



Progress on Climate Action in Latin America: Nationally Determined Contributions as of 2019

EUROCLIMA+
Thematic
Studies Series

13

European Commission

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13



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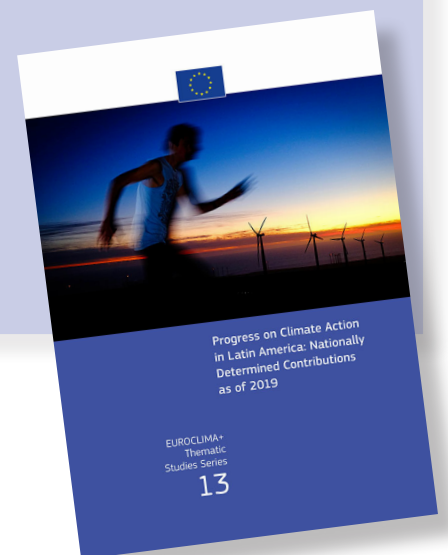
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Index

Acronyms.....	1
Presentation.....	10
Executive Summary.....	12
1. Introduction.....	19
2. Current state of NDCs in Latin American countries.....	26
3. Progress and challenges in the implementation of NDCs in Latin American countries.....	48
3.1 Summary of progress and challenges in the implementation of NDCs in Latin American countries.....	49
i. Political-legal-institutional coordination.....	49
ii. Sectoral coordination.....	51
iii. Multilevel coordination.....	52
iv. Social coordination.....	57
v. Financial coordination.....	59
3.2 Case studies of Latin American countries.....	62
3.3 Best practices in the implementation of NDCs in European countries.....	64
The Case of France.....	65
The Case of Spain.....	66
3.4 Country Sheets.....	67
• Argentina.....	67
• Bolivia.....	70
• Brasil.....	73
• Chile.....	76
• Colombia.....	82
• Costa Rica.....	85
• Cuba.....	90
• Ecuador.....	93
• El Salvador.....	98

• Guatemala.....	101
• Honduras.....	103
• Mexico	106
• Nicaragua	112
• Panama	115
• Paraguay	117
• Peru	120
• Uruguay	125
• Venezuela.....	129
4. Conclusions and main challenges.....	131
5. Bibliography.....	140
6. Annexes.....	144
Annex 1: Methodology	145
Annex 2: Selection criteria for case studies	150
Annex 3. Policies or regulations relating to climate change management by country	153
Annex 4: Projects Funded by the GCF & the Adaptation Fund in Latin American countries.	165
Annex 5: References-Case Studies	171

Acronyms

AED	Alianza Empresarial para el Desarrollo en Ecuador
AECID	Agencia Española de Cooperación Internacional para el Desarrollo
AEEREE	Asociación Ecuatoriana de Energías Renovables y Eficiencia Energética
AFOLU	Agriculture, Forestry and Other Land Use
AHPER	Asociación Hondureña de Pequeños Productores
AICCA	Adaptación a los impactos del cambio climático en los recursos hídricos en los Andes
ANACC	Alianza Nicaragüense ante el Cambio Climático
ANCON	Asociación Nacional para la Conservación de la Naturaleza
AND	Autoridad Nacional Designada
ANDESCO	Asociación Nacional de Empresas de Servicios Públicos y Comunicaciones
APE	Asociación Panameña de Empresarios
APL	Acuerdos de Producción Limpia
ARAP	Autoridad de los Recursos Acuáticos de Panamá
BAU	Business as usual
BRAZEEC	Energy Efficiency Program for Brazilian Cities
BUR	Biennial Update Reports
C3	Consejo de Cambio Climático de México
CAEM	Corporación Ambiental Empresarial
CAMBio II	Iniciativa de Inversiones Productivas para la Adaptación al Cambio Climático
CAPAC	Cámara Panameña de la Construcción
CAPE	Climate Action Peer Exchange
CBIT	Project for strengthening technical and institutional capacities to increase transparency in the framework of the Paris Agreement
CC	Climate Change
CCAD	Comisión Centroamericana de Ambiente y Desarrollo
CDM	Clean Development Mechanism
CDP	Carbon Disclosure Project
CEADS	Consejo Empresario Argentino para el Desarrollo Sostenible
ECLAC	Economic Commission for Latin America and the Caribbean
CEDES	Consejo Empresarial Salvadoreño para el Desarrollo Sostenible
CERs	Certified Emissions Reductions
CHECC	Análisis de Vulnerabilidad de Centrales Hidroeléctricas Emblemáticas ante los efectos del cambio climático en Ecuador
CICC - Ecuador	Comité Interinstitucional sobre Cambio Climático de Ecuador
CICC - México	Comisión Intersecretarial de Cambio Climático de México
CIF	Climate Investment Funds
CITMA	Ministerio de Ciencia, Tecnología y Medio Ambiente de Costa Rica

Clima+	Oficina Presidencial de Cambio Climático de Honduras
CNCC	Consejo Nacional de Cambio Climático
COA	Código Orgánico del Ambiente de Ecuador
CODEMA	Comisiones Departamentales de Medio Ambiente de Guatemala
CODEMET	Consejo de Desarrollo Metropolitano de El Salvador
COFEMA	Consejo Federal del Medio Ambiente de Argentina
COHEP	Consejo Hondureño de la Empresa Privada
COMICC	Comisión Intersectoral sobre el Cambio Climático de Colombia
CONACCP	Comité Nacional de Cambio Climático de Panamá
CONADES	Consejo Nacional de Desarrollo Sostenible de Panamá
CONAF	Corporación Nacional Forestal de Chile
CONASAV	Consejo Nacional de Sustentabilidad y Vulnerabilidad Ambiental de El Salvador
CONGOPE	Consortio de Gobiernos Provinciales del Ecuador
COP	Conference of the Parties
CORECC	Comités Regionales de Cambio Climático
CO2eq	Carbon dioxide equivalent
CTICC	Comité Técnico Interministerial de Cambio Climático de Costa Rica
DCCGR	Dirección de Cambio Climático y Gestión del Riesgo
DNCC	Dirección Nacional de Cambio Climático
DNP	Departamento Nacional de Planeación de Colombia
EbA	Ecosystem-based Adaptation
ECDBC	Estrategia Colombiana de Desarrollo Bajo en Carbono
ENDE	Programa Nacional de Deforestación Evitada
ERCC	Estrategias Regionales de Cambio Climático
ETICC	Equipo Técnico Interministerial de Cambio Climático
EU-ETS	European Union Emissions Trading System
EU	European Union
FAO	United Nations Food and Agriculture Organization
FBMC	Foro Brasileño de Cambio Climático
FCC	Fondo para el Cambio Climático
FIIAPP	Fundación Internacional y para Iberoamérica de Administración y Políticas Públicas
FGV	Fundación Getúlio Vargas
FONAFIFO	Fondo de Financiamiento Forestal de Costa Rica
F-ODM	Fondo para el Desarrollo de los Objetivos del Milenio
FUNDEMAS	Fundación empresarial para la acción social
Focal Point	Point of government contact in each country for the EUROCLIMA+ programme
GAP	Gender Action Plan
GCF	Green Climate Fund
GHG	Greenhouse Gas

GEF	Global Environment Fund
GFLAC	Grupo de Financiamiento Climático para América Latina y el Caribe
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GNCC	Gabinete Nacional de Cambio Climático
GPA	Good Practice Analysis
GTM - NDC	Grupo de Trabajo Multisectoral para la implementación de las NDC
GTSP - NDC	Grupo de Trabajo del Sector Público para la NDC de Chile
IDB	Inter-American Development Bank
IDEAM	Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia
ICCC	Comité Interministerial de Cambio Climático de Brazil
ICLEI	Local Governments for Sustainability
IHCAFE	Instituto Hondureño del Café
IIED	International Institute for Environment and Development
iLPF	Integración Rural-Ganadería-Bosques
IMCC	Comisión Interministerial sobre Cambio Climático de México
INCOFER	Instituto Costarricense de Ferrocarriles
INDAP	Instituto de Desarrollo Agropecuario
iNDC	intended Nationally Determined Contributions
INECC	Instituto Nacional de Ecología y Cambio Climático de México
INGEI	Inventario Nacional de Gases de Efecto Invernadero
INSMET	Instituto de Meteorología de Costa Rica
IFAM	Instituto de Fomento y Asesoría Municipal de Costa Rica
IPCC	Inter-Governmental Panel on Climate Change
IPPU	Industrial Processes and Product Use
IUCN	International Union for Conservation of Nature
KfW	German Development Bank
LAC	Latin America and the Caribbean
LECB	Low-Emissions Capacity Building Programme
LEDS	Low –Emissions Development Strategy
LEDS LAC	Regional Platform for Low Emissions and Resilient Development Strategies
LGCC	Ley General de Cambio Climático de México
LULUCF	Land Use, Land-Use Change and Forestry
MAG	Ministerio de Agricultura y Ganadería de Costa Rica
MERNNR	Ministerio de Energía, Recursos Naturales No Renovables de Ecuador
MIAMBIENTE	Ministerio de Ambiente de Panamá
MINAE	Ministerio de Ambiente y Energía de Costa Rica
MINAM	Ministerio del Ambiente de Perú
MVOTMA	Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente de Uruguay
MEF	Ministerio de Economía y Finanzas de Perú

MRV	Monitoring, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Action
NAP	Plan Nacional de Adaptación
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organization
OC	Observatorio del Clima
OPP	Oficina de Planeamiento y Presupuesto de Uruguay
PABCC	Plan de Acción de Bosques y Cambio Climático
PACC	Programa de Adaptación al Cambio Climático
PANCC	Plan de Acción Nacional de Cambio Climático
PAS	Planes de Acción Sectorales
PATPA	Partnership on Transparency in the Paris Agreement
PGC	Presupuesto Global de Carbono
PICCs	Planes Integrales de Cambio Climático de Colombia
Plan ABC	Plan de Agricultura de Baja Emisión de Carbono
PLANCC	Proyecto Planificación ante El Cambio Climático
PMR	Partnership for Market Readiness
pMRV	Programming, Monitoring, Reporting and Verification
PNCC	Política Nacional de Cambio Climático
PNCCC	Plan Nacional de Capacitación en Cambio Climático 2013-2017 del Perú
PNE 2030	Plan Nacional de Energía 2030 Brazil
PNESER	Programa Nacional de Electrificación Sostenible y Energía Renovable de Nicaragua
POT	Plan de Ordenamiento Territorial
PPCN 2.0	Programa País Carbono Neutralidad 2.0
PROEZA	Proyecto Pobreza, Reforestación, Energía y Cambio climático
PROFONANPE	Fondo Nacional para áreas Naturales Protegidas del Estado
PTDI	Planes Territoriales de Desarrollo Integral
PAWP	Paris Agreement Work Programme
RAMCC	Red Argentina de Municipios frente al Cambio Climático
REDD+	Reduction of GHG Emissions caused by Deforestation and Degredation programme
RENE	Registro Nacional de Emisiones de México
SAyDS	Secretaría de Ambiente y Desarrollo Sustentable
SCAM	Sistema de Certificación Ambiental Municipal de Chile
SEGEPLAN	Secretaría de Planificación y Programación de la Presidencia de la República de Guatemala
SEMARNAT	Secretaría de Medio Ambiente y Recursos Naturales de México
SIAT - NDC	Sistema de Información y Acciones para la Transparencia en su componente NDC
SINACC	Sistema Nacional de Cambio Climático de México
SINAMECC	Sistema Nacional de Métrica de Cambio Climático de Costa Rica

SINIA	Sistema Nacional de Información Ambiental
SITRAMSS	Sistema Integrado de Transporte del Área Metropolitana de San Salvador
SISCLIMA	Sistema Nacional de Cambio Climático de Colombia
SisVuClima	Sistema de Vulnerabilidad Climática
SNAACC	Secretaría Nacional de Ambiente, Agua y Cambio Climático de Uruguay
SNRCC	Sistema Nacional de Respuesta al Cambio Climático y Variabilidad de Uruguay
SMEs	Small and Medium-sized Enterprises
SDG	Sustainable Development Goals
TNA	Proyecto Evaluación de Necesidades Tecnológicas
UNFCCC	Convención Marco de las Naciones Unidas sobre el Cambio Climático
UNO	United Nations Organization
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UCAR	Unidad para el Cambio Rural de Argentina
UCC	Unidades Costarricenses de Compensación
UPME	Unidad de Planeación Energética de Colombia
WB - PMR	World Bank - Partnership for Market Readiness
WRI	World Resources Institute





Prologue

Jolita Butkeviciene

Director Latin America and Caribbean
Directorate-General for International Cooperation
and Development - European Commission

With the Paris Agreement coming into force, 2020 will mark a critical turning point in the global fight against climate change, as the means by which it has been agreed to keep the increase in the average global temperature below 2°C and stimulate efforts to limit the increase beyond 1.5°C take effect. Since signing on to the Paris Agreement, participating countries have initiated a review of their climate policies to identify concrete contributions for avoiding an even more severe and possibly irreversible climate crisis, by the end of the 21st century.

This agreement has been established to revitalize measures for the reduction of greenhouse gases and to promote flexibility and resilience in the face of the effects of global heating. Individual country efforts are defined through what has been denominated as Nationally Determined Contributions (NDCs) by signatory states.

2020 will furthermore be a key year for climate action, in which countries have been called upon to raise their climate targets and to focus on the development of low-carbon, climate-resilient economies. This focus is in accordance with the objectives of the Paris Agreement, and in response to the urgent call by the IPCC in 2018, in their 'Special Report on Global Warming of 1.5 °C'.

More frequent heatwaves, more intense and destructive cyclones and hurricanes, increase in droughts due to the rainfall scarcity, are just some of the most obvious symptoms of how climate change is affecting the region. The increase in the frequency and severity of heat waves, destructive cyclones and hurricanes, and droughts, as well as general water scarcity are just some of the most obvious symptoms of how climate change is affecting the region. Rarely, in the face of a problem of planetary proportions, have we had the benefit of scientific research that not only makes it clear we are facing an issue of the utmost urgency, but also supplies timely information to support the actions needed to mitigate the crisis. We effectively have both the scientific knowledge and political will necessary to initiate the unprecedented changes that are so urgently needed. Now is the time to take action.

This report provides a comprehensive overview of the state of the art of the NDCs of Latin American countries. The analysis identifies strengths, weaknesses, needs that have yet to be addressed, as well as highlights best practices that could be replicated in other countries. It is fundamental to the global challenge of climate change mitigation and adaptation that countries comply with the commitments established in their Nationally Determined Contributions (NDCs). To this end, the monitoring of actions carried out by each country is essential in order to identify the efficacy of policies and best practices, as well as to identify gaps and shortfalls.

This document details the policies and strategies being advanced by each of the 18 Latin American countries reviewed, describing how each has defined its national climate action plan for contributing to the reduction of the most significant factors at the root of the climate crisis. This has been made possible thanks to the work of multi-disciplinary teams of researchers and professionals. I would also like to acknowledge the support of the national focal points appointed by the governments of each participating country, which include professionals from technical sectors and public administration, who promote the application of the results generated within the framework of the EUROCLIMA+ programme at a national and regional level.

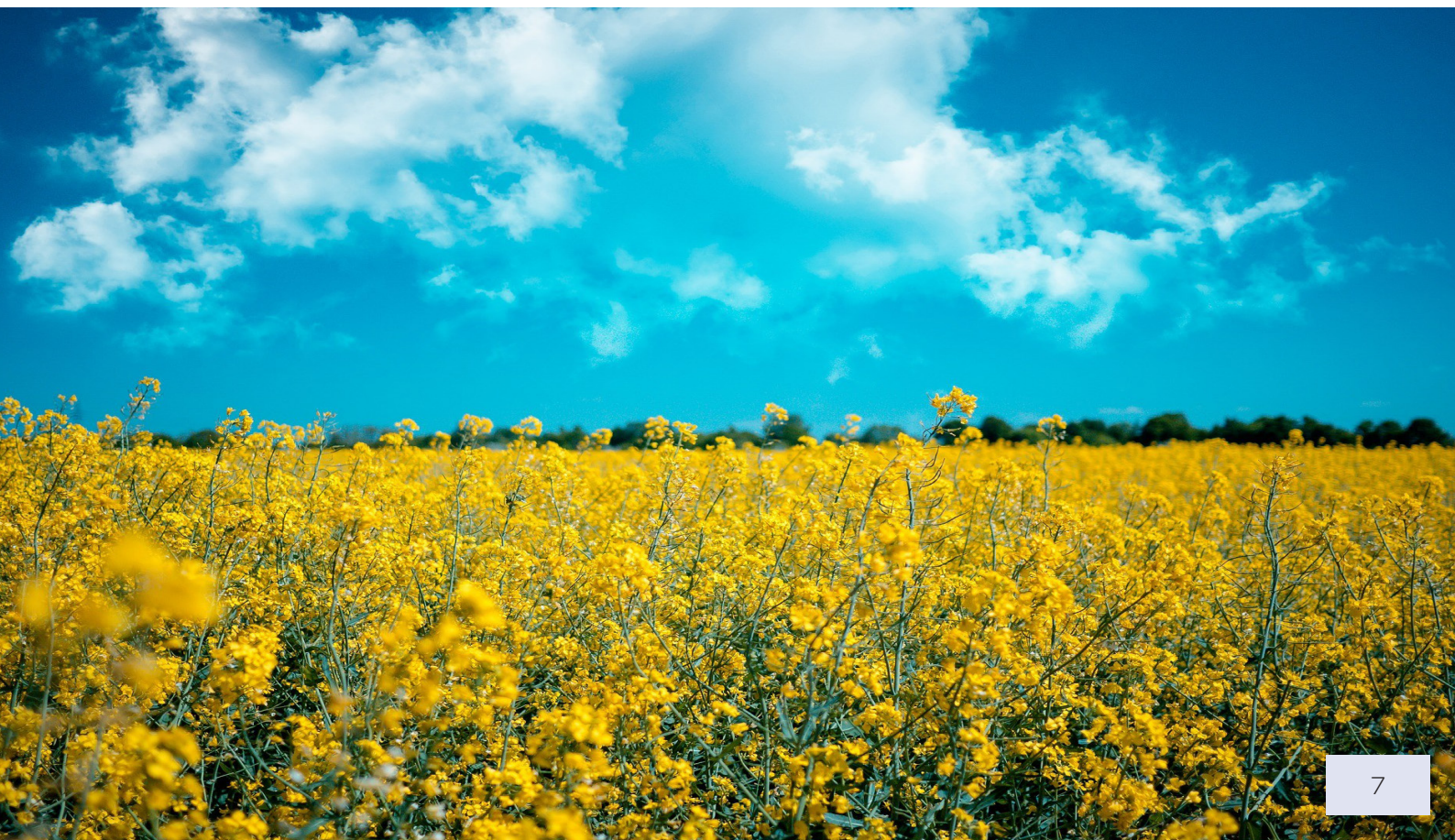
EUROCLIMA+ is the European Union's flagship regional programme to promote environmentally sustainable, climate-resilient development in Latin American countries. Within the scope of its Climate Governance work programme,, EUROCLIMA+ has developed the "Peer-to-Peer Dialogue to strengthen the implementation of Nationally Determined Contributions (NDC) in Latin America" within the EUROCLIMA+ framework' initiative, through a strategic alliance between the Deutsche

Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), and supported by the supported by Fundación Avina. This initiative seeks to facilitate an exchange of experiences and ideas through South-South cooperation, as well as to strengthen the implementation of NDCs and other commitments Latin American countries have established within the framework of the Paris Agreement.

One of the most important results of the "Peer-to-Peer Dialogues" initiative is this study, which constitutes a framework of information regarding the readiness of participating countries to implement their NDCs.

Together, we can make a major impact by facilitating effective climate action and low-emissions, climate-resilient development. Now is the time for establishing and strengthening alliances to promote multilateral action and achieve local, regional and global change in the face of climate change.

Jolita Butkeviciene





Prologue

Alicia Bárcena

Executive Secretary, Economic Commission for Latin America and the Caribbean (ECLAC).

Anthropogenic climate change caused by the burning of fossil fuels and changes in land use inherent to current patterns of production and consumption is one of the most serious challenges we face in this century. The global causes and consequences of climate change demand united action by all countries, not only to change the course of greenhouse gas emissions, which are causing global heating, but also to ensure the investments required to adapt to new climatic conditions and minimize the most acute effects of this phenomenon. Climate change characterizes and intensifies the challenges of a form of development that is not sustainable.

Climate change is inherent to the discussions that will shape the future of countries and generations to come, as well as the international political agenda. This is reflected, for example, in the approval of Agenda 2030 for Sustainable Development by the United Nations General Assembly. Other complementary and relevant international agendas designed to confront the challenge of climate change are the Addis Ababa Action Agenda on financing for development, which includes measures for environmental protection and for dealing with climate change; and the New Urban Agenda adopted at the Habitat III Conference, in which planning, land use management, and the development of public services, play a fundamental role in urban development and fulfilment of the Sustainable Development Goals.

The Paris Agreement, adopted at the COP21 in 2015, and the progress made in Marrakech, call on countries to reduce their greenhouse gas emissions in order to avoid increasing the average global temperature by more than 2°C, and ideally keeping it below an increase of 1.5°C, which puts planetary climate security at risk. Progress on this issue relies fundamentally on countries fulfilling their Nationally Determined Contributions (NDCs). However, the current pace of progress on the mitigation of emissions is not sufficient. Scientific evidence indicates that even if all countries were to comply with their NDC targets, it would still not be sufficient to fulfil the climate objective represented by the 2°C target. We need to set our sights higher.

The countries of Latin America are in one of the world's most vulnerable regions to the effects of climate change, which makes facing the challenge of this global phenomenon an absolute imperative. First, because climate change affects economic growth on multiple levels, especially sectors such as agriculture, hydroelectric power generation, among others. Secondly, because its most severe impacts increase levels of poverty for those who are already vulnerable, which also increases inequality.

To make progress on fulfilling the Paris Agreement requires the design and implementation of a combination of public policies covering economic,

social and environmental needs. It requires technological innovation and regulatory and institutional changes that can facilitate fulfilment of NDCs. If these public policies are implemented in a coordinated fashion, they can also serve as an impetus for improved economic growth and job creation, which we at ECLAC have coined the Drive for Sustainable Development. This major contribution to sustainability based on climate policy must be capable of effectuating structural changes conducive to reforming production and consumption patterns, and enable countries to transition to a more sustainable, low-carbon, and socially inclusive development pathway.

This document has been produced within the framework of the EUROCLIMA+ Programme, based on the "Peer-to-Peer Dialogues" initiative to reinforce the implementation of NDCs in Latin American countries. It is the result of an alliance between ECLAC and GIZ, with the support of Fundación Avina. Furthermore, the current study was produced with input from EUROCLIMA+ member countries through the important

contributions of their National Focal Points. These professionals supplied information regarding the establishment and implementation of NDCs, as well as the coordinating efforts undertaken in each country. This document is thus intended to supply those working in the area of climate change with information regarding the current state of the implementation of NDCs in the 18 participating countries of Latin America. It also covers key issues, such as NDC design processes, and the need for coordination in order to achieve successful sectoral, regional, financial, political and legal implementation, among other aspects. It is hoped that the insights and suggestions presented in this document will contribute to the successful implementation of NDCs in Latin America, and that the review of best practices and lessons learned will help to inform the ongoing process for updating NDCs in the region.

Alicia Bárcena



Foreword

The Paris Agreement, ratified in November 2016, is the framework that provides continuity to the action plan established by the Kyoto Protocol, in terms of defining concrete measures for reducing greenhouse gas emissions to ensure mitigation, adaptation and ecosystem resilience in the face of the effects of global heating. Having subscribed to the agreement, signatory countries initiated a planning stage to determine national actions designed to deal with the urgent need for climate action, known as Nationally Determined Contributions or NDCs.

After three years of this initial planning stage, now is the time for implementation of the NDCs, ensuring coherence with the progress and results of both national and global objectives¹. In other words, the challenge for signatory countries today is to move from the development of policies and plans to the implementation of actions that will have concrete impacts.

In the case of Latin America, the situation is critical due to underlying economic conditions. According to a report published by ECLAC, the region is characterized by an 'economic dynamism that displays risks and (...) exhibits a complex matrix of negative external impacts that threaten the foundations of development (...) and reveal a fragile development model in danger of erosion' (ECLAC, 2017). These particular features limit the region's capacity to reverse the current climate crisis or reduce greenhouse gas emissions. In this scenario, assuring fulfilment with individual country goals becomes an opportunity for cooperation between economic, governmental, political and social sectors that acknowledge the common goal of sustainability.

¹ An example of global goals in this area is the Sustainable Development Goals (SDG) proposed the 2030 Agenda by the United Nations Development Programme.

This study serves the need to take advantage of that opportunity by identifying and characterizing the experiences of the 18 countries in Latin America and the Caribbean that are members of the EUROCLIMA+ Programme, in the design and implementation of their NDCs. It constitutes an overview of the current state of the art regarding the implementation of NDCs in the region, identifying strengths, best practices and needs, as well as success stories that could be replicated in other countries. The information utilized for this report was collected through research developed up to March 29th, 2019. It includes public sector sources for each country, in particular those pertaining to ministerial climate change offices, as well as some non-governmental sources³ that compile actions related to NDCs.

This integrated vision of the progress that has been made in the region in facing the climate crisis highlights the mechanisms used to formulate, implement and raise the ambition of national contributions. In doing so, it represents a public resource to aid learning among peers and increase the potential for establishing new lines of international cooperation in this area.

Furthermore, the information gathered here through cooperation between EUROCLIMA+ and the Low Emissions and Resilient Development Strategy Regional Platform (LEDS LAC) will also be used to develop the 2019 LEDS LAC publication, and will enable increased levels of collaboration between a number of initiatives designed to assist with the implementation of

² Countries participating in EUROCLIMA+ are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay & Venezuela.

³ For more information on NGO initiatives related to NDCs, please see the Nazca Portal created by the United Nations Convention Framework on Climate Change: <http://climateaction.unfccc.int/>.

NDCs in Latin American countries. This study will also supply information on NDC design processes and cooperation between different levels, serving as input for an ECLAC report. This upcoming report will analyse the NDCs of Latin America and the Caribbean in the context of mitigation and adaptation, estimating the combined regional contribution towards the reduction of greenhouse gas emissions.

