social and environmental benefits; f) The adoption of measures to deal with the risks of reversion; and, g) The adoption of measures to reduce the displacement of emissions.

[25] This project included participants from entities such as the Global Environment Fund (GEF), the United Nations Environment Program (UNEP) and the Andean Development Corporation (CAF, for its acronym in Spanish), from the international context; and, in Ecuador, it was executed by the Corporation for the Promotion of Exports and Investments (CORPEI, for its acronym in Spanish) between 2010 and 2014. The project supported 51 pilot initiatives, in 22 different value chains, located in the four regions of Ecuador. For more details on the results and lessons learned from this project, see: http://scioteca.caf.com/handle/123456789/889.

Strengthening would be carried out through the delivery of monetary and non-monetary incentives (soft credit lines, technical advice), associativity, creation of commercial managers[26] specialized in the design and marketing of products with greater added value through sustainable practices, investment in research and development, both for timber and non-timber.

In the case of timber products, the MAE has designed a mechanism for the sustainable use of wood, called the Sustainable Forest Management Incentive or "Socio Management", issued through *Ministerial Agreement No. 187*, of July 1, 2014. This action is implemented by providing non-monetary incentives (technical assistance, access to loans, access to markets, research and product development, among others) that will improve the conditions for the legal extraction of wood. This incentive is complemented and requires the implementation of the WTS. Therefore, its execution has not been possible to date.

In this sense, FIP interventions could focus on the strengthening and improvement of biodiversity conservation ventures; promote the involvement of research centers to obtain products with higher added value; promote public-private partnerships for the development of markets, the financing of technical assistance and soft credit lines that allow to economically support and/or make the entire value chain more efficient, generating more profits through the final sale value.

The benefits of these actions would be reflected in:

- An increase in the value of the standing forest, by becoming sources of income complementary to that already received from the PSB, or from the diversification of other traditional sources of income.
- A greater willingness for forest conservation, since by reducing illegal use (by reducing their markets) forest owners would be more interested in State conservation initiatives (such as the PSB).
- Reduction of deforestation, especially in the most vulnerable areas.
- Promotion of activities to restore degraded areas, so that at some point they benefit from the incentives for sustainable forest management and/or biodiversity conservation ventures.
- Greater participation of vulnerable groups. Bio-venture are usually led by mestizo and indigenous women, so their promotion will generate better social conditions for these groups.

It is worth noting that both in Bio-venture and in sustainable forest management or sustainable use of timber, the intervention of the private sector is possible and necessary, since these actions constitute an alternative for the investment of capital with the option of obtaining returns. It is thus, for example, that certain Bio-venture could require capital to expand, modernize or innovate certain products that, in turn, could be demanded by industries or markets. This may be of interest to investors who, in partnership with the public sector, participate and promote the development of biodiversity conservation ventures.

c) Forest conservation and restoration

[26] The concept of commercial manager was proposed by the Inter-American Institute for Cooperation on Agriculture [IICA (for its acronym in Spanish), 2015] and is defined as the producer's ear on the market. It seeks to identify the characteristics and needs of real market demand. On the other hand, it also alludes to the voice of the producer in the market, that is, it represents forest producers before customers, communicating to the market the elements of differentiation of forest products.

As mentioned in section 1.4, deforestation risk models clearly demonstrate that actions aimed at protecting remaining forest have a key impact on the conservation of forests in some areas of the country.

In this regard, Ecuador has developed two important actions for the protection of remaining forest: the National System of Protected Areas (SNAP) and the Socio Bosque Incentives Program (PSB). The SNAP covers the four regions of the country and houses 51 nature reserves that extend to approximately 20% of the national surface (MAE, 2016). The PSB was explained in more detail at the end of section 1.5, but it is worth mentioning, in a general way, that it consists of promoting the conservation of forests by their owners.

With regard to restoration, it is appropriate to indicate that the country is making adjustments to the PRF, a process in which it is expected to have a more efficient program by the end of 2017, and where the following will be emphasized:

- Adjustments to the management model to acknowledge that forest restoration is a long-term process that seeks to restore ecological functionality and improve human well-being in degraded forest landscapes.
- Restoration modalities will consider restoration in agricultural mosaics that will focus on agricultural use, considering sustainable practices and the implementation of agroforestry systems; and large-scale restoration in locations where the soil is appropriate only for forest.
- Undertake restoration only in the amount of hectares for which the financing of the process is fully guaranteed (from 10 to 20 years), for which the figure of trusts could be used for financial management.
- Restoration projects with productive use could have refundable financing without interest, while those that aim for conservation or protection will be nonrefundable.

It is worth noting that Ecuador has resumed its link with Initiative 20x20 of the World Resources Institute, for restoration in Latin America, with which actions for the country's involvement are coordinated.

In this framework, the *REDD+ AP* has prioritized the following measures in which the FIP could contribute:

- Conservation of biodiversity, maintenance of water resources and ecosystems.
- Forest restoration.

FIP interventions could help keep both the PSB and the PRF active and operational, at least in the areas where the MAE decides FIP action must be focused. In this sense, the FIP could focus on a specific area of the country where, in the future, an increase in deforestation is expected, and which, together with other actions, would help to ensure the conservation of remaining forest and the reduction of expected deforestation.

2.2 Opportunities outside forests

a) Transition to sustainable productive systems

To deal with the causes and factors of deforestation linked to productive activities outside forests, it is necessary to develop a transformation towards sustainable systems that integrate measures both from supply and demand. From supply, sustainable production with better practices should be promoted, as well as efficient land management to intensify sustainable production in deforested areas, without expanding to new forest areas. From demand, it is necessary to promote the preference or demand of consumers and for the productive changes generated to be permanent and sustainable (MAE, 2016).

In Ecuador, the MAG promotes several initiatives aimed at the transformation of production systems. Among these are the Amazonian Sustainable Agro-productive Reconversion Project, framed in the Agenda for Productive Transformation in the Amazon (ATPA, for its acronym in Spanish); the Climate-smart Livestock Management Project; the Cocoa and Coffee Reactivation Project; and the actions to strengthen the biocorridors of Río Chone estuary, La Segua, the mountain range of Bálsamo, and Chongón-Colonche.

The ATPA works since 2014 with the primary objective of converting the agricultural production activities of the Amazon into sustainable agricultural production systems under economic, social, environmental and cultural perspectives through the implementation of comprehensive land planning to free areas of pasture that will be destined to the diversification of crops and reforestation. The project promotes the following systems: improved ancestral agroforestry, semi-intensive agroforestry, intensive agroforestry, silvopastoral and forestry, as well as the following productive axes: livestock, cocoa, coffee, fruit, medicines and other Amazonian and forestry products (MAE, 2016).

The MAG, in conjunction with the MAE, executes the Climate-Smart Livestock Management Project, which seeks to improve the income of small and medium livestock producers in the country, while mitigating and adapting the sector to climate change, intervening in a sustainable manner in the primary part of the value chain. The project is focused on the implementation and incorporation of good environmental practices in national livestock production through the genetic improvement of pastures and animals, increasing their efficiency and conversion capacity, livestock zoning and the increase of farms with silvopastoral systems (MAE, 2016).

The *Fino de Aroma* National Cocoa and Coffee Reactivation Project aims to support cocoa and coffee chains with a sustainable vision focused on economic, productive, social and environmental aspects. This is carried out through the renovation and rehabilitation of cocoa and coffee areas, as well as through the establishment of new areas with production potential, recovering degraded areas and projecting the increase of productivity of both crops (MAE, 2016).

The MAG, through its Commercial Networks' Coordination Office, performs actions to strengthen the biocorridors of Río Chone estuary, La Segua, the mountain range of Bálsamo and Chongón-Colonche. These activities are aimed at developing markets for organizations and communities that use sustainable production systems (for example, agroecological production, artisanal fishing, and sugar cane) and are carried out in coordination with sectional governments and UNDP.

On the other hand, there are some initiatives that seek to promote the free production of deforestation from demand. For example, for palm oil, the Round Table on Sustainable Palm Oil (RSPO) has created a certified sustainable palm oil (CSPO) system that establishes criteria and audit systems that try to ensure that production complies with labor rights and the rights of the indigenous communities, that new areas of high environmental value are not occupied, and that biodiversity is not threatened, in addition to promoting cleaner agricultural practices (MAE, 2016).

In this context, FIP funds can support the transition towards sustainable agricultural systems free of deforestation, favoring the implementation of the following plans that the MAE has designed, structured and prioritized under the *REDD+ AP*:[27]

- Adoption of good agricultural practices.
- Agro-productive reconversion.
- Traceability and certification for agricultural, forestry and aquaculture products free of deforestation
- Responsible purchases and market assurance and integration into value chains.

As in the case of the PRF, the financing needs of these initiatives are high and long-term, so the contribution of the FIP will complement the efforts obtained from other funds and projects. Its application will also be limited to geographical areas where high rates of deforestation are expected in the future.

Section 3. Legal framework and enabling conditions

In terms of policies, strategies and legislation, Ecuador relies on a legal and institutional framework that promotes the reduction of emissions and the strengthening of forest management. The country has a broad environmental and forestry legal framework with provisions ranging from constitutional rank to lower-level norms of technical and administrative nature (see Table 7).

Thus, the constitutional norm acknowledges the right of the population "[...] to live in a healthy and ecologically-balanced environment, which guarantees sustainability and good living, *sumak kawsay*."[28] In practice, *Good Living* implies that the transformation of the productive matrix is framed in a context of respect for the rights of nature and intergenerational justice (MAE, 2016: 60). In a unique and novel way, the *Constitution of the Republic of Ecuador (CRE)* acknowledges that "[...] nature will be subject to those rights recognized by the Constitution." This implies that the authorities are required to comply

[27] Ecuador *REDD+ AP* implementation plans are operational and seek to be prepared to receive climate financing. They are designed in such a way as to allow planning for the use of resources from different funds: public, private or cooperation funds. Implementation plans link financial resources to programs, projects or initiatives that have a presence in the territory and that have financing to optimize resources, generating a greater scope and achieving a greater environmental and social impact. The Targeted Support Project of UN-REDD+ has financed the preparation of fifteen plans that are now ready for implementation. These fifteen plans are divided into the following topics: a) Traceability and certification of forest products (three plans); b) Conservation, reforestation and biodiversity conservation ventures (three plans); c) Indigenous peoples and nationalities (one plan); d) Sustainable palm (two plans); e) Traceability and certification of agricultural products (three plans); and, f) Good practices in agroforestry systems (three plans).

[28] Article 14 of the *Constitution of the Republic of Ecuador* (2008).

with the rights of nature (Article 71). Thus, the State will promote the protection of nature and respect for ecosystems,[29] for which it commits itself to "[...] ensure the intangibility of protected natural areas, in such a way as to guarantee the conservation of biodiversity and maintenance of the ecological functions of ecosystems [...]."[30] Also, Article 74 of the *CRE* states that environmental services will not be susceptible to appropriation and the State will be responsible for regulating their use, production and exploitation. Based on these articles, the commercialization of carbon credits is not possible in Ecuador.

Table 7. Main environmental-related regulations

Regulation	Scope	Competent authority	Aspects of deforestation
Constitution of the Republic of Ecuador (*CRE*)	• Nature's rights • Protected areas • Conservation, biodiversity, protection and use of environmental services • Climate change	Ministry of Environment of Ecuador (MAE), mainly	• Incentives for the protection and conservation of ecosystems • Protection of environmental services
Organic Code on the Environment (OCE)	• Encode existing environmental regulations and reform several environmental standards • Maximum standard after *CRE* • Adopts provisions of the Forestry *and Conservation of Natural Areas and Wildlife Law*, repealed law	• MAE • National Water Secretariat	Regulates matters related to natural heritage, protected areas, protective vegetation, forest lands, privately owned forests, forest plantations, forest control and mobilization.
Organic Code for Territorial Organization, Autonomy and Decentralization	Codes the regulations related to territorial organization, autonomy and decentralization.	• National Secretariat for Planning and Development • Decentralized	• Standard on land use • Provides powers to decentralized autonomous

[29] The lawyer, Luis Fernando Macías Gómez, points out that the *CRE* acknowledges nature "[...] as a legal entity that merits protection and, for this, it is necessary to acknowledge some rights, but without this making it a subject of law." For a more detailed analysis, see Macías Gómez, Luis Fernando. *El constitucionalismo ambiental en la nueva Constitución de Ecuador. Un reto a la tradición constitucional*. Available at: http://www.usfq.edu.ec/publicaciones/iurisDictio/archivo_de_contenidos/Documents/IurisDictio_14/iurisdictio_014_008.pdf.

[30] Article 397.4 of the *Constitution of the Republic of Ecuador* (2008).

Regulation	Scope	Competent authority	Aspects of deforestation
		Autonomous Governments (GADs)	governments (GADs)
Organic Law on Water Resources, Uses and Exploitation of Water	Standard on integral management of water resources.	National Water Secretariat	Promotes and generates income for the protection and restoration of water sources.
National Plan for Good Living 2013-2017	Development planning, national territorial strategy, among others.	National Secretariat for Planning and Development	• Territorial planning • Conservation and ecosystem protection goals
National Biodiversity Strategy	It establishes the strategies for compliance with the agreements assumed in the *Convention on Biological Diversity*, the sustainable use of its components and the fair and equitable participation in the benefits derived from the use of genetic resources.	MAE, mainly	Conservation, protection and sustainable use of biodiversity, forest ecosystems.
National Strategy for Changing the Productive Matrix	It seeks to promote the transition of the country from an economy based on primary resources and, above all, oil, to a post-petroleum economy based on knowledge, the only infinite resource.	Vice Presidency, related ministries	Opportunity for the development of Bio-venture and bioeconomy.
National Environmental Policy	It incorporates the environmental variable in productive activities, the integral management of ecosystems and adaptation to climate change.	MAE	Norms for the management of ecosystems.
National Climate Change Strategy	It proposes strategies to incorporate the variable of climate change in agriculture, land use, energy, solid and liquid waste management, as well as in	MAE and related ministries	Proposes strategies for the land use sector according to international regulations.

Regulation	Scope	Competent authority	Aspects of deforestation
	industrial processes as priority sectors for the reduction of GHG emissions.		
Law on Environmental Management	Establishes environmental policy principles and guidelines; determines the obligations, responsibilities, levels of participation of the public and private sectors in environmental management and points out the permissible limits, controls and sanctions in this matter.	MAE	Establishes procedures for environmental licensing in diverse ecosystems.
Organic Law on Rural Lands and Ancestral Territories	• Regulates the use and access to the property of rural land, the right to its property that shall fulfill the social function and the environmental function. • Regulates the possession, ownership, administration and redistribution of rural land as a production factor to guarantee food sovereignty, improve productivity, promote a sustainable and balanced environment, and grant legal security to rights holders.	Ministry of Agriculture and Livestock (MAG)	Establishes regulations that directly impact land use.
REDD+ Action Plan	It seeks to articulate measures and actions inside and outside the forest to national and local policies, programs and initiatives, as well as to generate multiple environmental and social benefits.	MAE and MAG, mainly	Establishes direct actions to reduce deforestation.

Regulation	Scope	Competent authority	Aspects of deforestation
Ecuadorian Agricultural Policy, towards sustainable rural territory 2015-2025	• Contribute to reducing poverty and socioeconomic vulnerability of rural inhabitants • Improve the contribution of agriculture to ensure the food security and nutrition of the population in each area • Enhance the contribution of agriculture to rural development and national economic growth	MAG	Establishes territorial action guidelines that impact on land use.
Policy for Governance of the Natural Heritage for the Good Living of Society (2013-2017)	Ministerial agreement that seeks to align the policies of natural heritage governance to the National Plan for Good Living.	Undersecretariat for Natural Heritage of the MAE	Establishes direct actions for the reduction of deforestation and conservation of the natural heritage.
National Incentive Strategy for the Conservation and Sustainable Use of the Natural Heritage	Ministerial agreement that establishes a national strategy for generating incentives for the conservation and sustainable use of the natural heritage.	Undersecretariat for Natural Heritage and Socio Bosque Program of the MAE	Sets strategic lines and lines for the creation of incentives.
National Forest Restoration Plan (2014-2017)	Ministerial agreement that issues strategies and vision for the execution of forest restoration.	Undersecretariat for Natural Heritage	Sets goals and mechanisms for forest restoration.
Unified text from complementary environmental legislation	Ministerial agreement that supports the regulation of several legal provisions.	Ministry of Environment through its different undersecretariats and units	Book III states the regulations regarding the State's forest heritage.
National Agenda for Women and Gender	The agenda is the binding instrument for mainstreaming the principle	• National Council for Gender Equality	It provides key elements for the mainstreaming of the gender variable in all

Regulation	Scope	Competent authority	Aspects of deforestation
Equality 2014-2017	of equality and non-discrimination on the basis of gender in the Ecuadorian State so that, from its different functions, instances, organisms and entities, it ensures due diligence in fulfilling the constitutional mandate.	• National Secretariat for Planning and Development	sectors.

Source: Based on sources consulted.

With regard to climate change, Article 414 of the *CRE* provides that the State "[...] shall adopt appropriate and cross-cutting measures for the mitigation of climate change, by limiting greenhouse gas emissions, deforestation and atmospheric pollution; shall take measures for the conservation of forests and vegetation, and shall protect the population at risk."

The new *Organic Code on the Environment (OCE)* contains seven books plus general, transitory and reformative provisions that address broad issues of an environmental nature of national importance. The *OCE* seeks to codify existing environmental regulations. The sole final provision of this instrument establishes its entry into force in April 2018, date in which the codification of the *Forestry and Conservation of Natural Areas and Wildlife Law* will be repealed.

Book II of the *OCE* regulates issues related to natural heritage in which aspects have been incorporated on the conformation of the State's forestry heritage, protected areas, protective vegetation, forest lands, privately-owned forests, forest plantations, forest control and mobilization, issues that are currently included in the *Forestry and Conservation of Natural Areas and Wildlife Law*.

Among the main novelties that the *OCE* stipulates is the creation of environmental management funds, that may be public or private, of the central government or sectional governments, highlighting the creation of the National Environmental Management Fund, whose purpose will be the total or partial financing of plans, projects or activities oriented to research, protection, conservation and sustainable management of biodiversity, environmental services, measures of integral reparation of environmental damage, mitigation and adaptation to climate change and environmental incentives. It is also established that this fund may obtain income from budget allocations, fees, agreements or contracts, authorizations and concessions, as well as by the environmental services generated by ecosystems, among others. This is an important step forward in filling a gap that the environmental sector had. It also highlights in the *OCE* the issuance of the fourth book to include climate change, and the sixth for the generation of environmental incentives.

On the other hand, it is important to emphasize that there are different laws and norms in which the links among gender, forests and climate change are evident. Thus, the *National Climate Change Strategy* stresses that in order to face the impacts of climate change, it is necessary to include variables that consider the human dimension through criteria such as "priority attention groups" for situations of age, gender, poverty and marginalization, among others.

Thus, the *Ecuadorian Agricultural Policy*, *towards sustainable rural territory 2015-2025*, highlights the role played by women in agricultural activity and acknowledges the importance of overcoming the traditional model of agriculture characterized by a huge gender inequality in access and control of productive resources. It also acknowledges that policies and interventions have traditionally reinforced gender inequalities through various practices.

The *Organic Law on Rural Lands and Ancestral Territories* includes, among its fundamental principles, social, gender and generational equality in its policies for access to rural land. In addition, it states that specific policies will be developed to eradicate inequality and discrimination against women producers in access to production factors (following Article 324 of the *CRE*, which guarantees equal rights and opportunities for women and men in access to property). On the other hand, it prioritizes the redistribution of rural land to women and mothers who have assumed the head of the household, among other groups.

The *REDD+ Action Plan* establishes ten measures and actions to incorporate gender guidelines in the processes under development that include, among others, promoting the participation of women in national and local spaces; establishing a plan for the development of capacities and participation of women in the processes of productive transformation; integrating women's knowledge, skills, abilities and experiences in the implementation of REDD+ measures and actions; and, involving producers and members of women's associations in the processes of transition to sustainable production systems and initiatives for the use of non-timber forest products (NTFPs). In addition, throughout the document it includes specific actions to achieve gender equality in the strategic components included in the strategy. For example, among the measures to be promoted in the area of land legalization, strengthen women's access to programs of land redistribution and financial assistance in agricultural production.

Finally, the *National Agenda for Women and Gender Equality 2014-2017* incorporates the gender approach in public policy and is articulated with national planning. This instrument includes nine cross-cutting axes; the eighth corresponds to the environmental issue and promotes the full participation of women and their empowerment in the areas of management, natural resources and habitat management, which contributes to the balance between nature and the community as an essential element that generates adequate environmental conditions for the preservation of life. The agenda contains ten guidelines that incorporate, among others, the knowledge, practices and sustainable knowledge of rural women; acknowledges and values the role of women in the preservation of biodiversity and natural resources; and increases and strengthens the participation of rural women in the management of agricultural production units to guarantee food sovereignty.

Section 4. Expected joint benefits of the FIP Program

FIP interventions in Ecuador will bring diverse co-benefits that go beyond the mere reduction of GHG emissions; since the FIP is oriented to the application of several *REDD+ Action Plan* instruments, it must be pointed out that it has already identified the co-benefits that it would generate and that, consequently, will also be promoted by the FIP.

A process was developed in the country for the identification and prioritization of REDD+ co-benefits, which included four workshops that took place during 2013 in different regions of the country (north, central and south Amazonia, and Province of Esmeraldas). Participants included representatives of

government institutions, social and environmental NGOs, indigenous and local organizations, and agencies of the United Nations System. The first national workshop provided a draft list of potential co-benefits, based on which work was carried out in subsequent subnational workshops. In addition, the following criteria were taken into account for the prioritization of co-benefits: a) Relevance of the safeguards of the *UN Framework Convention on Climate Change (UNFCCC*); b) Relevance of the country's social and environmental policy objectives; c) Availability of data or information; and d) Spatial variability of the co-benefit (MAE, 2016).

