

ECUADOR

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REDD IN ECUADOR

Ecuador is a relatively small country (about half the size of France or 283,561 km²) with an extremely varied geographical landscape and extraordinary biological diversity (MAE 2010a). Ecuador is considered to be one of the world's megadiverse countries (Mittermeier et al. 1997) and the Amazonian region includes large tracts of intact natural forest of global conservation significance (Bass et al. 2010). Ecuador is divided into four distinct biogeographic regions: the Amazon, the Andes, the Pacific coastal plain and the Galapagos Islands. The vast majority of forest biomass - approximately 10 million hectares - is in the Amazon region (80%), with about 13% near the coast and the remaining 7% in the Andean highlands (Stern & Kernan 2011). The country has experienced major changes to its forest cover for many decades, mostly due to agricultural expansion and illegal logging. According to data from 2000, an estimated 198,000 ha of forest were being lost every year, equivalent to an annual deforestation rate of 1.5% (CLIRSEN 2003). Recent data from the Ministry of Environment, however, indicate that the national deforestation rate is significantly lower than the earlier figure and is closer to 61,765 ha per year (equivalent to 0.6% per year) (MAE 2011a). This figure, however, excludes deforestation in the humid north-western area of the country and alternative types of imagery are now being acquired to provide a more accurate figure for the national deforestation rate.

The principal driver of deforestation in Ecuador is the expanding agricultural frontier, followed by other drivers that vary in importance depending on the geographical region, including agroindustry (e.g. African oil palm), logging, mining and infrastructure. Most of the country's coastal forests have already been deforested for agriculture, and fragile habitats such as dry forests, mangroves and other wetlands have been lost or severely degraded. In the Amazon, broad areas have been affected by oil extraction and subsequent human colonization. The growth of palm oil plantations has decimated natural forests near the northwest coast and gold mining has caused deforestation, habitat degradation and water contamination, particularly in the southern Amazon region (Stern & Kernan 2011). Reducing deforestation in Ecuador is a national priority and the National Development Plan (known as the Plan for Good Living, 2009-2013) aims to reduce deforestation in Ecuador by 30% by 2013. To help achieve this goal, the Ministry of the Environment's Socio Bosque Program (SBP) began in 2008 to conserve natural forests by providing financial incentives to private and community forest owners to keep their forests standing.

Ecuador has been a participant in the UN-REDD programme since Oct 2009 when it was formally accepted as an observer country. Since the acceptance of its National Joint Program (NJP) in March 2011, Ecuador became a beneficiary country and joined the group of twelve pilot countries that are implementing activities in preparation for REDD. At the national level, a framework to regulate REDD activities is under development. These activities will be implemented at the national level with the possibility for sub-national projects. All measurement, reporting and verification (MRV) will be carried out at the national level (MAE 2011b). To date, the sub-national activities underway in Ecuador are largely feasibility studies for potential REDD+ projects, reforestation projects and include a few REDD projects that are preparing project design documents (PDDs).

ELEMENTS OF REDD

MANAGEMENT AND COORDINATION

The Ministry of Environment (MAE) is the official governmental partner to the UNREDD programme and coordinates all REDD initiatives and activities in Ecuador. During the readiness phase the MAE is responsible for implementation of the NJP and ensuring that the NJP is in compliance with the provisions of the National REDD+ Plan (PNREDD+).

The NJP is governed by an Executive Board that will guide, coordinate, supervise and monitor implementation of the NJP. The Board will be chaired by the Undersecretary of the Environment (SCC) within the MAE, together with the UN resident coordinator in Ecuador, with participation of the three UN agencies involved in the program (FAO, UNDP and UNEP). The Executive Board can also invite other stakeholders to join the Committee including other government agencies, civil society, and representatives of indigenous groups and other forest-dependent communities. Fund management arrangements will be jointly defined by the MAE and UN agencies.