This study is part of the “Peer-to-Peer Dialogue to strengthen the implementation of Nationally Determined Contributions (NDC) in Latin America” initiative of the EUROCLIMA+ Programme. It has been developed thanks to a strategic alliance between the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Economic Commission for Latin America and the Caribbean (ECLAC), with support from Fundación AVINA, as well as within the scope of the Climate Governance Programme of EUROCLIMA+.

The EUROCLIMA+ “Peer-to-Peer Dialogues” initiative seeks to contribute to climate governance by fostering coordination, inter-sectoral cohesion, and cooperation between national, regional and local levels, in order to ensure the implementation of NDCs and the fulfilment of other commitments that Latin American countries have taken on in the framework of the Paris Agreement. Specifically, it seeks to:

- Systematize, analyse and characterize methodological approaches, experiences and opportunities that strengthen the implementation of NDCs.
- Provide opportunities for knowledge sharing, and the exchange and dissemination of knowledge and experience among participating countries in the region.
- Implement a select set of South-South and triangulated learning activities, through exchanges between peers and groups of countries, according to needs and strengths identified to support concrete progress being made in the implementation of NDCs.

We are confident that this EUROCLIMA+ initiative will contribute to strengthening climate governance in Latin American countries, as well as facilitate NDC implementation processes in the short, medium and long term.

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Executive Summary

Objective and Methodology

This study systematizes and characterizes the experience of implementing Nationally Determined Contributions (NDCs) in the 18 countries of Latin America participating in the EUROCLIMA+ Programme⁴.

Its objectives are to identify mechanisms for improving the scope of NDCs, broaden the opportunities for an exchange of ideas, and acquire support from international cooperation.

This document highlights a number of factors for the establishment and implementation of NDCs, with special emphasis in the following six areas:

- NDC development process
- Political, legal and institutional coordination
- Sectoral coordination
- Multilevel coordination
- Social coordination
- Financial coordination

It also includes a bibliographical review and the identification and systematization of information gathered during workshops⁵ and interviews with participating EUROCLIMA+ National Focal Points, or others designated to represent them.

The results are presented in the aggregate analysis of the information: 18 country sheets for each

participating country, and 5 case studies, including 2 European country cases. The latter were included as exemplary references, demonstrating the valuable experiences acquired by countries that participated in carrying out the Kyoto Protocol, and in achieving absolute greenhouse gas emission reduction targets.

Current state of NDCs in the countries of Latin America

Economic inequality and the social and environmental problems facing Latin American countries characterize a vulnerable region, where there is also a steady rise in greenhouse gas emissions (ECLAC). This reinforces the need for urgent climate action.

The Paris Agreement presents the challenge of transitioning from the design stage of policies and plans intended to face climate risks, to real and effective implementation through the participation of various relevant actors. Concrete and demonstrable results are expected, in order to meet the challenge of ensuring the average temperature of the planet does not rise by more than 2°C, by the end of the century, including the more ambitious goal of limiting the rise to no more than 1.5°C. To achieve this objective requires immediate climate action on a grand scale, which demands improved executive capacity within governments, at national, regional and local levels. It also requires the fundamental commitment of non-state actors.

The 18 Latin American countries analysed are currently at varying stages of NDC implementation while, at the same time, display heterogeneous levels of ambition through which it is possible to identify and characterize both progress and remaining challenges.

4 Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

5 The first EUROCLIMA+ Peer-to-Peer Dialogue and the VII Regional LEDS LAC workshop, "Sectoral and multi-level coordination to strengthen the implementation of NDCs in Latin America", were held jointly in Santiago de Chile, 1-3 August 2018.

Based on the six areas of special emphasis, the main findings of this research are:

NDC development process

To make progress in this area, countries need access to the best available science.

Political, legal and institutional coordination

Leadership at the highest political level is imperative to achieve timely political, legal and institutional coordination, in order to develop a transition to climate-resilient, low-carbon socio-economic systems.

Sectoral and multilevel coordination

The implementation of NDCs would benefit considerably from the development and effective use of data and information, as well as through links to other relevant processes, such as the Sustainable Development Goals and Agenda 2030, adopted in the United Nations framework.

Social coordination

Even though progress has been made, there continues to be a need for structural reinforcement that can guarantee spaces for the participation of actors from the private sector, academia, civil society and indigenous populations.

Financial coordination

This area is still in the embryonic stage. The involvement of actors in local financial systems is key to strengthening climate action. It is important to note that the requirement of the Paris Agreement to make 'finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development' remains unfulfilled in Latin America.

Summary of the systemization and characterization of NDC implementation in the countries of Latin America

Level of coordination: NDC development processes

NDC development processes -including updates as of 2020-, decision-making mechanisms and long-term strategy development.

Progress observed in Latin American countries	Key challenges
<p>All 18 countries included in the study have established at least one NDC.</p> <p>At least 14 countries have proven design processes based on rigorous technical standards and include both state and non-state actor participants.</p> <p>Notably, ad-hoc coordinating mechanisms have been developed (working groups, cabinets, commissions) and, in at least 8 countries, formal instructional guidance has been produced (roadmaps, action plans, implementation schedules).</p> <p>Although 8 countries have established long-term strategies reaching up to 2050 and beyond, only Mexico has presented a formal long-term strategy for achieving low-emissions economic development to the UN Framework Convention on Climate Change.</p>	<ul style="list-style-type: none"> • A general challenge is to update NDC commitments in light of the improved and more recent scientific information available. • The urgency of the climate crisis demands that NDCs to be updated by 2020, incorporating more ambitious goals. • To achieve a more effective, transparent and ambitious implementation of the Paris Agreement, it is necessary for countries to establish long-term, quantitative mitigation goals. Such goals must establish the year in which emissions peak, and the carbon budget necessary to achieve neutrality, as well as declare each country's fair share of the global carbon budget (GCB). • Formalizing and institutionalizing ad-hoc NDC development processes that include both state and non-state actors, based on prior evaluation of the role that such processes play, their relevance within the new context, as well as their efficiency in achieving concrete results. • Identifying disruptive measures and approaches by actors who operate outside the field of climate change that can be replicated or scaled up; and identify opportunities to increase the ambition of NDCs in the context of the 2020 renewal process, as well as the subsequent periodic renewals. • Developing complementary and cohesive processes. For example, long-term strategies can be developed alongside the implementation of current NDCs. These processes can be led by different actors, while maintaining spaces for dialogue and coordination between them. • Making adaptation NDCs operational, through the use of goals and indicators.

Level of coordination: Political-legal and institutional

Legislation, regulatory frameworks and institutions directly related to climate change and NDC implementation.

Progress observed in Latin American countries	Key challenges
<p>Five (5) countries have a Framework Climate Change Law, and another two (2) are developing one. Of the former, only Mexico's law incorporates a target coherent with its NDC, while Peru's law establishes its NDC as a guiding policy instrument for climate action. All 18 countries have laws that promote the reduction of emissions in the energy sector, both in terms of energy efficiency and the promotion of renewable energy.</p> <p>The sector with the second-highest number of legal instruments is forestry. Three (3) countries (Colombia, Mexico and Uruguay) have developed national climate change systems designed to articulate productive sectors, local territories and climate finance, (among other relevant aspects), incorporating policies, regulations, processes, instruments and strategies.</p>	<ul style="list-style-type: none"> • It is imperative that the highest political and technical authorities in each country acknowledge the transformations required by the Paris Agreement as a development opportunity. • Contrary positions that hinder political cooperation must be avoided when there is a range of common and diverging interests among various ministries, commissions and/or agencies involved in climate governance. • The development and institutionalization of evaluatory mechanisms are needed in order to determine the impacts and effectiveness of climate policies, as well as to identify elements that require re-design. • Improving coherence between goals presented in NDCs and those established by national laws and policies, including the establishment of quantifiable CO₂-equivalent emissions reduction targets.

Level of coordination: Sectoral

Coordination and inter-institutional articulation for decision making regarding adaptation and mitigation measures included in NDCs, and whether or not sectoral allocations or targets have been established.

Progress observed in Latin American countries	Key challenges
<p>At least 14 countries have established permanent inter-sectoral coordination mechanisms (cabinets, systems, commissions). The experience of establishing and quantifying the initiatives of a variety of different sectors is notable in Colombia, Uruguay, Argentina, Mexico and Peru. Brazil has targets for its energy, land-use change and forestry, and agriculture sectors; while Chile has developed targets for its energy sector.</p>	<ul style="list-style-type: none"> • A fundamental need in the region is to promote the development and strengthening of the skills required for establishing information systems that allow for the design, implementation and monitoring of sectoral climate management plans. • It is important to develop sectoral allocation processes (that define emissions goals or limits compatible with national targets), as well as sectoral designation processes (that determine new functions, roles and resources for NDC implementation). • There is an urgent need to develop mechanisms to integrate governance frameworks established for the promotion of NDCs with other frameworks developed for similar agendas, such as the Sustainable Development Goals (SDGs), green growth, and others.

Level of cooperation: Multilevel

Coordination and definition of commitments between local, provincial/regional and national levels, including the implementation of NDCs in sub-national territories, and whether or not local responsibilities have been defined.

Progress observed in Latin American countries	Key challenges
<p>Ten (10) countries have created specific mechanisms and instruments for the multilevel coordination of mitigation and adaptation actions. A notable role is being played by municipal networks, which make progress on the development of projects that contribute to NDCs.</p> <p>Seven (7) countries have shared their experiences with the UN programme for Reducing Emissions from Deforestation and Forest Degradation (REDD++) at sub-national levels of coordination.</p> <p>Five (5) countries have made sectoral progress regarding projects and programmes implemented in territories, which do not necessarily have a formal link to their corresponding NDCs.</p>	<ul style="list-style-type: none"> • It is essential to promote the development of the skills required for establishing information systems that allow for the design, implementation and monitoring of territorial climate management plans. • It is important to promote climate action by sub-national government networks designed to implement a coordinated agenda for the promotion of initiatives that contribute to NDCs, with an approach based on the logic of territorial development. • There is a need to strengthen sub-national climate governance, including mechanisms for multilevel coordination and vertical integration, as well as monitoring actions at a sub-national level.

Level of cooperation: Social

Non-state actor participation in the development and implementation of NDCs.

Progress observed in Latin American countries	Key challenges
<p>Brazil is notable in this area, with at least 3 permanent mechanisms for non-state actor participation (Observatorio del Clima, Coalición Brazil Clima, and AdaptaClima). In addition, Costa Rica has a Citizen Consultative Council for Climate Change (5C), as well as a National Programme for Carbon Neutrality 2.0. Peru has formally institutionalized a program called 'Let's Talk' (Dialoguemos).</p> <p>Furthermore, some countries have identified systems for transparency regarding information on climate change as a significant factor for the successful inclusion of non-state actor participation</p> <p>Regarding the participation of private entities, there are noteworthy mechanisms for promoting the measurement of carbon footprints in Chile, Costa Rica, Colombia and Peru, as well as "roundtable" schemes for the establishment of "implementation agreements" in Chile, Costa Rica and Peru.</p>	<ul style="list-style-type: none"> • The transformations required to implement NDCs and the Paris Agreement must attain a high level of social legitimacy. This is an absolutely fundamental requisite for effective implementation. • Social coordination must consider the specific geographical, political, cultural and social contexts of each country, territory and/or economic sector. • Creating permanent mechanisms and effective means of participation is key for the inclusion of non-state actors in the development, implementation and evaluation of NDCs. Such mechanisms must recognize and value the contributions that non-state actors make towards the fulfilment of the international climate commitments taken on by national states.

Level of coordination: Financial

Mechanisms for mobilizing climate finance and the logic for financing strategies in support of NDCs. Countries are expected to develop financial flows compatible with a trajectory leading to climate resilient development with low greenhouse gas emissions.

Progress observed in Latin American countries	Key challenges
<p>Efforts towards achieving financial coordination have been shown to be fragmented. Few countries have prioritized the development of a financial strategy. Only Chile and Honduras make clear references to this in their NDCs.</p> <p>There is evidence of work being carried out to quantify financial needs and implement economic evaluations of measures included in NDCs; as well as to identify sources of financing, establish financial mechanisms, develop project and investment portfolios, and quantify public costs associated with climate change.</p> <p>Four (4) countries have national funds dedicated to climate change: Guatemala, Mexico, Panama and Paraguay.</p> <p>Both Mexico and Chile have carbon-pricing instruments. Furthermore, Chile and Peru have a Social Carbon Price that improves the return on public investment projects that generate a reduction of greenhouse gas emissions. On the other hand, Costa Rica has a tax on fuel, and Argentina began to implement a carbon tax for most liquid fuels in January of 2019.</p> <p>Seventeen (17) countries have accessed resources from the Green Climate Fund.</p>	<ul style="list-style-type: none"> • Develop financing strategies for NDCs that include mechanisms for optimizing the use of public resources as well as international cooperation funds, which could act as a catalyst for private investment on a larger scale, and guide the development of investment portfolios. • Map and clarify existing budgetary and financial instruments in each country, which have the potential to be used for implementing NDCs. • Identify climate risks and develop or improve products and services that efficiently promote sustainable development. • Capacity building of state and non-state actors in developing bankable projects, prioritizing project portfolios and leveraging funding. • Ensure that the provision of the Paris Agreement related to “Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development” is achieved.⁶

⁶ Article 2.1.c of the Paris Agreement.

The analysis presented in this document identifies 9 fundamental challenges for the implementation of NDCs in Latin American countries. These are:

- **Challenge 1:** How can ambition be raised in Latin American NDCs while countries are still trying to make progress on implementation? The potential role of the Long-Term Strategies development process, and the NDC renewal process in 2020.
- **Challenge 2:** The need to redefine the relevance of NDCs. What purpose is served by their implementation and what are the expected impacts?
- **Challenge 3:** The establishment of targets and the designation of responsibilities of different economic sectors regarding fulfilment with NDCs are pending tasks in most countries. How can these be achieved in the shortest possible time?
- **Challenge 4:** How can territorial priorities be aligned and made compatible with national climate action priorities?
- **Challenge 5:** If you cannot measure it, you cannot manage it. Based on expected impacts, and considering that climate action in Latin America is an opportunity to promote development priorities, what should be measured?
- **Challenge 6:** How can countries achieve an effective use of both international and domestic resources, to generate concrete actions or enabling conditions that allow them to act in line with the Paris Agreement?
- **Challenge 7:** How can the contributions of non-state actors be identified and accounted for? How can more of these kinds of initiatives be promoted?
- **Challenge 8:** Is it necessary to create new financial instruments to mobilize financing, or is it sufficient to modify existing ones? Where is climate finance most effective?
- **Challenge 9:** Knowledge management: How can knowledge be shared in a systematic way? What can be achieved by this?

1. Introduction



1. Background: study framework and complementary research on the systematization and characterization of NDCs

Work on the systematization and characterization of NDCs, involving that which is included in this study, supports the capacity of countries to comply with their commitments and fully participate in the 'ambition mechanism' contained in the Paris Agreement. It also helps to guide the work of organizations supporting countries with this challenge.

The European Union's EUROCLIMA+ Programme promotes environmentally sustainable and climate-resilient development in 18 countries of Latin America, with a special focus on the implementation of their climate commitments within the context of the Paris Agreement. The participating countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

EUROCLIMA+ includes a climate governance component, whose purpose is to improve institutional structures, capacity building, public policies, regulatory frameworks and monitoring systems in order to promote - in the participating countries- development that is aligned with the NDC goals. The programme is implemented through four agencies: the International and Ibero-American Foundation for Administration and Public Policies (FIIAPP), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH,

the Economic Commission for Latin America and the Caribbean (ECLAC), and the United Nations Environment Programme (UNEP).

In this context, GIZ and ECLAC have formed an alliance within the framework of the EUROCLIMA+ Programme for strategic development and regional exchange of skills. The GIZ-ECLAC alliance seeks to provide decision-makers in Latin American countries with a space for:

- (i) Reflection on methodological reflection on the assignment and revision of NDCs (within the framework of the Paris Agreement);
- (ii) exchanging experiences and methodologies; and
- (iii) mutual learning opportunities to promote the implementation of NDCs and raising ambition in future renewal cycles.

In order to bring the strategic alliance between GIZ and ECLAC to fruition, Fundación Avina was brought in to provide support, given their experience working towards sustainable development in Latin America through their 13 country offices and activities in 20 different countries in the region. One of Fundación Avina's 9 programmes is centred on climate action, and is well aligned with EUROCLIMA+ and the GIZ-ECLAC alliance. Under this programme, Fundación Avina performs capacity building, promotes strong and inclusive climate governance, and implements mitigation

and adaptation solutions on specific territories and sectors.

In this way, the GIZ-ECLAC-Avina initiative "Peer-to-Peer Dialogue to strengthen the implementation of Nationally Determined Contributions (NDC) in Latin America" within the EUROCLIMA+ Programme, seeks to contribute to climate governance by fomenting coordination and inter-sectoral coherence, as well as cooperation at national, regional and local levels for the implementation of NDCs as well as other commitments the countries of Latin America have made in the context of the Paris Agreement.

Context: The Paris Agreement and NDCs

The Paris Agreement was adopted in 2015 during the 21st session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC). One of its primary objectives is to change the current development pathways of countries that will keep the average temperature increase of the planet to below 2°C, as compared to pre-industrial levels, and strive to limit the increase to below 1.5°C. Furthermore, the Paris Agreement commits signatories to improve their adaptive capacity to the adverse effects of climate change, to promote climate resilience, and work towards low-emissions development. It also beseeches them to achieve carbon neutrality ("an equilibrium between anthropogenic CO₂ equivalent emissions and the absorption of these emissions") during the second half of the 21st century (UNFCCC, 2018), and invites them to develop long-term strategies to achieve their objectives.

The Nationally Determined Contributions (NDCs) are included among the commitments acquired by the 196 signatory countries to the agreement. These instruments encompass the actions that will be taken to reduce the greenhouse gas emissions beginning in 2020 and, in some cases, to adapt to the impacts of climate change.

The NDCs vary in structure and content, given that each country is free to design its own version. However, certain criteria were proposed for their development, as established through the guidelines on standard characteristics for NDCs created by the Paris Agreement Work Programme (PAWP). This requires that information contained in the NDCs must be clear and transparent, include reference points or baseline years for greenhouse gas (GHG) emissions reductions, in addition to the means and methodologies for measuring the corresponding emissions and carbon capture. Likewise, they must fix a schedule and deadlines for the implementation of suggested targets and present a planning process. NDCs must also clearly outline reach and coverage and demonstrate that they are fair as well as challenging. Furthermore, the guide suggests updating NDCs every five years, increasing the level of ambition each time, as stipulated in the Paris Agreement.

As a result of these guidelines, NDCs include actions for reducing GHG emissions or increasing carbon sinks, whether it is with mitigation targets, strategies, plans and actions or in the form of mitigation co-benefits as a result of adaptation actions or economic diversification.

The most recent research on climate change confirms that if we hope to keep the increase of average global temperature to below 2° C, it will be necessary to substantially raise the ambition of NDC commitments. Efforts will have to be greater still if the objective is to stay below a 1.5°C increase. The United Nations Environment Programme Emissions Gap Report 2018 (UNEP, 2018) explains that in order to reach the 2° C objective by 2030, considering a track with lower overall costs, global emissions allocated in 2017 should be reduced by 25%; while if global warming is to be limited to an average increase of 1.5%, this reduction needs to be 55%. There is a gap of approximately 29% that must be bridged in order to rise to this challenge. That is to say, emissions for 2030 need to be 29% less than those projected today, considering both the unconditional and conditional targets stipulated in the NDCs that were reported to the

United Nations Framework Convention on Climate Change (UNFCCC). The Economic Commission for Latin America and the Caribbean (ECLAC) reports that to comply with the commitments that have already been made, annual per capita emissions have to decrease from almost 7 tons to 2 tons, in a span of 30 years.

In 2011, per capita emissions for Paraguay were 17.2 tCO₂eq, for Bolivia they were 14.5 tCO₂eq, and for Venezuela they were 12.9 tCO₂eq; while Costa Rica registered the lowest per capita emissions, at 1.5 tCO₂eq (ECLAC, 2018).

Methodology and conceptual framework: levels of coordination for the implementation of NDCs

A first level analysis, which has been the focus of work carried out by platforms and institutions such as the World Resources Institute and the NDC Partnership, has characterized the content of NDCs. In the interest of not duplicating analytical efforts, this study utilizes secondary information on the countries reviewed. Within this work on the characterization of NDCs, the progress made by ECLAC within the framework of the EUROCLIMA+ "Peer-to-Peer Dialogues" is notable. Their quantitative analysis of NDCs has highlighted the dynamics of decarbonisation in Latin America, including emissions examined by sector, per capita, and by decarbonisation rates, among others. Complimentary research has been carried out by the Low Emissions Resilient Development Strategies Regional Platform for Latin America and the Caribbean (LEDS LAC), known as LEDSenLAC since 2019. This research sought to characterize the planning, implementation, review and renewal processes regarding future cycles of NDCs in Latin America.

A second level analysis has focused on national processes for integrating the contributions on a national scale. A study by the Grantham Research Institute on Climate Change and the Environment, and by the Centre for Climate Change Economics and Policy, has highlighted that very few NDC

targets are explicitly integrated within domestic frameworks, and that the majority of countries do not have laws and national policies designed to reduce emissions across the entire economy (Nachmany M. and Mangan E., 2018).

The current study looks further into this second level of analysis, addressing the types of coordination observed for NDC targets being translated into national actions. A variety of different design and planning experiences for implementing NDCs were identified and characterized, along with their legitimizing processes (such as public consultation processes). Furthermore, mechanisms for achieving the allocated emissions reductions for each economic sector were analysed, as well as those related to different levels of government. In addition, the mechanisms for calculating GHG emissions reductions, monitoring progress, on adaptation and mitigation actions, and updating the NDCs were also analysed. This analysis considered the different types of coordination required to strengthen the processes for the development and implementation of NDCs.

After the initial development of the country sheets, interviews with the national EUROCLIMA+ Focal Points (and/or officials delegated by the focal points) were held in each country⁷, in order to review the information included in each file. Afterwards, the overall situation on both a Latin American and national level was analysed to identify opportunities and challenges regarding the implementation of agreed targets.

To identify and characterize the experiences and the state of the art of NDC implementation, a conceptual framework was used that included six levels of coordination for each of the 18 countries. This makes it possible to understand the implementation processes, with a focus on both mitigation and adaptation, from both a horizontal (between sectors) and a vertical (between different levels of government) perspective. The analysis includes the following levels:

⁷ The guides used for the semi-structured interviews are included in Annex 1.

1 - Definition process of the NDC

This level refers to the NDC development process in each country, with its corresponding activities and decision-making mechanisms. It includes the formulation of long-term strategies that provide orientation for NDCs and facilitate future review cycles, as well as the possibilities for revision in 2020.

The information for this level of analysis was compiled using secondary sources, such as reviewing the UNFCCC and pertinent national websites, as well as reports and information supplied by the countries, and was complemented by the interviews with national officials.

2 - Political-legal–institutional coordination

Political, legal and institutional coordination refers to the progress made in each country regarding legislation and regulations directly relating to climate change and NDC implementation.

The guiding questions used to analyse this level of coordination were: What has the country done? What is required to strengthen the regulatory framework for implementing the current NDC? What is needed to strengthen the processes for raising the ambition of the NDC? The bibliographical review focused on the nature of regulations relating to climate change, as well as a more detailed analysis of those created after 2015 that focus on the implementation of NDCs.

The research process began by reviewing the database created by the London School of Economics (LSE), the Graham Research Institute in Climate Change and the Environment, and the Sabin Center on Climate Change Law (Columbia Law School)⁸. Furthermore, a compilation of legal frameworks and climate policies developed in each of the 18 countries, as well as a bibliographical review of recently developed climate laws

8. Climate Change Laws of the World. Available at: <http://www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world/>

and policies, was carried out by staff of the EUROCLIMA+ secretariat (2018).

3 - Sectoral coordination

This section refers to institutional cooperation and coordination within the governments of each country and seeks to answer the question of how decisions regarding adaptation and mitigation measures in the NDCs are defined, measured and acted upon. It also examines existing mechanisms for inter-sectoral and inter-institutional coordination, and whether or not sectoral responsibilities and/or targets have been defined.

The information for this level has been gathered from secondary sources, such as the institutional web pages, presentations and information provided by each country, and complemented by the interviews with national officials.

4 - Multilevel coordination

Multilevel coordination explores the mechanisms for coordination and the definition of commitments between local, provincial/regional and national levels within each country. It includes an understanding of how the implementation of NDCs is expressed and reflected in local territories and governments.

The information for this level has been gathered from secondary sources, such as the institutional web pages, presentations and information provided by each country, and complemented by the interviews with national officials.

5 - Social coordination

The level of social coordination seeks to evaluate the participation of non-state actors in the development and implementation of NDCs. To achieve this, researchers responded to the following query: To what extent have they participated in the definition of the NDC, and to what extent have they participated in its implementation? This level of analysis will summarize the involvement of the private sector, academia and civil society.

The information for this level has been gathered from secondary sources, such as the institutional web pages, presentations and information provided by each country, and complemented by the interviews with national officials.

6 - Financial coordination

This level of analysis examines the progress in each country in terms of financial coordination, and looks at information such as the existence of estimates regarding the level of investment required to implement the NDC, as well as what resources and budgets have been allocated for this process. Likewise, this section looks at how financial coordination is being carried out, what mechanisms are being considered to mobilize climate financing, and what logic is being followed in each country to achieve such coordination.

Regarding the last point, a study commissioned by GIZ-EUROCLIMA+ proposes certain phases required to assure financing for NDCs (Kreisler, 2018):

1. Integration of the NDC commitment: ratification of the Paris Agreement, alignment with the agenda of the Sustainable Development Goals, etc.
2. Prioritization of sectors and measures: implementation of the NDC is considered as key to the country's development, and contains mitigation and adaptation measures, including institutional coordination.
3. Implementation plan: includes all stakeholders and costs associated with the various measures.
4. Financing strategy: includes an estimate of financing needs (volume, instruments), eligibility for public funding sources and/or private investment, and adapting the institutional framework (regulations, incentives).
5. Definition and structure: project proposals and/or portfolios in order to access funding opportunities.
6. Monitoring, reporting and verification (MRV): includes establishing a system capable of performing these three essential actions for mitigation and adaptation projects.

It is understood that not all these phases may occur, or may follow a different order. However, this general conceptual framework will be used as the basis for understanding the logic guiding the different countries analysed.

The information for this level has been gathered from secondary sources, such as the institutional web pages, presentations and information provided by each country, and complemented by the interviews with national officials.

The methodology used is described in more detail in Annex 1. It should be noted that this study compiles information from countries provided by the public sector.