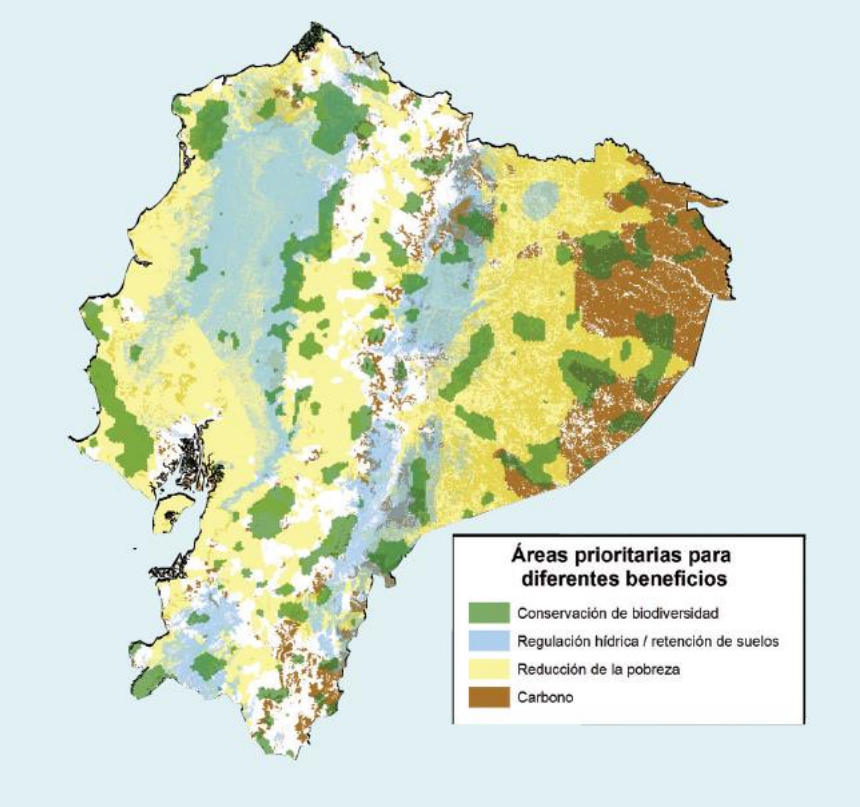
In this framework, the MAE determined co-benefits that could result from the implementation of REDD+ in Ecuador, considering its potential synergy with existing national policies. The most relevant are (MAE, 2016):

- Conservation of biodiversity.
- Water regulation and soil retention.
- Improvement of systems for the governance of natural resources.
- Maintenance of ancestral culture/identity.
- Increase in carbon reserves.
- Sustainable provision of ecosystem services.
- Improvement in the living conditions of populations linked to forests.

With this information, a map of relevant areas was developed from the highest number of co-benefits; for example, in some areas the overlap of two to four benefits is presented. In other words, in an area where REDD+ measures and actions are implemented, in addition to reducing GHG emissions, it could also enhance benefits in biodiversity, water regulation, and poverty reduction, among others.

This assessment was used as the basis for the design of REDD+ measures and actions and for the prioritization of the areas of implementation. With this background, some representative co-benefits are shown on Map 3, along with areas of importance due to their carbon contents (MAE, 2016).

Map 3. Spatial distribution of REDD+ co-benefits in Ecuador



Source: MAE (2016)

As the projects are incorporated into the FIP, the social, institutional, legal, economic and environmental impacts that the interventions would have can be further detailed, and are presented below:

Social

By focusing on strengthening and expanding the incentive programs for conservation and reforestation that already exist in the country, FIP interventions will be able to integrate more beneficiaries into these programs. This will translate, at the same time, into better capacities and knowledge for conservation, as well as a greater amount of distributed monetary benefits, which can directly affect a more decentralized local development. Incentive programs can also increase the resilience of populations to climate change, improve their living conditions, reduce threats such as fires and pests, and promote food security. On the other hand, FIP interventions can also support the maintenance of ancestral cultures, the identities of indigenous peoples, and gender equality.

Institutional

The strengthening of incentive programs will go hand in hand with strengthening the institutional capacities of those authorities that administer them. This work will involve a review to improve, simplify and/or harmonize the policies and the applicable legal framework and, in this way, favor the governance of forests and natural resources in the country. This will allow, in parallel, a better traceability and

control of wood resource flows, which will give greater transparency and credibility to the forest harvesting system.

Additionally, the promotion of Bio-venture will contribute to the change of the productive matrix of Ecuador, a policy that was implemented some years ago by the MAE and that constitutes a first link towards the implementation of bioeconomy, which is expected to replace the dependence of the country on the production of raw materials (MAE, 2017).

Economic

Strengthening the control and traceability of timber and non-timber products, value chains of products associated with the forest and the transition to sustainable production systems can increase market opportunities, facilitate the development of accessible financing mechanisms and diversify the income of rural families. Likewise, this has the potential to multiply investments in rural areas and increase value chains and commercial productive partnerships.

As indicated in section 1.2, the forestry sector had a contribution of 1.63% to Ecuador's GDP and, by January 2017, it would have contributed 2.93% of non-oil exports. Additionally, according to Viteri (2010), 8% of the economically active population of Ecuador depends directly on forestry activity.

In this sense, the promotion and strengthening of Bio-venture will allow hundreds of families in the areas of execution of the FIP to improve their income with new productive options that complement the traditional ones.

Environmental

Finally, strengthening the incentive programs that the FIP will support will also have a direct impact on the provision of environmental goods and services and the protection of biodiversity and ecosystems in general (for example, increased forest cover, watershed protection, water regulation, soil retention, among others). This ecological sustainability will also allow the normal functioning of the forests in the long term.

In addition, the FIP will contribute to increasing carbon stocks with its forest restoration component that, under an orientation towards the sustainable production of environmental goods and services, will also help to improve the living conditions of the populations involved.

Section 5. Collaboration among Financial Institutions and other partners

The main projects that the Financial Institutions and other potential partners carry out or plan to carry out in Ecuador are presented in Table 8. These initiatives are complemented by the projects to be financed through the FIP. However, in some cases, they have different geographic scope of application, so the exact financing cannot be determined. Nevertheless, another kind of coordination activity can be implemented in these cases, one that allows participants to take advantage of the lessons learned and share experiences.

Table 8. Projects executed by cooperation agencies

Organization and project name	Committed financial resources	Type of financial resources	Years of implementation	Deforestation factor addressed	Implementation partners
Green Climate Fund "Priming Financial and Land-Use Planning Instruments to Reduce Emissions from Deforestation" implemented through "Integrated Amazon Program for Forest Conservation and Sustainable Production"	USD 41.2 million	Donation	5 years	It co-finances several actions of the *REDD+ AP*: Investments to control the expansion of the agricultural frontier in forest areas; optimization of existing financial and economic mechanisms to implement agricultural and livestock production practices that reduce deforestation; alignment of zoning plans for land use with climate change objectives; strengthening of restoration, conservation and sustainable production in vulnerable watersheds. Also, redesign of public credit lines to guide them towards sustainable agricultural production practices; promotion of fiscal incentives for REDD+ support activities; and strengthening of certification and traceability policies for products without deforestation.	Ministry of Environment of Ecuador (MAE) Ministry of Agriculture and Livestock (MAG) ATPA BanEcuador Socio Bosque Program (PSB) National Forestry Restoration Program (PRF) Water Funds Decentralized autonomous governments (GADs) Indigenous communities Owners of protective forests
Germany and Norway - REDD Early Movers (REM) "Results-based Payments for Reduced Emissions from Deforestation	USD 40 million (under review)	Payment by results	3 or 4 years (to be defined)	This initiative consists of a payment to Ecuador by the Governments of Germany and Norway in recognition of the reduction of avoided deforestation emissions conditioned on the substantiation, verification, registration and deactivation of said	Socio Bosque Program (PSB) and other initiatives qualified as REDD+ according to the *REDD+ AP*

Organization and project name	Committed financial resources	Type of financial resources	Years of implementation	Deforestation factor addressed	Implementation partners
REDD+”				emissions for the years 2013-2016. REM funds must be invested in accordance with the *Separate Agreement of the Financial Contribution Contract* and the agreed conceptual note (currently under review) between the parties. In summary, 70% must be invested in implementation mechanisms for REDD+ - where the PSB stands out, with 90% of the allocation of funds- and 30% for enabling policies and conditions of REDD+ in Ecuador, which includes actions to operationalize REDD+ and forest governance policies.	
KfW Financial assistance projects for forest monitoring and co-financing of the Socio Bosque Incentives Program (PSB)	Forest monitoring, €4.5 million Support to PSB, €10 million	Donation	Until December 2018	Its purpose is to support the operation and consolidation of the National Forest Control System, especially in everything related to technological requirements. The co-financing of the PSB aims to complement the commitment that in previous years (2011) KfW assumed when financing the payment of incentives to approximately 40 community partners (indigenous peoples and nationalities), an action that was assessed as positive, and for which it committed additional	MAE 40 PSB partner communities

Organization and project name	Committed financial resources	Type of financial resources	Years of implementation	Deforestation factor addressed	Implementation partners
				financing.	
Global Environment Fund (GEF) "Sustainable Development of the Ecuadorian Amazon: integrated management of multiple use landscapes and high value conservation forests" implemented through "Integrated Amazon Program for Conservation and Sustainable Production"	USD 12.4 million	Donation	6 years	Catalyze the Transformation of Land Use Planning and Management in the Ecuadorian Amazon (CTEA) through the establishment of a governance and sustainable production framework, based on a landscape approach and on the optimization of ecosystem services and livelihoods.	Ministry of Environment of Ecuador (MAE) Ministry of Agriculture and Livestock (MAG) Owners of protective forests BanEcuador Socio Bosque Program (PSB) National Forestry Restoration Program (PRF) Water Funds Decentralized autonomous governments (GADs) Indigenous communities
Global Environment Fund (GEF) and Food and Agriculture Organization of the United Nations (FAO). "Climate-smart Livestock Management,	USD 3.8 million	Donation	4 years	Reduce land degradation and mitigate greenhouse gas (GHG) emissions in the country's livestock sector, in seven provinces distributed in the three regions of continental Ecuador: Guayas, Manabí, Santa Elena (coastal region); Imbabura, Loja (mountain range region); and Napo, Morona	Livestock sector, MAG, local governments, communities

Organization and project name	Committed financial resources	Type of financial resources	Years of implementation	Deforestation factor addressed	Implementation partners
Integrating the Reversal of Land Degradation and Reducing the Risks of Desertification in Vulnerable Provinces”				Santiago (Amazon region).	
Government of Ecuador “Amazonian Sustainable Agro-productive Reconversion”	Approved in 2016: USD 47.8 million Executed in 2016: USD 2.1 million	Fiscal resources	4 years	The project aims to convert the agricultural production activities of the Amazon region into sustainable agro-productive systems from the economic, social, environmental and cultural perspectives, through the delivery of incentives, credit, technical assistance and participatory rural extension.	MAG, local governments, communities
Andean Development Corporation, Italian Development Cooperation Agency and Brazilian Cooperation Agency “Fire-free Amazon”	USD 2.3 million	Donation	3 years	Reduce the incidence of forest fires in the mountains and coast of Ecuador by implementing alternative practices to the use of fire, contributing to protect the environment and improve the living conditions of communities.	MAE, local governments, protected areas, MAE
German Agency for International Cooperation (GIZ, for its acronym in German)	Undefined	Donation	3 years	ProChange II promotes models of conservation and sustainable use of biodiversity in four fields of action of the program: sustainable production systems, incentive	MAE, local governments, communities

Organization and project name	Committed financial resources	Type of financial resources	Years of implementation	Deforestation factor addressed	Implementation partners
Programs: "Climate Change, Biodiversity and Sustainable Development," "ProChange II" and "Conservation of Biodiversity, Forests, Mitigation and Adaptation to Climate Change, North Amazon Region"				mechanisms for the conservation and sustainable use of biodiversity, participatory control models, and measures for climate change adaptation. The "North Amazon Region" seeks for the population to market agroforestry and non-timber products of those whose production meets the criteria of environmental, social and economic sustainability, within the framework of governance of the natural heritage.	

Source: Based on project documents

In Ecuador, the WB addresses social and environmental issues within their investment projects. For example, currently underway, is a project called Productive Irrigation for Small and Medium Producers . This project works with the Ministry of Agriculture and promote climate smart agriculture in target areas. Additionally, the WB has developed and supervised conservation and sustainable management projects in protected areas, as well as climate change adaptation due to the loss of Tropical Andes glaciers projects financed by GEF.

The experience that the World Bank has demostraded will be of great value to the implementation of the FIP projects in Ecuador.

Section 6. Identification and rationality of programs and projects to be co-financed by the FIP

6.1 Background and rationale

For the prioritization of actions to be co-financed by the FIP, the Government of Ecuador and a group of experts evaluated, through the Delphi method,[31] twenty-five initiatives that are at different levels of execution or design. The latter are characterized by being aligned with the criteria that the Ecuador *REDD+ AP* determined as measures and actions that need to be implemented (or strengthened) to address the causes of deforestation and forest degradation.[32]

The prioritization criteria that were considered during this evaluation are:

a) Climate change mitigation potential.
b) Scale demonstration potential.
c) Cost effectiveness.
d) Implementation potential.
e) Integration with sustainable development (co-benefits).
f) Compliance with environmental and social safeguards.
g) Financial return.
h) Economic return.
i) Financing gap.
j) Geographical complementarity.

These criteria correspond to those required by the FIP (paragraphs a-f), as well as others requested by the Government of Ecuador (paragraphs g-j). Of the twenty-five investment initiatives evaluated, eight exceeded the average values of the evaluation and passed to a political-strategic evaluation by authorities, who finally selected the following six initiatives:

a) Biodiversity conservation ventures.
b) Sustainable agro-productive practices free of deforestation.
c) Restoration.
d) Conservation.
e) Credit for REDD+ measures and actions (green credit).
f) Forest traceability.

The FIP will implement these six initiatives grouped into two projects; the first contains those that refer to actions within the forests (biodiversity conservation ventures, conservation, forest traceability and,

[31] The Delphi method (name taken from the Delphos oracle) is a structured communication technique, developed as a systematic and interactive method of prediction based on a panel of experts. It is a prospective technique used to obtain essentially qualitative, but relatively accurate information about the future (see more information at: https://es.wikipedia.org/wiki/M%C3%A9todo_Delphi).

[32] See complete background information of the *REDD+ AP* in Annex 4.

potentially, some types of green credit); the second contains the initiatives that are carried out outside the forests (sustainable agro-productive practices, restoration and other green credits).

6.2 Investment plan objectives

6.2.1 General objective

Contribute to the efforts envisaged in the Ecuador *REDD+ AP* aimed at reducing deforestation and forest degradation through conservation, sustainable forest management and the optimization of other land uses, thereby contributing to the reduction of GHG emissions in three zones of homogeneous deforestation processes (ZHDPs) in the coastal region of the country.

6.2.1 Specific objectives

- Manage forest landscapes in a sustainable manner, guaranteeing the conservation of remaining forest, increasing the value of the remaining native forest and improving the income of the communities with important participation of women.

- Promote sustainable production practices in agricultural lands located in areas adjacent to the remaining forests and initiate restoration processes for the conservation and sustainable use of the land, maintaining or improving the income of participating families and guaranteeing the fair and equitable participation of women, men and communities.

6.3 Geographical location and prioritization

The Government of Ecuador has decided that the FIP will be implemented in the coastal region, given that the Amazonian Integral Project,[33] which has significant financing, is available in the Amazon region of the country. In addition, after the Amazon, the coastal region has the largest remnant of forest cover in the country.

However, after considering the extension of the coastal region, the number of prioritized initiatives, the feasibility of scaling it up and the available FIP budget, the Government of Ecuador has seen it necessary to prioritize the areas to be intervened within the Ecuadorian coast, for which it has defined that the FIP is executed in a maximum of three of the five ZHDPs[34] located there. To select them, the Government has used the following criteria:

a) Evolution of deforestation rates for the periods 1990-2000 and 2000-2008.[35]
b) Remaining forest cover
c) Annual deforestation projected to the year 2020.[36]

[33] For more information on the project, see Section 5.

[34] Zones of homogeneous deforestation processes; See map in Section 1.3 of this report.

[35] The 2008-2014 period was not considered because the ZHDP study was conducted during 2013 and, to date, it has not been updated.

[36] According to existing studies; there are no studies for later years.

d) Main use of land, main crops and increased land use in expansion.
e) Number of products from Bio-venture identified.
f) Percentage of hectares under conservation in relation to remnants.
g) Number of restoration initiatives and hectares under implementation.
h) Number of existing agricultural production initiatives with good practices or productive reconversion.
i) Average of "unsatisfied basic needs (UBNs)" indicator in the cantons located in the ZHDPs.

For the definition of the ZHDPs, the Government of Ecuador analyzed the results of studies on past and future deforestation, such as that of Castro *et al.* (2013), which precisely explores the drivers and trends of deforestation to the year 2020, as well as documents prepared by the technical team of the National Monitoring System, such as the *Analysis of deforestation in continental Ecuador (1990-2014)* (MAE, 2016), and other information provided by the MAE.

Table 9 summarizes the results of this prioritization, according to which the following ZHDPs were selected:

- North Esmeraldas and piedmont northern coast, ZHDP 4
- Northern Manabí and southern Esmeraldas, ZHDP 5
- Mountain ranges and semi-dry valleys of the central coast, ZHDP 7

The following is a description of these zones and how the FIP investment plan will intervene in each:

<u>North Esmeraldas and northern coast piedmont, ZHDP 4</u>

Table 9. Criteria for the definition of FIP implementation zones

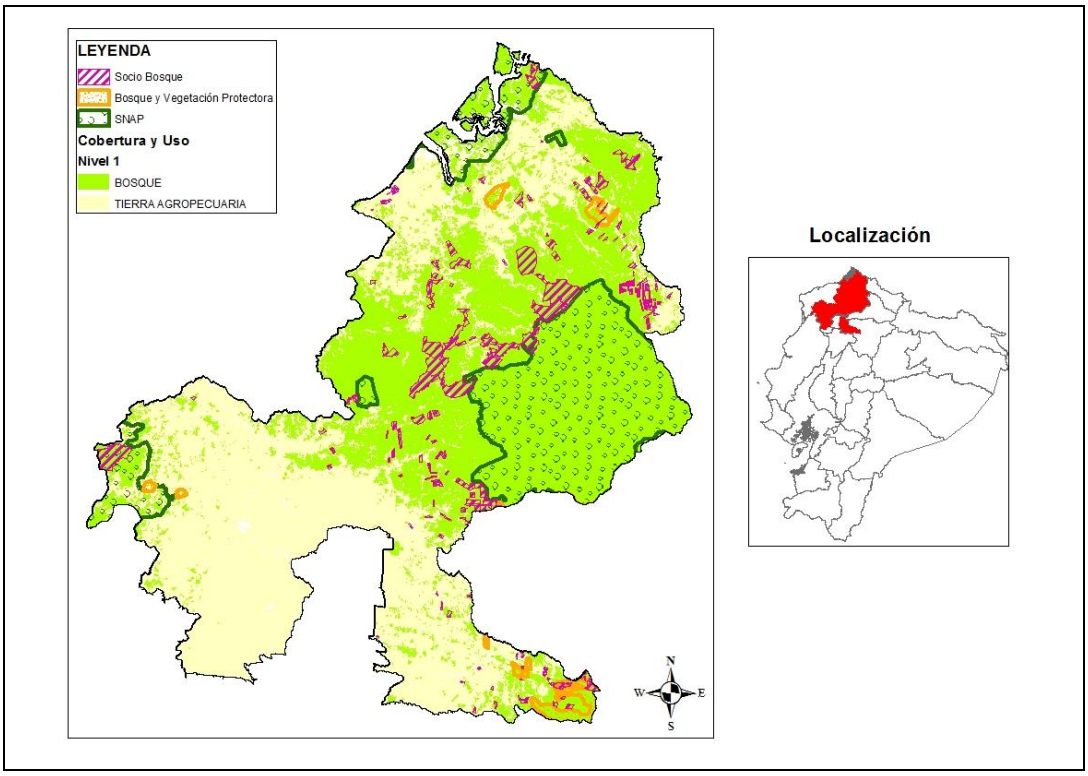
ZHDP	Deforestation rate 1990-2000	Deforestation rate 2000-2008	Percentage of forest cover and percentage under conservation Equivalent CO_2 content	Projected annual deforestation 2008-2020 (km^2)	Expansion of land use 2000-2008	Expansion of agricultural products	Identified Bio-venture (bioemprendimientos)	Hectares under conservation	Restoration initiatives	Sustainable agricultural production initiatives	Average UBNs
4. North Esmeraldas and northern coast piedemont	-1.46	-1.3	Remnant: 56.10% Under conservation: 48.6% Mainly evergreen forest on the foothills of mountain ranges: 453 tCO_2/ha	13.21	Permanent crops	African palm and cocoa	Orchids, ornamental native plants, bamboo, sustainable forest harvesting practices, melipona honey, resins, tagua, tourism	Socio Bosque Program (PSB): 51,339 ha, 22,400 people Forests and protective vegetation (F&PV): 15,811 ha SNAP: 269,886 ha	32 initiatives in GADs, 15,630 ha	GADs promote integral farms in Pichincha 2,000 ha under sustainable agricultural production in Muisne	83.8%
5. North Manabí and south Esmeraldas	-3.11	-2.27	Remnant: 24.60% Under conservation: 65.3% Mainly evergreen forest from Chocó:	8.92	Pastures	Beef cattle, cocoa and African palm	Tourism, bamboo, agro-ecotourism	PSB: 7,962 ha, 1,982 people F&PV: 117,067 ha SNAP: 98,190 ha	37 initiatives in GADs, 19,200 ha	Parochial GADs in Chone promote productive ventures (artisanal fishing and family gardens) 1,500 ha in permaculture	85,6%

ZHDP	Deforestation rate 1990-2000	Deforestation rate 2000-2008	Percentage of forest cover and percentage under conservation Equivalent CO_2 content	Projected annual deforestation 2008-2020 (km^2)	Expansion of land use 2000-2008	Expansion of agricultural products	Identified Bio-venture (bioemprendimientos)	Hectares under conservation	Restoration initiatives	Sustainable agricultural production initiatives	Average UBNs
			308.8 tCO_2/ha							and production of fine aroma cocoa in Muisne	
6. Central Manabí (central semi-dry coast)	-5.33	1.57	Remnant: 8.30% Under conservation: 76.9% Pluviseasonal dry forest: 137 tCO_2/ha	-79.54	Pastures	Cattle, cocoa and plantain		PSB: 6,391 ha, 7,398 people F&PV: 215,645 ha SNAP: 5,982 ha	One initiative, 604 ha	Parochial GADs in San Vicente and Sucre (Manabí) promote productive ventures (artisanal fishing and family gardens)	86.1%
7. Semi-dry mountain ranges and valleys in the central coast	-0.91	-1.87	Remnant: 59.1%* Under conservation: 32.6% Pluviseasonal dry forest: 137 tCO_2/ha	20.35	Pastures	Cattle and maize	Oil from palo santo, diving tourism, tourism, paja toquilla, tagua, bamboo cane, barbasco, fruits	PSB: 40,774 ha, 26,969 people F&PV: 105,834 ha SNAP: 40,486 ha	10 initiatives 6,316 ha	Parochial GADs in Puerto López with integral farms with agroforestry criteria	77.1%

ZHDP	Deforestation rate 1990-2000	Deforestation rate 2000-2008	Percentage of forest cover and percentage under conservation Equivalent CO_2 content	Projected annual deforestation 2008-2020 (km^2)	Expansion of land use 2000-2008	Expansion of agricultural products	Identified Bio-venture (bioemprendimientos)	Hectares under conservation	Restoration initiatives	Sustainable agricultural production initiatives	Average UBNs
8. Guayas river basin	-1.44	-1.37	Remnant: 20.40% Under conservation: 62.6% Pluviseasonal dry forest, 137 tCO_2/ha	41.94	Transient and permanent crops	Cocoa, sugar cane, banana, rice and maize	Dehydrated native plants, cosmetics based on cocoa, *sacha inchi*	PSB: 9,625 ha, 1,108 people F&PV: 196,974 ha SNAP: 100,382 ha	7 initiatives 2,400 ha		73.1%
Source:	Castro *et al*., 2013; MAE, 2016	Castro *et al*., 2013; MAE, 2016	Castro *et al.*, 2013; MAE, 2016; MAE, 2015b * Includes shrub vegetation	Castro *et al*., 2013; MAE, 2016	Castro *et al*., 2013; MAE, 2016	Castro *et al*., 2013; MAE, 2016	MAE, 2017	SUIA, 2017	Statistics PNRF	Statistics MAG	INEC, 2016; 2010 census

This area includes five cantons in the provinces of Esmeraldas (Quininde, San Lorenzo and Eloy Alfaro) and Pichincha (Pedro Vicente Maldonado, San Miguel de Los Bancos). It is characterized by a slight reduction in the rate of deforestation, from -1.46 in the period from 1990-2000 to -1.3, in 2000-2008. Also, as shown in Map 4, this area has an important forest remnant, since 56% of its surface has forest cover (Castro *et al.*, 2013). Conservation efforts in the zone are significant: 48.6% of the remaining forest are under some form of conservation and generate synergy. Thus, it is observed that the areas under conservation with the Socio Bosque Program (PSB) have practically become a protective barrier around the buffer zone of the main protected area in the zone: the Cotacachi-Cayapas Reserve.