In October 2010, a specific working group on REDD+ was established under Executive Decree No. 495 called the Inter-institutional Committee on Climate Change (CICC). The CICC performs as a high-level institution to coordinate and facilitate the integrated implementation of national policies related to climate change, the National Strategy for Climate Change and the country's responsibilities under the United Nations Framework Convention for Climate Change (UNFCCC).

STAKEHOLDER ENGAGEMENT

Ecuador has coordinated several actions at the national level to engage key stakeholders in the national REDD+ process. The REDD+ engagement programme, which is supported by UN-REDD, aims to provide information, opportunity for consultation and capacity building on the PNREDD+. The objectives of the engagement program are to assist stakeholders to understand REDD+ and the implications for implementation, reach agreements about REDD+ and generate interest in participation, involve key actors through mechanisms to promote participation and build local capacity to implement the PNREDD+ (MAE 2011c).

The National Advisory Committee (COASNA) was established to ensure that the implementation of the NJP is an inclusive process with equal representation of interests. COASNA is comprised of government and civil society stakeholders, including indigenous peoples and will initially consist of a representative and acting representative of the National Planning Secretariat (SENPLADES) and the Ministry of Agriculture, Ranching, Aquaculture and Fishing (MAGAP), to facilitate governance and coordination among different levels of government as stated in the mandate of the 2009-2013 National Plan for Good Living (MAE 2011b).

Ecuador has also established a review group for the NJP and has convened various workshops and a series of public meetings that serve as primary forums for stakeholder engagement around the UN-REDD process. Finally, the national Social and Environmental Standards (SES) Committee has engaged with a wide variety of stakeholders to develop standards and safeguards for REDD+ in Ecuador.

RIGHTS AND TENURE

Land tenure in Ecuador is an important determinant of land-use and deforestation dynamics in the country. The agrarian reform that took place during the 1960s and 70s required that land beneficiaries demonstrate that land in their possession was being used. This drove thousands of peasant farmers to occupy forested areas in the northwest and the Amazon regions of Ecuador, causing large-scale deforestation and destruction to forested ecosystems (Morales et al. 2010). The resulting situation is that many indigenous territories are now populated by colonists - in many cases with encouragement from the government - and the remaining forest resources are fragmented across a large number of individual, cooperative and communal landowners (Morales et al. 2010).

Ecuador does not have a forest concession system for production forests; instead, forest tenure is held by either the state, private landowners, or indigenous peoples and local communities. By far the largest owners of forests in Ecuador are indigenous communities (including Afro-Ecuadorians), who hold roughly 7.5 million ha of native forest (Palacios and Revelo 2005 cited in Añazco et al. 2010). Government lands include native forests within the National System of Protected Areas (SNAP), which account for around 4.8 million hectares, and the so-called forest patrimony, which cover over 2 million hectares. While forests within the SNAP are not allowed to be used for commercial purposes, they may be used for subsistence by indigenous communities. Land under forest patrimony, on the other hand is a combination of production and conservation forests (Añazco et al. 2010).

Forest patrimony is, in theory, controlled by the state, but in practice these lands are often in the possession of settlers, communities and logging companies and the issue of control of these lands remains one of the key issues to resolve within the forestry sector (Añazco et al. 2010). Data on forest tenure is also conflicting, and statistics on land ownership include a significant overlap given that Ecuador has a total forest area of 10 million hectares.

COMPLIANCE (ENFORCEMENT AND INCENTIVES)

Ecuador has a number of forest-related laws and policies relating to the enforcement and providing incentives for sustainable land-use practices. The Forestry Law, currently being updated, specifically details a range of prohibited actions that include (illegal) logging, grazing, transport of forest products, forest destruction and invasions on forested land.