On the content of this study

The results of this research demonstrates the most notable progress that has been made since the adoption of the Paris Agreement (after 2015) by the 18 EUROCLIMA+ countries, through the information included in the country sheets; these sheets also provide information on the overall orientation and efforts that have been made regarding the implementation of each country's climate actions. This allows for an evaluation of these efforts, and identifying best practices and successful experiences in order to define the determining factors for achieving a more expedient fulfilment of NDC goals.

In addition, 3 case studies based on in-situ country visits were developed, with a detailed analysis of the processes for the formulation and implementation of the corresponding NDCs, including specific actions taken at certain levels of coordination. The countries chosen for these case studies were Argentina, Ecuador and Honduras (according to the criteria described in Annex 2), considering the existence of progress in relation to at least 3 of the 6 implementation phases. The development of at least one special topic requested by any of the other countries, and the willingness to document their experience, were also considered for selecting the case studies. The intention is that these cases will promote learning across countries that share similar characteristics, typical to the region. The identification of common challenges also promotes coherence and coordination between countries in their work on NDCs, and brings them into alignment with

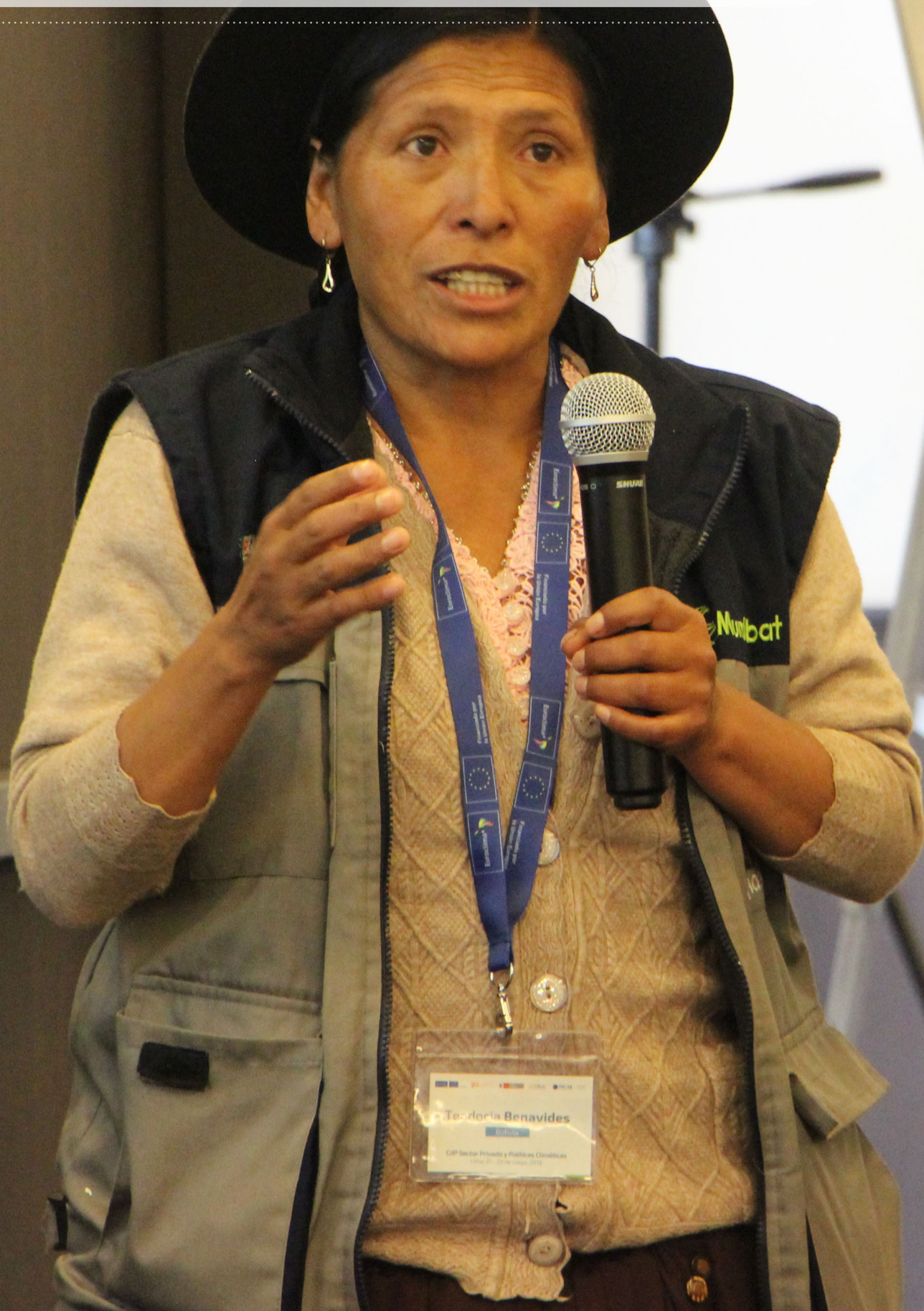
programmes such as EUROCLIMA+. Finally, the exemplary cases of France and Spain in the European Union have been included due to their experience with climate management since the implementation of the Kyoto Protocol.

In summary, this study provides an analysis and discussion based on a bibliographical review, information summarized in the country sheets that reflect the progress made in participating countries, case studies, and the results obtained from the first "Peer-to-Peer Dialogue to strengthen the implementation of Nationally Determined Contributions (NDC) in Latin America" organized by EUROCLIMA+, and the VII Low Emission and Climate Resilient Development Strategies Regional Workshop in Latin America and the Caribbean (LEDS LAC), which both took place in August of 2018 in Santiago de Chile.

This study is divided into four parts. The introduction is followed by a comparative analysis of the current situation of NDCs. The third section describes the progress and challenges relating to NDC implementation at a national and regional level. Lastly, it finalizes with conclusions on the context, the state of progress in the 18 countries, the redefinition of the relevance of climate action, the best practices and the challenges of implementation of the NDCs in Latin America.



2. Current state of NDCs in Latin American countries



2. Current state of NDCs in Latin American countries

This section contains a comparative analysis of the current state of NDCs in the countries of Latin America based on the development and revision of the 18 country sheets. These sheets summarize the current state of implementation of the NDCs in terms of the six levels of coordination and includes the strengths, which are understood as learning opportunities, and challenges or needs identified by each country. Each country file begins with a section describing the initial process for the development and submission of the Intended Nationally Determined Contributions (iNDC), and how this evolved to the establishment of the formal commitments in the NDC. Also mentioned are the countries which have initiated or concluded a review and updating process of

their climate commitments, up to March 29, 2019. The information for the country sheets was collected through information sharing with the representatives of each country, during interviews held during the Santiago Workshop and subsequent events, as well as from the bibliographical review.

The interview guidelines and questions can be found in Annex 1; while Annex 3 contains the list of pertinent climate change policies and regulations compiled for each country. The approach for the exchange of information with the countries for this research was carried out on three levels, as shown in Figure 1.



Source: Authors

Progress of countries in terms of their NDCs

In general terms, all 18 countries included in this study successfully established and ratified formal commitments within the framework of the Paris Agreement. In all cases, these commitments were made in the form of Nationally Determined Contributions (NDC).

Four (4) general tendencies have been identified in terms of the processes the different countries used for the development of their NDCs:

- 1) Countries in which the iNDC automatically became the NDC following ratification of the Paris Agreement: El Salvador, Bolivia, Brazil, Cuba, Mexico, Panama and Paraguay.
- 2) Countries in which the iNDC became the NDC after the ratification of the Paris Agreement, following an additional process involving an in-depth review in order to add more detail and improve the chances of actual compliance: Peru, Chile, Colombia, Costa Rica, Honduras, Guatemala and Venezuela.
- 3) Countries where the iNDC either went through, or is currently going through, a review process that changed or will change its content, nature or typology⁹. This is the case in Argentina, Uruguay and Ecuador.

9. For example, Argentina's iNDC had a relative target that was transformed into an absolute reduction target for its final NDC after being reviewed.

- 4) Countries that directly submitted their NDC. This is the case of Nicaragua, which adhered to the Paris Agreement the 20th of October, 2017 and introduced its first NDC in August 2018.

Types of NDCs and their content

In general, the countries of Latin America analysed here have accepted the relevance of adaptation to the climate crisis. Out of the 18 countries studied, 17 of them (with the exception of Panama) have included an adaptation component in their NDC. As shown in Figure 2, a range of territorial, sectorial or thematic areas have been identified as priorities in terms of adaptation to climate change. Some of the most common priority sectors in Latin American countries include agriculture and livestock, water resources, and health.

Alongside the adaptation component of the NDCs, there has also been progress on the development of National Adaptation Plans (NAP), considered as policy instruments that accompany and guide adaptation processes in each country. To date, Chile, Brazil and Colombia have such a plan, which has been designed and presented to the United

Figure 2. Economic sectors of the Latin American countries that include adaptation measures

	Energy	Agriculture and Livestock	Forests	Land use change & forestry	Biodiversity	Industry	Transport	Fishing	Infraestructura	Water resources	Risk management	Housing	Health	Tourism	Coastal areas	Cities
ARGENTINA																
BOLIVIA																
BRASIL																
CHILE																
COLOMBIA																
COSTA RICA																
CUBA																
ECUADOR																
EL SALVADOR																
GUATEMALA																
HONDURAS																
MEXICO																
NICARAGUA																
PANAMA																
PARAGUAY																
PERU																
URUGUAY																
VENEZUELA																

Nations Framework Convention on Climate Change (UNFCCC)).¹⁰ In addition, Paraguay completed its NAP in 2017 (National Climate Change Office-ONCC, 2017),¹¹ and Nicaragua has a Climate Change and Variability Plan that relates to its agriculture and livestock, forestry and fishing sectors (2013). Finally, Uruguay, Argentina, Costa Rica, Peru and Ecuador are all currently working on their own NAPs.

Table 1. Types of mitigation objectives included in the NDCs of Latin American countries

Type	Mitigation objective	Country
Absolute	Reduction or limitation of the increase of absolute emissions in relation to a baseline year. One kind of absolute objective is carbon neutrality, or reaching zero net emissions by a certain date, in relation to a baseline year.	Argentina, Brasil, Costa Rica
Relative to "Business as usual" economic scenario	A commitment to reduce emissions in relation to a projected emissions trajectory. For example, a reduction of 30% in emissions projected for 2030.	Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Peru, Venezuela
Intensity objective	A reduction of emissions per unit of another variable, such as GDP. For example, a reduction of 40% of the emissions intensity of the baseline year of 1990, up to the year 2020.	Chile and Uruguay
Peak emissions target	Time by which emissions of greenhouse gases will have reached their peak.	Mexico
Sectoral targets	A commitment to reduce emissions in relation to emissions trajectories projected for specific sectors, or targets with sectoral indicators. For example, number of hectares reforested, or percentage of renewable energy of the total energy matrix.	Uruguay, Bolivia, Chile, Cuba, Honduras, Nicaragua, Panama
Policies and measures	The implementation of policies and actions in one or more sectors to promote low emissions development. This can include explicit targets for the reduction of emissions, although some include other types of targets, such as the relative share of renewable energy sources in an energy matrix.	El Salvador, Cuba, Bolivia (adaptation with mitigation co-benefits)

Source: Adapted & updated from ECLAC, 2018

10. UNFCCC NAP Central portal. (Consulted 31/12/2018). National Adaptation Plans. Available at: <https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx>

11. National Climate Change Office (ONCC) in Paraguay, 2017.

As was already mentioned, there are prior studies that characterize the contents of NDCs formally presented by the countries under involvement in this research. A notable source is the Knowledge Portal of the NDC Partnership, which includes detailed information on each country.¹²

NDC development processes

At least 14 countries have used rigorous NDC development processes that include the participation of both state and non-state actors: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Especially noteworthy are the cases that involve the creation of ad-hoc coordination mechanisms, such as working groups, cabinets and commissions. These are relevant, as they create conditions that facilitate ownership and acceptance by stakeholders associated with productive sectors, and raise social awareness, thus generating favourable scenarios for effective implementation. It is interesting to note that countries like Peru and Uruguay have succeeded in quantifying sectoral efforts by using a bottom-up process, instead of a top-down scheme based on carbon budgets, and presented as benchmarks for setting sectoral targets.

Box 1 provides details regarding the participatory process for NDC development in Ecuador.

Box 1 - Participatory process for NDC development in Ecuador, with emphasis on the energy sector

Aspect or level of coordination	Development process and sectoral coordination
Brief description of the case study “Participatory process for NDC development”	<p>Ecuador presented its iNDC in October of 2015. However, the country did not ratify it in 2017, as it was determined that the initial version had not involved a participatory process, and because the political context has changed in the country. For this reason, a new development process for Ecuador’s NDC, which was more inclusive and designed to encourage ownership among relevant actors, was initiated in mid-2017.</p> <p>This process involved a methodology based on ‘design thinking’ and robust sectoral cooperation, which has made it possible to define emissions-reducing initiatives based on the contributions of multi-sectoral participants. It has also facilitated the identification of potential projects, gaps and opportunities regarding the subsequent implementation of the NDC. In this way, the NDC development process used a multi-actor and multi-level participatory approach, including state actors, academia, civil society, the private sector, and international development organizations.</p>
Stated objective:	A reduction of emissions per unit of GDP. For example, a 40% reduction of emissions intensity from the baseline year of 1990, to the year 2020.

12. NDC Partnership. (2017). Climate Watch: Powerful new platform offers comprehensive data for climate action. Available at: <https://ndcpartnership.org/climate-watch/NDC> 13

13. Bottom-up approach

Activities

Key stages of the process

- 1st stage: Actor mapping to identify information providers and decision-makers that it would be necessary to involve and empower in the process.
- 2nd stage: Workshops to validate the information, methodology, and emissions reduction scenarios and initiatives.

Workshops

Technical workshops were held during the second stage. The first workshop involved only ministerial representatives, while the others were open spaces including a wide range of public institutions, the private sector, civil society and academia.



- The first workshop was a closed session where strategic objectives were discussed among representatives of the Inter-Institutional Climate Change Committee of Ecuador (Comité Interinstitucional sobre Cambio Climático-CICC), which is a ministerial-level, decision-making entity.¹⁴ Afterwards, the different actors in this committee were involved in collecting and processing information.

- Workshops were later held on emissions trend scenarios, for which participants supplied information. Afterwards, workshops on unconditional initiatives (existing measures ready for implementation) were held. These two workshops also identified gaps and opportunities regarding mitigation measures, so that conditional initiatives (those that require certain adjustments, such as financing, in order to implement) and the identification of the necessary alliance in order to implement the measures, could be developed during workshops 4 and 5, together with other actors.

- Finally, a workshop was held for presenting the results obtained during the process.

Coordination achieved:

- Inter-sectoral process: the process began with some coordination roundtables only open to members of the CICC - Ecuador, which defined strategic objectives for the NDC, and agreed upon a methodology and lines of action. It is worth noting that the early definition of these aspects is an enabling factor for timely and efficient progress on NDC development.
- Creation of multi-actor and multi-level spaces for NDC development: 20 participatory roundtables were established, each with a separate focus, in which sectoral working groups were formed.

14. The CICC - Ecuador includes representatives from the Ministry of Environment, the Ministry of Foreign Affairs, the Ministry of Agriculture and Livestock, the Ministry of Energy and non-renewable Natural Resources, the Ministry for Industry and Productivity, the Department of Risk Management, the Department of Water, a representative of the Association of Ecuadorian Municipalities (Asociación de Municipalidades Ecuatorianas-AME), and of the Consortium of Provincial Governments of Ecuador (Consortio de Gobiernos Provinciales del Ecuador - CONGOPE).

<p>Activities</p>	<ul style="list-style-type: none"> • Bi-lateral coordination established by means of designated focal points for each institution: there were a total of 150 focal points for the mitigation component of the NDC, which served as the means for bilateral coordination. <p>Identification of preliminary negotiating models An important stage within the workshops was related to defining business models (using the business models canvas method), in which sources of finance, target audience, implementation mechanisms, and other elements were identified. It is hoped that during 2019, these preliminary models will become formally established and ready for use in applications for national and international funding opportunities.</p> <p>Adaptation of the methodology The integrated design model for the methodology was created specifically for the energy, industrial processes and product use (IPPU) and waste sectors. To adapt it for use in the land use, land use change and forestry (LULUCF) and agriculture sectors, modules relevant to each sector were selectively adapted. Likewise, some modules were used and adjusted for the adaptation component of the NDC.</p> <p>Methodological validation through the Inter-Institutional Committee on Climate Change (CICC - Ecuador) roundtables The NDC development process was finalized in December of 2018, and the NDC was validated by the CICC - Ecuador in February of 2019. Ecuador presented and ratified its NDC in March of 2019.</p> <p>Gender focus A gender focus was incorporated into the NDC development process methodology from the very beginning. This allowed space for reflection and debate on the need to work on equity and equal opportunities.</p> <p>Updating NAMAs for the energy sector Prior to developing its NDC, Ecuador had established three Nationally Appropriate Mitigation Actions (NAMAs) in the energy sector. In order to quantify them for inclusion as effective contributions to the NDC, within an unconditional scenario, their overall reach and estimated potential for emissions reductions was reduced. This was necessary because the government realized that the targets defined included projects that had not yet been completed when the NDC development process began. To allow for their incorporation, it was necessary to update them based on data from the investment projects and the actual stage of implementation as of November of 2018.</p> <p>The updated NAMAs that were incorporated into the NDC for the energy sector were:</p> <ul style="list-style-type: none"> • Electricity generation by developing hydroelectric power plants. Responsible entity: Ministry of Energy and Non-Renewable Natural Resources (Ministerio de Energía y Recursos Naturales No Renovables-MERNNR), Electricity Regulation and Control Agency (Agencia de Regulación y Control de Electricidad-Arconel). • Optimizing Electricity Generation and Energy Efficiency (OGE&EE). Responsible entity: Petroamazonas • Energy efficient cooking programme Responsible entity: Ministry of Energy and Non-Renewable Natural Resources (MERNNR), Electricity Regulation and Control Agency (Arconel).
<p>Impacts:</p>	<p>On the methodological process</p> <ul style="list-style-type: none"> • At a state level, a participatory policy making process was implemented that efficiently achieved technical validation of the sectoral proposals, and earned the support of the actors involved. • The methodology was highly valued, and is now formally required for public policy formation by other state agencies, such as the Ministry of Transport. <p>On participation levels</p> <ul style="list-style-type: none"> • The process included the active participation of 93 institutions representing the public (both sectoral and territorial¹⁵), private, academia and civil society sectors, as well as international organizations. • Included 891 participants from different institutions. • Included 3 inauguration events. • Involved 20 workshops on different mitigation sectors. <p>Of all participants, 51% were women and 49% were men¹⁶.</p>

15 Multilevel public institutions include the Autonomous Decentralized Governments (Gobiernos Autónomos Descentralizados-GAD), which constitute rural neighbourhood associations, as well as municipal, metropolitan, provincial and regional councils. They have political, administrative and financial autonomy.

16 In the waste, industrial processes and energy sectors.

<p>Impacts:</p>	<p>On the legitimacy of the validation of the co-construction process: The NDC development process has gained both technical and social legitimacy, given that 20% of participants represented private interests, 15% international cooperation, NGOs and foundations, 6% civil society, and 7% academia.</p> <p>On engagement with key actors and alliances</p> <ul style="list-style-type: none"> • Inclusion of new actors: the gender focus allowed for the participation of actors that have been historically absent from environmental policy making processes, such as the Council for Gender Equality. Furthermore, an alliance was established with UN Women for the purpose of mainstreaming the gender perspective within the formulation of methodologies developed for the NDC, and also for the implementation of measures and actions. The purpose is to have a gender and climate change methodology available that can include this vision throughout all project phases, from budget planning, to analysis of results, and the systematization of best practices. • Private sector participation: Given the political and historic circumstances of the country, 20% private sector participation is unprecedented. Even though the proposed goals are the responsibility of the state, it is nevertheless fundamental to include the participation of and validation by the private sector in the NDC development process, thus providing a foundation for this sector's commitment during the next stage of planning for implementation. In the case of the industrial processes and product use sector (IPPU), which concentrates the country's cement industry, the formalizing of commitments to emissions reductions through a letter signed by the primary representatives of this sector is indeed an achievement. <p>On the definition of business models that increase sustainability ambitions in Ecuador: during the identification of strategic alliances that needed to be established for making institutional adjustments, a preliminary collaboration began with actors involved in developing business models that allow for the effective implementation of climate change mitigation measures within the conditional scenario for 2020-2025.</p> <p>Development of an institutional network for developing an implementation plan: this network was established during the process for establishing the NDC goals, and will be fundamental for the next stage, which consists of elaborating a plan for NDC implementation. The challenge is to institutionalize this network during 2019.</p> <p>On the relevance of climate change in the public agenda: the development of the NDC has firmly established the subject of climate change in the public and political agenda. An example of this is that the energy sector, which produces the most emissions, is close to being covered by a Law on Energy Efficiency, which incorporates many of the concepts that have been worked on during the NDC development process.</p> <p>On synergies for action: based on the process, the sectors themselves have been working together on the gaps that have been identified. This is the case of the energy sector, in which there are synergies that generate enabling conditions conducive to implementing some of the mitigation measures that have been developed. For example, current work is being done to develop a standard for using biomass waste in the generation of electricity at a municipal level.</p> <p>On the internalization of the gender focus: the inclusion of this focus has enabled capacity building on gender, analysis and management, among the same sectoral specialists working on the NDC: technical staff of the Sub-Secretariat for Climate Change, and the other actors involved in the participatory process.</p>
<p>Institutions working with the energy sector:</p>	<ul style="list-style-type: none"> • Process coordinator: the Ministry of Environment (Miinisterio de Medio Ambiente de Ecuador-MAE) • Government institutions involved in the energy sector: Ministry of Energy and Non-Renewable Natural Resources (MERNNR), Electricity Regulation and Control Agency (Arconel). • Energy Company: Petroamazonas (state-owned hydrocarbon Company of Ecuador). • Organizations supporting the incorporation of a gender focus: UN Women and the Council for Gender Equality.
<p>Cooperation:</p>	<p>Under the aegis of the NDC Support Programme by the United Nations Development Programme (UNDP), Ecuador receives help from:</p> <ul style="list-style-type: none"> • The German government's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) • Spanish Agency for International Development Cooperation (AECID) • European Union (EU)

Factors for success:	<p>Innovative methodology A methodology based on design thinking was adapted for public policy formation. It included an interactive, participatory and dynamic process that made it possible to identify specific actions geared towards initiating processes and establishing the necessary steps for implementation. It has also greatly empowered all actors involved.</p> <p>Working closely with sectoral representatives The main reason for the success of this process has been working very closely with both the public sector institutions and sectoral representatives involved. Focal points were established for gathering information and enabling interaction with every sector or sub-sector.</p>
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Overcoming barriers/ challenges:	What were the main barriers to implementation?	¿How were they overcome?
	Difficulty in identifying relevant actors from the beginning of the process.	Mapping relevant actors was a dynamic process that required a constant cycle of updating. For this reason, the actor map was adjusted after every meeting or workshop, in a continuous effort to seek out individuals who could be useful in every context and according to their skills.
	Historically, there was limited private sector participation in public policy processes.	Private meetings were held with each relevant actor in order to present objectives, discuss expectations and to establish trust. From the start, an innovative methodology was developed to allow for the participation of a variety of different actors. When the process began, there was an effort to maintain continuity and keep participants regularly informed of results and progress.
	Absent or limited institutional arrangements for sharing and validating information between different state entities.	Even though institutional arrangements are still not in place, focal points have been established for each state entity to enable semi-formal information sharing by means of official communication between those working with the focal points. Likewise, the appointment of focal points by the participating institutions allowed for inter-sectoral validation of the processes.
	High staff turnover within public institutions, creates the risk of having to repeat or delay certain aspects of the process.	To respond to this issue, a policy of total transparency in terms of the information produced was adopted, both on a technical level and for the work of each roundtable, including the state of progress. To achieve this, virtual files were made available to all participants, so that everyone would have access to the same information in a timely manner. This also enabled and promoted follow-up and continuity.

<p>Lessons learned:</p>	<p>On methodology and the flow of information</p> <ul style="list-style-type: none"> • The process allowed for the establishment of integrated and holistic inter-sectoral agreements. • The use of an interactive and visual methodology made for higher levels of retention and participation of the actors involved. • Generating a flow of information by means of making presentations and systematized results of workshops or events available to participants promoted ownership over the process. <p>The inclusion of a gender focus in the development of sectoral scenarios assured that an egalitarian component was inserted into the objectives, as well as positioning this focus in the agendas of participating actors.</p> <p>Both the private sector and civil society are willing to contribute to the development of emissions reduction targets. They are concerned for environmental issues, either out of self-interest or because they are environmentally conscious. This represents an opportunity that must be acted upon.</p> <p>It is necessary to establish institutional arrangements with those entities responsible for generating relevant information. Even though formal institutional arrangements have not been created through this process, they will be key in the future. Such formal arrangements are particularly necessary when working with public institutions, given their role in the decision-making process, and because they manage information that is key for implementation. For example, in the case of the energy sector, there is a need for improved information flows. For now, this function has been carried out by designated focal points. However, as these focal points would change at any time, so might their willingness to fulfil this voluntary role. A formal institutional arrangement would enable a transfer of information that is not dependent on individual focal points. Likewise, an efficient flow of information would not only assist with the implementation of the NDC, but also have a positive impact on related processes, such as monitoring, reporting, and verification (MRV).</p>
<p>How can this be replicated?</p>	<ul style="list-style-type: none"> • It is hoped that actor mapping and participatory process methodologies can be institutionalized through the Inter-Institutional Committee on Climate Change in Ecuador (CICC), with a multi-actor and multi-level focus, in order to use these methodologies for future NDC revision processes. Potentially, they could become a 'national product' to share with other countries and regions. The methodology is already systematized in extensive documents, and is available for knowledge transfer. • This best practice was initially designed for use in the Energy sector, and has since been adjusted and replicated for other sectors, such as Land Use, Land Use Change and Forestry (LULUCF) and Agriculture. In terms of the adaptation component, given its complexity, only certain modules were adjusted for adaptation, and were applied separately.

Instruments supporting implementation

At least 8 countries have begun to strengthen, coordinate and establish implementation plans (Paraguay and Ecuador), roadmaps (Honduras and Guatemala), action plans (Chile), tentative schedules (Peru), and national climate change plans and strategies (El Salvador and Colombia), which contribute to the process of NDC implementation both in the short and medium term.