Map 4. ZHDP 4: North Esmeraldas and piedmont northern coast



Source: Castro *et al*., 2013; SUIA MAE, 2017
Prepared by: Ana Coral

For these reasons, the FIP will focus its efforts on strengthening the presence of these conservation instruments and, if possible, increasing them, combining the strategy with the strengthening of existing Bio-venture in the zone (orchids, native ornamental plants, bamboo, resins, tagua, tourism), in addition to the promotion of successful sustainable forest use experiences (for example, Verde Canandé).[37] FIP efforts will improve the living conditions of local populations that, by 2010, had an index of unsatisfied basic needs (UBNs) of 83.8% (INEC, 2017). In addition, the National Forest Control System (SNCF) should be strengthened through the incorporation of a forest traceability component.

[37] Verde Canandé is a community-based private business that successfully develops sustainable forest management with low impact technology and the use of non-traditional species, creating high quality export products (engineering floors, boards and others) and combining their work with forest conservation and restoration strategies.

On the other hand, agricultural lands cover 44% of the zone; the main use of the agricultural land in this area are pastures and permanent crops, representing 55% and 43%, respectively. Among the permanent crops we can mention monocultures, which cover the second largest area in the zone, after the Guayas basin.[38] The agricultural products with the greatest growth in area, between 2000 and 2008, were African palm and cocoa, destined mainly for export. The zone shows low flexibility for agricultural expansion, with barely 2% of the agricultural area at rest (Castro *et al.*, 2013).

These agricultural uses generate pressure on the protected areas of Mache Chindul and the Cayapa Mataje mangroves, as well as on the remaining forest in the southeast of the zone. Therefore, the FIP will prioritize the promotion of sustainable agricultural production practices and forest restoration processes that several GADs execute or have already executed on both topics. In addition, the FIP shall prioritize the promotion of green credits in these areas.

North Manabí and south Esmeraldas, ZHDP 5

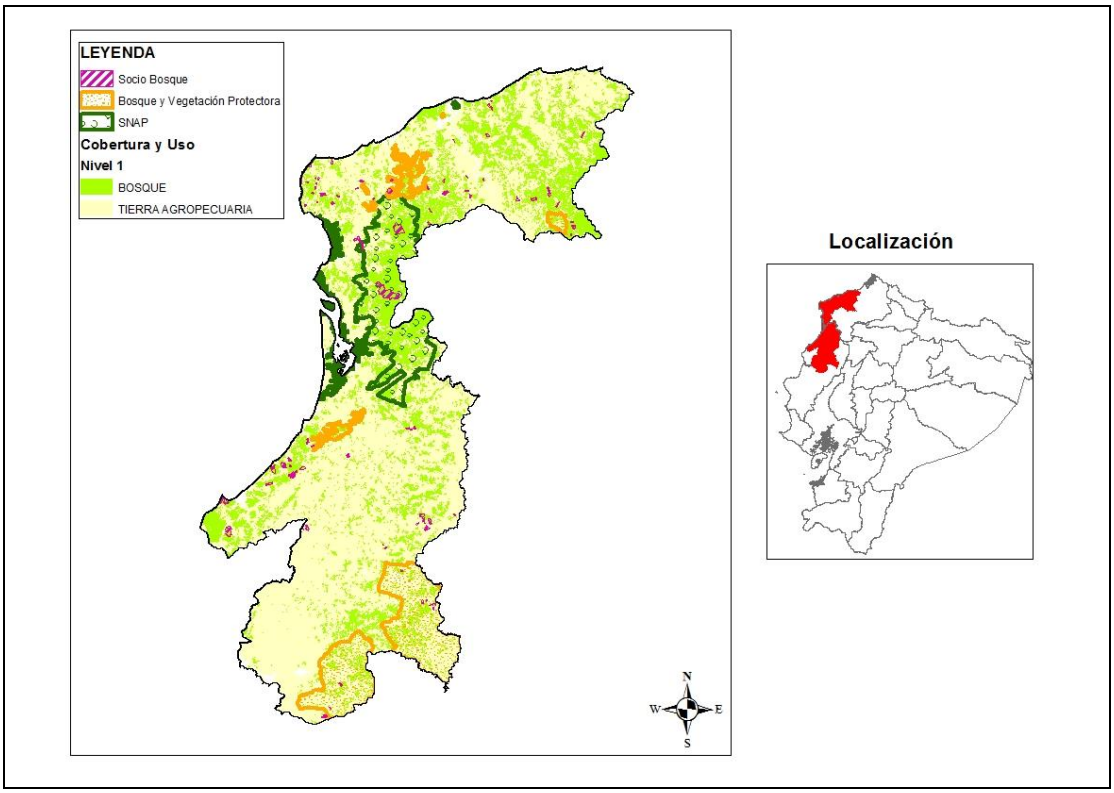
This zone includes ten cantons in the provinces of Esmeraldas (Río Verde, Esmeraldas, Atacames, Muisne) and Manabí (Chone, Pedernales, Flavio Alfaro, El Carmen, Jama, Pichincha). It has presented a reduction in the rate of deforestation from -3.11 in the period from 1990-2000, to -2.27 in 2000-2008. However, it exceeds the national rate (*Castro et al*., 2013). As can be seen in Map 5, about a quarter of the surface of this area (24.6%) is forest; its main protected area (Mache Chindul) presents a strong intervention, which has caused the MAE to discuss a potential recategorization and re-delimitation of the area. However, the areas under conservation with forests and protective vegetation (F&PV), the PSB and the protected area, reach 65.3% of the remaining forest of the area, so as in ZHDP 4, the FIP will support the strengthening and management processes of these conservation entities.

Unlike ZHDP 4, a significant number of Bio-venture have not yet been identified in this zone. The main ones are related to tourism and it is estimated that bamboo has good potential. However, these Bio-venture or others that are identified will be supported by the FIP. The SNCF will also be strengthened through the incorporation of its forest traceability component.

On the other hand, as it can also be observed in Map 5, most of the land in the zone is used for pasture, which represents 84% of the agricultural surface and was also the area with the most growth between 2000 and 2008. This zone presents the largest number of head of cattle, which is its main agricultural and livestock products and goes to the national market. The areas of African palm and cocoa also grew, oriented mainly to exports. The zone shows low flexibility for agricultural expansion, since only 1% of the agricultural area is at rest, which implies a greater risk of deforestation.

[38] The Guayas river basin is the most important productive area of the country for crops such as banana, rice and maize.

Map 5. ZHDP 5: Northern Manabí and southern Esmeraldas



Source: Castro *et al*., 2013; MAE, 2017d
Prepared by: Ana Coral

In this context, the FIP will prioritize the promotion of sustainable agricultural and livestock productive practices, the agro-productive reconversion and forest restoration processes that, as in the previous zone, have already begun. There is even a higher number of GADs and community organizations that execute and executed projects in both areas; therefore the FIP will prioritize the promotion of green credits in these areas. As a whole, the actions will contribute to improving the living conditions of the local populations that, according to INEC, have an UBN index of 85.6%.

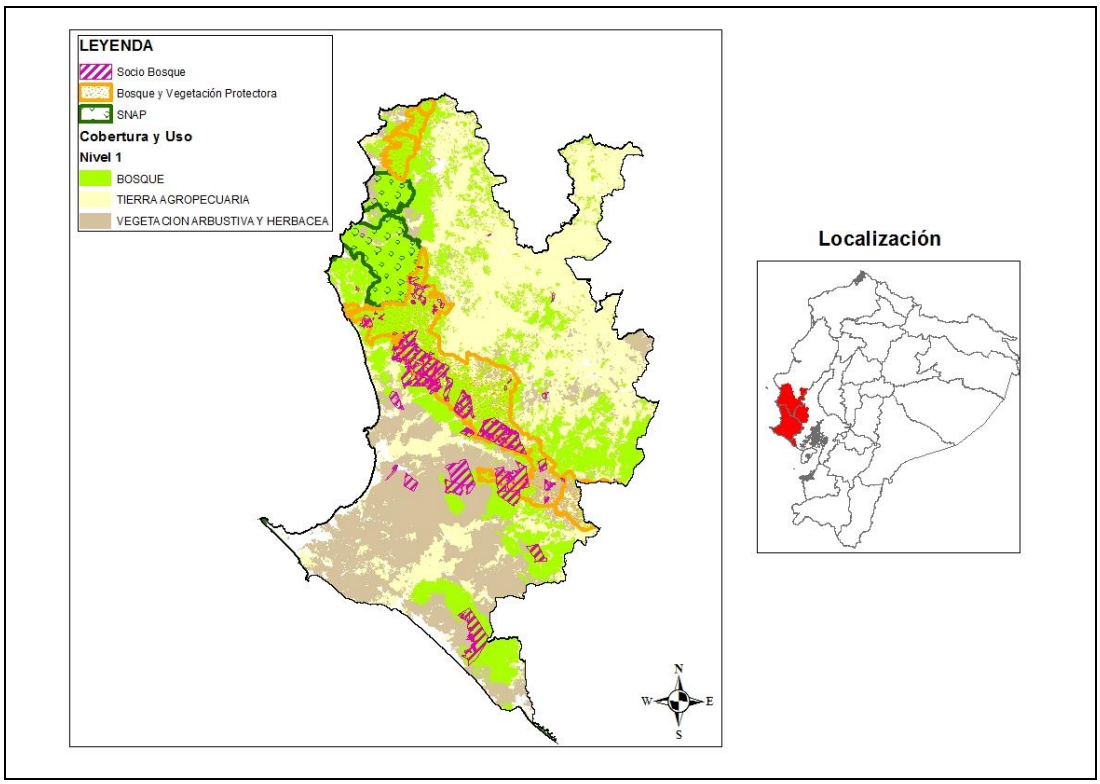
It is worth noting that during the process of preparing the FIP, experiences were identified that are in a canton near ZHDP 5, the canton of Sucre, in Manabí. There, Universidad Católica de Quito (private university) has, for some time now, carried out research and provided support to 364 farms on issues related to agroecology. Also, in the same canton of Sucre, in the Canoa parish, there is another emblematic agro-ecotourism experience called Río Muchacho, which has also carried out this activity successfully for 40 years. Therefore, both experiences should be considered at the time of implementation, since their potential for replication is very important for this zone.

<u>Semi-dry mountain ranges and valleys in the central coast, ZHDP 7</u>

This zone includes five cantons from the provinces of Manabí (Jipijapa, Puerto López) and Santa Elena (Salinas, La Libertad, and Santa Elena). It is characterized by a considerable increase in the rate of deforestation, which went from -0.91 in the period from 1990-2000 to -1.87 in the period from 2000-

2008, a higher indicator than the national rate (Castro *et al.*, 2013). As can be seen in Map 6, 59.7% of the surface of this zone is made up of forest or shrub vegetation and is 32.6% within the conservation figures that have allowed its maintenance. The FIP can also help strengthen and expand these areas.

Map 6. ZHDP 7: Semi-dry mountain ranges and valleys in the central coast



Source: Castro *et al*., 2013; SUIA MAE, 2017
Prepared by: Ana Coral

An advantage of this zone is the presence of several Bio-venture (oil from palo santo, diving tourism, tourism, paja toquilla, tagua, bamboo cane, barbasco) that constitute a potential that could be promoted through the FIP so that, by increasing the value of the standing forest, its conservation and sustainable use are ensured, improving the living conditions of the population that, in this zone, presents an UBN indicator of 77.1%.

In regards to the use of agricultural land in this zone, it is mainly used for pastures, which represent 58% of the surface; then there are permanent crops, with 16%; and, transients and fallow, with 18%. In the period from 2000-2008, pastures were the main land use in expansion in the zone, with an increase of 33.1 thousand hectares. Also, certain crops such as hard corn, cocoa and peanuts. These agricultural products are mainly destined to the national market. The zone shows high flexibility for agricultural expansion, since 9% of the agricultural surface is under rest, superior to the national proportion, which is 4%.

As there is greater diversity in the type of crops, there is also an interesting alternative for the promotion of good agricultural practices and, even, of productive reconversion. This will be promoted by the FIP, accompanied by forest restoration processes that ensure the conservation and sustainable use of the spaces.

6.4 Project opportunities for scalability and replicability

The actions foreseen in the implementation of the FIP, as has been explained in the previous sections, have a national scope, so they can be replicated in other ZHDPs, and even scale up nationally and internationally. The *Forest Investment Plan* of Ecuador could be considered for application in other Andean countries that have similar characteristics in terms of ecosystems.

Additionally, according to the results of the implementation of the FIP in Ecuador, it is likely that the country will postulate in the future for results-based payments (compensations) from REDD+,[39] which will allow to continue and deepen the actions in the selected ZHDPs and in other places of the country.

6.5 Results to be achieved by the FIP and methodology to measure them

The logical framework of the project is explained in detail in Section 9. However, this section presents a brief summary of the main results to be achieved by the FIP.

The indicator at the general objective level is:

At the end of the project, gross deforestation in the selected ZHDPs is reduced by at least 15%, with respect to the Forest Reference Emission Levels from Deforestation from 2000-2008. The reference emission level is updated by the National Forest Control System of the MAE.

To achieve this result, the investment plan proposes the following components or expected results:

a) Forest landscapes managed in a sustainable manner guarantee the conservation of remaining forest and increase the value of the remaining native forest, which allows communities to improve their income, with an important participation of women.
b) Land in agricultural use in areas adjoining remnant forests adopt sustainable production practices and/or initiate restoration processes for the conservation and sustainable use of the land, maintaining or improving the income of the participating families and guaranteeing the fair and equitable participation of women, men and communities.

The actions that aim to fulfill objective "a" correspond to conservation initiatives through different existing tools, among them the Socio Bosque Program (PSB), forest and protective vegetation (F&PV), the areas of the National System of Protected Areas (SNAP) and other conservation initiatives that are identified and/or promoted from the private, community or public sector. For this purpose, the MAE has developed a plan to implement the *REDD+ AP* called *Plan for the consolidation of public, private and community initiatives for forest conservation*, which will serve as a basis for defining the actions to be carried out in these three ZHDPs.

[39] According to Article 74 of the *CRE*, Ecuador cannot commercialize emission reduction certificates. However, it can receive compensation for results in emission reduction, in which case the country will communicate and deactivate those tons of CO_2 equivalent before the *Convention on Climate Change*. It is in this spirit that a financial cooperation agreement was signed between Ecuador and Germany-Norway under the REDD Early Movers Program (see Section 5).

Another group of actions that will contribute to the fulfillment of objective "a" is made up of those focused on the development of biodiversity conservation ventures, for which the FIP will also be able to use the *REDD+ AP* implementation plan, *Plan to promote sustainable biodiversity conservation initiatives in priority areas for conservation and reduction of deforestation*, which has been prepared and is available in the Undersecretariat for Climate Change, as a basis.

As noted in both implementation plans, the execution strategies combine both financial support and direct technical assistance to existing initiatives such as the preparation of competitive funds for the development of activities in certain areas, or for the deepening of actions. Thus, for example, a competitive fund could be set up to identify or develop business opportunities for Bio-venture with bamboo, an activity that may even include other partners that add funds and/or technical expertise, such as the International Network for Bamboo and Rattan (INBAR), entity that during the formulation of the FIP has shown interest in collaborating with this proposal.

Finally, a third group of actions that will contribute to the fulfillment of this objective is related to the sustainable use of wood and the forest control system, with the incorporation of its forest traceability component. For both, Ecuador has three *REDD+ AP* implementation plans that will serve as a basis:

- *Plan to strengthen the deforestation control process and the illegal use of native forests in the country.*
- *Plan to reduce illegal trade of timber forest products through the implementation of a robust and verifiable forest traceability system.*
- *Plan to increase the production and consumption of wood products of legal origin through the implementation of a strategy of production and sustainable public and private purchases.*

For its part, the actions aimed at fulfilling objective "b" correspond to the promotion of sustainable agricultural production practices and agro-productive reconversion and forest restoration. For both of them there are also *REDD+ AP* implementation plans oriented to these issues and that will serve as the basis for the definition of actions. These are:

- *Plan for the traceability and certification of selected agricultural products and cattle from sustainable and socially-equitable practices that reduce the pressure on forests.*
- *Plan for the establishment of responsible purchasing systems for agricultural and bovine products from sustainable and socially-equitable practices that reduce pressure on forests, focused on REDD+ priority areas.*
- *Plan for the establishment of sustainable coffee and cocoa agroforestry systems free of deforestation, as an alternative to shifting cultivation, where good management practices are implemented.*
- *Plan to support the implementation of public, private and community initiatives for the restoration of ecosystems, under the following approaches: landscape, connectivity among areas under conservation, gender and interculturality.*

To achieve goal "b" there is an additional tool that MAE itself has developed in conjunction with BanEcuador: the document, *Analysis and proposals to contribute so that the financial services of the bank promote sustainable production free of deforestation* (MAE, 2017b). This text includes a proposal to introduce improvements in BanEcuador's credit regulations and financing, as well as manuals for green credit lines (organic production, integrated farms and agroforestry systems and Bio-venture) in the same financial institution.

However, the promotion and operation of this type of credit could also be channeled through two additional public financial entities: the National Corporation for Popular Finance (CONAFIP, for its acronym in Spanish) and the National Finance Corporation (NFC). The first is to provide financial services and second-tier loans to organizations of the popular and solidarity financial sector, as established by the *Organic Law on Popular and Solidarity Economy*. This is perhaps the best mechanism to work with micro credit with credit unions that are present in the rural sector, while customers with credit capacity over USD 50,000 can receive loans directly from the NFC, an institution that has been working on the incorporation of a line of green credit with support from the Inter-American Development Bank (IDB).

Finally, it should be noted that a fundamental actor to achieve the results are the decentralized autonomous governments (GADs) at the different levels (provincial, municipal and parochial), which have several competences (for example, productive and land use, among others) that directly affect FIP objectives. Therefore, coordination with these actors is essential.

Result indicators for each specific objective are detailed in section 9.2.

6.5 Generation and quantification of co-benefits

Table 10 provides a general description of the co-benefits that are generated by each project component.

Table 10. Co-benefits per FIP specific objective

Specific result	Co-benefits
1. Forest landscapes managed in a sustainable manner guarantee the conservation of remaining forest and increase the value of the remaining native forest, which allows communities to improve their income, with an important participation of women.	The following co-benefits have been identified in accordance with the Ecuador *REDD+ AP*, the *National Biodiversity Strategy* and other international instruments: • Protection and conservation of forests and the biodiversity associated with them. • Allow the different natural ecosystems to maintain the supply of non-timber forest products (NTFPs) such as stems, mosses, lianas, cabuyas, wool, palms, fruits, resins and medicinal plants, among others. This generates opportunities for the development of Bio-venture that, offered according to the needs and requirements of the markets, under an appropriate business plan, will allow improving the income of the participating communities. • Preservation of the scenic beauty that allows, at the same time, to develop or consolidate ecotourism activities promoted by communities. • The protection of ecosystems in the upper parts of the basins will allow the regulation of water resources, the conservation of water sources, the protection of soils and the control of landslides. • The maintenance of the culture, identity and language of

	indigenous populations, as a result of the improvement of their income due to their participation in the Socio Bosque Program (PSB), Bio-venture and sustainable forest management. • The traceability and certification of the legal origin of wood will contribute directly to the reduction of the degradation processes produced by the illegal use of wood, which will be reflected in the increase of legal timber trade in the country. • The empowerment of women, as they play an active role in biodiversity conservation ventures, as well as in other actions derived from the gender approach that is taken into account both in the *REDD+ AP* and in the profile of forest investment projects.
2. Land in agricultural use in areas adjoining remnant forests adopt sustainable production practices and/or initiate restoration processes for the conservation and sustainable use of the land, maintaining or improving the income of the participating families and guaranteeing the fair and equitable participation of women, men and communities.	The following co-benefits have been identified in accordance with the Ecuador *REDD+ AP*, the *National Action Plan Against Desertification* and the *National Biodiversity Strategy*: • Reduction of runoff and soil erosion due to higher organic content and an increase in soil carbon and moisture retention capacity, which is crucial in case of decreases in precipitation and expected temperature increases. • Increase in soil moisture retention capacity, protection of water sources, protection of biodiversity, improvement of biological connectivity and improvement of the landscape. • Reduction of pressure on forests, thus avoiding deforestation. • Thanks to the implementation of agroforestry systems and forest restoration, the improvement of ecosystem connectivity (reduction of habitat fragmentation); the conservation of seed sources (in associated trees); water regulation (prevention and mitigation of effects caused by lack or excess of water); soil conservation (control of erosion and sediment retention, conservation of soil fertility by biomass); generation of spaces for traditional agroforestry systems such as chakras and ajas; provision of timber products (derived from agroforestry); and, strengthening of local governance systems (including coordination between associations and government agencies) are generated. • Restoration processes will also allow the use of Non-timber forest products (NTFPs) (stems, mosses, lianas, cabuyas, wool, palms, fruits, resins, medicinal plants, among others) by their owners. • Overall, good agricultural and livestock practices, the implementation of agroforestry systems and forest restoration will increase the income (or avoid costs) of their owners, which contributes

to socioeconomic development and poverty reduction.

Section 7. Implementation potential with risk assessment

Table 11 shows the main risks involved in the implementation of each component, as well as the most important mitigation measures.