The National Forestry Directorate (DNF), within the MAE, is responsible for compliance with forest management policies and other aspects of the Forestry Law. To date, the focus within the DNF has been on controlling the transport of illegal timber on the highways and the Directorate has had a limited role in controlling illegal activities within the forest. It has been proposed by the Ministry of Environment, though, that the future strategy for law enforcement be concentrated mainly within the forest industry (50% of the DNF's effort allocation), with additional controls in the forest itself (30% effort) and on highways (20% effort); almost the reverse of the current situation. Enforcement at sawmills and other industrial operations will involve engagement of additional authorities including the military, police, local governments and the country's Internal Revenue Service (MAE 2010b).

The Socio Bosque Program (SBP), though not formally a REDD+ program, is an incentive-based policy for forest conservation. From its initiation in September 2008 to December 2011, the SBP has achieved conservation agreements with private individuals (114,701 ha) and indigenous community partners (768,522 ha) to conserve a total of 883,223ha of native forests, humid Andean grasslands (páramos) and other native vegetation formations, with estimated benefits for more than 70,000 people (MAE 2011f). MAE is considering a range of additional incentives which may be monetary in the form of direct financial compensation (as is the case with the SBP), tax breaks for sustainable activities (e.g. for forested lands or imported machinery) or non-financial incentives such as facilitation in the acquisition of logging permits, administrative services through mobile offices in timber production zones, free technical assistance from MAE to develop management plans, or the deregulation of plantations (MAE 2010b). Further incentives to promote sustainable forest management and reforestation are also currently under consideration (MAE 2010b).

REFERENCE LEVELS

Ecuador will use an historical reference level (RL) for deforestation rates based on 1990 levels (MAE 2011a), and the government has recently begun a process to develop a national reference level for emissions from deforestation. The first component of this RL is the estimation of carbon stocks associated with different types of land use and vegetation cover, with an emphasis on forest ecosystems, which is being estimated as part of the National Forestry Evaluation. The second component is the calculation of the historical rate of deforestation that entails reliable estimation of the area and location of previous deforestation events. In February 2011, the MAE made publically available the first results on historic forest cover and land use for continental Ecuador for the two periods 1990-2000 and 2000-2008, based on a comparison of LANDSAT and ASTER images (MAE 2011a). The study estimated that Ecuador's total forested area in 2008 was 9,599,679 ha, and that the deforestation rate in Ecuador was 74,300 ha/yr between 1990 and 2000, and 61,800 ha/yr between 2000 and 2008.

It is important to note, however, that these preliminary figures exclude about 30% of the total land area in Ecuador, primarily in the Esmeraldas Province in the North West of the country, due to a lack of cloud-free satellite images. Given that much of this area is forested land that has undergone large-scale deforestation and forest degradation in the past two decades (Sierra et al. 2003; Stern & Kernan 2011), the actual figures for historical deforestation are likely to be significantly higher than current estimates. The

MAE plans to use historical reference data to focus national efforts across geographic areas with increased historical deforestation rates and to increase effectiveness of the Forest Governance Model.

SAFEGUARDS

Ecuador aims to comply with the safeguards that are outlined within the Cancun Agreements (UNFCCC 2010). These safeguards will be integrated into the Monitoring, Reporting and Verification (MRV) system currently being developed, with emphasis on the rights of indigenous peoples and local communities, conservation of biodiversity, ecosystem services and other social and environmental benefits.

In addition to its commitments under the UNFCCC, Ecuador is one of five pilot countries to develop voluntary national REDD+ Social and Environmental Standards (SES). This process includes an extensive stakeholder consultation process, workshops with diverse actors, revision by the Ministry of the Environment's legal department and the establishment of a National Standards Committee. During the SES implementation phase in Ecuador, an information and monitoring system for safeguards will be developed to link REDD+ SES with the UN-REDD program to ensure compliance with safeguards as well as multiple benefits from REDD+ implementation. This monitoring plan will be used in the Socio Bosque Program as a pilot effort, to be scaled up for use in the National REDD+ Plan (MAE, 2011b). In March 2010, the MAE and UNEP-WCMC began a joint program to identify social and environmental benefits from the implementation of REDD+ in Ecuador (MAE 2011c) and the global UN-REDD Programme will also produce tools and guidance to assess biodiversity and ecosystem services in forested areas that will be used in Ecuador.