The following box presents the roadmap designed by Honduras, which serves as an example of an instrument used to support NDC implementation.

Box 2. Roadmap for NDC implementation in Honduras

<p>Aspect or level of coordination</p>	<p>Development process, social coordination</p>
<p>Brief description of the "Roadmap" case study</p>	<p>In 2015, Honduras presented its Intended Nationally Determined Contribution (iNDC), committing to a 15% emissions reduction compared to the baseline, defined as a Business as Usual (BAU) emissions scenario projected for the year 2030 for all sectors. It also committed to an extra sectoral commitment for the forestation or reforestation of one million hectares of forests before 2030, and a 39% reduction in the consumption of firewood by families through the Nationally Appropriate Mitigation Action (NAMA) called 'Efficient Stoves.' The BAU scenario was determined by the National Climate Change Department (Dirección Nacional de Cambio Climático-DNCC), under the Secretariat for Energy, Natural Resources, Environment and Mines (MiAmbiente+), financed by the project for the development of the Third National Communication on Climate Change.</p> <p>However, the process for the development of national targets revealed some information, as well as doubts regarding how these targets would be met. Thus, in 2017, the Roadmap process was proposed, for the development of an integrated planning and monitoring tool, with the objective of planning actions with a given timeframe for implementation in terms of both goals and actors. The document proposed by the Government of Honduras outlined the actions required for the implementation of the NDC presented in 2015, from the definition of the BAU scenario, to the monitoring and evaluation of policies and measures.</p> <p>In 2017, the iNDC targets and the core information that had been used for their calculation were reviewed, and the objectives and specific actions required to implement the NDC were defined. In 2018, the actions included in the Roadmap began implementation, and are expected to be concluded by 2020, the year in which NDC measures and policies must be up and running, in accordance with the Paris Agreement under the UNFCCC. The development and implementation of the Honduras Roadmap is the responsibility of MiAmbiente+, together with the Presidential Office for Climate Change (ClimaPlus, Clima+).</p> <p>The process for the development of the Honduras Roadmap has enabled the definition of a clear path towards the implementation of the NDC. Furthermore, this collaborative exercise has strengthened the role of many sectoral actors through inter-sectoral cooperation, which has overcome the challenges inherent to incipient climate governance systems.</p>
<p>Proposed objectives</p>	<p>The main objective of the Honduras Roadmap is to revise the NDC and establish the mechanisms for its successful implementation. This process includes institutional improvements and a review of the legal framework. In this way, it includes 5 specific objectives:</p> <ol style="list-style-type: none"> 1. A revised NDC presented to UNFCCC. 2. Updated and prioritized list of mitigation and adaptation actions. 3. Develop specific roadmaps for prioritized actions. 4. Establish a monitoring, reporting and verification system (MRV). 5. Inter-institutional coordination for climate action.
<p>Activities</p>	<p>Stage One: Development of the Roadmap Meetings were held with a variety of government sectors throughout 2017 to revise the NDC and identify corresponding measures for each public entity. Sectoral roundtable workshops were established, which helped the more significant sectors, such as forestry, to determine the primary needs and barriers to overcome in order to achieve effective implementation of the corresponding policies and measures. The roundtables were convened by the Secretary of Energy, Natural Resources, the Environment and Mines (MiAmbiente+), together with the Presidential Office for Climate Change (Clima+).</p> <p>Stage Two: Complying with the 5 Objectives The activities included in the Roadmap were planned to take place between 2018 and 2020, and 21 specific actions were proposed in order to fulfil the 5 stated objectives. The implementation of some of these actions has been planned with the assistance of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, which has been working with Clima+ and MiAmbiente+ since 2018:</p>

<p>Activities</p>	<ul style="list-style-type: none"> • Review of the BAU scenario: the BAU scenario establishes the baseline for the emissions reduction up to 2030. The calculations used to establish the 2015 iNDC were revised in two workshops involving all the institutions participating in the process: one to present the methodology, and the other to present the results. • Identification and analysis of mitigation measures: through the participatory process and with the support of GIZ, mitigation measures were identified, their potential for emissions reductions were calculated, and a cost-benefit analysis was performed. It must be noted this analysis has yet to be applied for the adaptation component, which is scheduled to take place with the support of UNEP. • Analysis of NDC-SDG co-benefits: this activity seeks to align climate policies and actions with the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDG). It was carried out within the framework of the NDC-GIZ Project, and included the participation of the DNCC and Clima+. The results were processed through a broad consultative process including government institutions, civil society and academia. • Communications strategy: a communications strategy for the NDC was developed through workshops for dissemination and feedback, focused on three key sectors: civil society groups, private companies, and in the context of the Climate Change Congress, academia and other governmental institutions were also included • Exchange of international experiences: an exchange of experiences regarding climate governance was held with the Dominican Republic, involving the participation of Clima+. <p>Some pending activities include:</p> <ul style="list-style-type: none"> • Specific roadmaps: specific roadmaps for measures already identified and prioritized will be developed during 2019. Before this can take place, recommendations will be supplied on which measures to prioritize and implement. Based on these recommendations, barriers and financing needs will be identified, in order to develop an investment plan and MRV mechanism. • Development of an MRV system: monitoring, reporting and verification systems will be strengthened not only for the Roadmap; the Climate Change Management and Monitoring unit of the National Directorate will be bolstered in general. • Climate change investment plan: one of the roadmap activities included the development of an investment plan that will guide the financial strategy. Through a loan from the Inter-American Development Bank (IDB), the Finance Secretary and Clima+ have combined forces to hire an international company that will promote the development of this strategy and help guide the investment plan. Clima+ is also working on the identification of other sources of international cooperation and assistance to support this process.
<p>Impacts:</p>	<p>The experience of developing a roadmap has not only helped establish the steps needed for the implementation of the NDC, but also re-enforced tools and internal skills, with an emphasis on the following aspects:</p> <ul style="list-style-type: none"> • Inclusion of multiple sectors: sharing information on the measures has enabled sectors to take ownership of projects and objectives. • Strengthening sectoral monitoring units: information monitoring must be a transversal, shared responsibility. For this reason, work is being carried out in each secretariat in order to ensure the necessary consistency throughout the national monitoring system. <p>Likewise, needs related to economic evaluation, a review of emissions reduction potential, improving coordination mechanisms, identification of financing sources and strategies, and the creation of a monitoring and evaluation system (among others) were identified. These needs were included in the roadmap, the implementation of which began in 2018, with support from GIZ.</p>

<p>Participating institutions:</p>	<ul style="list-style-type: none"> • Focal points: Clima+ and MiAmbiente+ performed the primary coordination efforts and convened the various workshops. • Government institutions: a wide range of sector representatives participated and provided information for the development of the BAU and the measures included in the roadmap. The institutions involved included: the Secretariat for Agriculture and Livestock, via the Climate Change unit; the Institute for Forestry Conservation, via the Department of Climate Change and Forests; also the Secretariats of Infrastructure and Public Services (Secretaría de Infraestructura y Servicios Públicos-INSEP), Economic Development (Secretaría de Desarrollo Económico-PROHONDURAS), Finance, and Health, via the Climate Change unit for Health; the Central Bank of Honduras; the National Institute of Statistics; the National Autonomous Service for Aqueducts and Drainage Systems (Servicio Autónomo Nacional de Acueductos y Alcantarillados-SANAA); the Permanent Contingency Committee (Comité Permanente de Contingencia-COPECO); the Honduran Association of Municipalities (Asociación de Municipios de Honduras-AMHON); and the Municipality of the Central District, among others. • Coordinating entities: Secretariat of General Government Coordination; Chancellery; Finance Secretariat; the Central Bank; and the National Institute of Statistics. • Private sector institutions: the Honduran Institute of Coffee (Instituto Hondureño del Café-IHCAFE) for the coffee NAMA, and key companies in the industrial processing sector. • Other cooperating entities: Dutch bi-lateral cooperation, regarding the efficient stoves and ovens. • Other actors: Civil society presented their own actions in this area. Academia participated via the University of Forestry Sciences, and the Zamorano University.
<p>International cooperation:</p>	<p>The primary source of international cooperation came from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, which supplied technical support and accompanied the development and implementation of the current Roadmap through the NDC Assist Project, within the framework of the NDC Partnership.</p> <p>In addition, the World Bank helped develop the specific roadmaps and adaptation measures. The Netherlands Development Organization SNV was also involved via the NAMA on efficient stoves. Furthermore, the United Nations Development Programme (PNUD) supported the Third National Communication, which provided valuable information for the Roadmap process.</p> <p>Financing came directly from NDC Support, via GIZ, with complementary domestic resources from Honduras. It should be noted that the logistical and technical support of the Secretariat of Energy, Natural Resources and Mines is considered part of the complementary domestic resources. Furthermore, work carried out in the context of the Third National Communication also supported the process. This work was made possible by financing from the Global Environment Facility (GEF) and implemented through PNUD.</p>
<p>Success factors:</p>	<ul style="list-style-type: none"> • Definition of specific actions: the process for developing the Roadmap has made it possible to identify the actors responsible for NDC development and implementation, as well as their needs for support. This was translated into a programme of specific activities aimed at fulfilling the overall objectives. • Multi-actor participation: the process has involved the participation of a variety of government sectors, ensuring their commitment to common goals. • Inter-institutional coordination: the mandate for the development and implementation of the Roadmap was supplied through a joint decision made between the Presidential Office for Climate Change and the Secretariat of Energy, Natural Resources, Environment and Mines, based on the Paris Agreement. The latter obliges countries to update their NDC every five years in order to increase the level of ambition of their commitments in the fight against climate change. • Institutional commitment: there was a high level of willingness to support information-gathering efforts on an institutional level. Likewise, individuals responsible for supplying information also cooperated willingly. • Inclusion of the private sector: positive feedback was received from the participating private sector representatives regarding the NDC process.

Overcoming barriers and challenges:	What were the main barriers to implementation?	How were they overcome?
	<p>Staff turnover: One of the main problems was the inconsistency of the staff involved with the project, especially within the government. The people who had established the NDC in 2015 were no longer working in the government. During the course the Roadmap development process, it became clear that a significant percentage of participants were unaware of the processes for the development of neither the NDC, nor the Roadmap. This is also a potential future risk, because staff turnover continues to be very high, leading to loss of the knowledge base acquired.</p>	<p>More spaces were created for integrating and informing people new to the process. Also, the assistance of professionals who had participated in the original stages of the process, now contributing from other sectors, had a positive impact on human capital nationally. For example, individuals who had been involved in the initial NDC development processes have put in for bids regarding national processes with support from international cooperation.</p>
	<p>The need to strengthen governance: Despite the fact that current legislation provides for review and decision-making processes regarding measures, in practice the roles and processes are not clear. For example, the Inter-Institutional Committee for Climate Change of Honduras (CICC-Honduras), which should be the platform for coordination between secretariats, is currently not functional.</p>	<p>The Secretariat for Energy, Natural Resources, Environment and Mines took on the role of coordinating workshops and communication, while the Presidential Office worked closely with all the secretariats.</p>
	<p>A lack of traceable historic information: There is no record of the 2015 NDC development process, which would have enabled a review of the calculations, sources of information and the methodologies utilized, or the possibility of sharing specific information regarding the measures.</p>	<p>A new review process using an information management approach was carried out, which will leave a record of the calculations used for the future.</p>
<p>Lessons learned:</p>	<ul style="list-style-type: none"> • A lack of institutional legitimacy: the need for a participatory process from the outset became clear, as the unilateral presentation of the NDC by MiAmbiente+ to the Inter-Institutional Committee for Climate Change limited the level of commitment felt the institutions involved. • Strengthening governance: there is a need for the roles and functions of all the institutions involved to be clearly established from the beginning of the process, otherwise decision-making and coordination between sectors becomes compromised. • Establishing working groups: it is important to have a group of public sector participants whose participation can remain constant over time, given that changes in public sector representatives limits the continuity of capacity building processes, and diminishes the quality of the overall contributions to the process. 	

How can this be replicated?	<p>The Roadmap is a practical tool for guiding the NDC implementation process. It helps identify actors, roles, and the scope of measures and policies. Likewise, it can help assess the needs of each country in terms of skills, research, governance, financing, etc.</p> <p>Some recommendations for future processes:</p> <ul style="list-style-type: none"> • Establish specific objectives and actions: objectives and actions should be aligned with specific goals, but should also take into account the needs of the actors involved. • Develop a participatory process: actors must feel included from the outset, which generates a sense of ownership over the objectives. Likewise, the process must be clear in terms of the expectations that participants may have, explaining what is realistic and what is not feasible. • Define actors and roles: it is important for everyone to be clear on their responsibilities and functions in relation to the process. • Prioritize information management: the information produced during prior processes must be systematized, and synergies with parallel processes, such as National Communications, National Inventories or Monitoring Systems, must be identified. • Strengthen government climate change units: the coordinating entity must establish a strong and positive relationship with the climate change units within all sectors, in order to create a solid communication platform.
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Vision of long-term strategies

Colombia, Costa Rica, Argentina, Chile, Mexico, Panama, Uruguay and Cuba have established or in the process of defining long-term strategies on climate change that will facilitate the definition of future NDCs and support their implementation towards an initial horizon of 2050. However, only Mexico has presented its Long-Term Low Emissions Development Strategy to the UNFCCC¹⁷(2016), in accordance with article 4, paragraph 19, of the Paris Agreement (SEMARNAT-INECC, 2016).

Table 2, below, shows the progress highlighted by each country in its country sheet, regarding levels of coordination. This information provides an overview of the current situation, which will be analysed in more detail according to each level of coordination in the next chapter.

Table 2. Summary of Country Sheets

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Argentina	Revision of NDC includes raised ambition and change in the type of mitigation objective (from relative to absolute).	Creation of the National Climate Change Cabinet - Decree 891/2016.	Development of concrete sectoral plans by the Climate Change Cabinet (with quantified emissions reduction targets).	Multilevel organizations, such as the Federal Council for the Environment of Argentina (Comsejo Federal del Medio Ambiente de Argentina-COFEMA) and the Argentinean Network of Municipalities in the face of Climate Change (Red Argentina de Municipios frente al Cambio Climático-RAMCC) coordinate different local governments to promote work on climate change and establish GHG inventories at a provincial scale.	Inclusion of private sector and civil society actors in the context of the NDC public consultation process.	Support for local governments in developing projects to access international financing sources.

¹⁷ UNFCCC Portal - Communication of long-term strategies (consulted 31/12/2018). Available at: <https://unfccc.int/es/node/520>

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Bolivia	The Bolivian NDC was defined in a coordinated effort between the Ministry for Planning and Development and other relevant sectors. Multilevel coordination is considered key.	Framework Law of Mother Earth & Integral Development for Good Living (2012). Pluri-National Authority of Mother Earth (Autoridad Plurinacional de la Madre Tierra-APMT), under the aegis of the Ministry of Environment and Water.	Targets for water, renewable energy and forests were defined in coordination with different sectors and in accordance with the Economic Social Development Plan (Plan de Desarrollo Económico Social-PDES) 2016-2020. In the forests sector, a pilot initiative by the Joint Mitigation and Adaptation Mechanism for Integrated and Sustainable Forest Management, is the Bolivian alternative to the Reducing Emissions from Deforestation and Degradation (REDD+) approach.	The PDES includes territorial coordination, through departmental and municipal plans.	The PDES was the result of horizontal and vertical coordination by the Ministry of Development Planning, with ample participation of civil society and economic actors, within the plural economy framework.	Pluri-National Fund for Mother Earth (<i>Fondo Plurinacional de la Madre Tierra</i>)
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Brasil	The INDC was designed with input from civil society. A national consultation process was carried out, beginning in June 2014, to better comprehend expectations regarding the international agreement on climate change.	Inter-ministerial Committee on Climate Change.	In the energy sector, it is proposed to increase the share of sustainable bioenergy in the energy matrix by 18% by 2030. A target of zero illegal deforestation was set for 2030 in the forestry sector, together with offsets for GHG emissions resulting from legal plant and vegetation suppression up to 2030.	An evaluation of vulnerability to climate change at a municipal level was established through the Climate Vulnerability System (Sistema de Vulnerabilidad Climática-SisVuClima), which maps the country's most vulnerable areas.	The Brazil Coalition for Climate, Forests & Agriculture is a multi-sectoral movement comprised of leading Brazilian agribusinesses organizations. Climate Observatory (Observatorio del Clima-OC) is a network of civil society representatives designed to promote discussion on Brazil's climate policies.	A Country Programme is currently being developed for the Green Climate Fund.

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Chile	The NDC is based on mitigation scenarios, and included a public consultation process. Inter-ministerial committees work on NDC development and implementation at different levels.	The National Climate Change Action Plan (Plan de Acción Nacional de Cambio Climático-PANCC 2017-2022) is designed to be updated every 5 years. It also includes a National Adaptation Plan, and national sectoral adaptation plans, as well as an inter-ministerial cooperation mechanism.	Mitigation plan for the energy sector Sectoral adaptation plans.	There are Regional Climate Change Committees (Comité Regional de Cambio Climático-CORECC), and the Chilean Network of Municipalities for Climate Change that promotes climate work on a local level.	The private sector is primarily represented by the Consultative Council, and through Regional Consultative Councils. In addition, there is the Climate Leaders Group (CLG) and the United Nations Global Compact in Chile.	There is a carbon tax and a social price on carbon. There is a strategy for climate financing underway.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Colombia	Bi-lateral meetings and workshops were held between the Ministry of Environment and Sustainable Development, sectoral ministries, and the National Department of Planning. The process included dialogue with experts from public, private, academia, and civil society experts.	The National Climate Change System in Colombia (Sistema Nacional de Cambio Climático-SISCLIMA) is a system that allows for inter-institutional and multilevel coordination, integrating the various levels of government. This initiative represents an experience with NDC monitoring, reporting and verification.	There are sectoral responsibilities in the NDC; Integrated Sectoral Climate Change Management (Planes Integrales de Gestión del Cambio Climático Sectoriales-PIGCCS); and two PIGCCS for the Mining and Energy sector, and the Transport sector.	Climate change management is integrated into territorial planning instruments. To date, 21 Integrated Sectoral Climate Change Management Plans (Planes Integrales de Gestión del Cambio Climático Territoriales-PIGCCT) have been developed, for implementation on a sub-national level.	Colombia has experience with implementing private sector mitigation actions.	Committee for Financial Management within SISCLIMA. Financial Strategy for Climate Change.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Costa Rica	A consultation process that included different modalities, including the participation of over 450 actors from all relevant sectors.	Multi-sectoral and multi-dimensional coordination structures: the Inter-ministerial Technical Committee; the Citizen Consultation Council (SC), and the Scientific Council (4C).	Roundtables for developing sectoral agreements on emissions reductions. In early 2018, the Sectoral Emissions Reduction Agreement was signed with the Agriculture and Livestock sector, and the Sectoral Emissions Reduction Agreement for the Transport Sector will soon be signed.	Targets for the NDC have been established for urban, rural and coastal areas, including local municipalities, and strengthening territorial, local and regional planning processes.	Tools to facilitate the inclusion of private sector and sub-national actors through the Country Programme for Carbon Neutrality 2.0.	Investment Plan for NDC Implementation. This represents a financial system mechanism (green lines of credit), the development of a Green Bonds system, and a fuel tax for forest conservation.

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Cuba	National energy targets were taken into consideration, in line with the country's development projections up to 2030. A wide-ranging consultative process was developed with the main institutions involved in related public policy making and implementing processes.	The state climate change plan "Life Work". (Tarea Vida) Implementation of the plan requires a programme of progressive investments that will be carried out from the short to the very long-term (goals for the years 2020, 2030, 2050 and 2100).	National sectoral programs that support adaptation to climate change.	Development and implementation of adaptation projects.	Cuban programme for public communication, education and awareness-raising on climate change, hazard research and vulnerability and risk.	Cuba uses its own domestic systems to finance climate change strategies. There is an Inter-Institutional Committee for the Green Climate Fund that, together with the Central Bank of Cuba, evaluates and approves projects to be implemented in the country.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Ecuador	Used a participatory, multi-actor, multi-sectoral and multi-level process involving a gender focus, which worked with the different government sectors at national and local levels.	The Inter-Institutional Committee for Climate Change manages the coordination of policies and actions with an inter-sectoral focus.	The REDD+ Action Plan: Forests for Good Living 2016-2025. This instrument allows the country to strengthen national policies and initiatives, while contributing to the reduction of GHG emissions. The conditional measures in the NDC for the energy sector are being considered for work during 2019; as are integrated programmes for improving the efficiency of implementation processes. This is the case of the Bioenergy Programme.	There is a Multilevel coordinating entity that works to strengthen provincial capacities for the development of Regional Climate Change Strategies (Estrategias Regionales de Cambio Climático-ERCC).	Ecuador has sought significant participation across a variety of sectors for the NDC development process. Of all participants, 20% represented the private sector, 15% international cooperation, NGOs and Foundations, 6% civil society, and 7% academia. On a sub-national level, climate change is managed through the REDD+, the Commission for Citizen Participation, and through local communities, with a focus on community-based adaptation.	An assessment of climate financing in Ecuador is currently underway.

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
El Salvador	Multi-sectoral consultation process with active participation of the private sector, civil society, academia and the central government.	On an institutional level there is the National Council of Environmental Sustainability & Vulnerability (Consejo Nacional de Sustentabilidad Ambiental y Vulnerabilidad-CONASAV). There is also a National Climate Change Plan.		There is a National Programme for Ecosystem and Landscape Restoration, which focuses on adaptation-based mitigation.	Private sector and civil society representatives participate through CONASAV, including the National Commission for Micro, Small and Medium-sized Businesses; the Salvadorian Chamber of Construction; the Business Foundation for Social Action (Fundación Empresarial para la Acción Social-FUNDEMAS); and the Salvadorian Business Commission for Sustainable Development (Consejo Empresarial Salvadoreño para el Desarrollo Sostenible-CEDES).	There are proposals for a Climate Financing Strategy; as well as Institutional Architecture for Climate Finance; and a Monitoring, Reporting and Verification System for Climate Finance.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Guatemala	There was a technical team from the Ministry of Environment and Natural Resources (Ministerio de Ambiente y Recursos Naturales-MARN), including members from the National Council for Climate Change (Consejo Nacional de Cambio Climático-CNCC).	There is a National Climate Change Action Plan that incorporates participatory methodologies, under the aegis of the CNCC and the Secretariat for Planning & Programming within the Presidential Office of the Republic of Guatemala (Secretaría de Planificación y Programación de la Presidencia de la República de Guatemala-SEGEPLAN).	Institutional sector plans that incorporate climate change. Different state entities have also implemented Technical Units for Climate Change.	Support for the Network of Latin American Municipalities, Cities and Territories in the face of Climate Change.	Gender Environment Plan. Active participation in the recently created Local Communities and Indigenous Peoples Platform of the United Nations Framework Convention on Climate Change (UNFCCC).	Development and implementation of the National Climate Change Fund.

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Honduras	A national team was created to develop the NDC. Actors representing different sectors were included in the process (energy, agriculture, industrial processes, and solid waste), as well as civil society, academia and the state.	Roadmap for the implementation and updating of the NDC.	The Climate Change Law dictates that the President manages and controls actions through the Inter-Institutional Climate Change Committee, which acts as a permanent, consultative, deliberative and advisory body.	Adaptation and mitigation programmes implemented at a territorial level.	The Honduran Council for Private Enterprise (Consejo Hondureño de la Empresa Privada-COHEP), and the Honduran Association of Small Producers (Asociación Hondureña de Pequeños Productores-AHPER) participate in representation of the private sector. The main actors from civil society are the Climate Change Initiatives Foundation (Fundación de Iniciativas de Cambio Climático-Fundación MDL) and Life Foundation (Fundación Vida).	According to the evaluation of investment and financial flows, Honduras needs upwards of US\$6.5 billion up to 2030, in order to respond to climate change in the land use change, transport and water sectors.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Mexico	The NDC development process included public participation through meetings with the private and civil society sectors, workshops with industry associations and social organizations; as well as a public online survey organized and approved by the Inter-sectoral Climate Change Commission.	General Climate Change Law with quantifiable targets. Low Emissions Development Strategy up to 2050.	The document 'Climate Change Mitigation and Adaptation Commitments for the period between 2020 and 2030', includes expectations regarding how different sectors would participate in order to reach the targets established in Mexico's NDC.	Multilevel coordination mechanisms, related to city climate commitments, as well as international initiatives associated with the Under2 Coalition and C40 Cities for Climate Leadership Group.	System of Information and Actions for Transparency for the NDC (SIAT-NDC)(Sistema de Información y Acciones para la Transparencia-SIAT-NDC) within the NDC.	Climate Change Fund that channels public, as well as private, national and international investments.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Nicaragua	The NDC was developed through an ad-hoc mechanism that included the Ministry of Foreign Affairs, the Private Secretariat of National Policies, and the Ministry for the Environment and Natural Resources. The NDC was designed according to a model based on alliances, dialogue and consensus between different productive sectors.	National Climate Change Mitigation and Adaptation Policy and the NDC, developed through a consultative process with different sectors, including the Nicaraguan High Council of Private Enterprise (Consejo Superior de la Empresa Privada-COSEP), municipalities, the productive sector, universities, and government agencies.	National Programme for Sustainable Electrification and Renewable Energy (Programa Nacional de Electrificación Sostenible y Energía Renovable-PNESER).	National Deforestation Avoidance Programme (Programa Nacional de Deforestación Evitada-ENDE), which includes elements of the international United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+), designed to combat climate change and poverty.	The government has acknowledged and restored the historic land rights of indigenous peoples and African descendants, issuing titles that cover over 80% of territory originally pertaining to indigenous communities.	A strategy for the mobilization and management of funds and the implementation of means for adaptation measures is underway, including for losses and damage associated with climate change.

