



National Adaptation Plans in focus: Lessons from Ecuador

Ecuador is an Andean country in the north-west of South America, with a total area¹ of 256,370 km² including the Galapagos Islands, and 16.3 million habitants as of 2015.² The Southern Andes mountain range divides the continental territory of Ecuador into three different regions: Coast, Andes and Amazon. Ecuador is among the 17 countries in the world with the highest levels of biodiversity and a high level of endemic species. There is great variety in the Ecuadorian climate, largely determined by altitude and terrain. The mountain valleys have a year-round temperate climate, with a humid subtropical climate in coastal areas and rainforest in lowlands. There are two main seasons that are differentiated by the distribution of rainfall; rainy season and summer or dry season.

The Ecuadorian economy is primarily dependent on its petroleum resources, which account for over 40 percent of the country's export

earnings. In addition, Ecuador is a major exporter of fine cocoa, bananas, flowers and other primary agricultural products. Ecuador's Human Development Index value for 2017 is 0.752—in the high human development category—positioning the country at 87 out of 188 countries and territories.³ Between 2006 and 2014, GDP growth in Ecuador averaged 4.3 percent, driven by high oil prices and considerable external financing, which enabled increased social spending and important investments, especially in the energy, infrastructure and transportation sectors. During that period, poverty declined from 37.6 percent to 22.5 percent.⁴

Ecuador is characterized by a high cultural diversity that is expressed through its peoples, indigenous nationalities and multiple socio-cultural practices. There are 14 Ecuadorian indigenous nationalities, each of which maintains its own language and culture.

Climate change risks

Climate variability in Ecuador is closely related with the El Niño Southern Oscillation (ENSO) with increased rainfall and floods in the coast and Western Andes, and droughts in the Northern and Eastern parts. According to the climate projections of the Third National Communication on Climate Change (Ministry of the Environment, 2017), a tendency towards an increase in temperatures ranging from 0.9°C to 1.7°C by mid-century is foreseen and from 0.9°C and 2.8°C for the 2071-2100 period. Melting of glaciers, rising temperatures, and increase in extreme rainfall are trends that have been observed in Ecuador.

In the medium- to long-term, climate change is expected to have some major impacts in Ecuador: the intensification of extreme climatic

events (e.g. ENSO); sea level rise; increased retreat of the glaciers; decrease in annual runoff and increased vulnerability of water resources; increased vulnerability to floods and prolonged droughts; increased transmission of dengue and other tropical diseases; the expansion of invasive species populations in the Galapagos and other sensitive ecosystems of continental Ecuador; and the extinction of certain species. Some of these impacts are already being perceived.

These impacts are expected to negatively affect the Ecuadorian population, infrastructure and crop production, particularly as agriculture is already vulnerable to current fluctuations in climate. Estimates indicate that by 2025 the country could lose approximately US\$5.6 billion due to extreme weather events intensified by climate change.⁵



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Groundwork for supporting the NAP process



Policy, planning and budgeting

The Ministry of Environment has made important progress in creating a policy framework for managing climate change, in particular: (1) The inclusion of specific references on the subject in the current Constitution of the Republic and in the National Development Plans (2009-2013, 2013-2017 and 2017-2021); (2) the declaration of adaptation and mitigation to climate change as key government policies (Política de Estado)⁶; (3) legal framework included in the Fourth Book "Climate Change" of the Environmental Code⁷; (4) the establishment of an Under-Secretariat of State for Climate Change within the Ministry of the Environment in 2009; (5) the inclusion of specific benchmarks and methodological guidelines for sectoral and local planning that contribute to climate change management, such as the Organic code for public planning and finance and the "Explanatory guideline" developed by the Ministry of Environment that guides the development of local climate change plans, and; (6) the creation of a high-level body for coordination and inter-sectoral coordination of climate change management: the Inter-Agency Climate Change Committee (CICC).

The Constitution of the Republic of Ecuador is a global pioneer in its acknowledgment of the rights of nature, and refers to the adoption of appropriate and transversal measures for mitigating climate change, and protecting the population at risk.

The National Climate Change Strategy (NCCS), adopted in 2012, provides a vision until 2025, and seeks to establish a long-term objective for the management of climate change in the country. It has strategic work areas proposed for both adaptation and mitigation to climate change. For adaptation, the strategy defined key priority sectors or areas of work, taking into account the priority development objectives defined in the National Development Plan.