MONITORING, REPORTING AND VERIFICATION

Historically, Ecuador has been poorly equipped to monitor deforestation and forest degradation; national and regional data on forests are largely outdated, unreliable, incomplete and inconsistent and the current administration has subsequently made great effort and investment to create reliable data on the state of the nation's forests, the first results of which were published earlier this year (MAE 2011a).

The MRV program in Ecuador consists of four principal projects. The MAE developed a historical scenario to determine where deforestation and land use change occurred over time, during the periods 1990-2000 and 2000-2008. In Feb 2011, the SBP reported its first results with a national historical deforestation map based on LANDSAT and ASTER satellite imagery with minimum possible cloud cover (MAE 2011a). Ecuador anticipates but has not yet done a projected reference scenario. The National Forestry Evaluation programme, financed by the FAO, is being developed to procure data on tree species and biomass from plots in diverse forest types throughout the country with information on some forest types (e.g. dry forest and part of Amazonia) to be completed in Jan 2012 (MAE 2010b). MAE is currently developing a national forest monitoring system which is expected to be implemented in 2012.

SECTION SUMMARIES

STATISTICS

Ecuador is a relatively small country (283,561 km²; about half the size of France) with an extremely varied geographical landscape and extraordinary biological diversity due to its equatorial location, the presence of the Andean mountains that run the country's length, and the influence of marine currents on the coast (MAE 2010a). Ecuador is considered to be one of the world's megadiverse countries (Mittermeier et al. 1997) and the Amazonian region includes large tracts of intact natural forest of global conservation significance (Bass et al. 2010).

Ecuador is divided into four distinct biogeographic regions: the Amazon, the Andes, the Pacific coastal plain and the Galapagos Islands. The most recent figure for the total forested area of Ecuador is 9,599,679 ha (MAE 2011a) and around 80% of the forest is located in the Amazon Basin, which makes up 47% of the national territory (RAISG 2009). Of the remaining forest area, about 13% is near the coast and the final 7% in the Andean highlands (Stern & Kernan 2011). The percentage of natural forests vs. plantations has yet to be determined but is currently under analysis.

The annual rate of change in forest cover in Ecuador is variable between time periods and information sources due to different methods of analysis. According to data from 2000, an estimated 198,000 ha of forest were being lost every year, equivalent to an annual deforestation rate of 1.5% (CLIRSEN 2003). Recent data from the Ministry of Environment, however, indicates an annual change in forest cover on continental Ecuador of 0.68% (74,300 ha/yr) for the period between 1990-2000 and slightly lower, 0.63% (61,800 ha/yr), between 2000 and 2008 (MAE 2011a). The MAE study divided continental Ecuador into six regions: (1) Amazon, (2) Eastern Andean slopes, (3) Western Andean slopes, (4) inter-Andean valleys, (5) Coastal plain and (6) Southern Andes. The results, however, have an estimated error of up to 30% due to the difficulty of finding cloud-free images for certain regions of the country, particularly in the north-western Esmeraldas Province (coastal plain).

For decades, Ecuador has experienced major changes to its forest cover. The principal drivers of deforestation in Ecuador are ever-increasing areas of subsistence and commercial agriculture and cattle ranching, illegal logging and the exploitation of non-renewable resources such as oil, gold and other minerals, accompanied by road construction and subsequent colonization. Most of these commercial activities are important to the country's economy; Ecuador is a largely agricultural country, and oil and its by-products are an important source of foreign exchange.