Table 11. Risks and mitigation measures

Specific result	Risks and mitigation measures

1. Forest landscapes managed in a sustainable manner guarantee the conservation of remaining forest and increase the value of the remaining native forest, which allows communities to improve their income, with an important participation of women.	• Lack of coordination among the entities involved (MAE, MIPRO, Ministry of Foreign Trade, Pro-Ecuador, universities, research institutes) to promote biodiversity conservation ventures.
	  ○ To mitigate this risk, strong leadership from the environmental authority will be required, which will allow convening and reaching agreements with the different institutions.
	  ○ Likewise, a closer involvement (co-participation) of these institutions with the initiatives will be needed, which will help generate a greater commitment and understanding of the importance of coordinated work.
	  ○ The FIP should promote the participation of the greatest number of actors, especially the private sector and grassroots social organizations.
	• Lack of demand from markets or marketers to channel biodiversity products that guarantee fair volumes and prices.
	  ○ The mitigation of this risk is one of the pillars of the implementation plan that MAE has developed in order to promote biodiversity conservation ventures, and corresponds to the creation of the so-called “commercial managing entities,” in charge of linking the producer with the market. Among other tasks, commercial managing entities identify the characteristics, needs that the market requires of bio-ventures and, at the same time, negotiates with markets for their adequate valuation. The concept of commercial managing entities has been proposed by IICA (2015) in the document *Methodological guide for the creation of a commercial managing entity of timber and non-timber forest products in the Andean region*.
	• Increased illegality in forest use as a result of potential higher production costs generated by forest control and tracking processes.
	  ○ Among the implementation strategies is the creation of a community forestry service consisting of the training and initial investment of a group of forest extension agents that provide small forest producers with advice and technical assistance to comply with the traceability process. The

	training of these forest extensionists in other services (management plans, biodiversity conservation ventures, land legalization, forest restoration techniques, among other issues) will guarantee their subsequent self-financing. o Intensification of forest control in places where the system generates alerts of inconsistency with respect to the information of forest harvesting programs. This is considered in the design of the traceability system. o Intensification of forest control in final destinations, so that, in the event of inconsistencies in wood inventories, establishments are closed. To this end, joint work is planned with the Internal Revenue Service and the National Police. o Agreements with the Public Procurement Service of the State in order to guarantee a market for certified wood. o Agreements with the private sector to reach a social pact that promotes the purchase of certified wood. o Intensive communication and awareness-raising processes for the population to reduce resistance to the actions implemented. • Presence of conflicts in land tenure jeopardizes the investments made by the different actors. o Coordination with State entities with competence in the topic of land legalization and land conflict resolution. o Provide legal assistance to participants in the FIP on land tenure issues, acknowledging that a large percentage of the problems can be resolved through negotiated agreements.
2. Land in agricultural use in areas adjoining remnant forests adopt sustainable production practices and/or initiate restoration processes for the conservation and sustainable use of the land, maintaining or improving the income of the participating families and guaranteeing the fair and equitable participation of women, men and communities.	o Expansion of the agricultural frontier. Due to the own success of the developed actions, it is likely that producers wish to produce more, for which they will need to extend the cultivation surface, with the risk of expanding the agricultural frontier over forest areas. o Allocate resources for an important training component on good management practices, among which is property planning. This allows to identify the areas of land use, which will later be monitored. Thus, this possible desire for expansion may be directed towards lands that are already degraded or that are underutilized (such as large areas of extensive livestock farming). o Lack of coordination among different entities [ministries, decentralized autonomous governments (GADs), among others] that overlap territorially and have objectives opposed to conservation, that is, they make unsustainable use of natural resources. o To mitigate this risk, the environmental authority is required to reach interinstitutional agreements with the Ministry of Agriculture and Livestock (MAG), the National Secretariat for Planning and Development (SENEPLADES) and the GADs, with respect to the intervention of each actor in said areas. o In addition, the involvement of the different actors is required during the planning and execution of the activities in the territory. o Lack of commitment on the part of the trained technicians, as well as of their communities, which leads to a shortage of sufficient technical personnel. o To mitigate it, agreements will be signed with the people

trained (men and women) and with their communities, in which actions are agreed that minimize the risk of desertion before, during or after the training of the people. In the cases in which these desertions occur, the communities must commit to find the corresponding replacements. In addition, an action foresees the elaboration of a strategy and a plan to give financial sustainability to the creation of these groups of community extension agents.

- Lack of knowledge on the ecology of some species and forest dynamics that allow the restoration work to be carried out successfully.
    - To mitigate this risk, the involvement of universities and research centers that support, through co-financing, the preparation of the corresponding research is proposed. It is worth noting that currently, by legal provisions, universities have to demonstrate investments in research to maintain their accreditation qualifications and budgets.
- Lack of methodologies to evaluate the state of the ecosystems and their environmental services, evidencing improvements.
    - In order to mitigate this risk, an action is proposed that aims to develop and validate a set of indicators that allows monitoring and permanent evaluation of the progress of the restoration process. It is also expected to carry out this action through co-financing with universities and research centers.
- The presence of conflicts in land tenure puts at risk the investments made by the different actors.
    - Coordination with State entities with competence in the topic of land legalization and land conflict resolution.
    - Provide legal assistance to participants in the FIP on land tenure issues, considering that a large percentage of the problems can be resolved through negotiated agreements.

Section 8. Indicative financing plan for the investment plan

8.1 Project 1: Forest landscapes managed in a sustainable manner

	MDB	Indicative distribution of FIP funds (USD)			Co-financing (USD)		
Components		Donation (AT)	Loan	Total	GoE	Other	Total (USD)
Strengthening the management of areas under conservation and sustainable use	World Bank	$ 270.000	$ 5.230.000	$ 5.500.000	$12.900.000	$ 2.600.000	$ 21.000.000
Biophysical research to develop bio-ventures		$ 200.000	$ 200.000	$ 400.000		$ 200.000	$ 600.000
Strengthening of bio-ventures			$ 3.300.000	$ 3.300.000	$ 740.000		$ 4.040.000
Implementation of Forest Traceability System		$ 900.000	$ -	$ 900.000	$ 600.000	$ 500.000	$ 2.000.000
Subtotal project 1		$ 1.370.000	$ 8.730.000	$ 10.100.000	$14.240.000	$ 3.300.000	$ 27.640.000

In general, the destination of FIP funds has been estimated according to the activities that derive from the components and indicators of the logical framework.

On the other hand, co-financing resources correspond mainly to the fiscal counterparts to maintain the operational costs of programs and initiatives in execution. Contributions from other sources also correspond to agreed financing that comes from other sources of cooperation; for example, in the line of strengthening the management of the areas under conservation and sustainable use, the values correspond to contributions that KfW finances for the payment of incentives to some collective members of the PSB, and a smaller amount, to contributions from the private sector that the PSB has managed to get. In the line of research, counterparts are explained by financing expected by the universities and research centers that, in compliance with the *Law of Higher Education*, must allocate up to 5% of their budgets to this type of activity, so the project would try to get part of those funds.

8.2 Project 2: Sustainable management of agricultural lands

	MDB	Indicative distribution of FIP funds (USD)			Co-financing (USD)		
Components		Donation (AT)	Loan	Total FIP	GoE	Other	Total (USD)
Agricultural production under sustainable practices	World Bank		4,000,000	4,000,000	1,500,000	500,000	6,000,000
Creation, strengthening and financing of green credit lines			2,300,000	2,300,000	500,000		2,800,000
Market development		300,000		300,000	150,000		450,000
Forest restoration fund			5,820,000	5,820,000	1,000,000	500,000	7,320,000
Subtotal project 2		**300,000**	**12,120,000**	**12,420,000**	**3,150,000**	**1,000,000**	**16,570,000**

In this case, co-financing refers to estimates of the operating counterparts that the different State portfolios involved [MAE, MAG, BanEcuador, National Institute for the Popular and Solidarity Economy (IEPS, for its acronym in Spanish), CONAFIPS, NFC] would contribute as operational expenses or counterparts, as well as contributions that the project would try to get from the private sector.

8.3 Financing for the management of both projects

	Indicative distribution of FIP funds (USD)			Co-financing (USD)		
Components	Donation (AT)	Loan	Total FIP	GoE	Other	Total (USD)
Administrative management	600,000		600,000			600,000
Design and implementation of communication and citizen awareness plan	800,000		800,000	200,000		1000,000
Project design	80,000		80,000			80,000
Subtotal administration fees	**1,480,000**		**1,480,000**	**200,000**		**1,680,000**

8.4 Summary of the indicative financing plan

	Indicative distribution of FIP funds (USD)			Co-financing (USD)		
Components	Donation (AT)	Loan	Total FIP	GoE	Other	Total (USD)
Project 1	1,370,000	8,730,000	10,100,000	14,240,000	3,300,000	27,640,000
Project 2	300,000	12,120,000	12,420,000	3,150,000	1,000,000	16,570,000
Administration fees	1,480.000	-	1,480,000	200,000	-	1,680,000
Total	3,150,000	20,850,000	24,000,000	17,590,000	4,300,000	45,890,000

Section 9. Logical model of the investment plan and results framework

9.1 Logical Model of the Ecuador Forest Investment Plan

Final overall result of CIF (15-20 years)	Contribution towards the achievement of low-carbon productive alternatives resilient to the effects of climate change.		
Transformative impact (10-15 years) at country level	**Main objective:** Contribute to the efforts envisaged in the Ecuador *REDD+ AP* aimed at reducing deforestation and forest degradation through conservation, sustainable forest management and the optimization of other land uses, contributing to the reduction of GHG emissions.		
	Co-benefit 1: The protection, conservation and restoration of forests allows the maintenance of biodiversity and the generation of key ecosystem services to increase resilience in the face of climate change.	**Co-benefit 2:** bio-ventures, sustainable forestry and the adoption of good agricultural practices contribute to the socioeconomic development of inhabitants.	**Co-benefit 3:** Preservation of the culture, identity and language of the rural, indigenous or Afro-Ecuadorian populations that have developed alongside the forests.
Catalytic and feasible results to replicate (5-10 years) at the country level	Scaling of the experiences towards other zones of homogeneous deforestation processes and contribution to the recovery of degraded areas in support of incentive programs for the conservation and sustainable management of forests promoted by the Government of Ecuador.		
	Strengthening the governability of the areas under conservation and governance in communal lands and territories of indigenous peoples.	Academia and research centers contribute to the innovation and development of new products associated with biodiversity.	The national market recognizes and values the products developed under sustainable use of biodiversity and sustainable environmental practices.
FIP expected products (2-	Multiplication of experiences of sustainable use of biodiversity resources ((bio-		

7 years) at regional level	ventures) of sustainable agricultural production practices, and of new forest restoration spaces with involvement of GADs and the private sector.		
	Exchange of experiences among community organizations; creation of production and marketing networks for Bio-venture and agricultural products produced in a sustainable manner.	The number of hectares under conservation, sustainable use and forest restoration is increased under the sponsorship of the GADs and the private sector.	Local networks of producers of agricultural products elaborated through good environmental practices and from Bio-venture are articulated.
	Strengthening of the integral management of the areas under conservation; increase of knowledge and assessment of the sustainable use of biodiversity; sustainable use of agricultural lands adjoining remnant forests and forest restoration of degraded areas.		
FIP activities (1-5 years) at local level	Involvement of GADs, NGOs and CSOs in the processes of forest restoration, sustainable use of agricultural lands and bio-ventures.	Creation of a group of community extension agents with the capacity to assist the owners of forests and agricultural lands in the sustainable management of the territories.	Linking of universities and research centers that support the strengthening of value chains, Bio-venture and agricultural products developed through good environmental practices.
	Financial opportunities for USD 24 million in concessional loans (USD 20.85 million) and donations (USD 3.15 million) from FIP, additional collateral funds from the public sector (incentives and fiscal allocations) and private investments in support of the actions proposed in the investment plan.		

9.2 Logical Results Framework

Results	Indicators	Baseline	Sources of verification	Measurement methods
General objectives				
Contribute to the efforts envisaged in the Ecuador *REDD+ AP* aimed at reducing deforestation and forest degradation through conservation, sustainable forest management and the optimization of other land uses, contributing to the reduction of GHG	At the end of the project, gross deforestation in the selected ZHDPs is reduced by at least 15%, with respect to the Forest Reference Emission Levels from Deforestation 2000-2008.	In the ZHDPs (4, 5 and 7) where the project is developed, the Forest Reference Emission Levels from Deforestation 2000-2008 indicate a gross deforestation rate of 23,900 ha/year (Castro *et al.*, 2013).	Reports from the MAE's National Forest Control System.	According to the *REDD+ AP*, it is foreseen to report deforestation in continental Ecuador every two years. This, through forest/non-forest maps and cover and land use maps every four years. Remote sensors and databases on forest

Results	Indicators	Baseline	Sources of verification	Measurement methods
emissions.				cover will be used.
Expected results with FIP implementation				
1. Forest landscapes managed in a sustainable manner guarantee the conservation of remaining forest and increase the value of the remaining native forest, which allows communities to improve their income, with an important participation of women.	At the end of project implementation:			
	1.1 The integral management (technical, economic or infrastructure) of the areas under conservation and/or sustainable use that are implemented through the different instruments that operate in each ZHDP is strengthened.	100,075 ha under conservation and timber use with PSB until 2017 408,562 ha under conservation in protected areas until 2017 238,712 ha under conservation and protective forest management until 2017	Reports from MAE's National Forest Control System	Use of remote sensors and databases on forest cover
	1.2 There is research (on inventories, censuses, carrying capacity) and management plans for the species in key areas where Bio-venture are carried out in the three ZHDPs.	There are isolated studies, compilation and systematization is missing.	Publications disseminated through physical and digital media and socializations in the territory	Verification in digital and physical media and in reports of socialization events
	1.3 At least ten (applied) research jobs have been carried out on the potential use of			

Results	Indicators	Baseline	Sources of verification	Measurement methods
	biodiversity products, as well as on the development or improvement of processes, technologies and prototype products (in conjunction with universities and research centers, with co-financing of at least 25%).	For some products (for example bamboo, palo santo) there is formal research work that details their potential for harvesting and production.	Publications disseminated through physical, digital media and socializations in the territory	Verification in digital and physical media and in reports of socialization events
	1.4 At least 20 sustainable biodiversity conservation initiatives have been strengthened and/or replicated. Of these, 50% correspond to women's initiatives and 30% to indigenous organizations, with the participation of young people in both groups. From the third year of being supported, these initiatives increase their sales by 30%. In addition, they receive technical assistance to comply with sanitary, tax or certification standards, so that they can reduce barriers to market access or expand to specific markets, or so that they can participate in commercial circuits promoted by the MAG.	Approximately 20 operational biodiversity conservation initiatives to be validated during the first year of FIP execution. The Bio-venture with which FIP will work will be identified.	FIP management and evaluation reports	Field evaluation visits
	1.5 There is at least one commercial managing entity formed or constituted			

Results	Indicators	Baseline	Sources of verification	Measurement methods
	(private, public or mixed) to support, along the value chain, biodiversity conservation ventures. Additionally, the commercial managing entity benefits from project incentives.		Statistical records on the evolution of sales, compliance with sanitary, tax and certification standards	Producer surveys carried out at the beginning and end of the project
	1.6 There are at least 60 forest extension agents from the participating communities (30 men and 30 women) trained in sustainable forest management (biodiversity conservation ventures, timber harvesting, forest restoration, organic production)	No entity has been identified that performs activities similar to the commercial managing entity.		*In situ* evaluation visits
	1.7 Approximately 3,800[40] m^3 of timber with legal certificates of origin issued by the MAE			
			Constitutional documents or agreements signed between the parties that make up the commercial managing entity	*In situ* evaluation visits

[40] Average value of the last 5 years of exploitation licenses granted FIP areas of intervention (DNF, MAE, 2017).

Results	Indicators	Baseline	Sources of verification	Measurement methods
		In the 47 communities participating in the PSB that exists in the three ZHDPs, there are community members that have already been trained on issues related to administrative management, control and community forest monitoring.	Reports of training and evaluation of forest extension agents.	Review of minutes
			Certificates delivered	Interviews to beneficiaries
		No issuance of legal certificates of origin exists.		
			Report of audit to the Wood Tracking System	Independent verification of the operation of the traceability system
2. Land in agricultural use in areas adjoining remnant forests adopt sustainable production practices and/or initiate restoration processes for the conservation and sustainable use of the land, maintaining or improving the income of the participating families	2.1 Hectares with agricultural use in areas adjoining remnants of forests and native vegetation adopt sustainable practices or productive conversion.	About 20 parochial GADs have supported the establishment of integral farms with agroforestry criteria.	FIP management and evaluation reports.	I*n situ* visits

Results	Indicators	Baseline	Sources of verification	Measurement methods
and guaranteeing the fair and equitable participation of women, men and communities.	2.2 Number and amount of green credits granted	This type of credit does not exist.		
	2.3 Number of agreements with public and private sectors that ensure products obtained through sustainable practices access to fair markets, or their incorporation in MAG commercial circuits.	This type of credit does not exist, check during first year of implementation.	FIP management and evaluation reports FIP management and evaluation reports	Reporting system of financial entities Systematization study of the experience accompanied by audiovisual media
	2.4 Hectares in restoration processes with financing for the entire restoration cycle. There is additional financing of at least 25% to those from FIP	Approximately 40,000 ha in restoration processes with PNRF, whose situation must be assessed before their incorporation to the FIP.	Reports from MAE's National Forest Control System	Use of remote sensors and use of a base of indicators raised by the project
	2.5 Incorporate a long-term financing strategy for restoration within Ecuador's environmental financial scheme	The former National Environmental Fund is currently in the process of being reactivated, which, according to the COA, will be the instrument for attracting funds for environmental projects.	Creation of the corresponding accounts and deposit vouchers	Verification of constitution documents and deposit vouchers

Section 10. Environmental and social safeguards

The design and subsequent execution of the investment plan will comply with the social and environmental regulations in effect in Ecuador and with the Environmental and Social Safeguards and other pertinent policies of the multilateral partner, including:

- Direct observance safeguards of the World Bank: a) *Indigenous Peoples OP/BP 4.10*; b) *Involuntary Resettlement OP/BP 4.12*; c) *Forests BP 4.36* and *Physical and Cultural Heritage OP/BP 4.11*; and, d) on natural habitats (OP 4.04).

Prior to the start of the proposed actions, baseline evaluations will be carried out in order to ensure compliance with social and environmental indicators, with emphasis on the development of socio-environmental mitigation measures and the design of an appropriate conflict resolution strategy (in the cases in which the projects directly or indirectly affect the natural resources included in community lands, or in the cases of claims of territorial overlaps in relation to the National System of Protected Areas).

Specifically, *REDD+ AP* actions will place considerable emphasis on the design of a specific strategy for: a) the management and/or protection of forest ecosystems with high conservation value attributes (HCVAs), or ecosystems with special attributes for the generation of ecosystem services; b) the reduction of vulnerability and increase of resilience to climate change.

In the implementation of the proposed actions, the practices and ancestral knowledge of the indigenous communities will be taken into consideration. This will be particularly relevant in terms of the cultural and spiritual uses of the worldview of indigenous peoples in practices that favor the conservation and sustainable use of native species of firewood or wood, considering the official lists of non-invasive species.

In this investment plan, the application of gender equality, which is specifically included in the *National Agenda for Women and Gender Equality 2014-2017*, constitutes a determining institutional mandate, and will form an integral part of the safeguards included in this proposal.

Additionally, the investment plan will consider Ecuador's national approach to safeguards, on which the legal, political and institutional frameworks in force and constitutionally determined are based. This constitutes a favorable and promising context for the application of the rights approach associated with the REDD+ safeguards of the UNFCCC, as it guarantees and fully recognizes personal, collective and nature rights. These are aligned with and complement the commitments, provisions and rights acknowledged and determined by the international instruments and conventions ratified by Ecuador.

Therefore, within the framework of the country's REDD+ strategy, the approach to safeguards seeks to align with national policies and contribute to their effective implementation. The existing legal framework on the respect of rights and the participation of diverse actors is highlighted, as well as the strengthening of governance, with a view to implementing REDD+ within the process of the sustainable development of the country and Good Living (MAE, 2016).

In general terms, each of the seven safeguards determined by the UNFCCC has a definition of its national scope in the context of the country's legal, political and institutional framework. This *National Scope of Safeguards* establishes the parameters on which Ecuador will report its approach and respect in the implementation of REDD+ activities, in application of existing legal instruments and mechanisms; therefore, compliance is mandatory at the national level (MAE, 2016).

Scope development, as well as the definition of the country's safeguards approach, resulted from a process of technical and conceptual analysis of three elements (MAE, 2016):[41]

1) Contributions from different actors (including representatives of communities, nationalities and peoples) regarding the priorities, potential risks and social and environmental co-benefits that could be associated with the implementation of REDD+.
2) Legal, political and institutional framework of Ecuador regarding individual, collective and nature rights. In addition, analysis of its relationship with the topics covered by the seven REDD+ safeguards.
3) Topics and criteria of safeguards determined in the tools of relevant international initiatives.

[41] Annex 6 presents the seven UNFCCC safeguards, followed by the scope defined for its approach and respect in Ecuador.

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Annex 1. Inventory of proposed projects

A.1: Forest landscapes managed in a sustainable manner

a) MDBs and the main government agencies

The project will be operated by the World Bank (WB) and the Ministry of Environment of Ecuador (MAE) through a management office that will be created for FIP Ecuador, in close coordination with the National Program of Incentives for the Conservation of Forests "Socio Bosque" (hereinafter, PSB), the National Biodiversity Directorate and the National Forestry Directorate. It will focus its efforts on the areas under conservation based on any legal instrument (protected areas, "Socio Bosque" areas, forests and protective vegetation, reserves of sectional governments, among others) and on remaining forest in zones of homogeneous deforestation processes (ZHDPs) 4, 5 and 7, especially those that have the presence of indigenous communities, Montubias and Afro-descendants.

b) Statement of the problem

For the period 2000-2008, ZHDP 4 (North Esmeraldas and piedmont northern coast), 5 (Northern Manabí and southern Esmeraldas) and 7 (Mountain ranges and semi-dry valleys of the central coast) had deforestation rates ranging from -1.30 to - 1.87, exceeding the national average of -0.52. Therefore, it is a priority for the Government of Ecuador to reduce these rates, so that the remnants of natural forests that still exist in these areas are conserved (the percentage of remaining forest cover ranges from 24 to 56%).

As in other areas of the country, the expansion of the agricultural frontier is the main cause of deforestation. In ZHDP 4, there is greater expansion of agricultural land use in permanent crops such as African palm and cocoa, while in ZHDP 5 and 7 these crops are pastures, although with a recent expansion of cocoa and African palm in ZHDP 5, and maize in ZHDP 7. Additionally, other factors such as conflict over mining and land tenure have become factors of pressure on the native forest, especially in ZHDP 4. This situation is aggravated by the socioeconomic conditions of the rural population; thus, for 2010 the index of unsatisfied basic needs (UBNs) in rural areas of ZHDP 4 was 84%; in ZHDP 5, 86%; and, in ZHDP 7, 77%. This has led the indigenous peoples of Esmeraldas -such as the Chachi, Awá, Epera-, the Afro-Ecuadorian communities and the Montubio peoples of Manabí and Santa Elena to adopt survival strategies that directly affect the ecosystems.