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Panama	The NDC development process was led by the Ministry of Environment, with the support of the National Climate Change Committee of Panama (Comité Nacional de Cambio Climático de Panamá-CONACCP). Public meetings were held to include the participation of a variety of sectors, with representation of the ten provinces, and from the nine bodies of the indigenous people of Panama.	National Climate Change Policy (2007). Development of the National Energy Plan through a participatory process including provincial visits.	The NDC includes targets for the energy and forestry sectors. Other sectors, such as waste, industry and agriculture, will be progressively added in the future.	The Alliance for One Million Hectares (Alianza por el Millón de Hectáreas) Reforestation programme.	The role of private enterprise is notable for their social responsibility programmes.	Quantification of NDC needs. National Fund for Adaptation; and programme of incentives for reforestation and the conservation of natural forest.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Paraguay	A highly participatory process with civil society that included all sectors and institutions, as identified by the National Commission for Climate Change.	The implementation plan for the NDC (currently under review). There is also a National Climate Change Law (2017).	Energy Policy for the Republic of Paraguay (2016).	Declaration of Interest in Combating Climate Change by the Municipalities of the Metropolitan Area of Asuncion. There is also a guide for local climate change adaptation plans.	Network of Environmental Organizations; universities; Paraguayan Industrial Union; and the Rural Association of Paraguay, through the Climate Change Commission.	Climate Change Fund.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Peru	A Multi-Sectoral Working Group (Grupo de Trabajo Multi-Sectoral-GTM-NDC) was created for the implementation of the NDC. The purpose of this group was to monitor the progress by technical working groups in developing a more detailed NDC.	At the national level there is the Framework Climate Change Law; on a sub-national level there are Regional Climate Change Strategies. "Tentative Programming" or work plans for the implementation of the measures included in the NDC, for mitigation-based sectors (energy, transport, industry, residues and forests) and adaptation-based sectors (forests, health, agriculture, water and fisheries).	There are 62 mitigation measures, which are distributed across the following sectors: stationary energy combustion: 23; mobile energy combustion: 14; industrial processes & product use: 2; agriculture: 6; LULUCF: 8; and waste: 9. The NDC proposes an emissions level of 298.3 MtCO ₂ eq by 2030, and a reduction of 89.4 MtCO ₂ eq, which represents a 30% reduction target.	The Climate Change Framework Law requires regional and local governments to include mitigation and adaptation actions listed in the NDC in their planning and budgets.	Design and formulation of participatory processes: "Let's talk," in which the private sector, civil society, and the general public were included in the development of the NDC and the regulations contained in the Climate Change Law.	Within the framework of the GTM-NDC, guidelines for economic evaluation of NDC measures were developed. Furthermore, Peru has a social carbon tax.

Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Uruguay	Uruguay established its NDC based on its National Climate Change Policy (Política Nacional de Cambio Climático-PNCC). The mitigation component was reviewed in terms of the policies being implemented, and the potential of current planning strategies was also analysed. The development process involved inter-institutional participation within the framework of the National Climate Change and Variability Response System of Uruguay (Sistema Nacional de Respuesta al Cambio Climático-SNRCC), and the NDC was also submitted to a public consultation process.	National Climate Change and Variability Response System of Uruguay (Sistema Nacional de Respuesta al Cambio Climático-SNRCC)	Construction of multi-sectoral platforms with a capacity to influence public opinion and the political agenda. The primary actions were developed and agreed to by the Coordination Group of the SNRCC, with support from the ministries. The mitigation objectives for the NDC were established by coordinating with sectors, taking into account the specific nature of each sector and activity, each one developing its own targets and projections.	Multilevel coordination is especially strong for adaptation work. The current processes for developing national adaptation plans is closely tied to the NDC. Specifically for those related to coastal areas, agriculture and livestock, cities, and local infrastructure and planning, there is a very significant territorial component.	The private sector is involved in the implementation of the NDC, which is reflected in investments in renewable energies, domestic energy efficiency, and rural producers who are applying measures to reduce emissions and improve resilience; as well as private tourist initiatives that are working with Green Certification. Initiatives to increase private sector involvement in the NDC have also been carried out.	Progress on the Mechanism for Programming, Monitoring, Reporting and Verification of the National Climate Change Policy (Mecanismo de Programación, Monitoreo, Reporte y Verificación-PmrV); as well as evaluations of existing policies, programmes and projects.
Country	Process	Political-legal institutional	Sectoral	Multilevel	Social	Financial
Venezuela	Inter-sectoral meetings	The Homeland Plan (Plan de la Patria) was established as a Constitutional Law that includes encouragement to fight against climate change in Objective N°5.	A decree for the creation of a Presidential Climate Change Commission is being prepared.	Sustainable Forest Planning and Forest Conservation project. Carbon Neutrality in Soil Degradation project.	Experience of consultation processes with organized communities and grassroots eco-socialist movements. Eco-Socialist Technical Roundtables represent spaces of joint management in order to allow for the local implementation of climate change adaptation measures, with a focus on gender and vulnerable populations.	No progress has been recorded for this level of coordination.

3. Progress and challenges in the implementation of NDCs in Latin American countries



3. Progress and challenges in the implementation of NDCs in Latin American Countries

3.1 Summary of progress and challenges in the implementation of NDCs in the countries of Latin America

Based on the information gathered for this study, both progress and challenges were identified, in terms of NDC implementation in the countries analysed.

The analysis that follows is based on the information provided in the 18 country sheets produced by EUROCLIMA+, and the results reported at the VII Regional LEDS LAC Workshop – *First Peer-to-Peer Dialogue for countries working with EUROCLIMA+ and the VII LEDS LAC Workshop*¹⁸. It should be noted that the country sheets only outline the activities, and do not go into detail on expected impacts or results obtained during the implementation of the NDCs. For this reason, the analysis presented here is complemented by the reflections and lessons learned reported in the case studies included in sections 3.2 and 3.3.

i. Political-legal-institutional coordination

Progress and Opportunities

Development of regulations that incorporate climate change components

Each country has a number of different regulations or policies relating to the management of climate change. According to the information gathered by the London School of Economics - Grantham Research Institute in Climate Change and the Environment, and the Sabin Center on Climate

Change Law (Columbia Law School), and the updated information from the country sheets, in Annex 3 it is determined that there are 213 policies or regulations on climate change in the 18 countries of Latin America. Among those, the sectors with the highest number of associated climate laws and policies are Energy (58.8%) and Forestry (25.36%). While there is no information regarding the impacts of these laws on reducing GHG emissions or climate change vulnerability, they have been identified as an element of progress in the creation of a political and legal framework in support of the NDCs.

Climate Change Law

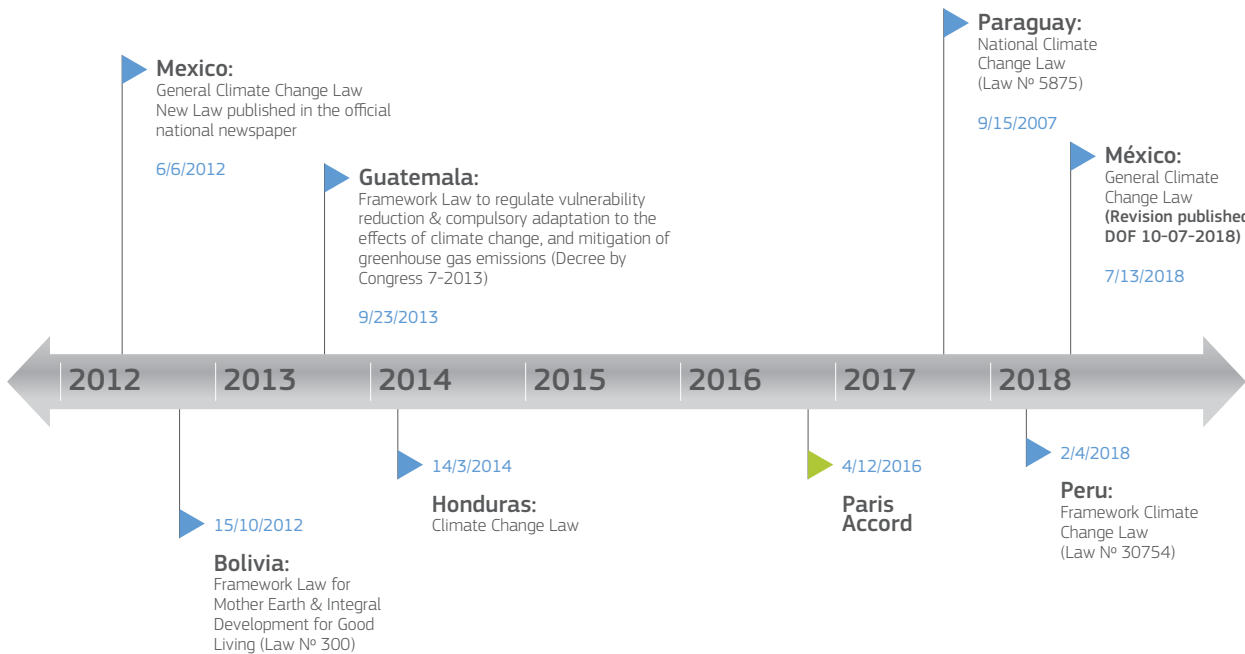
As portrayed in Figure 3, six of the eighteen countries of Latin America analysed that have been analysed have a national law focused on climate change management (Guatemala, Honduras, Mexico, Paraguay, Peru and Bolivia).¹⁹ Of these, 4 (Mexico, Bolivia, Guatemala and Honduras) were approved prior to the Paris Agreement; however, Mexico revised its law following its ratification of the Paris Agreement. In the cases of Bolivia, Guatemala and Honduras, their climate change laws do not specifically mention the NDC as a concrete instrument guiding their climate policy. The climate laws of Peru and Mexico, on the other hand, do make reference to the fulfillment of the NDC. Mexico's Law is the only one that establishes a quantified emissions reduction target.

¹⁸ Carried out in August of 2018.

¹⁹ In the case of Bolivia, the Framework Law on Mother Earth & Integral Development for Good Living (2012) includes climate change as a major component.

It should be noted that the laws or policies in place in Costa Rica, Guatemala, Mexico and Peru, embrace targets that are, at least, equally or more ambitious than those set out in their NDC (Nachmany & Mangan, 2018).

Figure 3. Timeline for approved climate change laws in Latin America for the period 2012-2018



Creation of national systems for managing climate change

A total of 3 countries of those involved in this study have developed national climate change management systems for the purpose of coordinating between sectors, territories and climate financing, among other relevant factors. These systems, have been achieved by integrating various policies, regulations, processes, and strategic instruments, and have been implemented in the case of Colombia, Mexico and Uruguay. The latter has a formally established National System in Response to Climate Change that is responsible for coordinating and planning the country’s public and private actions needed for risk prevention, mitigation and adaptation.

Challenges and Needs

Increase coherence between national and international targets

As previously mentioned, there are very few NDC targets that have been translated into domestic

frameworks, both at a global level and in the countries of Latin America under review.

Furthermore, the great majority of countries do not include economy-wide emissions reduction targets within their laws and policies. There is therefore an urgent need to improve coherence between targets presented in NDCs and national laws and policies, including the establishment of quantitative objectives that facilitate monitoring processes, and validate the mechanism for increasing levels of ambition proposed by the Paris Agreement.

Strengthen regulatory and institutional frameworks

Countries such as Argentina and Chile have highlighted the need to establish a Framework Climate Change Law as part of the implementation process for their NDCs, and both are currently in the process of developing such laws. El Salvador has also agreed to this need, and Venezuela has clearly expressed in its country file that a National Climate Change Strategy that includes the conformation of

an institutional body responsible for coordination is necessary. Bolivia, for its part, has shown that it lacks concrete regulatory instruments that could support the implementation of its NDC, despite having the Framework Law for Mother Earth & Integral Development for Good Living.

Support needed for MRV systems

Although the implementation of monitoring, reporting and verification (MRV) systems is a common challenge for all countries in the region, Ecuador and Uruguay have specifically stated the need for help in developing relevant indicators for climate management, as well as for the initial step of gathering and systematizing information for monitoring. Uruguay emphasised this need specifically in relation to adaptation.

Beyond MRV systems, an internal challenge that naturally arises when beginning the implementation stage – in which resources such as time and money are limited – is how to evaluate the progress and results of the process. How effective are the systems, spaces and instruments established for catalysing action or moving on to the implementation stage of NDCs? What results are expected and achieved? How can the relevance and pertinence of actions be measured? How must actions be adapted or improved? What needs arise from this evaluation? What needs could be met either by international cooperation or by a variety of domestic resources? These are some of the questions that arise.

Geopolitical restrictions

Venezuela and Cuba have stressed that the economic blockades against them imply extra challenges in terms of being able to receive funding and for technological transfer to assist in the implementation their NDCs.

ii. Sectoral coordination

Progress and opportunities

Formation of a space or platform for inter-sectoral coordination at a national level

With the exception of Bolivia, all countries have established, or are already developing, a space

or a platform for inter-sectoral coordination. For example, Venezuela is developing its Presidential Climate Change Commission, which is expected to be consolidated soon.

These platforms focus mostly on sectoral coordination between ministries (Brazil, Chile, Colombia, Honduras, Mexico, Peru & Costa Rica), although many also include other local actors, civil society, academia, and the private sector (Argentina, Cuba, El Salvador, Guatemala, Nicaragua, Panama, Paraguay, and Uruguay).

Sectoral responsibilities

Colombia, Uruguay, Argentina, Mexico and Peru have all succeeded in establishing and quantifying the sectoral efforts needed to achieve the targets set in their NDCs. In the case of Brazil, quantified targets exist for at least two sectors, and in the case of Chile, progress is being made on defining targets for the energy sector.

Challenges and needs

Enhancement of the permanent mechanisms for inter-sectoral coordination

Several countries have stated there is a need to enhance the inter-sectoral platforms that would enable them to establish governance mechanisms (Honduras), improve information flows (Colombia), and improve coordination between sectors (Paraguay and Bolivia). Venezuela has specified the need for technical working groups across institutions to develop the lines of action for its National Adaptation Plan.

Taking into account the lessons learned from the case studies, some questions arise regarding the challenges of how to reinforce these inter-sectoral coordination mechanisms: during a stage in which measurable climate commitments and actions are being developed, how clear are the roles of the actors involved? How relevant are the actors involved in terms of the roles required for establishing sectoral policies, instruments and incentives? How are these sectoral coordination mechanisms assisting ministries or sectoral agencies to establish their own commitments in relation to the NDC? What

does each country's focal point or climate change office need to achieve this more effectively? What do sectoral ministries need in order to propose their own targets and ensure the implementation of the actions necessary to achieve them? What kind of logic should be followed? Which regional mechanisms could be of assistance to accelerating this process in each country? Which international or regional cases could serve as a baseline analysis, and how can the lessons learned from these cases be applied to actions in other countries?

In addition, a common gap has been identified in terms of sectoral coordination, between the integration of governance frameworks for the promotion of NDCs, and the governance frameworks to promote similar agendas, such as the Sustainable Development Goals (SDGs), green growth, and others. In this sense, an important challenge for governance is the integration of the climate change sphere with the frameworks of other similar agendas.

Enhancing sectoral capabilities and information systems

Some countries have stated the need for improved technical skills within the public sector, in particular for work on climate change, technology transfer, and access to financial resources, which would enable the sectoral implementation of mitigation and adaptation actions (Costa Rica, Guatemala, Nicaragua, Panama and Paraguay). Peru and Paraguay have further highlighted the importance of improving technical and political skills in the public sector in order to support actions needed to implement NDCs.

iii. Multilevel coordination

Progress and opportunities

A variety of mechanisms for national and sub-national exchange

Some countries have utilized and/or developed networks or specific platforms for coordination and exchange of information between sub-national governments.

In the case of Argentina, the Federal Council for the Environment (Consejo Federal del Medio Ambiente-COFEMA) is mandated to coordinate at a sub-national level, including for climate action, and is supported by the Argentinean Network of Municipalities facing Climate Change (Red Argentina de Municipios frente al Cambio Climático-RAMCC) in terms of exchanging best practices and experiences. Box 3 contains information on the Argentinean process of multilevel coordination at a sub-national level for the purpose of reviewing and implementing the country's NDC.

Box 2. Multilevel coordination at the sub-national level for the revision and implementation of Argentina's NDC

<p>Aspect or level of coordination</p>	<p>Multilevel</p>
<p>Brief description of the case study on 'National Coordination'</p>	<p>Coordination at the sub-national level was fundamental during the process of updating Argentina's NDC, as the government had planned for implementation to take place throughout the country. For this reason, a Presidential Decree was issued in 2016 to establish a high-level political structure, called the National Climate Change Cabinet (Gabinete Nacional de Cambio Climático-GNCC).</p> <p>From its inception, the GNCC has carried out the I inter-sectoral and inter-jurisdictional work needed to coordinate participatory processes related to the NDC, and generate synergies between the different areas of national government and, in particular, between the national government and the provinces (including the Autonomous City of Buenos Aires).</p> <p>The GNCC's work was structured around regular meetings organized into working groups and provincial roundtables coordinated by the Federal Council for the Environment (Consejo Federal de Medio Ambiente-COFEMA), a key actor in this process, as it represents the environmental authorities of the 23 provinces and the Autonomous City of Buenos Aires. The National Government worked closely with COFEMA within the framework of GNCC, which helped identify needs and opportunities for strengthening capacities to work on climate change on a provincial level. After two years of systematic, constant and efficient work, progress was made in improving the skills and effectiveness of provincial governments for the purpose of establishing GHG emissions inventories and identifying mitigation measures that contribute to the national targets established in the NDC.</p> <p>The GNCC is a high-level political entity, as it is presided over and managed by the Chief of the Cabinet of Ministers, and includes the participation of representatives from approximately 13 Ministries and Government Secretariats.</p>
<p>Stated Objectives</p>	<p>The objective of this coordinated action is:</p> <ul style="list-style-type: none"> • Ensure the involvement of the provinces in the implementation of the NDC in sub-national territories. • Develop more GHG inventories at a provincial level. • Ensure that all provinces have an action plan that includes targets for adaptation and mitigation in the 6 prioritized sectors of energy, forestry, transport, agriculture and livestock farming, and infrastructure and territory.
<p>Activities</p>	<p>The following actions were carried out at a provincial level:</p> <p>1) The Forestry Sector, on a territorial level. Once the NDC commitments for this sector had been established, Argentina began to develop the National Action Plan for Forests and Climate Change (Plan de Acción Nacional de Bosques y Cambio Climático-PANByCC) with help from the ONU-REDD Programme. The process of establishing the PANByCC was led by the National Climate Change Cabinet, together with the National Directorate of Forests, which both pertain to the Secretariat of Environment and Sustainable Development (Secretaría de Ambiente y Desarrollo Sustentable-SAyDS). In order to ensure that the process for the development of the plan was transparent, open and effective, public consultation activities were held with relevant actors, and a Participation Plan was also established to promote dialogue. Among the key actors identified were the provinces, which were grouped into five forest regions (Selva Misionera, Yungas, Parque Chaqueño, Bosque Andino Patagónico, and el Monte & Espinal). This coordination with the provincial governments occurred through COFEMA, and in particular through the Climate Change Commission and the Native Forests Commission. Through these efforts of coordination, the causes of deforestation and degradation on a local level were identified and prioritized, and strategic lines of action to solve this problem were proposed.</p>

<p>Activities</p>	<p>2) Enhancement of provincial capacities for mitigation. Provincial governments were trained in the development of GHG inventories and in identifying and prioritizing mitigation measures as part of their development plans. These training activities were carried out together with the Low Emission Capacity Building (LECB) project, of UNDP. Staff training took place in every province, in addition to meetings held in the 5 COFEMA regions. Measures identified and suggested by the provinces contributed towards the national goals set out in the NDC.</p> <p>3) Financing for the implementation of mitigation measures at provincial level. Through a Green Climate Fund (GCF) Readiness project, with support from Fundación Avina, meetings were carried out in the provinces grouped into the five COFEMA regions, for the purpose of training their representatives in climate financing and to facilitate their ability to generate projects that could be financed by the GCF, among other sources of climate funding. It is expected that a number of concept papers for specific projects related to the implementation of NDC measures will be produced based on these actions.</p>
<p>Impacts</p>	<p>Long-term impacts resulting from the strengthening of skills and coordination include the following:</p> <ul style="list-style-type: none"> • Provinces will be aligned with national GHG inventories, with a significant role in the implementation of the NDC through their mitigation measures and the development of provincial action plans. • Provinces will be able to view their emissions through the official on-line platform. Some provinces, such as Córdoba, Santa Fe, Entre Ríos, Chaco and Ushuaia, among others, have already begun to establish their own GHG inventories. <p>In relation to the NDC:</p> <ul style="list-style-type: none"> • When Argentina presented its revised NDC at the COP22 in 2016, the provinces made a federal commitment in support of the NDC, proposing around 200 measures, including measures at a municipal level. Through this valuable contribution, they were formally incorporated into the work of the GNCC. • Thanks to climate capacity building that has taken place since 2016, the provinces are better prepared to contribute to work on the adaptation plan, which began in 2019. <p>Impacts for managing climate change:</p> <ul style="list-style-type: none"> • Some provinces, including Buenos Aires, have shown interest in replicating the experience of the GNCC for developing provincial climate action plans, through a project funded by the Inter-American Development Bank (IDB); of particular interest is the structure of the GNCC as a climate governance entity, and the kind of relationships that are established for coordination between the different ministries involved. <p>Impacts for coordination between provinces:</p> <ul style="list-style-type: none"> • Spaces for dialogue between provinces have also been established, where it is possible to develop coordinated work on climate change. For example, some provinces are working together to present joint project proposals for financing from GCF Readiness.
<p>Institutions involved</p>	<ul style="list-style-type: none"> • The Federal Commission for the Environment (Consejo Federal de Medio Ambiente-COFEMA): includes the environmental authorities of all 23 provinces, the Autonomous City of Buenos Aires and the federal government. Through COFEMA, SAyDS has achieved effective coordination and collaboration between provinces, which would not have been possible otherwise. • The Government Secretariat of Environment and Sustainable Development (Secretaría de Ambiente y Desarrollo Sustentable-SAyDS): responsible for coordinating the participation of COFEMA within the Cabinet (GNCC). • International cooperation (described below): these actors have allowed for continuous work with the provinces over time, with a focus on GHG inventories, mitigation, forests, and climate finance, among others priority issues.

<p>Cooperation</p>	<p>Three main actors were involved throughout the process:</p> <ul style="list-style-type: none"> • The United Nations (FAO, UNDP and UNEP): supported the development of a National Action Plan for Forests and Climate Change (PANByCC), including the participation of the provinces, through a UN-REDD+ project. • UNDP, through the Low Emission Capacity Building Programme (LECB): supported capacity building for the development of GHG inventories at a provincial level. • Fundación Avina: supported capacity building on climate finance in the provinces, through a Green Climate Fund Readiness project. 	
<p>Success factors</p>	<ul style="list-style-type: none"> • Multilevel coordination by the GNCC was systematic, constant and well organised. Trust was built with the provinces, which was conducive to effective, useful and dynamic coordination that emphasized inclusion in the NDC revision and implementation process. • Coordination by the GNCC was positively evaluated at a provincial level, due to the technical assistance and support for establishing provincial GHG inventories and identifying mitigation measures. Likewise, due to GNCC support, the provinces also have more knowledge regarding the financing opportunities available for implementing their mitigation measures. • A Presidential mandate on collaborative work between sectors at a national level was conducive to collaboration between ministries and provinces. • Provincial meetings and training workshops were held periodically over two years. All training workshops that were developed through the different projects (LECB, Avina, and UN REDD+) were held in all five COFEMA regions, which established a permanent line of communication with the provinces. 	
<p>Overcoming barriers/ challenges</p>	<p>Main barriers and challenges to implementation</p>	<p>How were they overcome?</p>
	<p>There is disparity between provinces in terms of climate change work: some have a team dedicated to the issue, while others have a more wide-ranging environment team that works with several issues (waste, water, etc.). This has led to lower coping capacity and involvement in some provinces.</p>	<p>This barrier was overcome through hard work, perseverance and conviction in terms of building relationships based on trust.</p>
	<p>Lack of trust by the provinces in the national SAYDS. This is because there had never been a close relationship in the past, and this initially led to difficulties for achieving effective, useful and dynamic coordination.</p>	<p>Coordination by the GNCC was systematic, constant and well organised, which improved trust. Periodic meetings were held, and twice a year a summary of the progress made by each working group was presented.</p>
	<p>Cooperation between provincial ministries was not always easy, given they often have to compete for the same resources.</p>	<p>Part of the work carried out by SAYDS was to establish open dialogues with representatives of other sectors involved, beyond only environmental issues, in order to ensure fluid communication. For example, joint meetings were held between the Forestry Commission and the Climate Change Commission, to facilitate an open dialogue between them.</p>
	<p>Cooperation between provincial ministries was not always easy, given they often have to compete for the same resources.</p>	<p>Trust-building efforts resulted in improved willingness by provinces to share the information at their disposal.</p>

<p>Lessons learned</p>	<ul style="list-style-type: none"> • Every process that requires coordination and trust must be serious, consistent, coherent and continuous over time. Currently, the relationship between provinces is open and participatory, with no barriers to information sharing. • Processes that involve coordination between many different actors require complete transparency. For this reason, the GNCC made sure to keep the provinces informed and up-to-date on the progress being made. • There is a need to design processes that can transcend political affinities. All the provinces were involved in the process, independent of political party affiliations.
<p>How can this be replicated?</p>	<p>The Argentinean experience with multilevel coordination is a good example to replicate. To this end, there is a need for:</p> <ul style="list-style-type: none"> • Clear and decisive presidential support, expressed through a formal mandate. These processes work best when they are clearly supported by the highest level of government. To achieve effective work with so many participants, an express mandate from the highest authority (mayor, governor or president) is a must. • An organization like COFEMA is needed to support coordination with sub-national governments. COFEMA has a well-structured internal organization that includes: delegates (the ministers of environment from each province); focal points; and a Climate Change Commission (with a president), who coordinated directly with the SAyDS. • Training and awareness raising at a provincial level. Continuous capacity building and heightened awareness on climate change is important, so that each province understands the implications and can apply the country's international climate commitments in their territory. This continuous process of cooperation and shared learning is of vital importance.

There are a variety of mechanisms for coordination in other Latin American countries. Chile has Regional Climate Change Committees (Comité Regional de Cambio Climático-CORECC) and the Chilean Network of Municipalities for Climate Change; Colombia has Regional Climate Change Nodes; Paraguay works with a Municipal Network for Climate Change; and Mexico has a National Climate Change System that includes mechanisms for coordination between states, municipalities and the Federal Government.

Similarly, some countries use local consultation mechanisms designed for environmental issues in order to address climate action and policy. For example, Bolivia has Municipal Consultative Platforms for Mother Earth; Costa Rica has a carbon neutrality country Programme 2.0, through which it manages the official methodology to calculate territorial GHG emissions, and designs priority mitigation measures for municipalities, with an emphasis on mobility and waste management; El Salvador has a Metropolitan Development Commission; and finally, Guatemala has Departmental Environment Commissions (Comisiones Departamentales de Medio Ambiente-CODEMA).