INSTITUTIONS

The Ministry of the Environment (MAE) is the focal point for REDD+ activities in Ecuador and develops and implements policy for REDD+ readiness. The Ministry is comprised of two Departments: the National Department Climate Change Mitigation and the National Department for Climate Change Adaptation. As an indication of the priority and inter-sector relevance that the government has placed on the issue of climate change, a high level Inter-Institutional Committee on Climate Change (CICC), led by the MAE, was formed in 2010 under Executive Decree.

PLANS AND POLICIES

Numerous other government institutions at the national or provincial level are or potentially will be involved in REDD+ implementation. Many civil society organizations (CSOs), private sector entities and indigenous groups are also involved in REDD+ to differing degrees.

Ecuador has a number of national-level governmental plans and policies that support efforts to reduce emissions from deforestation and forest degradation. The most relevant for REDD+ is the National REDD+ Plan (PNREDD+) currently being developed under the Ministry of Environment (MAE) to coordinate efforts to reduce deforestation in Ecuador. One of the crosscutting components of the National REDD+ Plan is to ensure additional social and environmental benefits in the implementation of REDD+, including improved benefits for local and indigenous communities that depend on forests for their livelihoods and wellbeing. As such, Ecuador is developing national REDD+ Social and Environmental Standards (SES) to be implemented alongside PNREDD+.

The National Climate Change Strategy, 2010-2030 (approved by Executive Decree, July 2009) is the overarching climate change policy in Ecuador and comprises the National Mitigation Plan and the National Adaptation Plan. The MAE is responsible for the development and implementation of the strategy which aims to protect the country's biodiversity that is considered a strategic resource for the well-being and development of Ecuadorian society. The National Plan for Good Living (2009-2013) sets the environment as a national priority and as one of its central axes it proposes the conservation and sustainable management of natural heritage and biodiversity, and mitigation and adaptation to climate change. It also aims to reduce social and environmental vulnerability and to reduce the national deforestation rate by 30% by 2013 (SENPLADES 2009). The National Environmental Policy enacts policies that are considered relevant to reach a level of well-being for all Ecuadorians including the sustainable management of the environment. Finally, the Forest Governance Model (FGM) within the National Strategy for the Development of Sustainable Forestry emphasizes the maintenance and restoration of environmental goods and services provided by forests to local communities and society in general.

LEGAL FRAMEWORK

Ecuador has a number of laws relating to the conservation, and sustainable use of forests, as well as the conservation of natural areas and biodiversity, all of which are currently in the process of being revised. These laws, some of which are mentioned below, provide guidance on the use of natural resources as well as enforcement measures to protect forests. The Forestry and Conservation of Natural Areas and Wildlife Law has been in effect since 1981. The forestry component emphasizes forest management, production forests (native forests and plantations), forestry control and research. The Biodiversity Law (2004) focuses on the protection of the biodiversity of Ecuador including genetic and ancestral resources. The Water Law (2004) focuses on water conservation, its use (domestic and irrigation), clean-up and quality improvement, the location of underground water sources and citizens' rights to access and use.

The Constitution of Ecuador (2008) is the supreme law of Ecuador and provides the framework for the organization of the Government and the relationship between the government and citizens. The Constitution was approved by public referendum and became effective on Oct 20, 2008 when it was published in the Official Register. Article 74 of the Constitution regulates environmental services to ensure that people, communities and indigenous groups have the right to benefit from the environment. It also states that "environmental services are not susceptible to appropriation; that their production, provision and use will be regulated by the National Government." It is therefore commonly understood that carbon sequestration from forests, which is considered to be an environmental service, may not be sold or appropriated, making it unclear how Ecuador would be able to participate in a market based solution to REDD+. The MAE is consequently now leading a process to define the regulatory framework for environmental services in the country that will include incentive mechanisms, usage rights and provisions for the equitable distribution of economic benefits from their use (MAE 2011b). The interpretation of Article 74 is currently under scrutiny for its applicability to present and future REDD+ activities and the level at which they may be carried out. Other articles including Articles 400, 403 and 414 include specific mandates to protect biological diversity, to conserve forests and protect at-risk populations.