However, the conservation policies and strategies carried out by the Government of Ecuador have allowed 49% of the remaining forest in ZHDP 4, 65% in ZHDP 5, and 33% in ZHDP 7 to be under some conservation figure and generate synergy with each other. It is observed, for example, that the areas under conservation in the framework of the PSB have practically become a protective barrier around the buffer zone of the main protected area of ZHDP 4, the Cotacachi-Cayapas Reserve. Something similar happens in the other zones.

c) Proposal of the impacts of transformation and co-benefits

This project will strengthen focus its efforts in strengthening the presence of conservation instruments and, if possible, in their increase, combining these strategies with support for biodiversity conservation initiatives that exist in the zone (orchids, native ornamental plants, bamboo, resins, tagua, tourism, honey from melipones, oil from palo santo, paja toquilla, barbasco, among others), plus the promotion of successful experiences of sustainable forest use (for example, Green Canandé, in ZHDP 4). All this will contribute to increase the value of the standing forest, favoring the sustainability of the areas under conservation through the generation of new jobs and sources of income for the rural populations involved.

Additionally, the project will support the Ministry of Environment of Ecuador (MAE) in the implementation of the Forest Traceability System, which will strengthen the National Forest Control System (SNCF), favoring the MAE in the improvement of logging controls and the creation of incentives linked to the certification of legal timber. The latter will make it possible to reduce the markets for illegal timber and guarantee them for the legal one (through a system of public purchases and agreements with the private sector).

The general objective of the project is to manage the forest landscapes within the three selected ZHDPs, in order to guarantee the conservation of remaining forest and increase the value of the standing native forest, allowing the communities to improve their income, with an important participation of women.

It contributes to the consolidation of the co-benefits identified by the MAE that could result from the implementation of REDD+ in Ecuador, such as the following:

- Conservation of biodiversity.
- Water regulation and soil retention.
- Improvement of systems of governance of natural resources.
- Maintenance of the ancestral culture/identity.
- Improvement of the living conditions of the populations involved.

Proposal:

1. Consolidate and strengthen the implementation of public, private and community initiatives for forest conservation through the application of the gender and intercultural approach within each ZHDP. For this purpose, the following has been identified:
    - Contribute to the financing and strengthening of the PSB.
    - Support the development and implementation of management plans for protected areas and protective forests, water protection areas and zones, and remaining forest in the areas of influence of strategic projects.
    - Promote the conservation of remaining forest, allowing the establishment of biological corridors between areas of the National System of Protected Areas (SNAP), protective forests, decentralized autonomous government (GAD) reserves and areas of the PSB.
    - Promote the linkage of the areas under conservation (in different modalities) within the territorial land-use plans (PDOTs, for their acronym in Spanish) of the GADs, so as to maximize the synergy between both instruments.
    - Link and sensitize the private and public sectors, as well as the general public, with regard to conservation initiatives and their relation to climate change.

2. Promote sustainable Bio-venture initiatives and initiatives free of deforestation in the areas under any form of conservation and in its adjoining zones, so as to increase the value of the standing forest, guaranteeing the effective participation of men, women and their communities. Among the planned actions are the following:
    - Promote institutional arrangements and regulatory reforms that favor the development of Bio-venture initiatives in the country.
    - Promote and strengthen the processes of basic and applied research for products of Bio-venture.
    - Strengthen sustainable initiatives of Bio-venture throughout the entire value chain, creating commercial managing entities and promoting their scalability and replicability.
    - Sensitize and link the private sector and the general public with bio-ventures, emphasizing their relationship with climate change.
3. Reduce the illegal trade of timber forest products through the implementation of a robust and verifiable Forest Traceability System, and by certifying the legal origin of timber.
    - Implement a traceability scheme for wood products from native forests, forest plantations, agroforestry systems and natural regeneration.
    - Design, validate and implement incentive mechanisms to incorporate forest traceability in all wood production chains.
    - Consolidate and implement a system of accreditation or certification of legal timber, as a basis to implement responsible purchasing schemes.

Cross-cutting elements:

- In the promotion of bio-ventures, in the governance of landscapes and in conservation, the fair and just participation of mestizo, Montubias, indigenous and Afro-Ecuadorian women will be promoted.
- Special attention will be given to strengthening the business capacities of the beneficiary communities of the PSB and other organizations to be selected.
- The FIP should be implemented through transparent processes that promote the participation of civil society organizations, the private sector and sectional governments.

d) Preparation for implementation

For the detailed preparation of the project there are technical inputs prepared by different actors. Among these inputs, it is worth mentioning the Ecuador *REDD+ AP* implementation plans (biodiversity conservation ventures, conservation, forest traceability, responsible purchases of wood, forest control, prepared by MAE-UN-REDD+); the conceptual document for the implementation of Bio-venture in Ecuador (MAE-FAO); the econometric and sociocultural impact evaluations of the PSB (IDB-MAE Technical Cooperation); the cartographic and geo-referenced analysis of the PSB, which includes data on carbon balance (IDB-MAE Technical Cooperation); the mapping of community Bio-venture and schemes of management units in the territory (MAE-GIZ); the characterization of five value chains of in the "Socio Bosque" communities (under development by the IDB-MAE Technical Cooperation), among others.

e) Potential national and international partners, including their REDD+ financial support

Section 5 of this document details possible synergies with other ongoing initiatives, such as the Integrated Amazon Program (Green Climate Fund, GEF); REDD Early Movers (official cooperation Norway - Germany - Ecuador); the Forest Conservation Program and REDD (German Financial Cooperation, KfW); the Climate-smart Livestock Management, Integrating the Reversal of Land

Degradation and Reducing the Risks of Desertification in Vulnerable Provinces (FAO-GEF); the International Network for Bamboo and Rattan (INBAR). More recently, an initiative has been presented to the Amazonian Program of the Banco Nacional de Desarrollo Económico y Social de Brasil [Brazilian Development Bank (BNDES, for its acronym in Spanish)] for the implementation of the national system for the traceability of wood and protective forests.

f) FIP financing justification

For several years, Ecuador has made considerable efforts to reduce emissions due to deforestation and forest degradation, for example: a) The creation of the PSB, one of the most successful monetary compensation initiatives, which has been implemented since 2008 and in which the Government has invested more than USD 65 million; b) The preparation of the *REDD+ AP*, which is the national strategy to address the root causes of deforestation and forest degradation, which was carried out taking into account all the requirements of the UNFCCC and that has put Ecuador among the first countries to comply with the *Warsaw Accords*; c) The generation of basic information, such as the Report on Forest Reference Emission Levels submitted to the *UNFCCC*; the maps of historical deforestation 1990-2000-2008-2014; the map of ecosystems, among others.

These actions are aligned with the purposes of the FIP and, for its consolidation, require its co-financing, especially at a time when the country's economy has been hit by the fall in oil prices of 2015-2016 and by the earthquake that hit Esmeraldas and Manabí[42] in April 2016.

g) Safeguards

Prior to the start of the proposed actions, baseline evaluations will be conducted to ensure compliance with social and environmental indicators, with emphasis on the development of socio-environmental mitigation measures and the design of an appropriate strategy for the resolution of conflicts (in the cases in which the projects directly or indirectly affect the natural resources included in community lands, or in the cases of claims of territorial overlaps in relation to the National System of Protected Areas).

The actions of the investment plan will place considerable emphasis on the design of an specific strategy for: a) The management and/or protection of forest ecosystems with high conservation value attributes (HCVs), or ecosystems with special attributes for the generation of ecosystem services; b) Reducing vulnerability and increasing resilience to climate change.

In the implementation of the proposed actions, the practices and ancestral knowledge of the indigenous communities will be taken into consideration. This will be particularly relevant in terms of the cultural and spiritual uses of the worldview of indigenous peoples in practices that favor the conservation and sustainable use of native species of firewood or wood, considering the official lists of non-invasive species.

[42] An investment plan will be implemented in these two provinces.

In this investment plan, the implementation of gender equality, which is specifically included in the *National Agenda for Women and Gender Equality 2014-2017*, constitutes a determining institutional mandate, and will form an integral part of the safeguards included in this proposal.

Additionally, the investment plan will consider Ecuador's national approach to safeguards (see Annex 6), which departs from the legal, political and institutional framework in force and constitutionally determined. This constitutes a favorable and promising context for the application of the rights approach associated with the REDD+ safeguards of the *UNFCCC*, as it guarantees and fully recognizes personal, collective and nature rights. These are aligned with and complement the commitments, provisions and rights recognized and determined by the international instruments and conventions ratified by Ecuador.

h) Financing plan

	Indicative distribution of FIP funds (USD)			Co-financing (USD)		
Components	Donation (AT)	Loan	Total	GoE	Other	Total (USD)
Strengthening the management of areas under conservation and sustainable use	270,000	5,230,000	5,500,000	12,900,000	2,600,000	21,000,000
Biophysical research to develop bio-ventures	200,000	200,000	400,000		200,000	600,000
Strengthening of bio-ventures		3,300,000	3,300,000	740,000		4,040,000
Implementation of a Forest Traceability System	900,000	-	900,000	600,000	500,000	2,000,000
Total project 1	**1,370,000**	**8,730,000**	**10,100,000**	**14,240,000**	**3,300,000**	**27,640,000**

i) Schedule for project preparation

	Month 1				Month 2				Month 3			
Activity	W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4
Collection of base documents												
Primary information analysis												
Development of components												
Field mission												
Mission report												
Preparation of detailed project												

A.2: Sustainable management of agricultural lands

a) MDBs and the main government agencies

The project will be operated by the World Bank (WB) and the Ministry of Environment of Ecuador (MAE) through a management office that will be created for FIP Ecuador, in close coordination with the National Forestry Restoration Program (PRF), the National Forestry Directorate and the Ministry of Agriculture and Livestock (MAG). It will focus its efforts on the areas adjoining areas under conservation based on any legal instrument (protected areas, "Socio Bosque" areas, forests and protective vegetation, among others) in zones of homogeneous deforestation processes (ZHDPs) 4, 5 and 7, especially those that belong to indigenous communities, Montubias and Afro-descendants.

b) Statement of the problem

For the period from 2000-2008, ZHDP 4 (North Esmeraldas and piedmont northern coast), 5 (Northern Manabí and southern Esmeraldas) and 7 (Mountain ranges and semi-dry valleys of the central coast) had deforestation rates ranging from -1.30 to - 1.87, exceeding the national average of -0.52. Therefore, it is a priority for the Government of Ecuador to reduce these rates, so that the remnants of natural forests that still exist in these areas are conserved (the percentage of remaining forest cover ranges from 24 to 56%).

As in other areas of the country, the expansion of the agricultural frontier is the main cause of deforestation. In ZHDP 4, there is greater expansion of agricultural land use in permanent crops such as African palm and cocoa, while in ZHDP 5 and 7 these crops are pastures, although with a recent expansion of cocoa and African palm in ZHDP 5, and maize in ZHDP 7. Additionally, other factors such as conflict over mining and land tenure have become factors of pressure on the native forest, especially in ZHDP 4. This situation is aggravated by the socioeconomic conditions of the rural population; thus, for 2010 the index of unsatisfied basic needs (UBNs) in rural areas of ZHDP 4 was 84%; in ZHDP 5, 86%; and, in ZHDP 7, 77%. This has led the indigenous peoples of Esmeraldas -such as the Chachi, Awá, Epera-, the Afro-Ecuadorian communities and the Montubio peoples of Manabí and Santa Elena to adopt survival strategies that directly affect the ecosystems.

However, the conservation policies and strategies carried out by the Government of Ecuador have allowed 49% of the remaining forest in ZHDP 4, 65% in ZHDP 5, and 33% in ZHDP 7 to be under some conservation figure and generate synergy with each other. It is observed, for example, that the areas under conservation in the framework of the PSB have practically become a protective barrier around the buffer zone of the main protected area of ZHDP 4, the Cotacachi-Cayapas Reserve. Something similar happens in the other zones.

c) Proposal of the impacts of transformation and co-benefits

This project will focus its efforts on the sustainable management of agricultural lands adjoining the areas under conservation (under any legal concept). This will be done through the adoption of sustainable production practices (for example, good agricultural practices, sustainable livestock, agroecology, permaculture, among others) and restoration for the conservation and sustainable use of land in degraded areas without agricultural vocation, guaranteeing a fair and equitable participation of women, men and communities, improving or maintaining the income of their families.

Additionally, the project will support the Government of Ecuador in the creation, strengthening and financing of green credit lines in public financial institutions such as the National Corporation for Popular Finance (CONAFIPS), BanEcuador and the National Finance Corporation (NFC), promoting access to the target population to said lines of credit.

It contributes to the consolidation of the co-benefits identified by the MAE that could result from the implementation of REDD+ in Ecuador, such as the following:

- Conservation of biodiversity.
- Water regulation and soil retention.
- Improvement of systems of governance of natural resources.
- Maintenance of the ancestral culture/identity.

Proposal:

1. Promote the management and financing of processes for the traceability and certification of selected agricultural products from sustainable practices that reduce the pressure on forests, located in the three selected ZHDPs.
2. Reduce deforestation through the implementation of sustainable silvopastoral systems and improved livestock production, with the ability to sustain the national herd in a stable and consistent manner and jointly promote the increase of ecosystem services and the productive reconversion of pastures.
3. Develop, implement and finance the proposed improvements to the credit regulations and manuals for green credit lines in the National Corporation for Popular Finance (CONAFIPS), BanEcuador and the National Finance Corporation (NFC).

4. Develop and support the implementation of public, private and community initiatives for ecosystem restoration, under the approaches of landscape, connectivity between conservation, gender and intercultural areas in the three ZHDPs, considering the following:
    - Strengthen the implementation of the *National Forest Restoration Plan* and contribute to the financing of public forest restoration initiatives under execution.
    - Encourage the creation of forest restoration initiatives in areas that favor the establishment of biological corridors with the National System of Protected Areas (SNAP), the Socio Bosque Program (PSB), or others, the recovery of ecosystem services and the generation of opportunities for the benefit of their owners.
    - Promote scientific research and the recovery of ancestral and traditional knowledge that allow restoration projects to be implemented with greater success, as well as having a follow-up, monitoring, and online operation system for these initiatives.
    - Sensitize and link the private sector and citizens in general with restoration initiatives, emphasizing their relationship with climate change.

Cross-cutting elements:

- The fair and just participation of mestizo, Montubio, indigenous and Afro-Ecuadorian women will be promoted in all project components.
- Special attention will be given to strengthening the business capacities of the communities adjacent to the areas under protection and the communities surrounding remnants of natural forest.
- The FIP should be implemented through transparent processes that promote the participation of civil society organizations, the private sector and sectional governments.

d) Preparation for implementation

For the detailed preparation of the project there are technical inputs prepared by different actors: Ecuador *REDD+ AP* implementation plans (forest restoration, sustainable livestock, traceability and certification of sustainable agricultural products, prepared by MAE-UN-REDD); proposal to contribute so that the banking financial services promote sustainable production free from deforestation (MAE-UN-REDD+); National Forestry Restoration Program and its new management model (under development, MAE-CONDESAN); conceptual documents of the Amazonian Sustainable Agro-productive Reconversion (MAG); conceptual documents of the Climate-smart Livestock Management, Integrating the Reversal of Land Degradation and Reducing the Risks of Desertification in Vulnerable Provinces (MAG-FAO); conceptual documents of the Integrated Amazon Program (MAE-GEF-GCF), among others.

e) Potential national and international partners, including their REDD+ financial support

Section 5 of this document details possible synergies with other ongoing initiatives, such as the Integrated Amazon Program (Green Climate Fund, GEF); REDD Early Movers (official cooperation Norway - Germany - Ecuador); the Forest Conservation Program and REDD (German Financial Cooperation, KfW); the Climate-smart Livestock Management, Integrating the Reversal of Land Degradation and Reducing the Risks of Desertification in Vulnerable Provinces (FAO-GEF); the International Network for Bamboo and Rattan (INBAR), among others.

f) FIP financing justification

For several years, Ecuador has made considerable efforts to reduce emissions due to deforestation and forest degradation, for example: a) The creation of the PSB, one of the most successful monetary compensation initiatives, which has been implemented since 2008 and in which the Government has invested more than USD 65 million; b) The preparation of the *REDD+ AP*, which is the national strategy to address the root causes of deforestation and forest degradation, which was carried out taking into account all the requirements of the UNFCCC and that has put Ecuador among the first countries to comply with the *Warsaw Accords*; c) The generation of basic information, such as the Report on Forest Reference Emission Levels submitted to the *UNFCCC*; the maps of historical deforestation 1990-2000-2008-2014; the map of ecosystems, among others.

These actions are aligned with the purposes of the FIP and, for its consolidation, require its co-financing, especially at a time when the country's economy has been hit by the fall in oil prices of 2015-2016 and by the earthquake that hit Esmeraldas and Manabí in April 2016.[43]

g) Safeguards

Prior to the start of the proposed actions, baseline evaluations will be conducted to ensure compliance with social and environmental indicators, with emphasis on the development of socio-environmental mitigation measures and the design of an appropriate strategy for the resolution of conflicts (in the

[43] An investment plan will be implemented in these two provinces.

cases in which the projects directly or indirectly affect the natural resources included in community lands, or in the cases of claims of territorial overlaps in relation to the National System of Protected Areas).

Very specifically, the actions of the investment plan will place considerable emphasis on the design of a specific strategy for: a) The management and/or protection of forest ecosystems with high conservation value attributes (HCVs), or ecosystems with special attributes for the generation of ecosystem services; b) Reducing vulnerability and increasing resilience to climate change.

In the implementation of the proposed actions, the practices and ancestral knowledge of the indigenous communities will be taken into consideration. This will be particularly relevant in terms of the cultural and spiritual uses of the worldview of indigenous peoples in practices that favor the conservation and sustainable use of native species of firewood or wood, considering the official lists of non-invasive species.

In this investment plan, the implementation of gender equality, which is specifically included in the *National Agenda for Women and Gender Equality 2014-2017*, constitutes a determining institutional mandate, and will form an integral part of the safeguards included in this proposal.

Additionally, the investment plan will consider Ecuador's national approach to safeguards (see Annex 6), which departs from the legal, political and institutional framework in force and constitutionally determined. This constitutes a favorable and promising context for the application of the rights approach associated with the REDD+ safeguards of the *UNFCCC*, as it guarantees and fully recognizes personal, collective and nature rights. These are aligned with and complement the commitments, provisions and rights recognized and determined by the international instruments and conventions ratified by Ecuador.

h) Financing plan

	Indicative distribution of FIP funds (USD)			Co-financing (USD)		
Components	Donation (AT)	Loan	Total FIP	GoE	Others	Total (USD)
Agricultural production under sustainable practices		4,000,000	4,000,000	1,500,000	500,000	6,000,000
Creation, strengthening and financing of green credit lines		2,300,000	2,300,000	500,000		2,800,000
Market development	300,000		300,000	150,000		450,000
Forest restoration fund		5,820,000	5,820,000	1,000,000	500,000	7,320,000
Total project 2	**300,000**	**12,120,000**	**12,420,000**	**3,150,000**	**1,000,000**	**16,570,000**

i) Schedule for project preparation

	Month 1				Month 2				Month 3			
Activity	W 1	W 2	W 3	W 1	W 2	W 3	W 1	W 2	W 3	W 1	W 2	W 3
Collection of base documents												
Primary information analysis												
Development of components												
Field mission												
Mission report												
Preparation of detailed project												

Annex 2. Actors' participation plan

A.2.1 Plan for the participation of actors in the socialization process of the Forest Investment Plan

The participation plan has been developed in a participatory and dynamic way, involving a national level (MAE, MAG, REDD+ Work Group) and a regional level (GADs, NGOs, universities, communities, and private enterprises) through workshops held in the provinces of Esmeraldas and Santa Elena. It had the valuable support of the multilateral development banks (BMDs), particularly with their experience in the development of other FIP investment plans at the global level. In the different stages of the plan, calls were made with actors from civil society and other government entities, in order to make the relevant decisions.

The link with the actors started from the exploratory mission (carried out from September 27 to 29, 2016), in which there was a first approach with representatives of civil society, with whom information, on the purpose of the FIP and actions, opportunities and expectations that organizations have regarding issues related to climate change, was shared.

Between April 18 and 19, 2017, the first joint mission (IDB, WB, MAE) was carried out with the objective of reviewing the advances in the formulation of the investment plan –especially with regard to sections 1 to 5– and a workshop was held to socialize these advances with the members of the REDD+ Work Group. The latter constitutes a space at national level for citizen participation that, in the past, led to dialogue, participation and the monitoring of the different processes in the framework of REDD+ preparation. The group is made up of representatives of civil society (academic sector, private sector, national NGOs and women's and youth organizations) and national representatives of communities, peoples and nationalities. It is governed by principles of public deliberation, responsibility, co-responsibility, information and transparency, interculturality and equality.

The second joint mission (IDB, WB, MAE) was held from August 15 to 17, with the objective of advancing the process of preparing the FIP and the general definition of the profiles of projects to be financed by it. During the mission, a new meeting was held with the members of the REDD+ Working Group in which progress was made public and comments were collected on the partial design of the investment plan; also, civil society experiences related to the ideas of projects that were presented were heard. Additionally, the dates for the regional workshops were agreed upon.

The regional workshops were held between September 12 and 14, 2017. On the 12th, the workshop was held in the town of Olón, province of Santa Elena, central point for ZHDP 5 and 7; 43 people participated (28 men and 15 women), representatives of GADs (prefectures and municipalities), universities, provincial delegations of the central government, NGOs, private enterprises and community organizations. Among the latter, 15 leaders (9 men and 6 women) from the following organizations participated: Commune of Aguadita, Commune of Olón, Commune of Loma Alta, Commune of Dos Mangas, Commune of Villingota, Commune of Salanguillo, Commune of Febres Cordero, Commune of Las Balsas, Association of Communes, Río Muchacho Agroecological Farm.

On September 14, the workshop was held in the town of Atacames, province of Esmeraldas, central point of ZHDP 4; the activity was attended by 54 people (28 men and 26 women), representatives of (parish) GADs, universities, provincial delegations of the central government, NGOs and community and indigenous organizations. Among the latter, 32 leaders (14 men and 18 women) from the following organizations participated: Commune of San Javier, Meliponicultural Women's Association, Commune of Lucha y Progreso, San Gregorio Association, Commune of La Tortuga, Musam Women's Association, Sustainable Caimito Association, Federation of Awa Centers in Ecuador, Chachi Center of San Salvador, Cube Lagoon Association, Chachi Federation of Ecuador, Primero de Abril Agricultural Association, Commune of San Miguel, Verde Canandé community enterprise, Awa Women's Association, Epera Nationality Women's Association and Commune of Santiago Cayapas River.