Meanwhile, Brazil and Ecuador have coordination platforms for topics specifically linked to adaptation and forests. The Brazilian Ministry of Environment established the Climate Vulnerability System (Sistema de Vulnerabilidad Climática-SisVuClima) for mapping the most vulnerable areas at a local level; while Ecuador has REDD+ roundtables.

Challenges and Needs

Enhancing sub-national coordination

The majority of countries have recognized the need to establish roadmaps for climate action, which coordinates between national and sub-national scales, facilitates communication and the exchange of information, and integrates climate change into regional instruments. In addition, such a roadmap serves to promote technology transfer; insert and connect local action with national policies, and facilitate alliances with municipalities (Argentina, Brazil, Ecuador, Honduras, Panama, Peru, Uruguay and Venezuela).

Enhancing technical capacity building and available information

The process of integrating the NDC into multilevel policy and actions has revealed a strong need for enhancing technical skills, especially at a sub-national level (regional, provincial and municipal). This capacity building is necessary so that sub-nationals have the installed capacity needed to develop plans, projects, mitigation and adaptation actions, to integrate climate policy within multilevel policy and planning, as well as to develop and implement project portfolios. This challenge is shared by Mexico, Ecuador, El Salvador, Colombia, Chile, Honduras, Brazil, Argentina, and Panama. In the specific case of Colombia, this challenge is especially difficult, as it is necessary to develop such skills in a huge number (thousands) of municipalities.

A lack of MRV mechanisms at sub-national level

Chile, El Salvador and Mexico have emphasized the absence of MRV mechanisms for monitoring the coordination and implementation of actions at a local level. Chile has highlighted the specific need for the development of metrics for actions related to Ecosystem-based Adaptation (EbA). Bolivia, on the other hand, has identified a specific challenge relating to the absence of clarity in linking current projects being developed in local territories with the objectives of the NDC.

The need to link sub-national development priorities with the NDCs

A realization that has grown from progress made during sub-national NDC implementation work in Latin America is the important role local governments can play in catalysing action. One reason for this is that they can directly attest to the fact that climate considerations are a fundamental factor for fulfilling development priorities, as well as provide valuable lessons learned and potentially scalable policies or actions for both national and other sub-national governments.

Municipalities and local governments are the most efficient vehicle for demonstrating how a focus on

climate and the NDC can have a tangible role to play in solving problems and outlining priorities that emerge from the needs of the local community. In fact, one of the great challenges in this regard is how to link national commitments with the climate contributions subscribed to by countries at an international level. Much progress could be made on multilevel implementation if the problems and perceptions of local actors are shown to be directly relevant to the climate crisis both now, and into the future.

A promising format for an exchange of ideas between national/sectoral actors and local governments could be by creating a space to discuss the development of contributions and explicit commitments by local actors regarding the implementation of NDC objectives. Possible guiding questions could be: How do the NDC targets help reach development targets in a specific location? What local community problems or priorities do such targets respond to? Which local governments have made commitments? Why? And what positive impacts are they having? How have such positive impacts been achieved?

iv. Social coordination

Progress and opportunities

Platforms for non-state actor exchange (initiatives proposed by civil society)

Non-state actors focused on sustainability and climate change have been working on significant initiatives throughout Latin America. They have grown from projects developed out of their own fruition, rather than having been stimulated by national governments.

Brazil, Peru and Chile all demonstrate such articulating initiatives by non-state actors. For its part, Brazil has the Brazil Coalition – Climate, Forests and Agriculture,²⁰ in which the private sector, specifically agribusiness, works with academia and

²⁰ Coalizao Brazil – Clima Florestas e Agricultura. (2019). Participe dos Fóruns de Diálogo. Available at: <http://www.coalizaobr.com.br/>.

civil society. There is also the Climate Observatory,²¹ which is a network that brings civil society representatives together for discussing the country's climate change policies.

In Chile, from the private sector there is the Climate Leaders Group,²² whereas civil society actors have conformed the Citizen Panel on Climate Change, and the Climate Commitments Observatory;²³ in addition, the UN supports the Chilean chapter of the Global Compact Network.²⁴

For its part, Peru has two private sector initiatives that promote climate action. One is the L+1²⁵ group of general managers and company CEOs who seek to catalyse investment and sustainable action; and the other is Nexos+1,²⁶ a Latin American platform for climate action that brings people together to catalyse investments and company initiatives to encourage increased government ambition.

Private companies in the region are increasingly involving themselves in various of climate change work under their own volition. An example is the international business movement Sistema B²⁷ and Triple Impact, a collection of companies founded to solve environmental and social problems, which is picking up steam in Latin America. This movement is also facing challenges related to climate change adaptation and mitigation. In addition, there are also organisations affiliated with the World Business Council for Sustainable Development, in Latin American countries, such as CEADS in Argentina; AED in Costa Rica; and Peru 2021 in Peru. All these have begun to work with companies to align their actions with the Sustainable Development Goals (SDGs), including SDG 13 for Climate Action.

Initiatives for including civil society promoted by governments

In Costa Rica the Carbon Neutrality 2.0 Country Programme stands out, as it includes both big business and small to medium-sized enterprises (SME). In the case of the former, the programme helps establish guidelines for monitoring organizational GHG emissions, implement reduction measures, and enable compensation through the purchase of Costa Rican Compensation Units (Unidades Costarricenses de Compensación-UCC)²⁸. In terms of SMEs, the programme defines guidelines for measuring emissions and developing action plans.

Chile has developed the national programme "Footprint Chile" (Huella Chile), which is a carbon management platform with the objective of promoting GHG management by both public and private organizations, for the purpose of mitigating total country emissions. As a result, thus far around 900 individuals have been provided with technical training, and information has been gathered from over 320 organizations that measure their GHG emissions within the program. It is interesting to note the synergy of this mechanism with other state initiatives; for example, joining the program is one of the requirements of the Municipal Environmental Certification System (Sistema de Certificación Ambiental Municipal-SCAM) also of the Ministry of Environment. Furthermore, "Footprint Chile" (Huella Chile) has been incorporated into several stages of the Clean Production Agreements (Acuerdos de Producción Limpia-APL),²⁹ through which productive sectors take on commitments to improve production in terms of energy efficiency and emissions reduction, among others. Chile also has

21 Observatório do Clima. (2019). Fatos Florestais: vídeo desfaz mitos que opõem produção à conservação no país. Available at: <http://www.observatoriodoclima.eco.br/>

22 Climate Leaders Group. <http://clgchile.cl/>

23 Climate commitments. <https://www.compromisosclimaticos.cl/>

24 Chilean Global Network Pact. <https://www.pactoglobal.cl/> 25 L+1 <https://www.lmas1.org/>

26 Nexos +1. <https://nexusmasuno.pe/>

27 System B: <https://sistemab.org/>

28 According to the document Mercado Doméstico Voluntario de Carbono de Costa Rica published in 2012, a UCC is 'equivalent to a ton of CO2 from projects, programmes or activities that neutralize or reduce emissions and/or remove and/or store greenhouse gases.'

29 Clean Production Agreements. Available at: http://www.produccionlimpia.cl/index.php?option=com_content&view=article&id=51&Itemid=235

30 The commissions include government representatives as they are founded under the aegis of the Environment Framework Law.

a National Consultation Commission and Regional Consultation Commissions,³⁰ which includes civil society and private sector representatives, as well as government representatives, as these commissions are founded under the aegis of the Environment Framework Law.

In Peru, the space 'Let's Talk' (Dialoguemos) has been created, which includes the participation of both state (sub-national) and non-state (including the private sector) actors. This program facilitates agreements among participants and promotes conditions necessary for the implementation of concrete measures.

Brazil has a platform known as "AdaptaClima",³¹ which is a collaborative portal for systematizing and sharing climate change adaptation initiatives; while Costa Rica has a Citizen Commission for Consultation on Climate Change (5C), made up of representatives of urban collectives, productive collectives, women's groups, indigenous groups and the private sector. This platform was created by the Ministry of Environment and Energy.

Mainstreaming the gender focus and vulnerable populations in the NDCs

A number of countries mention a gender focus in their NDCs: Brazil, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela.³² Peru, Venezuela and Ecuador, among others, have also stressed the specific importance of considering the needs of vulnerable populations, including indigenous communities.

Challenges and needs

Increase the participation of the private sector and other relevant non-state actors in the NDC development/revision and implementation processes

Ecuador, Honduras, Nicaragua and Uruguay have all stated the need to improve efforts to include

representatives from academia, civil society, and especially the private sector, in order to promote commitments and an exchange of best practices for the implementation of NDCs. Paraguay has further emphasized the need to strengthen ties to academia in this effort, as they are key actors for producing knowledge and information regarding climate change.

The information gathered from government records is still limited. Therefore, it would be a relevant effort to ensure that those responsible for the NDC develop a closer relationship and with participate in relevant spaces open to non-state actors. This is important, as it enables the NDC policy makers to better understand the motivations and needs of non-state actors, and garner information useful for accelerating the implementation and raising the ambition of NDCs. Likewise, it would be very important to take advantage of such interactive spaces to communicate government's policy priorities as they relate to each sector, as well as their impact on development.

The social legitimacy of the changes required to implement the NDCs and the Paris Agreement should be understood as being a fundamental requisite for the promotion of climate policies.

v. Financial coordination

Progress and opportunities

Allocation and quantification of public funds for climate action

Colombia is one of the countries that has made the most progress in this area, as it has been able to estimate the required budget for the implementation of its NDC. Likewise, the country has accounted for the public funds currently allocated to climate change-related actions, and has created a Financial Management Committee set within the framework of the National Climate Change System (Sistema Nacional de Cambio Climático-SISCLIMA). Meanwhile, Cuba uses its domestic budget to finance climate action strategies.

31 AdaptaClima - Plataforma de Conhecimento em Adaptação: <http://gvces.com.br/adaptaclima>

32 Own analysis of the EUROCLIMA+ Programme.

Creation of national funds

Guatemala, Mexico, Panama and Paraguay stand out as countries that have established national funds to finance climate action. Guatemala has created the National Climate Change Fund (Fondo Nacional del Cambio Climático-FONCC) that channels both national and international funds, prioritizing those that can be used for adaptation. In Mexico, the Fund for Climate Change (Fondo para Cambio Climático-FCC) was established by law and ratified on November 30th, 2012. The FCC was designed to be managed as a trust fund, for channelling public and private funding from both national and international sources. By early 2019, 16 projects had been financed. Panama and Paraguay have been each established a National Adaptation Fund and a Fund for Climate Change (respectively).

Creating committees established specifically for climate finance

The current study shows that Cuba, Colombia and El Salvador have established inter-institutional committees focused on climate finance. El Salvador, in particular, has developed the Inter-institutional Climate Change Financing Committee.

Development of budgets and financing strategies

Uruguay has initiated a process for assigning a budget for public spending specifically for climate change, as well as to monitor the use of these funds. For its part, Honduras has calculated the financial investment needed to minimize the consequences of climate change at national level. In order to fulfil this objective, the country is developing a national financial strategy that includes the participation of the private sector through a micro-financing programme.

Colombia published its National Climate Financing Strategy in 2017, and the following year, it produced methodological guides, directories of financing sources, and published an analysis of public and private climate spending. Meanwhile, Chile is working to mainstream its Climate Financing Strategy.

Projects funded by the GCF and the Adaptation Fund

The Green Climate Fund (GCF) and the Adaptation Fund are already financing projects in Latin American countries. As shown in the table found in Annex 4, 17 countries have had projects approved, as well as assistance for achieving the enabling conditions (readiness) needed to access GCF funds.

Development of carbon pricing instruments as an emissions reduction mechanism

Mexico and Chile have established a carbon tax that has the objective of reducing GHG emissions. In the case of Chile, it was established for both stationary and mobile sources, and has generated US\$300MM in tax revenue from 2017 to mid-2018. The country also measures the social cost of carbon that allows it to incorporate social costs and benefits associated with GHG emissions into its evaluation of public investment projects (Chilean carbon price, 2017). Costa Rica, in turn, also has a fuel tax, which is a duty on national fuel production as well as imported fuel (Treasury Department of Costa Rica, 2018).

Presence of Latin America in the Coalition of Finance Ministers for Climate Action

Finance Ministers from Finland and Chile led the Coalition of Finance Ministers for Climate Action in December 2018, through the World Bank and COP22 Presidency's Climate Action Peer Exchange (CAPE) initiative, which was formally presented in April of 2019 (Climate Action Peer Exchange, 2019). The mission of this coalition is to accelerate the implementation of the Paris Agreement by making domestic and global action in the face of climate change more cohesive.

Challenges and needs

Improve the enabling conditions for mobilizing climate finance

Some countries, such as Cuba, El Salvador, Guatemala, Honduras and Nicaragua, have stated the need to improve technical skills among their national financial groups for identifying and accessing climate finance. There is a need

to specifically identify, country by country, how such financial groups are composed and the capacity building needed for these groups to become effective mobilizers of financing for NDC implementation. These enabling conditions should include, as a key component, the development of climate financing strategies aimed at fulfilling Paris Agreement commitments. Specifically, there should be a focus on setting the level of financial flows to be compatible with a trend towards climate-resilient, low emissions development.³³

Support for structuring project portfolios

Even while some countries, such as Chile, have incorporated the development of a National Climate Change Financial Strategy within their NDC, based on this study, there is a clear need for creating local, public-private financing mechanisms for the development of both sectoral and multilevel project portfolios with access to financing from banks. There is also a need for instruments that can help reduce the risks associated with investment in mitigation and adaptation projects (Colombia, Costa Rica, Ecuador, Mexico and Peru). Colombia and Peru have emphasised the importance of working closely with the private sector on these processes.

The creation of new mechanisms is important. However, it is also essential for the authorities responsible for climate governance and the environment in all countries to understand existing economic instruments on a national level, and to reflect on how these might best serve proposed climate objectives, while still fulfilling sectoral and territorial objectives. Quite often, it is not necessary to create new funds and financial instruments, but rather utilize the ones that already exist, and are regularly used by bstate actors.

Managing knowledge on climate financing

This is a common challenge for most countries in the region. The specific need is for developing studies that can provide a clear estimate of costs for sectoral measures (Colombia) and create proposals and new business models an that include

awareness of the limits to public debt (Costa Rica). Such information could greatly facilitate decision-making and the design of concrete and realistic plans. In this sense, the challenge is to overcome the information deficit that exists for climate financing.

It should be noted that an initial estimate of costs for sectoral measures must first overcome the challenge of finding information on the types of costs, expenses and investments needed (preparatory or enabling activities such as research, technical assistance, publicity, dialogues, workshops, publications, feasibility studies, etc.). In addition, it is important to note that an initial estimate should value general percentages for the types of expenses required, and for what specific actor in accordance with their roles and responsibilities, and with what specific objectives. For example, the needs of a Ministry of Environment are completely different to those of a development agency or a private company. Furthermore, it is essential to identify what public or private financial vehicles exist, as well as their sources, be they national or international. It is also necessary to determine how and for what the financial resources are to be used, including needs for technical assistance with international cooperation, in order to catalysing larger investments. Aspects to be examined include identifying gaps, risks no one else can cover, or opportunities for seed financing, or testing prototypes.

Difficulty in accessing climate finance

Chile and Uruguay have expressed that their transition to becoming countries with medium-to-high income levels as a challenge that is limiting their access to international development funding in this area. It is worth noting that in order to address this challenge, it will be important to identify who is having trouble accessing climate funding in general, and what are the specific causes that limit that access. Furthermore, there is a need to establish objectives, the stages of a programme or project, and the type of costs and expenses where financing from climate funds is necessary.

³³Article 2.1.c of the Paris Agreement.

3.2 Case studies on the countries of Latin America

Three case studies were carried out within the framework of this report on the experience of Honduras, Ecuador and Argentina, in relation to the formulation and implementation of their NDCs, with special emphasis on, social, sectoral and multilevel coordination. These case studies have been presented in text boxes in Section 2 and in Section 3.1.

Annex 2 describes the selection criteria used for the case studies, which evaluate the level of progress for at least 3 of the 6 aspects of NDC implementation, the development of a topic that is of interest to other countries, and the willingness of the countries to document their experience.

Information was gathered during research trips to the selected countries. In each case, between 4 and 11 interviews were held with individuals who provided detailed information on the implementation of the NDC, and the country initiative being highlighted in the case study. Annex 1 contains a list of institutions interviewed for each case study.

The information gathered for the case studies was complemented by the database of best practices published in the Good Practice Analysis (GPA), which is currently being revised for its third edition, and which is promoted by the Partnership on Transparency in the Paris Agreement (PATPA), in conjunction with the UNDP Low Emissions Capacity Building Programme and the NDC Support Cluster. This database provided examples of best practices for 14 of the 18 countries analysed, as shown below in Table 3.

Table 3. Best practices documented in the countries of Latin America³⁴

Country	Documented best practice	Related Area/ Level of coordination
Argentina	Design and construction of sustainable houses in Argentina	<i>Mitigation / sectoral</i>
Bolivia	Evaluation of carbon and water footprints in Andean cities: a comparative study between La Paz, Quito and Lima	<i>Adaptation / multilevel</i>
	Developing resilience to climate change through indigenous knowledge: the case of Bolivia	<i>Adaptation / social</i>
Brazil	Developing resilience in the Brazilian bio-fuels market	<i>Mitigation / sectoral</i>
	Climate mitigation through improved productivity of agricultural lands in Brazil	<i>Mitigation / sectoral</i>
	Implementation of prevention and control policies to reduce deforestation	<i>Mitigation / political-legal-institutional</i>
Chile	National Strategy for Marine Energy in Chile	<i>Mitigation / political-legal-institutional</i>
	Implementation of national climate policies through sub-national climate action in Chile	<i>Mitigation / sectoral</i>
	Process for the development of an inclusive and technically solid iNDC in Chile	<i>Transversal/ multilevel</i>
	Green transport zone in Santiago de Chile	<i>Transversal / process</i>

³⁴ These cases can be found at: https://www.transparency-partnership.net/good-practice-database?keys=&countries_regions_tid%5B%5D=73

Country	Documented best practice	Related Area/ Level of coordination
Colombia	Vulnerability analysis: a multi-dimensional focus from the Cauca River basin in Colombia	<i>Adaptation / multilevel</i>
	Climate action planning in Cartagena, Colombia	<i>Adaptation / multilevel</i>
	Design of a transport-oriented, vertically integrated NAMA	<i>Adaptation / multilevel</i>
	Integration of climate change resilience into coastal cities planning: early lessons from Cartagena, Colombia	<i>Mitigation / sectoral and multilevel</i>
	Taxis with high mileage save money by switching to electric in Colombia	<i>Adaptation / multilevel</i>
Costa Rica	Development of an integrated MRV system for the forestry sector	<i>Transversal / sectoral</i>
	Forest regeneration in Costa Rica	<i>Transversal / sectoral</i>
	A gender focus for mitigation actions	<i>Mitigation / social</i>
	Connecting LEDS and NAMA in the livestock sector	<i>Mitigation / sectoral</i>
Ecuador	Acting on climate vulnerability: lessons and best practices from Quito, Ecuador	<i>Adaptation / multilevel</i>
	Evaluation of carbon and water footprints in Andean cities: a comparative study between La Paz, Quito and Lima	<i>Adaptation / multilevel</i>
	Private conservation agreements support climate action: the Forest Partner Programme in Ecuador	<i>Transversal / social</i>
	Promoting induction cookers in Ecuador	<i>Mitigation / sectoral and multilevel</i>
Guatemala	Tree Nursery Activities for Reforestation in the Taltimiche Plains of Guatemala (APRODIC)	<i>Transversal / multilevel</i>
Honduras	Management of plants, soils and livestock in Honduras	<i>Mitigation/ sectoral</i>
Mexico	An integrated national climate policy in Mexico	<i>Transversal / political-legal-institutional</i>
	The closure of the landfill site at Bordo Poniente helped "green" Mexico city	<i>Mitigation / multilevel</i>
	Development of a national integrated framework for MRV	<i>Transversal / political-legal-institutional</i>
	Climate-compatible development at a regional level in Mexico: the Yucatan Peninsula Agreement	<i>Transversal / multilevel and political-legal- institutional</i>
	District energy in Mexico	<i>Mitigation / sectoral</i>
	Impacts of climate change on the coastal zone of Mexico: an integrated ecosystemic approach to the Gulf of Mexico to support coastal management legislation	<i>Adaptation / territorial and political-legal- institutional</i>
	National public services companies in Mexico are adapting to climate change	<i>Adaptation / sectoral</i>
	Paving the way towards a green, more intelligent and flexible network in Mexico	<i>Mitigation / sectoral</i>
	Policy changes have prioritized geothermal energy in Mexico	<i>Mitigation / political-legal-institutional</i>
	Reducing air pollution by 50% in Mexico	<i>Mitigation / political-legal-institutional</i>
Planning for renewable energy transmission in Mexico (DEMO)	<i>Mitigation / sectoral</i>	

Country	Documented best practice	Related Area/ Level of coordination
Nicaragua	Energy sector and strategic planning for investment in renewable energy in Nicaragua	<i>Mitigation / sectoral</i>
	Adaptation to climate change with a focus on poverty reduction in the urban centres of Nicaragua	<i>Adaptation / multilevel</i>
Panama	Restoration of the Panama Canal Watershed	<i>Transversal / multilevel</i>
Peru	Business as a driving force in Peru (poverty reduction)	<i>Mitigation / social</i>
	Financing for the energy transition on a sub-national level in Peru	<i>Mitigation / multilevel and financial</i>
	A gender focus for mitigation actions	<i>Mitigation / social</i>
	Paving the way for success: an integrated participatory process for NDC implementation in Peru	<i>Transversal / process and social</i>
	The National Climate Law of Peru: a critical step towards the reduction of global emissions	<i>Transversal / political-legal-institutional</i>
	Climate change planning in Peru	<i>Mitigation / process and social</i>
Uruguay	Transforming the energy sector in Uruguay	<i>Mitigation / sectoral</i>

Source: Partnership on Transparency in the Paris Agreement, 2019.

3.3 Best practices for the implementation of NDCs in European countries

The country sheets and case studies for Latin America offer good examples of initiatives and success factors at the different levels of coordination for the implementation of NDCs. They provide context and demonstrate common problems. Nevertheless, it is important to consider other examples of best practices in the world, which can provide innovative ideas and examples to follow in our region. In this context, the strategies to manage climate change used by France and Spain are presented below.

The Case of France

The National Low Carbon Strategy of France

The National Low Carbon Strategy to 2050 of France sets an absolute target for a 75% reduction in its GHG emissions by 2050. The target is established using the levels recorded in 1990 as a baseline, with an intermediate reduction phase of 40% by 2030. The shared responsibility for its implementation lies with the Environment and Energy Agency and the Technical Inter-professional Centre for the Study of Air Pollution. Furthermore, it is legally binding for the entire public sector, given that it is a government initiative that arises from a political decision made at the highest level. This means that it obligates sectors to ensure that their actions are compatible with the stated objectives. Also, though this national strategy responds to the requirements set by the European Union, it is nevertheless an initiative with internal objectives for France.

The National Low Carbon Strategy presents guidelines for managing its implementation across all sectors, and enabling a transition to a sustainable low carbon economy. Its goals are set by sectoral carbon budgets that define the path towards emissions reductions. These carbon budgets can be described as maximum limits on emissions allowed over 4 to 5-year periods. The first three carbon budgets were defined in 2015, and covered the periods from 2015-2018, 2019-2023, and 2024-2028.

In order to comply with the carbon budget, the strategy proposes 67 recommendations, of which 23 are transversal and include the redirecting of investments; carbon footprints; territorial dynamics; training; education and citizenry; and research and innovation. The other 44 recommendations are sectoral and prioritize transport, domestic services, agriculture, biomass and forests, industry, energy production, and waste.

Monitoring is assured through the use of 184 indicators developed for this purpose, which are reviewed every two years by the Committee on Information and Strategy Planning, made up by the Committee of Experts in Energy Transition, and the National Council for Ecological Transition. There are 19 results-based indicators and 14 context-based indicators, while the remaining 151 are monitoring recommendations.

The results-based indicators quantify the combined effects of the strategy, including the results of GHG inventories, national and sectoral emissions, and energy consumption by sector, among other items. The context-based indicators are designed to put results into perspective through an analysis of socio-economic, climate, environmental and technological changes.

The monitoring recommendations indicators are divided into two groups. Indicators for the level of integration into public policies measure the integration of climate change into sectoral public policy. They are evaluated according to a transition scale that includes indicators for satisfactory, partially satisfactory or insufficient integration. It is a qualitative measurement as it seeks to value the expected effects of public policy. The pilot indicators monitor the implementation of every sectoral and transversal recommendation, prior to the final results.

The strategy also has a multilevel focus for which priorities have been established. On the one hand, there are energy transition territories, centred on helping communities that are particularly affected by mitigation measures – such as the closure of coal-fired power plants. Furthermore, there is the Energy Transition Law, which obliges every region to produce an energy-climate-air quality policy plan, by the end of the year. To this end, local skills for the development and implementation of these plans are being strengthened.

The strategy includes a revision of its objectives every 5 years. It is currently being reviewed for the first time, having just completed the first 5-year cycle since it was established. The National Low Carbon Strategy of France allows for transversal management of actions leading towards a low-carbon economy, answering to the expectations of the European Union as well as internal expectations within France. The fact that the decision to establish this strategy was made at the highest political level, facilitated its inter-sectoral implementation and coordination.

Sources:

Podesta, Gwenaël (August, 2018). "National Low Carbon Strategy" [Presentation]. French Ministry for Ecological Transition and Solidarity at the First Peer-to-Peer Dialogue event by EUROCLIMA+ / VII Regional Workshop LEDS LAC "Sectoral and multi-level coordination for strengthening the implementation of NDCs in Latin America" (August 3, 2018).

Ministere de la Transition ecologique et solidaire (July 2017). Stratégie Nationale Bas-Carbone (SNBC). <https://www.ecologique-solidaire.gouv.fr/strategie-nationale-bas-carbone-snbc>

Ministere de la Transition ecologique et solidaire (January 2018). Suivi de la Stratégie Nationale Bas-Carbone. <https://www.ecologique-solidaire.gouv.fr/suivi-strategie-nationale-bas-carbone>

The Case of Spain

Climate Change Management in Spain

Spain responded to the European Union's call to reduce emissions by 40%, as compared to 1990 levels by the year 2030, by creating the Ministry for Ecological Transition. This ministry joined the State Secretariat of the Environment and the State Secretariat of Energy for the purpose of transitioning towards a more ecological productive and social model in terms of the energy and environment sectors.