Priority sectors for adaptation as defined in the NCCS



Food sovereignty, agriculture, livestock, fishing and aquaculture



key productive and strategic sectors



health



water resources



natural ecosystems



human settlements

Vulnerable human groups and disaster risk reduction are cross-cutting topics for all sectors. The NCCS will be implemented through three major national plans that will be developed soon; the National Plan for Creation and Strengthening of Conditions, the National Adaptation Plan (NAP), and the National Mitigation Plan. In line with the country's vision, the NAP seeks to create and strengthen the country's adaptive capacity to deal with the negative impacts of climate change, reduce vulnerability at national, sectoral and local scales and contribute to the country's sustainable development.

Ecuador is in the process of formulating its Nationally Determined Contribution (NDC), to fulfil its commitments under the Paris Agreement. The NDC includes adaptation under the sectors prioritised in the National Climate Change Strategy. The adaptation goals included in the NDC aim to enable the integration of adaptation in development planning at national, sectoral and local scales.

Preparing for adaptation planning

Several studies and analyses on climate, variability and change have been carried out to date, allowing for information on the risks and impacts related to climate change. Several adaptation projects have also been implemented, many on a pilot basis, which have provided valuable lessons learned on adaptation planning. Recently, indicators have been defined for measuring progress and results on adaptation in terms of reducing vulnerability at the sectoral and local levels.

Implementation of adaptation actions

Since the creation of the Under-Secretariat of State for Climate Change several adaptation projects, measures and initiatives have been implemented, led by the Ministry of Environment, development agencies and some by local governments. Some key projects include:

- Adaptation to the impact of rapid glacier retreat in the tropical Andes
- Adaptation to climate change through effective water governance in Ecuador
- National Adaptation Plans in Ecuador
- Enhancing resilience of communities to the adverse effects of climate change on food security
- Climate, biodiversity and sustainable development
- Vulnerability analysis of central hydropower plants
- Integration of Amazon Protected Areas
- Adaptation to the impacts of climate change on water
- Integrated management for combating desertification, degradation and climate change
- Climate-smart livestock management, integrating reversion of land degradation and reduction of desertification risks in vulnerable provinces
- Ecosystem-based Adaptation strategies to climate change in Colombia and Ecuador
- Building adaptive capacity through food and nutrition security and peacebuilding actions in vulnerable Afro and indigenous communities in the Colombia-Ecuador border area
- Increasing adaptive capacity of local communities, ecosystems and hydroelectric systems

Some key activities carried out under the above projects include: Local level vulnerability assessments; capacity building; adaptation measures in areas such as: water and watershed management, glacier management, protected areas, Ecosystem-based Adaptation, agriculture, livestock and food sovereignty.

The Third National Communication summarises the adaptation achievements to date, including with regards to climate research and adaptation in the areas of health, water resources, protected areas and agriculture.

The process to formulate and implement NAPs in Ecuador

Institutional arrangements for the NAP process

The key actors for the NAP process are the members of the Interinstitutional Climate Change Committee (ICCC), established in 2010, as the governmental organ for the coordination and integral execution of national policies related to climate change, including the NCCS. The cross-sectoral ICCC is led by the Ministry of Environment (MAE), through its Under-Secretariat for Climate Change, which acts as Technical Secretariat for the Committee. The Under-Secretariat for Climate Change oversees the coordination of policies, strategies and regulations for climate change, awareness on climate change, climate change planning at national level, information management, overseeing compliance with national and international climate change agreements and regulations, and coordination with international technical assistance.

NAP process and timeline (key activities to date)

The Third National Communication on climate change (TNC, 2017) can be considered a precursor to the NAP process, given the methodology and institutional arrangements that were put in place to develop it. The TNC development process focused on three lines of action; 1) reporting institutionalisation, which included promoting coordination meetings between institutional actors; 2) a local approach, which took into consideration the need for implementing mitigation and adaptation actions from a local perspective, and; 3) capacity building. The development of the TNC involved organizing 37 workshops for capacity building and information exchange involving a total of 2051 participants.

Ecuador began the development of its National Adaptation Plan in February 2017 with an inception workshop, which convened the main stakeholders involved in climate change adaptation in the country. The workshop began a consultation process to prepare a road map for the NAP. Participants to this workshop included representatives from the majority of sectoral ministries, local government representatives and associations, as well as specialized agencies (e.g. Meteorological and Hydrological Institute), and civil society organizations, amongst others.

Building on the results of this workshop, in line with national objectives and building on lessons learned on adaptation to date, a GCF NAP readiness proposal was developed and submitted to the GCF in 2017 and approved in July 2018.

Support programmes

UNDP has provided support for the development of the Third National Communication and Climate Public Expenditures and Institutional Review (CPEIR). In addition, the Global Environment Facility (GEF)-funded joint UNDP-UN Environment NAP-Global Support Programme (NAP-GSP) have supported the development of the NAP proposal in Ecuador, submitted to the Green Climate Fund (GCF), which aims to integrate adaptation in development planning.