The design of the investment plan, therefore, has been carried out through an inclusive cooperation process at national, regional and local levels, for which participatory methods were used, ensuring effective participation of all stakeholders.

Methodologically, the process was based on a process of socialization in compliance with the principles of honesty, truthfulness, transparency and respect for cultural diversity, including gender, and on the basis of the governance of the Montubio, indigenous and Afro-Ecuadorian peoples. This has allowed the enrichment of the issue for the preparation of the projects, with their corresponding components, according to each geographical area originally selected.

In sociocultural terms, three indigenous nationalities have participated: Chachi, Awa and Epera, as well as Montubio and Afro-Ecuadorian peoples.

Objectives

- Socialize the purpose of the FIP and its relationship with climate change.
- Socialize and propose adjustments to the progress made in the design of Ecuador's forest investment plan.
- Identify needs and opportunities that contribute to the successful execution of the investment lines of the forest investment plan.

Identification of target group by each geographical area

A decisive aspect for the achievement of the objectives and results of the community participation plan was the adequate selection of the target group and participation commitments. In general, the MAE made a selection of actors according to the investment lines of both projects, giving special attention to

the organizations that work with the ministry (especially with the PSB), or have worked or coordinated actions in the past.

Below, a short list of the actors identified and convened, in thematic order:

- Community organizations (communes, associations, federations, indigenous peoples and nationalities).
- Private sector (companies biodiversity conservation ventures, farmers with experience in agroecology, permaculture, and sustainable production).
- Public sector organizations: Representations of the central government in the provinces (MAE, MAG, IEPS, among others) and entities of the sectional governments (parochial, municipal and provincial GADs).
- NGOs.
- Universities and research centers.

Methodology used in the workshops

In regards to the central aspect of the workshops, participants were asked to address the following in workgroups:

Workgroup 1:

> Propose opportunities or strengths of their locality/province for the generation of economic income of the population through biodiversity conservation ventures, forest conservation, environmentally-friendly agricultural production and forest recovery (restoration).

Workgroup 2:

> Propose threats, weaknesses or shortcomings that prevent or may prevent the development of the opportunities and strengths indicated above.

Workgroup 3:

> How do you see the role of women in the execution of this issue? Is it fair? What should be done to improve it?

Table A2.1 presents the methodological tools used.

Table A2.1. Methodological tools used in regional workshops

Stages and methodological tool	Objective of the methodological tool	Description of the tool
1. Introduction of participants/ "The landscape"	Introduce organizers, facilitators and participants	A large piece of paper is hung; with a marker each person introduces himself/herself by drawing an element of nature with which he/she identifies himself/herself. At the end of the individual introductions, they reflect on interaction and interdependence and the value of each one in a process of improving life and forest conservation.

Stages and methodological tool	Objective of the methodological tool	Description of the tool
2. Workgroups/ "Map of my province"	Propose opportunities or strengths (threats, weaknesses) of your locality/province in the generation of economic income of the population through biodiversity conservation ventures, forest conservation, agricultural production friendly to the environment and forest recovery (restoration).	A large piece of paper is given to participants, in which they must draw a map where red (alert) indicates the spaces where there are difficulties to carry out biodiversity conservation ventures, promote environmentally-friendly agricultural production and conserve forests. The green color is used to indicate the places where there is potential to carry out biodiversity conservation ventures, promote environmentally-friendly agricultural production and conserve forests. The brief presentation of the map sheds light on the areas where the project has greater possibilities. Cards are given so that every three people can express an idea to improve the economic income of the population through biodiversity conservation ventures, environmentally-friendly agricultural production and forest conservation; taking into account the map already worked in, the ideas are placed in the area where they can be executed.
3. Workgroups/ "Power game"	Gather the gaze of the participants working for gender equality	The workgroup facilitator asks participants to assign one of them the role of Prefect. This person will lead a short meeting with his/her technical team (all participants). Cards are given so that, in groups of four, they answer: "How do you see the role of women in the participation of this issue? What should be done to improve this participation?"
Closing plenary session	Record the conclusions and the next steps of the project	• Presentation from each workgroup. • Closing and thanking participants for their attendance.

Relevant results of socialization workshops

Table A2.2 presents a consolidated summary of the contributions received in each workgroup for each workshop, by geographical region.

Table A2.2. Consolidated summary of contributions received in regional workshops

Region/ workshop	Issue	Main observations
	Workgroup 1: Opportunities or strengths of their locality/province for the generation of economic income of the population	• Participants highlight as an important opportunity the participation of communes in the Socio Bosque Program (PSB), both for the economic incentives it provides and for its impact on the effective protection of forests and territories. They indicate that there are other municipalities interested in

Olón, Santa Elena (ZHDPs 5 and 7)	through biodiversity conservation ventures, forest conservation, environmentally-friendly agricultural production and forest recovery (restoration).	participating in the PSB, so they suggest that a correct investment would be the reopening of this program in new areas (they recalled that since 2015 the PSB does not incorporate new hectares). • The communes see the experience they have acquired in the sustainable use of forest resources (the so-called biodiversity conservation ventures) as an opportunity; several of them have many years of experience in the use of some forest products (for example, paja toquilla, tagua, bamboo cane, barbasco, muyuyo, among others); some have even started transformation into higher value-added products, for example, palo santo oil. • One of the main proposals is to promote ecotourism, create a flora and fauna research center, as well as a butterfly and orchid garden. • There are degraded areas that must be restored; in that sense, they consider it necessary to provide support for the restoration of forests and mangroves. • The organization of the communes is a positive aspect; there are many years of experience in the management of communes, there are leaders (men and women) who have experience in administration and management, although they acknowledge limitations. • There are experiences regarding the sustainable management of agricultural lands (agroecology, permaculture, agroforestry systems) that should be strengthened and replicated in other places. • Livestock production must be diversified, smaller animals have good potential in Santa Elena because of the climate.
	Workgroup 2: Threats, weaknesses or shortcomings that prevent or may prevent the development of the opportunities and strengths indicated above.	• Lack of support from GADs and the Association of Ecuadorian Municipalities (AME, for its acronym in Spanish) to improve the management of the communes. • Lack of GAD support for the multiplication of Bio-venture and conservation. • Tourism has negative impacts, so technical assistance is required to improve the controls of tourist tributaries according to the ecosystem that supports this activity. • Biodiversity conservation ventures, agroecology, and tourism are good alternatives, but funding is required to undertake any new initiative. • There is still illegal logging of forests and the MAE does not have enough capacity for forest control. • Due to the lack of forest conservation, there are already problems of lack of water in certain places. • In the case of biodiversity conservation ventures, commercial advice, market studies and impact studies are required to enable their efficient operation. • Controlled follow-up even when leaders change. • Innovation in pest control is needed to reduce the risk of losses and, thus, have some commercial certainty for sale. • Lack of financing to undertake actions of sustainable production, agroecology, restoration and conservation.

		• The lack of coordination among State entities means that the State itself encourages unsustainable agricultural practices (for example, the MAG usually opposes the interests of the Ecuador FIP).
	Workgroup 3: How do you see the role of women in the execution of this issue? Is it fair? What should be done to improve it?	• In Santa Elena, communes state that the participation of women has increased. • The constitutional mandate has allowed the participation of women to improve in the last five years. • However, there are difficulties for greater participation, especially in regards to the lack of support at home. It should be noted that women leaders continue with their duties at home, which causes difficulties to participate and even problems with their couples. • The norms and statutes of communes must be reviewed so that they favor the participation of women. • Work must be done at home, provide partner training, foster responsibilities in the home, provide training to avoid intrafamily violence, rights and equality, helping women assume leadership roles. • Women are the best administrators.
Atacames, Esmeraldas (ZHDP 4)	Workgroup 1: Opportunities or strengths of their locality/province for the generation of economic income of the population through biodiversity conservation ventures, forest conservation, environmentally-friendly agricultural production and forest recovery (restoration).	• Participants highlight as an important opportunity the participation of communes in the Socio Bosque Program (PSB), both for the economic incentives it provides and for its impact on the effective protection of forests and territories. They indicate that there are other municipalities interested in participating in the PSB, so they suggest that a correct investment would be the reopening of this program in new areas (they recalled that since 2015 the PSB does not incorporate new hectares). • The restoration of deforested areas is a necessary measure and could generate ventures with non-forest species, as well as generate more areas for "Socio Bosque." • There are some biodiversity conservation initiatives (honey from melipones, use of fibers, bamboo), but they are few, still incipient and require technical assistance and support for commercialization.
	Workgroup 2: Threats, weaknesses or shortcomings that prevent or may prevent the development of the opportunities and strengths indicated above.	• The pressure of logging on forests is latent. Participants point out that the forests of several communities are increasingly in demand: Sabalito, Capulí, Gualpí de Cayapas and Gualpí de Onsole. • There is no adequate financing (concessional) to undertake new productive activities (biodiversity conservation ventures). In addition, there is evidence of lack of knowledge about markets for products and lack of facilities such as working capital, roads, etc. • African palm is taking the place of forest. In addition, water is contaminated due to the use of agrochemicals and it is not potable (there are around five large companies as sources of pollution).

		• Another important pressure on the forest in the northern part of the province of Esmeraldas is the presence of mining activities in the northern area. • Another problem that was highlighted is the legal insecurity of the land, the presence of invasions and conflicts over tenure. • Hunting and the illegal logging of wood are also problems identified by the communities, which is aggravated due to a perception of lack of presence of the authorities. • In several sectors of the province, the lack of safe water, health services and education are priority problems for the population. • Lack of technical capabilities of the GADs to meet the demands of citizens. • There are social problems such as drug trafficking, which is a threat at all levels (family, regional, etc.).
	Workgroup 3: How do you see the role of women in the execution of this issue? Is it fair? What should be done to improve it?	• The role of women is acknowledged as important, both in productive activities (for example, in the harvest of cocoa, where women split the ear, which is then collected by men). • An improvement in the division of tasks between men and women is acknowledged. • Women have agreed to work in places where previously only men worked; even worse, they are a minority and are not always well paid. • There are community banks managed by women, since they manage resources better and perform well; for this reason, treasuries are usually managed by women. • In the Chachi nationality there is still a strong lag in the participation of women and they have problems regarding the organization of leadership. • There is a political school for the training of leaders in Esmeraldas that should be used or strengthened. • One of the ways to promote female participation is to ensure that the statutes and regulations (of communities, assemblies) require the existence of a 50% female participation (parity). • To improve the amount of training that men and women receive, nurseries would be needed, so that women with young children can participate in these spaces. • They consider that family violence has been reduced in the province.

Photographic record

President of the Commune of Olón presenting the results of his workgroup

Final group photo in the workshop in Olón, province of Santa Elena

Presentation of the representative of the Musan Women's Association, Esmeraldas

Final group photo in the workshop in Atacames, province of Esmeraldas

Finally, on October 12, 2017, the national workshop for the socialization of the Ecuador FIP was held, which had an important participation of actors from the private sector, international, non-governmental, governmental and civil society organizations. The following are the main results achieved through this workshop:

After the presentation, participants were asked to write their questions or concerns, which were answered by the MAE-BID consultant, as follows:

Questions	**Answers from MAE-BID consultant**
What is the plan's duration? And, how often is it evaluated?	Four years, with evaluations in accordance with the regulations of the banks.
How is the monitoring of the activities undertaken guaranteed?	In accordance with national regulations, SENEPLADES follow-up processes and bank policies.
Why is the southern region of the country, the Dry forest in Loja and El Oro, not considered?	These regions are part of the Integrated Amazon Program.
Can the areas of intervention be extended to the neighboring cantons?	To date, there isn't an operational manual for the project. However, the recommendation that will be recorded is that the project will be able to identify good practices from neighboring cantons that can be replicated and, consequently, also strengthened.
With the rise of shrimp, how will they control the increase in shrimp farms?	The project does not apply to mangrove areas. This has been decided from the consideration that the mangrove ecosystem currently has other projects that support its management and protection.
How will the project contribute to green credit lines?	The project plans to finance a line of credit in a public financial institution (CONAFIPS, BanEcuador and/or NFC) oriented to credits in deforestation-free assets.
What happens with the GAD agreements that do not have disbursements from previous agreements?	The MAE is currently evaluating the status of the agreements signed with the GADs within the framework of the Forest Restoration Program for Conservation Purposes. This is a process foreign to the FIP. However, it is estimated that depending on this evaluation, some GADs that participated in this project could participate in the FIP, but it would be a new operation.
How can real participation of actors in projects be included?	The MAE is in the process of orienting its actions to the rector of public policy, so its role as executor will decrease in the future. For this reason it is estimated that, although the MAE will be responsible for the execution of the FIP, the operational and executing branches in the territory will be local actors: GADs, NGOs, community organizations and the private sector.
Was the strengthening of reforestation for commercial purposes considered as an alternative for forest conservation?	This activity has not been included. However, in the definition of actions in the field it could, in some cases, be established as an option, given market or strategic conditions. This will be decided based on studies in the territory.
In the areas of intervention of the project, why is the micro basin not considered for management?	The FIP is an intervention plan, so it still has a global level of design. Once approved by the Climate Investment Fund, the projects will be designed at a

Questions	Answers from MAE-BID consultant
	detailed level, where the scale must necessarily be lowered. This is where watersheds or micro basins should definitely be considered.
When and in what zones of homogeneous deforestation processes (ZHDPs) will the implementation of the forest investment plan begin?	It is estimated that the detailed design of the projects will take until the middle of 2018; therefore, the start of activities could be carried out from the third quarter, depending on the legal procedures that must be fulfilled. The FIP must initiate its actions in the three ZHDPs.
If successful private initiatives are outside the area, how can they be included?	The FIP has already identified some actions outside the three ZHDPs, which are being documented and recorded in order to be considered at the moment of the detailed design of the projects. Additionally, during project design, new approaches to the territory must be made in order to identify any additional action that is underway.
As a private entrepreneur, how can one obtain credits and support to develop projects?	Once the FIP is operational, and depending on the management model that the MAE defines, it is expected that there will be calls for the execution of components or activities through public procurement processes or the signing of execution agreements.
How is forestry separated from agriculture in a landscape where the two activities coexist?	They should not be separated. The actions of the two components of the FIP can and should act jointly in spaces where it is identified that this must be the case.
How can the effectiveness of the project be measured? And, on that basis, is the design of a public policy foreseen?	The FIP is based on the public policy prepared and socialized by the MAE, which focuses on the *REDD+ Action Plan*. There are goals and indicators in this plan that will allow measuring its own effectiveness.
Is there a regulation for application of projects in the FIP?	The norms of the Ecuadorian State are of mandatory compliance, as well as those of the banks.
How will the productive private sector be involved?	Once the FIP is operational, and depending on the management model that the MAE defines, the existence of calls for the execution of components or activities is foreseen. Public procurement processes or the signing of execution agreements are also foreseen.
What actions will be implemented to incorporate the gender approach?	The gender approach has been included in the objectives and indicators of the FIP, which will force the execution to consider it. Otherwise, executors would not meet the objectives set by MAE itself.
Why only basic research? Applied research or action research is key to biodiversity conservation ventures.	Yes, applied research is also considered. However, observation will be incorporated in the final version of the FIP.

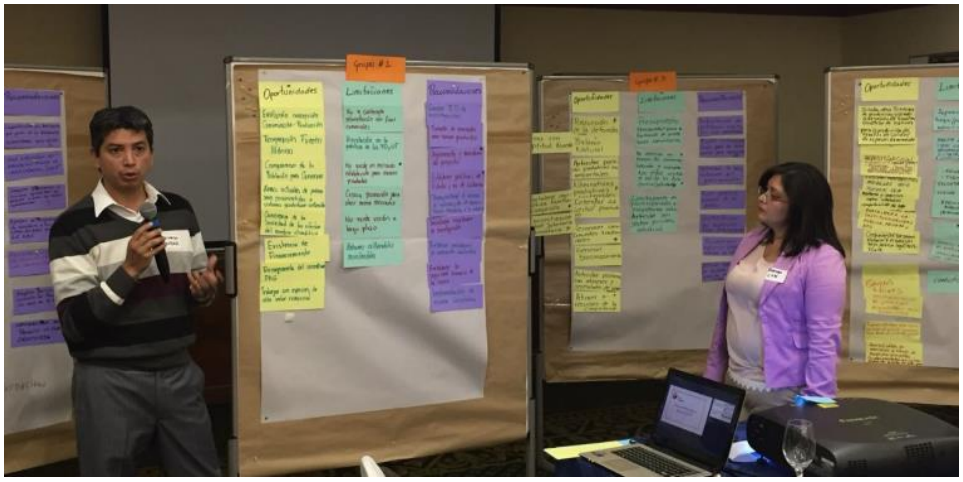
Questions	Answers from MAE-BID consultant
Could we receive the contact information of all the actors participating in the Ecuador FIP?	Yes, it would be possible. The contact information of the identified participating actors will be included in the FIP document.
An extension agent has an academic background, why aren't community promoters (men, women) included to improve their capacities?	No. The FIP considers precisely the members of the communities as potential extension agents.

Results of the work carried out by the workgroups

After the presentation of the *Ecuador Forest Investment Plan*, participants were divided into four groups, with the aim of discussing the following aspects in a participatory manner:

- ✓ **Opportunities** of the forest investment plan
- ✓ **Limitations** of the forest investment plan
- ✓ **Recommendations** of the forest investment plan

Each group presented the results of their exchange in the subsequent plenary session.



Group # 1

Opportunities	Limitations	Recommendations
Find timely financing lines.	Knowledge of forest species to determine the real state of conservation.	Field training by academia and universities as partners.
Academic collaboration for the development of applied research in different topics: biodiversity conservation ventures, restoration, etc.	Very short period of project implementation.	For training, see examples of projects.
Sustainable use of non-timber resources under clear guidelines.	Weakness in the control of invasions, especially in private forests.	Share experiences and lessons learned in current biodiversity conservation projects.
Reforest areas where forests were destroyed by invaders.	Land tenure, lack of deeds.	Support MAG's program of incentives to the productive forest plantations.
The FIP is a project that integrates knowledge.	High influence peddling that benefits invaders.	Review and make viable the projects in an efficient manner.
Involve different actors in a true process of planning and development.	Lack of credit support.	Expand the plan's execution period: It must be more than four years.
Develop our projects with the support of the restructured program through the FIP.		Independent sustainability of the project.

Group # 2

Opportunities	Limitations	Recommendations
Conceptual evolution of conservation/production.	Reforestation is not foreseen for commercial purposes.	Generate research databases.
Recovery of water sources.	Linkage in the practice of PDOTs.	Promotion of markets for new products.
Commitment of population towards conservation.	There is no established market for new products.	Project follow-up and monitoring.
Current areas of palm are reconverted to sustainable production systems.	Little promotion for the opening of new markets.	Establish State policies and not government policies.
Society's awareness of the effects of climate change.	There is no long-term vision.	Democratize the population's access to information on forest inventories.
Existence of financing.	The practice of cultural promoters is unsustainable.	Socialize research results.
Reengineering of the MAG incentive.		Strengthen environmental education strategies.
Work with species of high commercial value.		Strengthen the security of land tenure.

Group # 3

Opportunities	Limitations	Recommendations
Reduction of deforestation.	Budget.	Articulation of agricultural and environmental policies.
Natural balance.	Budgets for training community promoters.	Multidisciplinary teams to set guidelines for implementation.
Articulate productive and environmental policies.	It does not address commercialization and consumption issues.	Optimize budget management.
Strengthen peasant family agriculture.	The role of academia (articulation) is not visible.	Conduct comprehensive analysis of the area.
Food sovereignty awareness.	Limitations on the participation of individual owners.	Diversify species for reforestation.
Sustainable productive alternatives.	Articulation with the industrial private sector.	Technical assistance to diversify reforestation.
Integrate productive sector.		Define mechanisms for accessing resources for communities. Competitive funds.
Recognize traditional knowledge.		
Generate biodiversity conservation knowledge.		
Articulate policies with the interests and needs of owners in mind.		
Forest-appropriate areas.		
Attract more cooperation resources.		

Group # 4

Opportunities	Limitations	Recommendations
• Diversification of markets through biodiversity conservation ventures. • There are products that have not been commercialized due to lack of support.	• Artificial separation forest/agricultural production. • Separate by institution MAE –MAG.	• Allocate funds in the FIP. • Make agreements with universities.
Prepare strategies to motivate complementary private investment from the beginning of the project.	Lack of articulation between State organizations, academia and private enterprises.	Forest by-products for export.
Implementation of prototypes developed at the university.	• Funds. • Time.	Green credits, more subsidies mean better results.
Gender/actors.	• Political will. • Sectoral vision.	Incorporate corridors and water units in established zones.
Integrate private initiatives to the actions defined in the investment plan.	Public execution.	Actively involve relevant GADs with different competencies.
The ordinances must be elaborated or updated based on the existing legal framework.	Barriers to enter communities.	Stewardship, community participation.
Strengthen public and private institutions.	Deep participation of the community, not only informative.	Local technical operators.
Monitoring and follow-up.		Expand corridor areas, prioritize protected areas.
There are model projects that can be replicated.		Recommend that the FIP complement the commercialization of carbon credits and make it available to the private sector.

• Research, forest value chains. • Markets and innovation. • Biodiversity conservation ventures.
Industrial forest nurseries.
Selection of native trees for seed production.
Design of a production and marketing system for native forest seeds.

Group photo during national workshop held on October 12, 2017

A.2.2 Actors' involvement plan (AIP) for the implementation of the Forest Investment Plan

A more specific and directed involvement will be implemented during the design of the projects, by geographic region. This will include the definition of responsibilities of the regional offices of the Ministries of Environment (MAE) and Agriculture and Livestock (MAG), according to the category and amplitude of the projects, as well as a preponderant participation of local governments (municipalities,

prefectures) and authorities of community organizations. All the information generated during the socialization process will be prioritized and applied in the specific projects selected.

In the same way as in the process of socialization of the stakeholders' participation plan, methodologically speaking, the process will be based on a strategy of socialization towards cultural diversity and gender, based on the governance of indigenous peoples.

In this phase, not only will the relationship between potential actors (producers-industry-market value chains) be sought, but the mechanisms and responsibilities of the parties will be formalized in relation to the development of their specific actions. In other words, to the extent possible, the establishment of formal agreements between members of the productive and value-added chain of forest and non-forest products will be sought. At this stage, the financial mechanism that will strengthen the renewal or update of technological processes (equipment, machines, training and technical assistance) must already be structured and ready for operation.

A relevant aspect that will be sought in this stage of implementation of the investment plan will be the search for synergies and application of lessons learned from other processes or projects with similar components in the target regions and globally, with the support of similar experiences provided by the multilateral development banks (MDBs). Likewise, the installed capacity of State entities will be used in terms of their conservation programs (MAE) and sustainable agricultural production (MAE), and of the private initiative based on their operational installed capacity and alternative co-financing for the achievement of the proposed goals.