The Ministry for Ecological Transition has been developing Climate Projects for the Carbon Fund for a Sustainable Economy (FES-CO2), the objective of which is to promote a transformation of the productive sector towards a low emissions model. Specifically, there are projects to reduce GHG emissions in a number of sectors,³⁵ including transport, agriculture, housing, and waste, among others.

Regarding sectoral coordination, Spain already had other national organisms that allowed for sharing progress between different sectors. The Spanish Office for Climate Change works under the General Directorate for Environmental Quality and Evaluation, pertaining to the Ministry of the Environment, the objectives of which are to develop policies relating to climate change. For its part, the National Climate Council was created in 1992, and is dedicated to the promotion of research on climate change and its social and economic implications. This council is linked to the Ministry of Public Works, Transport and Environment.

There is also a Climate Change Policy Coordinating Commission, which coordinates work between the State and the Autonomous Communities for applying the commercial mechanisms covering emissions rights and fulfilment with international commitments. Finally, there is the Inter-Ministerial Climate Change Commission, which coordinates policies between the ministries. It is presided over by the Ministry of Agriculture, Food and Environment, and includes the participation of members from another 10 ministries.

In terms of multilevel coordination, Spain has developed the Network of Cities for Climate, which operates within the framework of the Spanish Network of Municipalities and Provinces. This initiative seeks to integrate climate change mitigation and adaptation into local public policies through technical assistance and by translating national policy objectives to a local scale. Local governments must fulfil certain formal prerequisites to join the network, and have to demonstrate concrete actions and commitments.

Recently, a Spanish Platform for Climate Action was created to enhance public-private collaboration, and to align corporate strategies with those of the government. The platform offers the chance to exchange best practices, identify tools for innovation, and develop reports evaluating results.

Finally, Spain is working on a Climate Change and Energy Transition Law that as a leverage policy in response to the 2030 agenda. This will guarantee a just, organized and socially fair transition. Work has been going on for almost a year, and has included a variety of actors from the public sector, business associations, academia, the private sector, researchers, and NGOs, working under an inter-ministerial commission; the project also included a public consultation phase. The Spanish Commission of Government Ministers approved the blueprint for the Climate Change and Energy Transition Law in February of 2019.

Sources:

Pinto, Ana (August, 2018). "Concrete experiences in the NDC implementation in Spain" [Presentation]. Spanish Office for Climate Change at the First Peer-to-Peer Dialogue Event by EUROCLIMA+ / VII Regional Workshop LEDS LAC "Sectoral and multi-level coordination for strengthening the implementation of NDCs in Latin America". Spanish Platform for Climate Change (s.f.). What is the Platform? <https://accionporelclima.es/la-plataforma> Ministerio para la Transición Ecológica (s.f.). Climate projects: <https://www.miteco.gob.es/es/cambio-climatico/temas/proyectos-clima/> Ministry for Ecological Transition (s.f.). Organismos e Instituciones implicadas en la lucha contra el Cambio Climático a nivel Nacional. <https://www.miteco.gob.es/es/cambio-climatico/temas/organismos-e-instituciones-implicados-en-la-lucha-contra-el-cambio-climatico-a-nivel-nacional/> Spanish Network of Cities for Climate (s.f.). What is the Network? <http://www.redciudadesclima.es/la-red>

³⁵ Refers to those sectors that are not subject to European regulations on commercial emissions rights.

Some remarkable aspects from the European cases that serve as lessons for the analysis of the Latin American sheets, are presented below:

- Carbon budgets: these work as sectoral targets that establish maximum emissions limits for specific periods of time. This is distinct from reduction targets, which are being used in Latin America, because the budgets imply long-term control over the evolution of total emissions, with more specific control measures within fixed periods (Carbon Estimate, 2011).
- Robust monitoring: it is interesting to note that the monitoring system integrates both qualitative and quantitative indicators to measure the effects of the overall strategy. It includes contextual indicators that ensure a more credible evaluation of the results, which goes beyond environmental changes alone.
- Public-Private Exchange: the Spanish Platform for Climate Action facilitates the active participation of the private sector and aligns corporate and state strategies. It is also not limited merely to reporting, but rather serves as a space for sharing best practices as well.

In general, these countries have more experience in climate change management due to having established goals under the Kyoto Protocol, which helped strengthen their later work.

3.4 National Sheets

• Argentina

Country	Argentina		
	NDC		
	<p>Argentina presented its iNDC on October 1st, 2015. As a result of the progress achieved during COP 21, particularly regarding the Paris Agreement, the country made the decision to revise its iNDC. Argentina signed and ratified the Paris Agreement on September 21st, 2016, through Law 27.270, by which the revised contribution replaced the initial version of the iNDC, in accordance with paragraph 22 of Decision1/CP.21. The country presented its Third National Communication in December of 2015, and its Second Biennial Update Report (BUR) in August of 2017. Furthermore, it is preparing a Long-term Strategy, in accordance with Article 4, paragraph 19 of the Paris Agreement.</p>		
Summary	<p>Mitigation – absolute target: Argentina will not exceed net emissions of 483 million tons of carbon equivalent (tCO₂eq) by 2030. This target will be achieved through the implementation of economic measures focused on the energy, agriculture, forestry, transport, industry and waste sectors. As a result of the review of the iNDC presented in 2015, the country improved its contribution, planning for unconditional mitigation measures that will decrease its target for 2030, from 570 to 483 million tCO₂eq.</p> <p>The impact of implementing the conditional measures has also been calculated; if all of these measures were to be implemented, it would limit emissions to 369 million tCO₂eq by 2030. These measures are not included in the contribution. If all the conditional measures were to be implemented together with the unconditional measures, Argentina would succeed in reducing emissions by a total of 223 million tCO₂eq, in terms of its baseline scenario for 2030.</p> <p>Adaptation – Argentina has adaptation measures focused on the forestry, water, crop management, health, conservation of biodiversity, and extreme events sectors.</p>	Development process	<p>The NDC development process included the participation of public (both national and provincial) entities, and private sector, civil society and academia representatives. The public sector is responsible for formulating the NDC, in consultation with the other actors.. The National Climate Change Cabinet was made responsible for revising the NDC. During the NDC development process, two extended roundtables were held; one at the beginning, and one halfway through the process. A final presentation was also made, prior to presenting the NDC to the United Nations Framework Convention on Climate Change (UNFCCC).</p>

Coordination	
Political- legal- institutional	<p>Argentina has 15 policies or standards that are expressly related to climate change,³⁶ and are focused on the promotion of renewable energies and the creation of institutional adjustments to respond to the challenge of climate change. An example of the former is the recent creation of a mechanism to promote distributed generation of renewable energy to be integrated into the public electricity grid.</p> <p>The National Climate Change Cabinet (GNCC) was created by Decree 891 in 2016, with the purpose of coordinating climate policies through the national ministries and government secretariats, at national and local levels.</p> <p>Three sectoral plans that respond directly to NDC commitments were developed within the GNCC framework during 2017. This process included the participation of various ministries as well as other actors, such as provincial governors, NGOs, academia, and private sector representatives. The plans presented were: the National Action Plan for Energy and Climate Change; the National Action Plan for Forests and Climate Change; and the National Action Plan for Transport and Climate Change. In addition to these plans, 2 others had been developed in 2018, for the industry and agriculture and livestock sectors. Yet another plan is currently under development for the infrastructure and territory sector. The sectoral plans contain some of the actions included in the country's National Mitigation Plan and National Adaptation Plan. It is expected that both of these plans will be finalised by the end of 2019, and together will form the National Plan in Response to Climate Change.</p>
Sectoral	<p>The creation of the GNCC demonstrates Argentina's progress in terms of the country's political and institutional framework for managing climate change. It was created by presidential decree and has representatives from most ministries and national government secretariats, including Energy, Treasury, Finance, Transport, Production and Work, Environment and Sustainable Development, Health and Social Development, Education, Culture, Science & Technology, Interior, Public Works and Housing, Foreign Relations and Culture, Agroindustry, Security and Defence.</p> <p>The GNCC is led by the Chief of Cabinet of Ministers for Argentina. The objective is to coordinate climate change policies through sectoral and transversal roundtables, coordinating between national and local levels, and promoting awareness on the importance of mitigation and adaptation to climate change. The main actions include the preparation of a National Plan in Response to Climate Change, and to propose national sectoral action plans.</p> <p>Argentina presented three sectoral plans at COP 23, which undergo periodic updating processes led by the GNCC:</p> <ul style="list-style-type: none"> - The National Action Plan for Energy and Climate Change proposes unconditional avoided emissions of 77 MtCO₂eq by 2030, and a further reduction by 101 MtCO₂eq, conditioned on financing and technology resources, given that the energy sector is that with the highest potential for mitigation in the NDC. There are four cornerstones: 1) Efficient Energy; 2) Renewable Energy; 3) Fuel; and 4) Large Scale Generation. Work on adaptation measures are being carried out in 2019. - The National Action Plan for Forests and Climate Change proposes unconditional avoided emissions of 27 MtCO₂eq by 2030, and a further reduction by 81 MtCO₂eq, conditioned on financing and technology resources. It is focused on conservation, sustainable usage (forest management integrated with livestock farming), restoration and recovery, prevention of forest fires, and a reduction in deforestation. - The National Action Plan for Transport and Climate Change proposes avoided emissions of 5.9 MtCO₂eq by 2030, with accumulated savings of 13.3 billion litres of diesel fuel (2011-2030). Mitigation measures include three cornerstones: 1) Urban public transport; 2) Inter-urban public transport; and 3) Cargo transport. Adaptation measures will be worked on during 2019.

36 See Annex 3

	<p>In 2018, the GNCC completed work on the National Action Plan for Industry and Climate Change, which commits to avoided emissions of 6.4 MtCO₂eq by 2030. Mitigation measures include four cornerstones: 1) Circular economy; 2) Renewable energy; 3) Energy efficiency; and 4) Carbon sequestration.</p> <p>The GNCC has also finalized work on the Mitigation Chapter of the National Action Plan for Agriculture and Climate Change, which proposes avoided emissions of 25.74 MtCO₂eq by 2030, in the fisheries, agriculture and agro-energy sub-sectors. There are also plans to make progress on the Adaptation Chapter in 2019.</p>
<p>National</p>	<p>One of the GNCC's objectives is to coordinate between the national and sub-national government levels. The Federal Commission for the Environment (COFEMA) is in charge of the roundtable for provincial coordination in Argentina, including all provinces and work on a local level. The country also has a Network of Municipalities Facing Climate Change (RAMCC),³⁷ which is an instrument for the coordination and promotion of local public climate change policy in member cities. Its objective is to implement climate change mitigation and/or adaptation projects and programmes, be they municipal, regional or national, based on the mobilization of local, national and international resources.</p> <p>The RAMCC coordinates local action, shares experiences and best practices, as well as evaluates the results of programmes developed by its member municipalities, integrating the recommendations supplied by international agencies. The RAMCC coordinated the local governments consultation in the NDC development process, in which it took on a validating role and was able to propose municipal targets related to climate change.</p> <p>The Federal Commitment on Climate Change was signed in 2017, representing an instrument that includes 22 jurisdictions and proposes around 200 provincial mitigation and adaptation measures. In terms of mitigation, Argentina has promoted the development of GHG inventories at a provincial level, and also established some low-carbon regulation initiatives at a local level. For example, the Autonomous City of Buenos Aires is developing building codes for new buildings that are aligned with sustainability criteria, and which incorporate aspects for managing climate change. The codes are being developed by the SSREGIC –MDUyT –GCABA Code Commission.</p> <p>At a city level, the Ecologistics project will soon be launched: low-emissions cargo transport for sustainable cities. The project promotes policies and practices regarding urban cargo transport, and is implemented by ICLEI Local Governments for Sustainability in Argentina, Chile and India.</p> <p>Finally, the Government Secretariat for Environment and Sustainable Development is developing a National GHG Inventory and NDC Measures Monitoring System.</p>
<p>Social</p>	<p>The GNCC is the primary governance structure for the coordination of actors working on climate change. It is a policy-making body to which ministers contribute, and a technical agency with focal points in the various ministries and government secretariats. It also manages provincial coordination, and runs extended roundtables to integrate other non-state and sub-national participants.</p> <p>The main actor in the development and implementation of the NDC is the National Climate Change Directorate, under the authority of the Secretariat for Climate Change and Sustainable Development, which itself pertains to the Government Secretariat for Environment and Sustainable Development. The GNCC has integrated a variety of government sectors into its work, including the Chief of the Cabinet of Ministers, a number of ministries and government secretariats, and the Federal Commission for the Environment (COFEMA), among others.</p> <p>Likewise, the main actors from the private sector involved in this work include the Industrial Union of Argentina, the Business Commission of Argentina for Sustainable Development, the Rural Society of Argentina, and various companies represented through their chambers of commerce. There has been significant participation from civil society, especially through the Environment and Natural Resources Foundation (FARN), Greenpeace Argentina, and the Wildlife Foundation.</p>

37 Available at: <http://www.ramcc.net/es/pages/home/map:1>

Financial	<p>According to a study on public financing in Argentina carried out by the Climate Financing Group for Latin America & the Caribbean (GFLAC, 2014a), there is only one item on the budget that expressly mentions climate change, including a total of US\$1,106,784. Another study by GFLAC (2014b) on international financing flows identified that between 2010 and 2014, there were a total of 136 projects labelled as relevant to climate change, financed to the tune of an estimated US\$283,000,000.</p> <p>According to the Argentinean Network of Municipalities in the face of Climate Change (RAMCC, 2019), to date there is a portfolio of 190 projects (on renewable energy, energy efficiency, sustainable transport, waste, adaptation and forestry, among others) from a total of 159 different municipalities, which have mobilized US\$714,377.³⁸</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - The development of concrete sectoral plans by the National Climate Change Cabinet. - Development of a proposed bill of law establishing minimum budgets for climate change projects. - Development of a National Adaptation Plan, a National Mitigation Plan, and a National Plan in Response to Climate Change - Development of a long-term strategy - NDC revision process to increase ambition. - Enhanced interaction between national and sub-national levels to improve NDC development, revision and implementation processes. This includes increasing the budget allotted, and capacity building at a local level; For example, in preparing projects and accessing sources of international funding. 	<ul style="list-style-type: none"> - Improve the exchange of best practices, lessons learned, and experiences. In particular, with other countries of Latin America.

• **Bolivia**

Country	Bolivia (Plurinational State of)		
NDC			
Bolivia signed up to the Paris Agreement in April of 2016, and ratified it the following October, converting its iNDC into its NDC. To date, the country has not presented a Biennial Update Report (BUR). The country's Second National Communication was presented in 2009, and its Third Communication will be presented in 2019. Bolivia has plans to update its NDC in 2020.			
Summary	<p>Bolivia's NDC utilizes an integrated climate change adaptation and mitigation approach, aligned with its 'Living Well' policy, which prioritizes three areas: water, energy and forests/ farming. Its contribution establishes targets for 2030 using one baseline scenario based on national efforts, and another more ambitious scenario based on receiving international financial aid. In addition, the country has proposed a Climate Justice Index for the fair and equitable distribution of global emissions budget for the future.</p>	Development process	<p>The Bolivian NDC was designed through coordination between the Ministry of Planning for Development and relevant sectors, in a process that was consistent with the country's historic climate change negotiating position, and with its commitment to integrated development, in accordance with the 2025 Bicentennial Patriotic Agenda, and the State's medium-term integrated planning process</p>

³⁸ This amount can be divided into donations provided by the Swiss, New Zealand and German embassies in Bolivia.

Coordination	
Political- legal- institutional	<p>Bolivia's NDC was designed in a process that was consistent with the country's historic position on climate change negotiations, and its commitment to integrated development, in accordance with the statutes of the Political Constitution of the State, Law 71 on the Rights of Mother Earth, and Law 300 for the Framework Law of Mother Earth and Holistic Development for Living Well; the 1696 Supreme Decree, the Bicentennial Patriotic Agenda (Law 650); the Socio-Economic Development Plan (Law 786); and Law 777 for integrated state planning at sectoral and sub-national.</p> <p>The regulatory framework for climate change can be found in Law 300, the Framework Law for Mother Earth and Holistic Development for Living Well (2012). Its objective is to establish the vision and foundations for integrated development in harmony and balance with Mother Earth for living well. It seeks to guarantee the continued capacity of Mother Earth to regenerate her natural systems by recovering and strengthening local and ancestral practices within a framework of legal rights, obligations and responsibilities.</p> <p>Thus the Plurinational Authority for Mother Earth (Autoridad Plurinacional por la Madre Tierra-APMT) was established as the strategic, autocratic, public legal entity, with autonomy for administrative, technical and economic management, under the aegis of the Ministry of Environment and Water. This institution operates within the framework policy and the Plurinational Climate Change Plan for Living Well, with a transversal and inter-sectoral approach. It is responsible for policy formulation, planning, technical management, designing and carrying out strategy, plans and programmes, administration, and the transfer of financial resources related to the processes and dynamics of climate change (Law 300, Art. 53).</p> <p>The APMT operates through three mechanisms: (1) A combined mitigation and adaptation mechanism for the integrated and sustainable management of forests; (2) A mitigation mechanism for living well and; (3) an adaptation mechanism for living well.</p> <p>The NDC was therefore conceived as part of the integrated and sustainable development of the country, incorporating adaptation, mitigation and risk management, and in which multilevel coordination is paramount.</p>
Sectoral	<p>The APMT is responsible for coordinating all sectors involved in the struggle against climate change, using its own internal mechanisms and through consultative platforms, through which actors from the different priority sectors identified in the NDC are able to participate.</p> <p>As focal point to the United Nations Framework Convention on Climate Change (UNFCCC), it is also responsible for generating reports within the UNFCCC framework and the Paris Agreement.</p> <p>In terms of the Bolivian NDC, there is a focus on water, energy, forests and farming, with the following objectives:</p> <ul style="list-style-type: none"> • Water. Increase integrated adaptive capacity, and systematically reduce hydrological vulnerability in Bolivia. • Energy. Increase capacity for renewable energy electrical power generation to serve local and regional development. • Forests and Agriculture. Increase joint mitigation and adaptation capacities through integrated and sustainable forest management. <p>Bolivia's NDC does not include sectoral targets for GHG emissions because it is focused on developing structural changes that will promote integrated, low-emissions, climate-resilient. However, there are sectoral targets in terms of, for example, tripling water storage capacity by 2030; increasing the use of renewable energy by 79% by 2030; and increasing forested areas under integrated and sustainable management models to 16.9 million hectares by 2030, through a community-based approach.</p> <p>These targets were developed in coordination with the different sectors and in accordance with the projections framed by the goals of the Socio-Economic Development Plan 2010-2016. Currently, the medium-term evaluation of this plan is being carried out, and the corresponding adjustments required for the NDC will be based on the results of that work.</p>

	<p>In the forestry sector, Bolivia has initiated pilot programmes for the joint mitigation and adaptation mechanism for integrated and sustainable forest management, an alternative approach designed to reduce GHG emissions caused by deforestation and degradation (REDD+) by offering payment upon results. This is intended to promote integrated and sustainable use of forest resources and life systems by promoting conservation, protection and restoration of biodiversity and environmental functions through the development of sustainable productive systems, aimed at reversing the structural causes of deforestation. Currently, the APMT is producing guidelines for upscaling this joint mechanism approach at national and international levels.</p>
Multilevel	<p>Bolivia's NDC was designed within the framework of its Socio-Economic Development Plan (PDES), which is coordinated at a national level through departmental and municipal plans. After the mid-term evaluation of this plan has been completed (currently underway), overall progress will be determined and adjustments will be made to the fundamental pillars, targets and results, contributing directly to the NDC. Afterwards, information will be passed on to sub-national actors.</p> <p>Regarding progress in the implementation of the NDC, there is continuous coordination between the Ministry for Development Planning and the APMT, as well as with other sectors involved, in order to progress with monitoring and evaluation of the results, actions and indicators, as part of the Integrated State Planning System.</p> <p>Periodic workshops are also being held with sub-national, autonomous and decentralized entities in order to increase social awareness of the NDC. Furthermore, roundtables on the prioritized areas are currently reviewing possible means for identifying actions and relevant indicators for the NDC.</p>
Social	<p>Bolivia's PDES, upon which the NDC is based, was developed based on extensive horizontal and vertical coordination carried out by the Ministry for Development Planning, including the participation of local governments, civil society, and economic actors within the framework of a pluralistic economy.</p>
Financial	<p>1) Calculation of financial needs Currently being estimated.</p> <p>2) Financial strategy The financial needs for the implementation of the NDC are related to national efforts (domestic resources) and international cooperation (external financing). Domestic resources consist of investments prioritized mainly by the General Treasury of the State.</p> <p>It is hoped to finance the upscaling initiative with non-refundable funds from the Green Climate Fund, in the context of the provision of the means of implementation committed by developed countries.</p> <p>3) Existing mechanisms The Plurinational Fund for Mother Earth is the financial mechanism administered by the Plurinational Authority of Mother Earth, which was established by Supreme Decree 1696, for the purpose of channelling, administering and assigning financial resources efficiently, transparently, and in a timely and sustainable manner. It supports the development of climate change adaptation and mitigation plans, programmes, projects, initiatives, actions and activities. This fund has been operational since 2017, and has financed multiple projects under the aegis of the Joint Mechanism, and is currently seeking re-financing.</p> <p>4) Designated budget and/or estimate of national and international investment in climate change the Socio-Economic Development Plan is currently being evaluated Once this stage has been completed, official information will be available regarding the designated budget and resources spent in Bolivia, which will have repercussions for the NDC.</p> <p>There is a study by the Financial Climate Group for Latin America and the Caribbean (GFLAC) that claims that part of the national budget had been assigned to climate change in 2015³⁹, but the categories utilized do not relate to the NDC, or to its general focus.</p>

39 https://docs.wixstatic.com/ugd/32948d_b4f0f73a0eb244e5b26a0a3af2b95226.pdf

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - Bolivia has an Integrated State Planning System (Sistema de Planificación Integral del Estado-SPIE) and a Socio-Economic Development Plan that includes pillars, targets and results related to the NDC, and which integrates territorial actors and allows for climate change work to be carried out at various levels. - The Plurinational Authority for Mother Earth, through its coordination with different sectors and levels of governance, provides Bolivia with an institution that has the technical and financial resources that are robust enough to implement climate change actions within the framework of its NDC. 	<ul style="list-style-type: none"> - To improve coordination between sectors through appropriate mechanisms of the SPIE, in order to facilitate follow-up regarding fulfilment of stated NDC goals. - Strengthen monitoring, evaluation and reporting instruments for the implementation of the NDC, including indicators. - Improve information management related to climate financing, including instruments related to planning and public finances. - Evaluate and, if necessary, update the NDC in 2020.

• Brazil

Country	Brazil		
NDC			
Brazil presented its iNDC in September of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it in September of the same year, when its iNDC became the official NDC. The country presented its Second Biennial Update Report (BUR) in 2017, and the Third National Communication in 2016.			
Summary	<p>Mitigation – absolute target: Emissions reduction of 37% compared to 2005 levels, by the year 2025. Prioritized sectors include land use change, energy (including biofuels), agriculture, industry, and transport. This is an unconditional target. As a complementary goal for 2025, Brazil calculates that by 2030, it will have succeeded in reducing GHG emissions by 43%, compared to 2005 levels, but that is only a referential figure and is not part of its official NDC.</p> <p>Adaptation – Brazil’s NDC contains commitments to adaptation in terms of building resilience among the population, of its ecosystems, productive systems and infrastructure, by reducing vulnerability through the provision of ecosystem services.</p>	Development process	Brazil designed its iNDC with input from its citizenry. A national consultation process took place starting in June of 2014, to gauge public expectation regarding the international climate agreement.
Coordination			
Political-legal-institutional	In the case of Brazil, 19 policies or regulations related to climate change management have been identified at the national level. ⁴⁰ Fifteen of them were developed prior to the Paris Agreement, and four were presented afterwards. Of the total, 14 of the policies are related to energy, and 12 policies imply some kind of administrative or institutional adjustment. On the other hand, five are related to the reduction of GHG emissions caused by deforestation and forest degradation (REDD+), forests, or land use change.		

⁴⁰See Annex 3.