Challenges

The main challenges, barriers and gaps to develop the NAP process in Ecuador relate primarily to limited policies and technical standards to integrate adaptation into development planning at sectoral and territorial levels. There is limited data to adequately inform development planning, including poor resolution and lack accuracy of climate projections as well as poor territorial and sectoral coverage of vulnerability studies. Furthermore, there is limited capacity for climate risk analyses and for design and implementation of adaptation options at sectoral and territorial level.

Successes

Adaptation planning in Ecuador has evolved from, and builds on, the lessons learnt in implementing pilot adaptation projects at local level.

The importance of stakeholder and institutional participation for sustainability, as well as of replicating and/or scaling up successful adaptation practices, has been understood and forms a basis for current adaptation planning and practices.

The empowerment of local actors and beneficiaries has been a key lesson learnt. This empowerment has been achieved, amongst others, through institutional capacity building, awareness raising, and appreciation of traditional and ancestral knowledge. Local adaptation planning is supported, in particular since 2014 and the promotion of local government climate change plans.



The process to formulate and implement NAPs

The Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) established the National Adaptation Plan (NAP) process in 2010, to enhance country-led planning and preparedness for climate change adaptation (CCA) in the medium and long-term. The objectives of the NAPs are to reduce vulnerability to the impacts of climate change and to facilitate the integration of adaptation into all levels of development planning. The NAP process is multi-sectoral, involving Ministries of Environment as well as Planning and Finance, in addition to other key ministries. By bringing greater institutional integration and coordination to adaptation planning, NAPs can enhance ongoing national development planning processes, safeguard development gains, and build resilience.



“Climate change adaptation is a priority for our country and, therefore, all efforts to plan and implement actions that reduce the vulnerability or increase the resilience of human and natural systems in Ecuador contributes positively to the country’s goals to achieve development in a sustainable manner.”

Maria Victoria Chiriboga, Vice-Minister, Ministry of Environment

Opportunities and next steps

The NAP provides an opportunity to operationalise the goals and priorities identified under the Constitution of Ecuador, the National Development Plan and the NSCC and to scale up the lessons learned from adaptation actions carried out to date. The GCF NAP readiness resources would provide seed funding to address the most critical gaps and needs identified by stakeholders, through:

- 1) Improving the coverage and the spatial and temporal resolution of climate projections, risks and vulnerability analyses;
- 2) Strengthening institutional capacities to facilitate the management of climate risks;
- 3) Developing technical and regulatory tools that facilitate the integration of adaptation into development planning and budgeting processes at sectoral, territorial and local level;
- 4) Designing measurement, reporting and verification (MRV) mechanisms for the NAP process and related adaptation actions;
- 5) Formulating strategies to ensure the financing and sustainability of implemented adaptation actions, and strengthen the engagement of the private sector in these actions.

The desired impact of these activities is to create the foundation for integrating adaptation and climate risks in development planning at national, sectoral and local levels.

Key documents

- Third National Communication on Climate Change (http://unfccc.int/resource/podcast/nc2/tercera_comunicacion_nacional_ante_la_unfccc_del_ecuador.zip)
- National Strategy on Climate Change (<http://extwprlegs1.fao.org/docs/pdf/ecu140074.pdf>)
- National Development Plans (2009-2013, 2013-2017 and 2017-2021) (<http://www.buenvivir.gob.ec/versiones-plan-nacional#tabs1>)

Notes

¹Third National Communication, Ministry of the Environment, 2017.

²Population and migration statistics 2010 – 2020. INEC, 2016

³UNDP, Human Development Report, 2017.

⁴World Bank, country profile

⁵Amat y C León. 2008. “El cambio climático no tiene fronteras, impacto del cambio climático en la Comunidad Andina”. Secretaría General de la Comunidad Andina. Agencia Española de Cooperación Internacional para el Desarrollo. Lima, Perú 2008.

⁶Executive Decree 1815 – July 2009

⁷Article 247

HDI 87
out of 187 countries

US\$5.6 billion
losses from extreme weather
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6
priority sectors for adaptation as
identified in the NCCS

About the NAP-GSP

The joint UNDP-UN Environment National Adaptation Plan Global Support Programme (NAP-GSP) was launched in June 2013, financed by the Global Environment Facility (GEF) Least Developed Countries Fund (LDCF), and the Special Climate Change Fund (SCCF). The NAP-GSP, together with partners, are assisting developing countries to identify technical, institutional and financial needs to integrate climate change adaptation into medium and long-term national planning and financing. The NAP-GSP provides technical expertise and guidance on country NAP processes, and opportunities for knowledge exchange on NAPs.

NAP-GSP
NATIONAL ADAPTATION PLAN GLOBAL SUPPORT PROGRAMME

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