In this implementation phase, it will be vital to capitalize all the experience and results of the consultations held for the development of the *REDD+ Action Plan*; also, take advantage of synergies with initiatives such as the Socio Bosque Program (PSB). The definition and compliance of the safeguards will also be emphasized, both at the national level and in those defined by the MDBs..

Annex 3. Mechanism for the involvement of indigenous peoples and local communities

The Dedicated Grant Mechanism for Indigenous Peoples and Local Communities (DGM) is a global initiative that was created and developed as a special window under the Forest Investment Program (FIP) to provide donations to indigenous peoples and local communities (IPLCs) that seek to improve their capacity, supporting initiatives to strengthen their participation in the FIP and in other REDD+ processes at local, national and global level.

The DGM design document highlights the need to strengthen the capacity of IPLCs to participate effectively in all stages of the FIP and REDD+ processes and create livelihood opportunities that generate, at the same time, climate change mitigation and adaptation benefits. The DGM intends to achieve this respecting culture, ancestral knowledge and indigenous systems of forest management. The general objective of the DGM is to improve the capacity of IPLCs by supporting their specific initiatives in the pilot countries of the FIP, in order to strengthen their participation in the framework of the FIP and in other REDD+ processes at local, national and global level.

As a program, the DGM is implemented in eight pilot countries of the FIP (Brazil, Burkina Faso, the Democratic Republic of Congo, Ghana, Indonesia, Lao People's Democratic Republic, Mexico and Peru)

through donation projects, under the general framework of a global component which serves as a platform for the exchange of experiences and knowledge. Recently, other pilot countries have been added, including Guatemala, the Ivory Coast, Ecuador, Mozambique, and Nepal).

Based on the operating rules of the DGM, the preparatory activities to initiate the mechanism in each country depend on the approval of the FIP investment plan. Once this document is approved, the World Bank (WB), as an implementing partner, can request resources to carry out the first phase of organization and governance of the DGM through a national consultation phase for the creation of the National Executive Council (NEC). To date, only a few consultations and information meetings have been held with representatives of local stakeholders and representatives of entities of the Government of Ecuador.

Some important steps for the conformation of the DGM in Ecuador are: a) Consultation phase for the integration of the NEC and the definition of its governance system; b) Selection of the National Executing Agency (NEA), which, as its name implies, is responsible for the execution of the donation funds together with local organizations. The members of the NEA will be chosen through a self-selection process that can be facilitated or not by the WB during the preparation of the DGM national project. In any case, the selection process must be carried out in accordance with the procedures determined by the IPLCs, in consultation with the WB and the Government, and must respect the FIP design document, as well as the guidelines for the consultation already conducted as part of the preparation process of the FIP, and also future specific consultations for the formation of the DGM for Ecuador, considering the principles of equality, inclusion and transparency. For this purpose, it will be possible to resort to the current and traditional decision-making processes and institutions, as appropriate.

Annex 4. Considerations on the development of *Ecuador REDD+ Action Plan*

The Ecuador *REDD+ AP* is the result of a process that involved different actors from different levels (national, provincial, cantonal and local) and collected their contributions to enrich and adjust it to the diverse needs, priorities and national circumstances. This included, at the same time, capacity-building processes and spaces for dialogue and participation, such as the REDD+ Working Group and the workgroups and workshops. The inputs generated in these spaces guided the development of the technical and policy guidelines that are part of the *REDD+ AP*.

The country's REDD+ approach, as well as the different elements and components that structure the *REDD+ AP*, were defined based on studies, analyses and technical inputs developed during the preparation phase for REDD+, with the contribution and participation of multiple actors. These included delegates from the political and technical spheres of national institutions with competence in the planning, development and execution of actions in agricultural and environmental areas, among others, several NGOs, producer associations and representatives of communities, peoples and nationalities.

In addition, the *REDD+ AP* proposal went through a process of review and compilation of suggestions and contributions provided by institutions of sectors relevant to the implementation of REDD+ in the country and by representatives of communities, peoples and nationalities. Therefore, this document, which provides guidelines for the operationalization of REDD+ in Ecuador, is the result of intersectoral collaboration and considers the environmental and cultural diversity that exists in the country. This

allows the presentation of a comprehensive and strategic vision of the measures, actions and operational processes for the implementation of REDD+.

The process of technical and participatory preparation of the *REDD+ AP* for Ecuador is summarized below.

a. Technical aspects

For the construction of the *REDD+ AP*, several inputs, studies and methodologies developed in the preparation phase of the country for REDD+ were considered; they allowed a comprehensive understanding of the causal relationships that determine the changes in land use. The political, legal and institutional context in which REDD+ measures and actions are framed was also analyzed, as a basis for the definition of operational components. Some key elements for the preparation of the *REDD+ AP* were:

- Technical inputs of the National Forest Control System, such as the results of the *National Forestry Evaluation*, the development of deforestation scenarios and the historical analysis of the rate of deforestation.
- Forest Reference Emission Levels due to deforestation evaluated by the *UNFCCC*.
- Technical inputs validated through the functioning of the REDD+ Working Group, workgroups, and the actions undertaken to strengthen REDD+ capacities.
- Development of a GHG emissions reduction accounting tool (project approach).
- Methodological document for the design of the REDD+ Safeguards Information System (SIS).
- Analysis of the national legal framework and proposals for regulations associated with REDD+ (consultation and record).
- Study on the main causes and factors of deforestation.
- Study of REDD+ actions and measures from a landscape approach.
- Study on social and environmental benefits/risks for REDD+.
- Analysis and prioritization of potential risks and social and environmental co-benefits associated with the implementation of REDD+.
- Opportunity cost studies and implementation for REDD+.
- Study on potential future deforestation scenarios, under different development scenarios.
- Study to determine the main REDD+ priority areas.
- Proposal of implementation mechanisms by strategic option.
- Support for the design of the REDD+ Fund.
- Study on the prioritization of investment and local allocation of resources from REDD+.
- Financing strategy for REDD+, articulated with the measures and actions prioritized at national level and by zone of homogeneous deforestation processes (ZHDP).

The analysis of the causes and factors that affect deforestation made it possible to identify REDD+ opportunities, as well as the prioritization of issues. Economic studies were taken into account, such as the analysis of opportunity costs and of implementation of measures and actions, which involved participatory processes. Opportunity costs, for example, included in each ZHDP a set of interinstitutional and intersectoral workshops at the provincial (11) and cantonal (25) level. The target group of these workshops was oriented to actors of the agricultural, livestock and forestry productive sectors, as well as to technical managers of production, planning and sustainable development of the GADs and MAGAP. Members of the technical staff of MAE, provincial directors and representatives of NGOs, parish councils, and communities, peoples and nationalities (MAE 2014a) also joined this process.

The gathering of this information in the territory allowed the construction of a *REDD+ AP* that would gather inputs, information, methodologies, studies and experiences drawn from the key actors at the local level, with a reading based on their own reality. The various studies carried out in the territory – including the gathering of field information on opportunity costs and implementation for REDD+– applied the "bottom-up" methodological approach, based on a participatory evaluation of the main risks and opportunities associated with the major causes and factors of deforestation in the ZHDPs.

The result of this national and local interaction supported the design and prioritization of those REDD+ measures and actions that could address the causes of deforestation, strengthen governance structures and provide additional social and environmental benefits to mitigate climate change. Therefore, those actions related to economic alternatives that provide opportunities for different social groups, promote the rescue of traditional knowledge and practices, and contemplate actions for capacity building were included.

This process of participatory identification of potential REDD+ measures and actions has contributed to the different productive, social and institutional actors to see, in a practical way, how REDD+ articulates with sustainable rural development processes and initiatives in the cantons and provinces (MAE 2014a), which will be the basis for the definition of activities in the implementation plans of REDD+ measures and actions.

Another technical input used to prepare the *REDD+ AP* was the study *Carbon, Biodiversity & Ecosystem Services: Exploring Co-benefits*. Ecuador (Bertzky *et al.*, 2011), through which the potential social and environmental benefits that the implementation of REDD+ could bring were identified. In the same way, the provisions related to safeguards in the constitutional framework of Ecuador, international agreements and national legislation were used. The safeguards approach has been a fundamental pillar for the development of the *REDD+ Action Plan*. This national scope of the safeguards establishes the parameters on which Ecuador will report its approach and respect in the implementation of REDD+ activities.

Similarly, for the monitoring and reference level, several studies were developed and information was collected that served as a basis to know the state of the forests, their dynamics, as well as the modeling of scenarios and carbon contents, among others.

It should also be noted that the *National Consultation Guide for REDD+ in collective lands and territories* (MAE, 2015b) was a technical input that is part of the *REDD+ AP*, which resulted in a solid, robust and inclusive development process with key actors. The development of this guide was a long work that started in 2012 and ended in 2014, and had a multidisciplinary team that facilitated the understanding of the technical content with the target group with which it worked at the national and local levels. For the development of communication material, participatory processes were carried out to translate technical content into a culturally-appropriate language that is accessible to all.

In summary, a diversity of actors, under the leadership of the MAE, accompanied the preparation phase of REDD+ in Ecuador and supported the development of the various technical analyses that support the elements presented in the *REDD+ AP.*

b. Participative aspects

It should be emphasized that the preparation of the *REDD+ AP* is the result of a collective, multi-level participation process (at the local, regional and national levels), in which several strategic actors were integrated. This entailed the participation of relevant actors at the interinstitutional level such as the MAGAP, the Water Secretariat, SENEPLADES, the Undersecretariats of Climate Change and Adaptation, and other projects within the MAE. Intersectoral management with MAGAP was a critical success factor for having official information for an intersectoral REDD+ approach in response to the causes of deforestation, inside and outside the forest. In the same way, this collective process for the development of the *REDD+ AP* had the participation of civil society, which included several NGOs with national and local representation, and communities, peoples and nationalities, as well as producer associations.

For the participatory construction of the *REDD+ AP*, training materials were developed and various dialogue spaces were promoted at the national and local levels to generate a high understanding of REDD+ and the processes related to this initiative.

During the preparation phase of REDD+, in parallel to the construction of the *REDD+ AP*, a participation strategy was used (MAE, 2015f) that included three spaces for dialogue:

- The REDD+ Working Group (REDD+ WG) (MAE, 2012b) was a national space for citizen participation that fostered dialogue, participation and follow-up of the different processes in the framework of REDD+ preparation.

  The REDD+ WG was made up of representatives of civil society: Academic sector, private sector, national NGOs and women's and youth organizations, as well as national representatives of communities, peoples and nationalities. It was governed by principles of public deliberation, responsibility, co-responsibility, information and transparency, interculturality and equality.

  The frequency of meetings of the REDD+ WG was initially on a bi-monthly basis; however, by request of the members themselves it was made on a monthly basis and, in some cases, there was more than one meeting per month. There were a total of sixteen meetings during its term (2013-2015), of which thirteen were ordinary and three, extraordinary.

  The REDD+ WG closely followed the whole REDD+ preparation phase, which generated valuable inputs, recommendations and feedback on how the country should build its REDD+ approach. In the plenary of the meetings held with the members of the REDD+ WG, and after the feedback, the *REDD+ AP* was validated several times and valuable inputs were received in these discussions.

  The MAE reshaped this space for dialogue, which is now called the “REDD+ Working Group: Forests for Good Living” and which today integrates other key sectors of civil society for the successful functioning of REDD+, such as the productive sector, beneficiaries of the Socio Bosque Program (PSB) and local grassroots organizations, among others. This reshaped space responds to the success achieved by the first working group (2013-2015) and, above all, to the call of civil society for their needs, priorities and criteria to be heard.
  The successful experience of Ecuador in shaping this type of spaces for involvement and dialogue has become a reference for the region, which has led other countries to replicate similar platforms (MAE, 2014).

- The workgroups were technical spaces made up of members of the REDD+ WG and other specialized actors or experts in topics related to REDD+.

  These spaces were intended to provide feedback on the proposals that were presented on specific REDD+ issues. To this end, five workgroups were created that generated technical inputs: a) Monitoring, measurement, reporting and verification (M-MRV); b) SIS; c) Consultation; d) Dispute resolution; and, e) Distribution of benefits. As part of the participation mechanisms, these workgroups also added inputs to the preparation of the *REDD+ AP*.

- The training workshops in the territories were developed to achieve the local participation of civil society and the communities that accompanied the design of REDD+. These events aimed to inform and disseminate official data on topics such as climate change, forests and REDD+, as well as strengthen capacities and collect inputs and contributions on issues related to the REDD+ design process.

  The socialization of these issues in the territories favored the incorporation of aspects that were not being considered from a national perspective, and allowed complementing guidelines from local realities. As an example, we can mention the training and socialization events of the REDD+ consultation guide that was validated in the territories (REDD+ priority zones) with strategic actors (MAE, 2014r).

  Likewise, to achieve the full participation of the actors and the strengthening of their capacities, several training initiatives were promoted in the territories and at the national level, using pedagogical work methodologies differentiated according to the context. A package of informational material was produced with booklets translated into Kichwa and Shuar, as well as a guide for trainers.

Three capacity-building mechanisms were implemented:

- Training for trainers: Courses aimed at national and international organizations and local communities interested in socializing and training on REDD+ in their areas of influence; including topics related to climate change, forests and REDD+, together with the review of training tools.
- Training replication: This model sought that the representatives of the communities that previously participated in the training courses for trainers were the ones who reproduced the knowledge acquired in their own communities, organizations or related representations.
- Thematic training: Activities for the introduction of basic principles on climate change, its relationship with forests, deforestation and forest degradation, and general aspects of REDD+. These events combined training with later moments of participation that allowed the collection of information or contributions of technical proposals to support the construction of the *REDD+ AP*. Training workshops were held on: a) Opportunity costs; b) Consultation for REDD+; and, c) Safeguards.

Thus, the *REDD+ AP* incorporates inputs generated through work at the local level that was also validated and analyzed at the national level through a set of workshops with technical and policy instances of the MAE, specifically with the PSB and MAGAP.

On the other hand, the *REDD+ AP* also incorporates contributions from communities, peoples and nationalities. In workshops and spaces for dialogue, the representatives of these groups gave feedback to the proposal from their own points of view and worldview. As part of this process, a workshop was held to present the *REDD+ AP*, in which its measures and actions were also reviewed, in synergy with the proposal of REDD+ Indigenous Amazonian (RIA); both proposals present their respective approaches with a certain degree of compatibility and coherence.

Annex 5. Technical review of the Forest Investment Plan by a FCPF expert

A Review of Ecuador's Proposed Forest Investment Plan (E-FIP)
Reviewer: Miguel Pinedo-Vasquez
Date of review: 22/10/2017

Key attributes of the E-FIP: This investment plan has the merits to be financed. Following are six main attributes that explain and justify why E-FIP deserves to be financed:

1. Ecuador has designed an innovative and inclusive climate investment plan that relays mainly in the actual and potential socio-environmental benefits of forests and biodiversity as well as of conservation and forestry practices.
2. E-FIP incorporates lessons learnt, advances made and benefits gained from past investment in conservation and forestry.
3. The portfolio of investment includes some innovative sectors (i.e. bioempredimientos), on-going integrated conservation and development initiatives (i.e. «Socio Bosque»), productive functional forestry (i.e. restoration of forests in slope lands) and conventional agroforestry initiatives (i.e. cacao and coffee).
4. E-FIP clearly identifies actors or beneficiaries across social groups from smallholders, conservation organizations and investors.
5. E-FIP is a low-risk investment plan that is designed to have high impact on the forestry sector with a clear goal to increase the contribution of forest (currently at 2.9%) to the national gross domestic product (GDP) as well as to reduce emissions.
6. Ecuador - FIP is a socio-environmental investment model that aims to invest in sustainable forestry to improve and diversify local livelihoods as well as to reduce greenhouse gas emissions (i.e. *Plan de acción REDD+*).

Comments, observations and recommendations

Section 1 and section 2: Country context and identifying opportunities. In these two sections, the applicants have provided contextual information, a well-documented synthesis of the challenges and opportunities for investing in sustainable forestry, forest/biodiversity conservation as well as mitigation and adaptation actions. The two sections include background

documentation that clearly states the case of why forest, biodiversity and forestry in Ecuador needs financial support. The following are specific comments and additions to the two sections:

Ecuador is considered to be predominantly an Andean-Amazon country with extensive costal region that include an important area of the Chocó biome. Ecuador has managed to reduce the net deforestation rate from -0.65% in the 1990-2000 period to -0.37% in the 2008-2014 period by implementing legal and economic incentives. Ecuador is managing to build human and institutional capacities to engage in conservation and sustainable forestry to reverse the trends of deforestation, land degradation and biodiversity erosion. Ecuador has been applying innovative approaches in conservation by mixing conventional conservation with sustainable development conservation initiatives such as the «Socio Bosque» program. In addition, Ecuador has produced some of the best examples of how to build working partnerships with conservation and rural development with the private sector and non-governmental organizations in Latin America.

E-FIP reflects the gains of government and private initiatives in building institutional and human capacities. E-FIP aims to take advantage of such a valuable resource in the implementation of innovative investment in productive forestry, biodiversity conservation and in sustaining the provision of environmental services. The proposed investment approach to diversity of forestry practices, conservation actions and forest products matches with the Ecuador's intended nationally determined contributions (INDCs) and the country's strategy to deliver on the Paris Agreement's goals. In addition, E-FIP aims to implement Ecuador's REDD+ strategies and some interesting low-emission land/resource use initiatives. E-FIP integrates some forestry practices that have been part of the land use systems of rural populations for generations. E-FIP is an opportunity for enhancing indigenous practices of conservation and landscape management that have sustain their livelihoods, and conserve biodiversity in their territories.

E-FIP's feasibility and applicability relays in the abundance of information and opinions collected throughout a process of consultation and validation. The investment plan per sectors and regions offers an important strategy to centralize, canalize and coordinate all relevant international funds directed to support the implementation of IINDCs and the National REDD+ strategy. Although the investment priorities and opportunities are clear, the flowing suggestions could be considered:

(i) Prioritize high impact interventions as part of the portfolio of actions, policies and financial mechanisms.
(ii) Consolidate mechanisms of co-funding and co-management of forest and conservation programs and projects.
(iii) Find some incentives for attaching private investors to invest in sustainable forestry and biodiversity conservation.
(iv) Support for diversifying forests products and for integrating the sustainable provision of ecosystems services as part of the INDCs and REED+.

Section 3 and section 4. This proposal is strongly built and supported by Ecuador's legal and institutional framework. The proposed actions to implement INDC, REED+ and sustainable forestry are guided by the legal and financial mechanisms immerse in the Constitution and a

wide range of national and local laws and regulations. The implicit recognition in the Constitution that environmental services are common goods and their use regulated by the State offers new opportunities for developing innovative financial frameworks that could be applied in other countries. The legal framework offers an opportunity for financing rural sustainable development initiatives.

E-FIP shows how the State is committed to promote low-emission development and the achievements of the Sustainable Development Goals (SDGs). E-FIP is also based on State capacity to innovate governance policies in the protection and management of natural heritage to people's good living conditions, «buen vivir». Considering the fact that the forest code is expected to be implemented in 2018 (pg. 33), E-FIP could have great impact in defining its strategies. Having a legal instrument such as the environmental code (*Código Orgánico de Ambiente -COA*) that focuses on the establishment of environmental funds is without any doubt an opportunity for diversifying access to financial resources. The highlights of the role played by women in food production in the sustainable rural development plan for 2015-2025 also represent a legal instrument for an inclusive model of E-FIP.

While the legal instruments for guiding E-FIP are well documented and explained in the proposal, the expected co-benefits section might benefit by incorporating tangible and un-tangible co-benefits, short and long-term co-benefits and particularly some gains in carbon-stocks, biodiversity conservation and the sustainable provision of ecosystem services. Much of such co-benefits are mentioned in the table 10 (pg. 54-55) as part of the investment plan. The section does include interesting co-benefits by investing in REED+, but the question of co-benefits expected by financing INDCs is not clearly stated in this section. For instance, the co-benefits that sustainable development initiatives are expected to bring are not included.

It's clear, however, the expected impacts of E-FIP on local livelihoods, institutions and environments, as well as wellbeing. By focusing on strengthening and supporting on-going conservation and reforestation initiatives, E-FIP will have high impact on local communities. Any form or quantity of payments for environmental services and biodiversity will benefit the local economies. There are some interesting experiences of such payments (i.e. «Socio Bosque») that can facilitate the design and implementation of payments for environmental services, conditional cash transfer and other forms of income transfer initiatives. E-FIP's ambitious goal to increase national GDP is possible to achieve by the promotion of forests products and promoting existing forestry practices. Much of the wood consumed by the construction and furniture industries is managed and conserved by small and medium landholders (Pacheco *et al*., 2015). E-FIP has the capacity for integrating and supporting smallholder forestry. A well-though initiative is to invest in the development of institutional and human capacities. The best approach for having an impact on the ground is to provide some financial resources to local actors and authorities. An investment niche for E-FIP could be reviewing the current tax systems on forests and biodiversity resources. Local municipalities and governments have little or no benefit from the management, extraction, processing and marketing wood resources (Pacheco *et al.*, 2015). Without any doubt E-FIP will have major environmental impact by either financing the establishment of INDCs, supporting REED+ initiatives and other conservation and sustainable development actions.

Sections five, six, seven, eight, nine and ten. E-FIP incorporates the advances made by past and on-going investment initiatives on conservation, development, implementation of REED+ and other international and national initiatives. E-FIP is incorporating the results of past initiatives and aiming to establish links of cooperation and co-financing of projects. Such financial and working approach is highly valuable, considering investment in environmental and climate change initiative is highly competitive and characterized by limited options for exchanging experiences and results. Sections six, seven, eight, nine and ten are well-documented parts of the proposal.

Annex 6. Environmental and social safeguards adopted by Ecuador for *PA-REDD+*

According to the *REDD+ AP* for Ecuador, the environmental and social safeguards are:

Safeguard A:
Complementarity or compatibility of the measures with the objectives of national forestry programs and international conventions and agreements on the subject.

Scope
REDD+ measures and actions will be complementary or compatible with the framework of national and local laws, policies, plans and programs, as well as with the applicable international instruments for REDD+.

REDD+ measures and actions must be complementary or compatible with the *Constitution of the Republic of Ecuador (CRE)*; the guidelines of international instruments and conventions (including the *United Nations Framework Convention on Climate Change* and the *Convention on Biological Diversity*, among others); the *National Development Plan 2013-2017*; the *National Climate Change Strategy*; the *National Policy on Governance of the Natural Heritage*; the productive and economic development policies relevant to REDD+; and local planning instruments (territorial development and land-use plans and territorial land-use planning instruments of communities, peoples and nationalities).

Safeguard B
The transparency and effectiveness of national forest governance structures, taking into account national legislation and sovereignty.

Scope
The transparency and effectiveness of forest governance structures, within the framework of REDD+ at the national level, will be analyzed in regards to the following:

1. Transparency and effectiveness of the regulatory framework, REDD+ operational framework and their respective structures.
2. Strengthening of forest governance structures and other land uses, with emphasis on aspects related to land tenure, forest control and forest monitoring.
3. Implementation of complaint and dispute resolution mechanisms applicable to REDD+.