Ecuador is a signatory of many international environmental conventions as well as some international treaties related to the protection of endangered biological species (e.g. sharks, marine turtles, vicuñas).

ACTIVITIES

There are a range of preparatory REDD+ activities underway in Ecuador, ranging from national level programs to those at the project level. Ecuador has been a member of the UN-REDD programme since Oct 2009 and in March 2011 - upon acceptance of its National Joint Program (NJP) - Ecuador joined the group of twelve pilot countries under the UN-REDD programme that are implementing REDD activities. These activities include an initiative to ensure multiple benefits for REDD+ implementation, and the development of a legal, financial and institutional framework for REDD+.

In addition to the activities carried out under the UN-REDD programme, the government of Ecuador is implementing two further national-level forest programs that will contribute towards REDD. The Socio Bosque Program (SBP) is an incentive-based program for forest conservation, coordinated by the MAE, which has been running in Ecuador since September 2008. Under SBP owners of land receive economic incentives to guarantee the permanence of native forests over the medium- to long-term. All legal landowners can participate in the program but priority is given to areas with rapidly changing land use and forest cover (i.e., high rates of deforestation), areas that are critical for the maintenance of ecosystem services that provide benefits for society and areas with a high incidence of poverty. PROFORESTAL is a national reforestation program, created in 2008, to establish industrial and communal plantations and agroforestry systems with the twin objectives of protecting native forests and generating jobs in the rural sector. Under PROFORESTAL indigenous groups, local communities and private property owners sign agreements with PROFORESTAL who then provide up-front capital including labour costs and technical assistance to establish the plantation. Following timber harvests, landowners must then return a percentage of their income from timber sales to PROFORESTAL. Some difficulties and limitations have been highlighted within this program including uncertainty and conflict in land ownership, gaps in technical know-how, and a lack of coordination among government institutions (Zambrano-Barragán 2010, in Lawson et al. 2011).

A number of subnational activities are also underway in Ecuador and are at various stages of development. These activities are predominantly pilot projects led by national or international civil society organisations and the private sector. The most developed of these are the Awacachi and Orellana projects that aim to protect community forests that are threatened by land use change.

FINANCING

The major sources of funding for REDD+ activities in Ecuador are the national government, FAO, GIZ, KfW, and the UN-REDD Programme that will support Ecuador in the REDD readiness phase through 2013. Non-governmental funds for REDD+ have typically been spent on capacity building and training, communication, research and investigation, and feasibility studies for project-level REDD activities among other things (EcoDecision 2010).

The current major funding sources for REDD-related programs and activities in Ecuador are as follows. From 2008-2011, the government of Ecuador spent USD 14.5 million on the Socio Bosque Programme. FAO provides financial support of about USD 1 million for a project to support the National Forest Evaluation. GIZ provides technical support for activities related to climate change mitigation. The UN-REDD programme has pledged USD 4 million over a three-year period from 2011-2013 to support REDD Readiness activities in Ecuador, although as of early 2012 none of this has actually been disbursed. Finally, the German Development Bank (KfW) has pledged € 13.5 million to support REDD activities in Ecuador until 2015.

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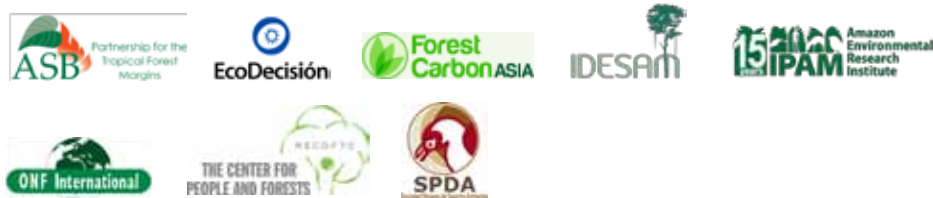
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