4. Contribution of REDD+ to the strengthening of the internal governance structures of rights holders involved in the implementation of REDD+ actions.
5. Existence and transparency of mechanisms to ensure access to REDD+ information.
6. Transparency and effectiveness of financial management and prioritization of investment.
7. Local allocation of REDD+ resources.
8. Promote gender equality in the implementation of REDD+.

Safeguard C

Respect for the knowledge and rights of peoples, communities and nationalities, taking into consideration international obligations relevant to the circumstances and national legislation, and bearing in mind that the General Assembly of the United Nations has approved the *United Nations Declaration on the Rights of Indigenous Peoples*.

Scope

The respect for the knowledge and rights of peoples, communities and nationalities will be analyzed taking into consideration the collective rights recognized and detailed in Article 57 of the *Constitution of the Republic of Ecuador (CRE)*, as well as in the international instruments of rights human rights, such as the *United Nations Declaration on the Rights of Indigenous Peoples*, the *Convention on the Elimination of All Forms of Discrimination against Women, ILO Convention No. 169 on Indigenous and Tribal Peoples in Independent Countries,* the *Nagoya Protocol*, among others.

Based on this approach, for the analysis of respect for the rights of indigenous communities, peoples and nationalities, the Afro-Ecuadorian people, the Montubio people and communes, in the design and implementation of REDD+, the following will be considered:

a) Right to access and ownership of land, territories and resources.
b) Protection of knowledge and ancestral practices and knowledge.
c) Respect for forms of coexistence, social organization and exercise of authority in their ancestral territories and community lands of ancestral possession.
d) Respect for the right to work that guarantees their health, integrity, safety and well-being.
e) Application of a *Consultation Guide for REDD+*, which includes criteria for free, prior and informed consultation, when applicable.
f) Access to judicial mechanisms for claims in case of damages.

Safeguard D

The full and effective participation of interested parties, in particular indigenous peoples and local communities, in the actions mentioned in paragraphs 70 and 72 of *Decision 1/CP.16*.

Scope

Full and effective participation in the design and implementation of REDD+ in Ecuador will be reported in terms of the promotion and implementation of:

a) Information processes and capacity building with key actors for the implementation of REDD+.
b) Relevant processes and spaces for participation and dialogue for REDD+.
c) Mechanisms for the inclusion of women and priority attention groups in information processes, capacity building and opportunities for participation and dialogue associated with the implementation of REDD+.
d) Processes of participation of key actors, in particular indigenous communities, peoples and nationalities, the Afro-Ecuadorian people, the Montubio people and the communes, in the local

investment of REDD+ resources, in accordance with the measures and actions defined by the national REDD+ authority (which corresponds to the MAE).

e) Mechanisms for receiving and handling complaints associated with the implementation of REDD+.

Safeguard E

The compatibility of measures with the conservation of natural forests and biological diversity, ensuring that the actions specified in paragraph 70 of *Decision 1/CP.16* are not used for the conversion of natural forests, but that instead, they help encourage the protection and conservation of these forests and the services derived from their ecosystems and promote other social and environmental benefits.

Scope

For the analysis and reporting of the compatibility of REDD+ with measures for the conservation of forests and biological diversity, as well as with incentives for the protection and conservation of forests, their services and potential social and environmental co-benefits, the following will be observed:

a) The compatibility and contribution of REDD+ to national actions for the conservation of natural forests and biodiversity, avoiding the conversion of natural forests.
b) The contribution of REDD+ to the protection and maintenance of forest ecosystem services.
c) The strengthening of social and environmental co-benefits prioritized at the national level in the implementation of REDD+.

Safeguard F

The adoption of measures to deal with the risks of reversion.

Scope

The implementation of REDD+ seeks to ensure that emission reductions are sustainable or sustainable over time, through the following considerations:

a) Identification, at the national level, of the risks of reversion of emissions associated with the causes of deforestation and forest degradation.
b) Implementation of actions to avoid or minimize risks of reversion of emissions associated with REDD+ actions, in collaboration with local actors.
c) Strengthening of information systems relevant for REDD+.
d) Execution of actions or mechanisms for monitoring and managing identified risks, according to technical and financial capacities.

Safeguard G

The adoption of measures to reduce the displacement of emissions.

Scope

With the implementation of REDD+, a reduction of effective national emissions is expected, for which the following considerations will be taken into account:

a) Identification of emission displacement risks at the national level, considering underlying and indirect causes of deforestation and change in land use.
b) Strengthening of forest control measures to reduce the risk of displacement of emissions, as enabling and complementary conditions to REDD+.

c) Implementation of actions to avoid or minimize the risks of displacement of emissions associated with REDD+ actions.
d) Strengthening of the National Forest Control System, which allows the detection of displacement of emissions with the contribution of community monitoring and early warning systems.

Annex 7. Context of the gender approach in Ecuador

Introduction

The Human Development Report of the United Nations Development Program (UNDP) presents two indicators to measure gender equality within the Human Development Index (HDI): the Gender Development Index (GDI), which measures the three basic dimensions of human development: health, education and control over economic resources; and the Gender Inequality Index (GII), which measures the loss of potential human development due to the inequality between female and male achievements in terms of reproductive health, empowerment and the labor market.

In the case of the GDI, Ecuador is among the countries with a high level of equality, a classification that it shares with Uruguay and Colombia among the Latin American countries analyzed and with countries with a higher level of development such as Norway, Australia and Canada, among others. In the case of the GII, Ecuador scores a value of 0.391, which places it among the average of countries with high human development in Latin America (0.390).

Women and men in Ecuador

Productive sector. Women represent 51.2% of the working-age population (WAP). However, only 39.8% of the economically active population (EAP) is made up of women (INEC, 2017b). 5.9% of women in the EAP are unemployed, while unemployment among men is 3.5% (INEC *et al*., 2014).

The first occupation of women is in the services sector, where the majority of the staff are in activities such as domestic services (94.1%), social and health services activities (68.3%), hotels and restaurants (65.8%) and education (61.9%). %). On the other hand, the majority of men are involved in activities such as construction (94.7%), transport (89%), fishing (88.6%) and agriculture (69.2%) (INEC *et al.*, 2014).

The average labor income of an employed man is USD 355.7, while for an employed woman, labor income is USD 278.9.

Education. In 2016, the enrollment rate in elementary education was very similar in women (107.9%) and men (107.4%). In high school education, the figure slightly favors women (109.2%) compared to

men (105.3%).[44] In tertiary education, women enroll more in the university (45.3%), compared to men (34.6%).[45]

The illiteracy rate is 7.5%, with a higher incidence in rural areas (12.25%) than in urban areas (3.75%), and among women (7.7%) than among men (5.8%). The group of rural women is the one with the highest illiteracy (14.2%). It should be noted that illiteracy is declining, since among the population between 15 and 24 years of age, the percentage of illiterates is reduced to 1.5% (INEC *et al.*, 2014).

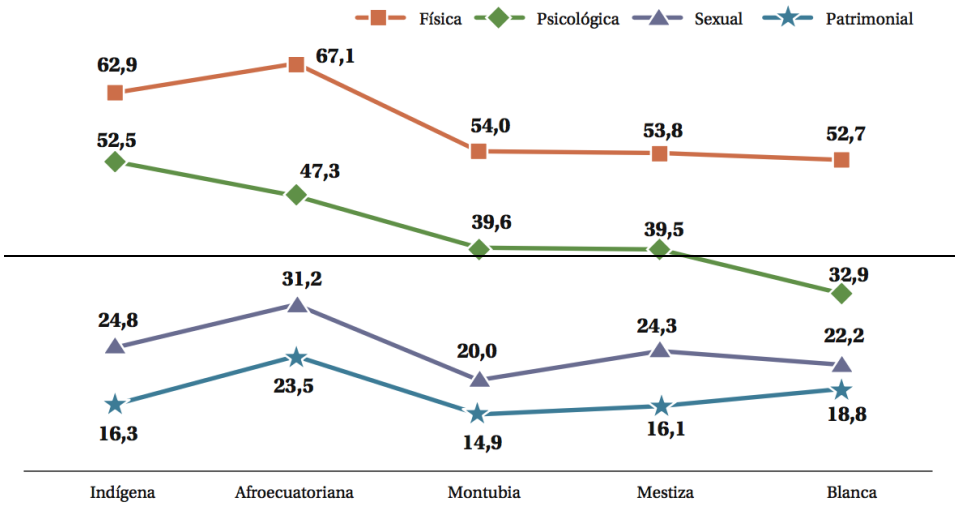
Digital illiteracy is higher among women (31.1%) than among men (24.4%), reaching 43.2% among rural women.

Head of household. Women represent 28.7% of family heads in households. The largest number of female heads of household occurs in the case of family units with two members, where they represent 40.6% of households (INEC *et al.*, 2014).

Violence against women. 60.6% of women in Ecuador state to have experienced gender-based violence. According to the *Survey on family relations and gender-based violence against women* in 2011, the most frequent form of violence is psychological or emotional violence (53.9%), followed by physical violence (38%), sexual violence (25.7%) and patrimonial violence (16.7%).

The different ethnic-cultural groups present variations according to the type of aggression. According to this same survey, violence is notoriously greater among Afro-Ecuadorian and indigenous women, as can be seen in Figure 7.1.

Figure 7.1. Percentage of women who have suffered gender-based violence by any person, per ethnicity and type of aggression



Source: INEC (2011). *Survey on family relations and gender-based violence against women*
Prepared by: Gloria Camacho and Cynthia Mendoza

[44] Unesco Institute for Statistic, data for 2016.

[45] Unesco Institute for Statistic, data for 2012.

The coastal region has the lowest levels of women who have suffered gender-based violence from their partner, while the mountain ranges and Amazonia show the highest levels. Among the areas of implementation of the FIP, Manabí is the province with the lowest incidence of this type of violence (see Table 7.1).

Table 7.1.. Rates of women who have suffered violence from their partner, by type of aggression (in percentages)

Zone	Physical	Psychological	Sexual	Patrimonial
Coast	30.8	38.6	13.5	10.3
Mountain range	39.1	48.2	15.3	11.2
Amazonia	38	46.2	15.9	10.4
Galápagos	33.1	40.6	11.9	11.2
Provincia				
Manabí	24.9	32.0	8.7	7.9
Santa Elena	26.8	32.4	9.7	6.4
Esmeraldas	36.3	41.5	13.3	7.1

Source: INEC (2011). *Survey on family relations and gender-based violence against women*

Political participation. Ecuador has a participation of women higher than usual in its parliamentary representation, although without achieving parity. Women occupy 42% of the seats in parliament, which places Ecuador as the eighth country in the world with the largest presence of women in this governmental body. 24% of the ministerial positions are occupied by women.[46]

Land ownership. According to the *Civil Code* of 1989, any property acquired during marriage belongs to the couple. Single women and men share the same rights.

In recent decades, several efforts have been made to promote the ownership of women's land in rural areas, such as the publication of the Support Program for Rural Women of Ecuador in 2003, the *National Policy on Rural Women*, in 2007, and the *Equal Opportunities Plan*, 2005-2009, which incorporates the needs and demands of rural women.

The mountain range and coastal areas have very different ownership patterns. The ownership of land by women and joint ownership by couples are much more frequent phenomena in the first of these areas, with greater indigenous population, compared to the coast, where the land belongs mostly to men.[47]

Men and women in the investment plan population

Manabí

[46] See: World Economic Forum. *The Global Gender Gap Report 2016*. Available at: http://reports.weforum.org/global-gender-gap-report-2016/economies/#economy=ECU.

[47] FAO. Gender and Land Rights Database. Country profile: Ecuador.

The population of Manabí is made up of 1,369,780 people according to the 2010 census. 49.7% are women, and 50.3% are men. Around 350,000 women are of reproductive age (between 15 and 49 years of age).

The EAP is much higher among men (356,391 workers) than among women (140,122 workers).

Women work mainly as private employees, on their own account or as public employees. Men work as day laborers or laborers, on their own or as private employees.

The main occupations of the women in Manabí are: service and sales workers (22.1%); elementary occupations[48] (22.1%); professionals, scientists and intellectuals (14.4%), and administrative support staff (9.0%). Men in Manabí work in elementary occupations (32.6%); they are farmers and skilled workers (14.2%); officers, operators and artisans (13.6%), and service and sales workers (12.5%).

Men have an average of 8.3 years of schooling, while for women the average is 8.6. 35.6% of women are digital illiterates, as are 32.2% of men.

Santa Elena

The population of Santa Elena is formed by 308,693 people according to the 2010 census. 49.2% is made up of women, and 50.8%, by men. Around 78,000 women are of reproductive age (between 15 and 49 years of age).

The EAP is much higher among men (80,038 workers) than among women (28,892 workers).

Women work mainly on their own as private employees or as public employees. Men work as private employees, on their own or as day laborers or laborers.

The main occupations of women in Santa Elena are: Service and sales workers (30.1%); elementary occupations (23.1%); professionals, scientists and intellectuals (11.5%), and administrative support staff (9.8%). The men of Santa Elena work as officers, workers and artisans (21.5%); elementary occupations (18.2%); service and sales workers (17.6%); farmers and skilled workers (16.1%).

Men have an average of 8.9 years of schooling, while women have 8.7. 45.5% of women are digital illiterates, as are 34% of men.

Esmeraldas

According to the 2010 census, the population of Esmeraldas is made up of 534,092 people; 49.2% of them are women, and 50.8% are men. About 130,000 women are of reproductive age (between 15 and 49 years of age).

The EAP is much higher among men (135,472 workers) than among women (67,982 workers).

[48] According to the 2010 census, the following are considered elementary occupations: cleaners, domestic assistants, street vendors, agricultural, fishing or mining laborers.

Women work mainly on their own, as public employees or as private employees. Men work as private employees, as day laborers or laborers or on their own.

The main occupations of Esmeralda women are: service and sales workers (26.6%); elementary occupations (19%); professionals, scientists and intellectuals (7.7%), and administrative support staff (7.7%). Esmeralda men work in elementary occupations (25.5%); as farmers and skilled workers (19.9%); service and sales workers (17.6%), or as officers, operators and artisans (11.5%).

Men have an average of 8.3 years of schooling, while the average of women is 8.9. 36.5% of women are digital illiterates, as are 33.8% of men.

Gender legislation and instruments

The *Constitution of the Republic of Ecuador (CRE*), dating from 2008, acquires a series of commitments to achieve gender equality, including: promotion of parity in the appointment of public officials; elimination of violence against women in the private and public sphere; formulation and implementation of policies to achieve equality between men and women; guarantee access of women to property and in the decision making of the administration of a conjugal society; guarantee equal access to employment; acknowledgement as productive work of the unpaid work for self-support and human care in households; assurance of sexual and reproductive health actions and services and protection of pregnant women under the law.

After the approval of the *CRE*, the different public policies generated by the State are oriented towards the effective enjoyment of rights to achieve equality between women and men; the gender approach is incorporated into plans and programs; and technical assistance is provided for its mandatory application in the public sector.

In 1997, the National Council for Gender Equality was created, which aims to ensure the full validity and exercise of the rights of women and the lesbian, gay, bisexual, transgender, transvestite and intersex people (LGBTI). Its attributions are:

- Formulation of public policies on equality to eradicate the gender gap.
- Transversalization in public policies, laws and regulations.
- Observance of compliance with the principle of equality and non-discrimination and influence the management of the State to guarantee it.
- Monitoring and evaluation of progress and results in the application of the principle of equality and non-discrimination.

The *National Agenda for Women and Gender Equality 2014-2017* vindicates subjects of rights and proposes public interventions to overcome the inequality gaps. Its purpose lies in the transformation of discriminatory social relations towards a State in which real or substantive equality is guaranteed; it is framed in Good Living as a horizon of the work of the State to enable the destructuring of the colonial legacies of neoliberalism.

The agenda includes nine transversal axes; number eight corresponds to the environmental issue and highlights the full participation of women and their empowerment in the areas of environmental management, management of natural resources and habitat, thus contributing to the balance between nature and the community as an essential element that generates environmental conditions suitable for

the preservation of life. The agenda contains ten guidelines that incorporate, among others, the knowledge, practices and sustainable knowledge of rural women, recognizes and values the role of women in the preservation of biodiversity and natural resources, and increases and strengthens the participation of rural women in the management of agricultural production units to guarantee food sovereignty.

Table 7.12. National legal and regulatory instruments

Legal or regulatory instrument	**Description of gender-related content included**
Organic Code on Judicial Function	It determines the competence and jurisdiction of judges of violence against women and the family.
Democracy Code or Organic Law on Elections and Political Organizations	Regulates the application of parity between men and women in lists for multi-personal elections. It establishes the exercise of gender-based violence and not complying with child and daughters' food payments as impediments to being candidates.
Organic Law on Legislative Function	It incorporates in a transversal way the approach of women's rights and gender equality through the creation of the Legislative Technical Unit, whose objective is to accompany the process of creation of the standard and provide the specialized commissions and the Plenary session with a non-binding report on issues such as the use of non-discriminatory language in the standard and the gender impact of suggested standards .
Organic Law of the Council of Citizen Participation and Social Control	Guarantees citizens, individually or collectively, equal rights, conditions and opportunities to participate, influence and decide in the public life of the State and society.
Organic Code on Territorial Organization, Autonomy and Decentralization	Cantonal councils for the protection of rights will have as attributions the formulation, mainstreaming, observance, monitoring and evaluation of municipal public policies for the protection of rights, articulated to the public policies of the national councils for equality.
Organic Code of Planning and Public Finance	It stipulates that in the exercise of planning and public policy, coordination spaces will be established in order to incorporate gender, ethnic-cultural, generational, disability and mobility approaches.
Comprehensive Organic Criminal Code	It typifies three types of crimes of violence against women or family members: Physical violence, psychological violence and sexual violence.
Code of Children and Adolescents	It establishes protection mechanisms against the mistreatment, abuse, sexual exploitation, trafficking and loss of children and adolescents. It stipulates visiting rights, parental authority and food.
Labor Code	It specifies the rights of working women and men, maternity and paternity leave, the prohibition of untimely dismissal due to maternity, the obligatory nature of insurance

Legal or regulatory instrument	**Description of gender-related content included**
	affiliation for medical and social benefits.
Violence Against Women and the Family (Law 103)	It makes an explicit approach to violence against women and the family. It includes measures to protect victims and prosecute the perpetrators of this type of violence. Article 1 protects the physical, mental and sexual freedom of women and their family members.
Law on Free Maternity and Child Care	It guarantees the right of women to free and quality health care with warmth, during pregnancy, childbirth and postpartum; access to sexual health and reproductive health programs.
2010 Public Service Organic Law	It guarantees the joint presence of men and women in nomination and appointment positions, in processes of selection and incorporation into the public service.
Organic Law on Intercultural Bilingual Education	It establishes equality between men and women; includes people with diverse sexual orientation and gender identity in order to achieve, in the educational system, a change in discriminatory cultural conceptions of any order.
Organic Law on Higher Education	It establishes the principle of co-government that is understood as the shared direction of the universities and polytechnic schools in accordance with the principles of quality, equality of opportunities, alternability, gender equity and equality.
Organic Law on Communications	It prohibits discriminatory content for reasons of ethnicity, place of birth, gender identity, cultural identity, health status, sexual orientation, judicial status and immigration status.
Organic Law on Popular and Solidarity Economy	It establishes as popular economic units those that are dedicated to provide care, among other activities. It defines the people responsible for providing care, such as those who exclusively carry out activities for the reproduction and sustainability of people's lives, in relation to the preparation of food, human care and others.

Source: *National Agenda for Women and Gender Equality 2014-2017*

Legislation on gender and climate change

There are different laws and regulations in which the links between gender, forests and climate change are appreciated, as reflected in Section 3 of the investment plan.

- *National Climate Change Strategy*. It emphasizes that in order to face the impacts of climate change it is necessary to include variables that consider the human dimension through criteria such as priority attention groups by age, gender, poverty situation, marginalization, among others.
- *Ecuadorian Agricultural Policy*, *towards sustainable rural territory 2015-2025*. It highlights the role played by women in agricultural activity and recognizes the importance of overcoming the traditional model of agriculture characterized by a huge gender inequality in the access and control of productive resources. It also recognizes that policies and interventions have traditionally reinforced gender inequalities through various practices.
- *Organic Law on Rural Lands and Ancestral Territories*. It includes among its fundamental principles social, gender and generational equality in the policies regarding access to rural land. In addition, it indicates that specific policies will be developed to eradicate inequality and discrimination against women producers, in access to production factors (following Article 324 of the *CRE*, which guarantees equal rights and opportunities for women and men in the access

to property). On the other hand, it prioritizes the redistribution of rural land to women and mothers who have assumed the maintenance of the household, among other groups.

- *REDD+ AP.* It establishes ten measures and actions to incorporate gender guidelines in the processes under development that include, among others, promote the participation of women in spaces of national and local participation; establish a plan for the development of capacities and participation of women in the processes of productive transformation; integrate women's knowledge, skills, abilities and experience in the implementation of REDD+ measures and actions; and, involve producers and members of women's associations in the processes of transition to sustainable production systems and initiatives for the use of non-timber forest products (NTFPs). In addition, the document includes specific actions to achieve gender equality within the strategic components included in the strategy.
- *National Agenda for Women and Gender Equality 2014-2017*. It incorporates the gender approach into public policy; it is articulated with national planning and includes an axis corresponding to the environment (see "Gender Legislation," in this annex).

Socialization workshops

During the socialization workshops of the investment plan held on September 11, in Olón, and on September 13, in Esmeraldas, participants addressed three issues in the workgroups. One of these topics was the role of women in Bio-venture and forest conservation, and how to improve this role.

After group discussions, these were the main aspects addressed:

- Women are key in conservation processes. On the one hand, they carry out different Bio-venture to support the family and, on the other hand, they transmit the conservation tasks.
- Women continue to play traditional roles in the household, so work in the forest is an additional burden. Women assume a public role, but men do not assume roles in the household.
- Men and women work in timber activities in the forest, such as cutting down trees. Most of the wood deposit are made by women. An example is the case of honey.
- Most biodiversity ventures are carried out by the members of the household. There are Bio-venture in which women manage the income and they pay the men in the household who work in them. Women have their own income and control the benefits of the activity.
- Women lead tourism ventures and restaurants.
- In general, credit is acquired jointly by the couple. When a woman wants to access it individually, it is complicated because she has no way of showing that she has an income, which is usually more informal than that of a man.
- Lack of representation in decision-making spaces. For example, community or business organizations accept a person from the family as a partner and this position is assumed by the male. Therefore, although women attend meetings, they have no voice and cannot be elected to office. In recent years, many organizations accept as partners both men and women.
- Women are also limited to access these positions because they have to look after the children and the household.
- Gender training is needed for women and men so that, on the one hand, women are empowered and participate in productive activities and decision-making, and on the other, men understand that women can access these spaces, that they should collaborate with household activities and avoid possible situations regarding intrafamily violence.