<p>Political-legal-institutional</p>	<p>The Department of Climate Change (DEMC) of the Ministry of the Environment is charged with carrying out follow-up work on the country's development plans.</p> <p>The National Strategy for the Implementation and Financing of the NDC of Brazil also articulates the Federal Government, state governments, municipalities, and relevant economic and social sectors, representative organizations, NGOs, social movements and other interested groups, through structured dialogues that were organized throughout the first half of 2017.</p> <p>The Brazilian Forum for Climate Change was re-established by Decree 9.082 in 2017. This Forum seeks to raise consciousness and mobilize society to contribute to the discussions on how best to fight climate change. The Decree reflects the Brazilian NDC presented in Paris, and is subdivided into ten thematic chapters: adaptation, risk management and resilience; forests, biodiversity, agriculture and fishing; energy; transport; industry; cities and waste management; finance; defence and security; science, technology and innovation; and a long-term vision. This Decree revokes the previous version, which had been issued on August 28th, 2000 at the Brazilian Forum for Climate Change (FBMC), and details which ministers and other public officials, as well as which members of civil society, are to become members of the Forum.</p> <p>Also in 2017, Decree 9.179 on Administrative Violations and Sanctions regarding the Environment modified Decree 6.514 (2008), which had already established administrative violations and punishments regarding the environment, incorporating a federal administrative process to determine such offences. Article 140 on the preservation, improvement and restoration of environmental quality stipulates that mitigation and adaptation to climate change is one of the objectives covered by actions, activities and work included in the scope of the Decree.</p> <p>Law 13.576 was also recently presented, which focuses on the National Biofuels Policy (RenovaBio)⁴¹ and its principles, objectives, foundations and instruments. RenovaBio certifies biofuel producers, and establishes objectives regarding GHG emissions reductions from the fuel matrix, and regulates the issuance and sale of carbon credits.</p> <p>Furthermore, Brazil has a National Climate Change Adaptation Plan (NAP), which was established on May 10th, 2016, by means of the Portaria n. 150. This is an instrument developed by the federal government in collaboration with civil society, the private sector and local governments, with the objective of reducing national vulnerability to climate change and managing climate-related risks. This involves identifying the country's exposure to current and future impacts based on climate projections, identification and analysis of vulnerability to such impacts, and defining actions and lines of action aimed at sector-based adaptation. The NAP looks at 11 sectors represented by their corresponding government offices: agriculture, water resources, food security, biodiversity and ecosystems, cities, disaster risk management, industry and mining, infrastructure, vulnerable populations, health, and coastal zones.</p>
<p>Sectoral</p>	<p>Brazil's NDC for the energy sector proposes an 18% increase in the use of sustainable biofuels within the country's energy matrix by 2030. The increase in the consumption of biofuels will be led by increasing the availability of ethanol, especially through increased availability of advanced, second generation biofuels, and by increasing the proportion of biodiesel within diesel fuel. Furthermore, the country plans for the use of renewable energy to make up an estimated 45% of its energy sector by 2030, including an expansion in the use of renewable sources and increasing the use of non-fossil fuel-based energy in the domestic sector, and increasing the proportion of renewable energy used in electricity generation to at least 23% by 2030.</p> <p>In the forestry and land use change sector, the NDC sets out to improve compliance with the Forestry Code at federal, state and municipal levels; also to enhance policies and measures to ensure zero illegal deforestation in the Brazilian Amazon by 2030, and to compensate for GHG emissions arising from legal forest fires by 2030; to restore and reforest 12 million hectares of forest by 2030; and, furthermore, to increase the scale of sustainable management systems for native forests using geo-referencing and traceability measures that can be applied to the management of native forests, aimed at restraining illegal and unsustainable practices.</p>

41 Ministério de Minas e Energia Pesquisas. Renovabio. Available at: <http://www.mme.gov.br/web/guest/secretarias/petroleo-gas-natural-e-combustiveis-renovaveis/programas/renovabio/principal>

Sectoral	<p>In the agriculture sector, an enhanced Low Carbon Emissions Agriculture Plan (PlanABC) is intended to be the main strategic tool for sustainable development, which also proposes an additional restoration of 15 million hectares of degraded pastures by 2030; and an increase to 5 million hectares of areas of Integrated Crop-Livestock-Forest (ICLFS) by 2030. The plan's objectives are to reduce GHG emissions resulting from farming activities; reduce deforestation; increase farm production based on sustainable practices; adapt rural properties to environmental legislation requirements; increase forest plantations; and stimulate the recovery of degraded areas. The plan is financed by the Bank of Brazil, and has benefitted 20 states to date.</p> <p>In the industrial sector, Brazil is looking to promote new standards for clean technologies and increase energy efficiency measures and improve low carbon infrastructure. In the transport sector, Brazil is promoting efficiency measures, and improvements to transport infrastructure, including public transport in urban areas.</p>
Multilevel	<p>There has been progress at a sub-national level in some Brazilian states, which have begun to develop climate action plans and projects. The State of Mato Grosso presented a Produce, Conserve and Include (Produzir, Conservar, Incluir)⁴² programme in 2015, which seeks to restore 2.5 million hectares of degraded lands, reduce Amazonian deforestation by 90%, and by 95% in the Brazilian Pantanal, by 2030.⁴³ Another example is in the State of Para, which has designed mitigation strategies for its 2030 Plan that promote low-carbon development and the reduction of GHG emissions.</p> <p>An association between the Ministry of Environment of Brazil (MMA-Brazil), the British Commission (CB), the Getúlio Vargas Foundation (FGV) and the International Institute for Environment and Development has resulted in the AdaptaClima platform.⁴⁴ This is a collaborative site for the systematization and sharing of climate change adaptation initiatives, allowing for improved access to knowledge, as well as connecting people working on the climate agenda in Brazil. The country also has a System for Climate Vulnerability (SisVuClima),⁴⁵ designed by the Ministry of Environment (MMA) and Fiocruz. It includes 64 variables for identifying and mapping areas most vulnerable to climate change, including their adaptation needs. The system has been used in six Brazilian states: Amazonas, Espírito Santo, Mato Grosso do Sul, Maranhão, Paraná and Pernambuco.</p>
Social	<p>Brazil has a Climate Observatory (OC)⁴⁶ that consists of a network that joins civil society representatives for the purpose of discussing the country's climate policy. The OC also promotes meetings with experts and coordinates civil society organizations in campaigns designed to ensure that the Brazilian government lives up to its commitments, and creates effective public policy that works in favour of climate change mitigation and adaptation in Brazil. In January of 2015, the OC carried out a survey to support the development of Brazil's iNDC (Observatório do Clima, 2015).</p> <p>Brazil has a multi-sectoral movement called the Brazil Climate, Forest and Agriculture Coalition, made up of the primary leaders of agribusiness, and including the main NGOs working on environment and climate issues, as well as academic representatives, sectoral associations, and leading companies in the wood, cosmetics, steelmaking, paper and cellulose sectors, among others. The movement has a baseline document that contains 17 concrete proposals aimed at GHG emissions reductions and developing a low-carbon economy. It has also participated in the launch of the National System for Control over the Origin of Forest Products (Sinaflor); has signed up to the National Plan for the Recovery of Native Vegetation (Planaveg); and has participated in the public consultation process regarding the implementation of Brazil's NDC.</p> <p>In terms of climate litigation, 11 cases have been reported in Brazil. In some cases climate change is a key argument in the case, while in others it is a secondary element. One of the most recent cases covers a series of collective accusations made by government inspectors in 2014 against airlines using the international airport of Sao Paulo, demanding that land around the airport should be reforested to compensate for GHG emissions and other contaminants arising from the use of the (expanded) airport.</p>
Financial	<p>The country is in the midst of preparing its proposal for the Green Climate Fund (Secretariat for Foreign Affairs, 2018), for the purpose of aiding the implementation of its NDC. This action is designed to work within the context of the investment criteria established by the GCF, as well as by existing climate change policies and strategies in Brazil, and to identify areas suited to investment through a democratic and participatory process.</p>

42 Produzir, Conservar, Incluir. <http://pci.mt.gov.br/> 43 Pará 2030. <http://para2030.com.br/>

44 Centro de Estudos em Sustentabilidade. <http://gvc.es.com.br/adaptaclima>

45 Sistema de Vulnerabilidad Climática - SisVuClima. <http://www.sisvuclima.com.br/>

46 Observatório do Clima. <http://www.observatoriodoclima.eco.br/>

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - The methodology for the evaluation of vulnerability to climate change at a municipal level, known as SisVuClima, will establish the location of the most vulnerable areas across Brazil. - The experience of the Country Programme Development Process for the Green Climate Fund will improve familiarity with the process of applying for funding from this source, increase experiences with involving relevant actors, and provide a summary of sectoral policy and strategic plans that have already been established. - Progress in the reduction of deforestation and the implementation of REDD+. 	<ul style="list-style-type: none"> - There is a lack of coordination between the different municipalities for sharing information and solutions. - There is a need for training and improved technical skills for the development of projects at local or sub-national levels.

• Chile

Country	Chile		
NDC			
Chile presented its iNDC before the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) on September 29th, 2015, and signed up to the Paris Agreement on September 20th, 2016. It was ratified in February of 2017, making its iNDC into Chile's NDC. The country presented its third Biennial Update Report (BUR) in December of 2018, and its Third National Communication in November of 2016, during the COP22.			
Summary	<p>Mitigation – Chile has a carbon intensity target that does not include the land-use, land-use change and forestry (LULUCF) sector, proposing a reduction of CO2 emissions per unit of GDP by 30%, as compared with 2007 levels. Furthermore, the NDDC proposes reductions of between 35% and 45% by 2030, conditioned on international financing. The priority sectors include energy, industrial processes, use of solvents and other products, and agriculture (including livestock and agricultural waste).</p> <p>In addition, there is a specific contribution that relates to the LULUCF sector, which is focused on sustainable management and the restoration of 100,000 hectares of mostly native forest, as well as the forestation of 100,000 hectares with mostly native species.</p>	Development process	<p>The NDC set the GHG emissions reduction target based on sectoral analysis and mitigation scenarios developed within the framework of the MAPS-Chile (Phase 2) project, the results of the National GHG Inventory (1990-2010), additional information supplied by the ministries for the Environment, Energy, Treasury, and Agriculture, as well as information received as a result of a public consultation process.</p> <p>Regarding adaptation, Chile's NDC included the progress made in the development of the country's adaptation policies that had already been achieved, and proposed ways to advance the implementation of these policies and to work on aspects where gaps have been detected.</p>

<p>Summary</p>	<p>Adaptation - Chile is committed to the implementation of concrete actions to increase its climate resilience, within the framework of the National Plan for Adaptation to Climate Change and the sectoral plans, with a decentralized perspective and seeking the integration of efforts between the different decision-making levels (national, regional, municipal). Furthermore, it commits to the recognition of financing sources for the implementation of these plans, within the framework of what stated in the pillar of financing of the same contribution. Additionally, it establishes the creation of synergies between mitigation initiatives, the maximization of benefits coming from the pillars of development, the construction of capabilities and the creation and transfers of technologies included in this contribution. Lastly, it is proposed the strengthening of the institutional framework for adaptation in the country and the preparation of metrics and mechanisms for measuring sectoral plans.</p>	<p>Development process</p>	<p>The filing included a formal public consultation process lasting four months, which was established to receive comments from the different stakeholders of the society.</p> <p>Due to changes in national and international circumstances, Chile anticipated the need to update its contributions and consequently formed the Public Sector Working Group (GTSP-NDC). This is a collaborative instance composed of authorities from eleven (11) ministries, and coordinated by the Ministry of the Environment, which started its work in 2017. Some of the topics that have been discussed include the reformulation of the national goal into an absolute goal; the level of ambition of the new target; to maintain or not the separation between conditional and unconditional goals; and the follow-up of the pre-2020 commitment.</p>
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<p style="text-align: center;">Coordination</p>	
<p>Political-legal-institutional</p>	<p>The primary actor responsible for the management of climate change in Chile is the Climate Change Office of the Ministry of Environment of Chile (MMA-Chile). The public sector as a whole includes several ministries, including the Ministry of Interior and Public Safety; the Ministry of Foreign Affairs; the Ministry of National Defence; the Treasury; the Secretary General of the Ministry for the Presidency of the Republic; the Ministry of Economy; the Ministry of Tourism; the Ministry of Social Development; the Ministry of Education; the Ministry of Public Works; the Ministry of Health; the Ministry of Housing and Urban Planning; the Ministry of Agriculture; the Ministry of Mining; the Ministry of Transport and Telecommunications; and the Ministry of Energy.</p> <p>After the Paris Agreement, Chile presented its National Action Plan for Sustainable Consumption and Production 2017-2022, which contains a strategic governmental vision for guiding Chile towards a low carbon economy. Likewise, a GHG Mitigation Plan for the energy sector was presented, which presents scenarios and objectives for specific reductions. The plan promotes the incorporation of renewable energy within the country's energy matrix, as well as energy efficiency.</p> <p>The coordinating instrument for all the country's Climate Change policies is the National Climate Change Action Plan (PANCC 2017-2022), revised and renewed every 5 years, which articulates and integrates all public policies relating to climate change under one instrument. This plan, along with the process for its periodic revision, will come to be guided by the National Climate Change Strategy to 2050, which is currently being developed. The PANCC is also the instrument for preparing and promoting fulfilment with all of the pillars included in the NDC.</p> <p>The Paris Agreement was approved by the Chilean Congress in 2017, through Decree 30. That same year also saw the approval of Decree 52, creating the Permanent Presidential Advisory Commission on Climate Change, the mission of which is to advise the President of the Republic regarding the identification and formulation of policies, plans, programmes, measures and other activities relating to climate change, including compliance with the Paris Agreement and other international agreements; and also to develop proposals for national public policy on climate change. The Ministry of Environment will act as the Technical Secretariat for the commission, providing technical and administrative support necessary for its functioning.</p>

<p>Political-legal-institutional</p>	<p>As of December of 2014, Chile has a National Plan for Climate Change Adaptation, which will soon be subject to revision. This plan includes the primary lines of action for adaptation in Chile, providing an operational structure for coordination and implementation, using both a sectoral and transversal approach at different administrative levels throughout the country. The plan prioritizes 9 sectors for the development of sectoral adaptation plans, of which, to date, 7 have been approved. These seven are being implemented in the forestry, biodiversity, fishing and aquaculture, health, infrastructure, cities, and energy sectors. Two plans, on water resources and tourism, are currently being developed. The plans for forestry and biodiversity are currently being revised. In addition, work is being done to promote the establishment of metrics for monitoring progress in the implementation of these instruments.</p> <p>In 2018, the government announced the development of a Climate Change Law, currently being developed, and expected to be submitted to Congress for validation by August of 2019. The developed process included a public consultation process through citizen dialogues on the initiative.</p>
<p>Sectoral</p>	<p>Chile has a variety of committees for inter-sectoral coordination at different levels. The Council of Ministers for Sustainability (Consejo de Ministros por la Sustentabilidad-CMS) is presided over by the Minister of Environment, and includes the participation of 11 other ministers (Agriculture, Treasury, Health, Economy, Growth and Reconstruction, Energy, Public Works, Housing and Urban Planning, Transport and Telecommunications, Mining, and Planning). There is also an International Negotiation Committee, which is presided over by the Ministry of Foreign Affairs, and made up of the ministries of Energy, Agriculture and Environment. This committee is responsible for the process of national consensus relating to the international climate negotiations at the Conference of the Parties (COP).</p> <p>The Technical Inter-Ministerial Climate Change Team (Equipo Técnico Inter-Ministerial de Cambio Climático-ETICC) was founded in 2015, as established in the National Adaptation Plan. It is made up of the climate change focal points in each ministry and public service, and functions as a technical coordinating mechanism for developing climate change policies, developing the national communications, and elaborating the Biennial Update Reports, among other things. Finally, the National Designated Authority to the Green Climate Fund is the Sub-secretariat of the Treasury, which is supported by a Technical Secretariat managed by the Ministry of Environment, together with the Treasury and the Ministry of Foreign Affairs.</p> <p>The National Climate Change Adaptation Plan (NAP) was approved by the CMS in December of 2014. This Plan establishes objectives, principles and conceptual frameworks for adaptation; it decides which sectors need to have an adaptation plan and advises on the development and implementation process for the sectoral plans. It also determines the methodological foundations for the development of public policy in Chile designed to manage adaptation to climate change.</p> <p>Of the 9 sectors that have been prioritized for plans, the first to be developed was the Adaptation Plan for Agriculture, Forestry and Livestock, in January of 2013. It involves 12 different institutions pertaining to the Ministry of Agriculture, and includes 21 national adaptation measures for the agriculture and forestry sectors. The forestry sector has implemented the REDD+ initiative through the National Forestry Corporation (Corporación Nacional Forestal-CONAF), which also contributes towards Chile's voluntary commitment to the UNFCCC to reduce GHG emissions by 20%. This initiative is complemented by the Nationally Appropriate Mitigation Action (NAMA) for forestry. The sectoral national adaptation plans currently in the implementation stage include: Agriculture, Forestry and Livestock (2013), Biodiversity (2014), Fishing and Aquaculture (2015), Health (2016), Infrastructure (2017), Cities (2018) and Energy (2018).</p> <p>The Biodiversity Plan includes 50 actions organized according to 4 specific objectives: i) biodiversity research and capacity building for environmental management, information and awareness at national, regional and local levels; ii) promotion of sustainable productive practices for adaptation to climate change in biodiversity and ecosystem service maintenance; iii) consideration of biodiversity objectives in land use and urban planning instruments, and regional land use plans (Plan Regional de Ordenamiento Territorial-PROT) or others, as a climate change adaptation mechanism; and iv) strengthening of the National System of State Protected Areas and the implementation of climate change adaptation measures for ecosystems and species, on land and water, and for coastal areas, inland waterways, marine environments and islands, as well as for rural, urban and semi-urban areas.</p>

<p style="text-align: center;">Sectoral</p>	<p>The Fishing and Aquaculture Plan includes 29 actions organized according to 5 specific objectives: i) promote a precautionary and ecosystemic approach in the fishing and aquaculture sector, especially for improving the resilience of marine ecosystems and coastal communities that depend on hydro-biological resources; ii) promote the research needed to improve knowledge on climate change impacts and scenarios in terms of the conditions and ecosystem services upon which fishing and aquaculture activities depend; disseminate information on the impacts of climate change to provide education and training on these issues for relevant stakeholders; improve the regulatory, political and administrative framework to better face the challenges and opportunities presented by climate change, and to develop direct adaptation measures that can contribute towards reducing vulnerability to and the impact of climate change, in relation to fishing and aquaculture. The Health Plan includes 16 actions, organized according to 8 categories: i) strengthening institutions; ii) enhancing human resources; iii) research; iv) monitoring; v) citizen health promotion; vi) emergency response; vii) vulnerability reduction; and viii) healthcare services. This plan has already been approved by the CMS. Also approved are the Infrastructure Plan (Dec 2017); the Adaptation Plan for Cities; and the Adaptation Plan for Energy (2018). The adaptation plans for water resources and tourism are being developed in 2018-2019. For 3 of the 4 plans already being implemented, the MMA-Chile acquired almost USD\$ 13MM in financing from international funds (GEF, United Nations Adaptation Fund).</p> <p>Various initiatives have been developed for the energy sector. An MRV platform has been designed for mitigation actions in the energy sector, which provides public access to monitoring and reporting activities, in order to improve transparency. In 2018, the Ministry of Energy launched a roundtable to promote sustainable mechanisms for the energy sector through a Partnership for Market Readiness (PMR) project. This project analysed the different types of certifications that exist in Chile, such as transferable market instruments that infer attributes or acknowledgement, in order to define the criteria that must be met. The Ministry of Energy has also launched a roundtable on decarbonisation that is intended to devise a roadmap for the closure or reconversion of coal-fired power plants. The Ministry of Environment also participates in this roundtable.</p>
<p style="text-align: center;">Multilevel</p>	<p>In the regions of Chile, climate change work is carried out by the Regional Climate Change Committees (Comité Regional de Cambio Climático-CORECC), which are presided over by the Intendant of the regional government. The CORECCs include the participation of the Regional Ministerial Secretariats (Secretarías Regionales Ministeriales-Seremis), local municipal representatives, and those representing the regional consultative councils. The CORECCs coordinate the various sectors and municipalities for the implementation of regional climate change policies.</p> <p>The CORECCs were established by the National Plan for Climate Change Adaptation, in order to respond to the need for a regional coordinating institution. The first CORECC was established in early 2016, and currently all regions have operational CORECCs. The CORECC of Valparaíso has accessed funding for the development of a climate change resilience plan, a project that is currently underway.</p> <p>At a local level, there is also the Chilean Network of Municipalities for Climate Change, which is made up of 45 municipalities and is also open to membership from other municipalities willing to take on a commitment to climate planning and development. Through this initiative, participating municipalities establish municipal climate profiles, which can be used to better understand negative local impacts from climate change. Local climate change plans are also used as internal municipal planning instruments for integrating and implementing adaptation measures into local management. This initiative also uses the Manual for Incorporation into the Chilean Network of Municipalities for Climate Change.</p>

<p>Multilevel</p>	<p>Chile also has a Municipal Environmental Certification System (Sistema de Certificación Ambiental Municipal-SCAM), managed by the Ministry of Environment. Municipalities are free to voluntarily integrate an environmental management model into their work both internally and in their territories, following international standards such as ISO 14.001, and the Community Regulations for Eco-management and Eco-auditing. In addition, there is the Energy Community initiative designed by the Ministry of Energy, which promotes the development and implementation of Local Energy Strategies. The development of these strategies contemplates a participatory process that invites contributions from civil society, companies, academia, local governments and the national government.</p> <p>Local projects that are suitable for international support have also been identified. For example, there is the ‘Enhancement of Resilience to Climate Change for Small Agriculture’ project developed by the Chilean Development Cooperation Agency, with the objective of helping members of the Institute for Agroforestry Development to improve their water management and use for crops, and to increase the resilience of rural farming communities in eight coastal communities in the coastal desert regions. The Climate Change Adaptation Fund provided financing of US\$9,960,000, which will be managed by the Ministry of Environment, the Ministry of Agriculture, and the Regional Government.</p> <p>At the city level, the project ‘Cities ready for Climate Change’ (Ciudades aptas frente al cambio climático) project is on-going, and is aimed at assisting municipal leaders to adapt and implement their development plans in order to ensure urban centres are prepared for climate change. Another example is the Ecologista project that promotes low-carbon policies and practices for urban cargo transport. And Canada is supporting Chile in an initiative designed to significantly reduce GHG emissions in the municipal waste management sector, through the Reciclo Orgánicos programme.</p>
<p>Social</p>	<p>The main actors at a sub-national level are the Regional Ministerial Secretariats of Environment (SEREMIS), the Regional Climate Change Committees (CORECC), and the Chilean Network of Municipalities for Climate Change. The private sector is represented through a national consultative council, and by regional consultative councils. There is also the Climate Leaders Group and the Global Compact in Chile. Civil society is also represented through the national and regional consultative councils, and relevant NGOs active in Chile include Terram, WWF Chile, FIMA and Adapt Chile.</p> <p>Furthermore, the country has the Footprint Chile (HuellaChile) programme, led by the Ministry of the Environment, with the objective of promoting the management of GHG emissions in public and private organizations, in order to mitigate GHG emissions for Chile as a whole.</p>
<p>Financial</p>	<p>In order to calculate the financial needs for the NDC, a National Financial Strategy for Climate Change is being developed, which will provide information regarding sectoral financing gaps in terms of supply and demand, for those sectors that have been prioritized in terms of their strategic relevance to the development of a low-carbon economy.</p> <p>A National Financial Strategy for Climate Change makes up part of Chile’s NDC commitments, and must include the following elements as a minimum:</p> <ul style="list-style-type: none"> • A periodic analysis of public expenditures both direct and indirectly related to climate change, to be updated annually starting in 2020. • The creation of the internal institutionality needed to manage and coordinate the country’s best possible working relationship with the Green Climate Fund, among other responsibilities. This institution will be responsible for compiling and evaluating a portfolio of projects for potential funding, which incorporates a multi-sectoral perspective. • The design of financial instruments that could be used for adaptation and technology transfer. <p>The Treasury is currently developing this strategy, and it is expected to be announced in early 2019. The focus is on having a coherent evaluation of climate financing that can identify a variety of sources of public, international and private funding. It will also seek to identify initiatives capable of maximizing capital flows by creating a positive investment climate, closely aligned with the country’s economic development plan.</p>

<p>Financial</p>	<p>There are currently a variety of climate financing mechanisms, among which the public financing instruments are of particular interest. These make up part of a public climate expenditure expressed as mitigation and adaptation projects and programmes. In addition, there are private funding sources that use various instruments, such as loans, equity, and guarantees, among others.</p> <p>It is important to note that Chile has instituted a carbon emissions tax by law, of US\$5 per ton of CO2 eq. Also, the Division for Evaluating Social Impact of Investments at the Chilean Ministry of Social Development has been reporting the annual social carbon price since 2013. This was updated most recently in 2016, and it is estimated that it applies to a quarter of all investments in the country, which facilitates incorporating this information into long-term decision making.</p> <p>In addition to the above, the country also has the Agency for Sustainability and Climate Change, which seeks to promote the inclusion of the climate change and sustainable development dimension in the private sector and sub-national territories. This is achieved through voluntary agreements, coordination among public institutions, development initiatives, and supporting programmes and projects that contribute to the development of a sustainable, climate-resilient and low-carbon economy.</p> <p>According to GFLAC research (2014c), the energy sector (Ministry of Energy) designated a total of CLP\$12,102,412,569 to initiatives related to climate change; and the agro-forestry sector (Ministry of Agriculture) assigned a total of CLP\$94,839,068 to climate initiatives. The GFLAC study (2014d) also identified 57 projects relevant to climate change with international funding between 2010 and 2014; of these projects, the total value of the amount invested was determined for 45 of them, totalling US\$303,837,252.</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - Established inter-ministerial committees to work on the NDC and its implementation at different levels. - The NDC is being revised through the Public Sector Working Group - There is a National Climate Change Action Plan, as well as national and sectoral adaptation plans, and a functional inter-ministerial coordinating entity. - There are municipal networks at a local level to help promote climate work and share knowledge on a sub-national scale. There are also sectoral adaptation plans for use at a local level. - Progress is being made on integrated risk management, including the design and development of early warning systems focused on epidemics, climate-induced diseases, and forest fires; as well as climate insurance for the farming sector. - Sectoral progress is being made through a number of mechanisms, such as sectoral plans or NAMAs, including for the agriculture, fishing and aquaculture, and energy sectors. - Implementation of the Regional Climate Change Committees (CORECC). - Chile has implemented a carbon tax and a social cost of carbon. 	<ul style="list-style-type: none"> - Securing finance for the development of climate change projects in order to fulfil the conditional NDC commitments. Also, Chile may become a high-income country, which will make it even harder to access climate funding. - Need to develop a climate change law based on the experiences of other countries in the region. - Capacity building at regional and local levels, and knowledge management. - Development of adaptation metrics and indicators.

• Colombia

Country	Colombia		
NDC			
Colombia presented its iNDC in September of 2015 and signed up to the Paris Agreement in April of 2016, which was ratified on July 12th, 2018. The iNDC is set to become the NDC. The Third National Communication was presented in 2017, and the second Biennial Update Report (BUR) was presented in December of 2018.			
Summary	<p>Mitigation – Colombia’s NDC has a relative target of a 30% GHG emissions reduction by the year 2030, according to a BAU scenario. This includes a 20% unconditional target, while 30% is conditional on international financing. Prioritized sectors include transport, energy, agriculture, housing, health, business, tourism, industry and protected natural areas. Colombia also intends to explore the use of market instruments that guarantee the principles of transparency and environmental integrity, and can produce genuine mitigation that is permanent, verifiable, and avoids double accounting of emissions.</p> <p>Adaptation – Adaptation and resilience in the face of climate change are priorities for Colombia and are considered a matter of national security. The country plans to focus on social-ecosystem based adaptation, risk management, and institutional capacity building.</p> <p>In addition, there is a commitment to promoting implementation measures that will ensure that the actions proposed for the NDC are effective.</p>	Development process	<p>Colombia has been developing policy instruments for climate change since 2010. For example, the CONPES 37008 Document, the Colombian Low Carbon Development Strategy (Estrategia Colombiana de Desarrollo Bajo en Carbono-ECDBC), the National Emissions Reduction Strategy for Deforestation and Forest Degradation (ENREDD+), and the National Climate Change Adaptation Plan.</p> <p>Colombia began developing its National Climate Change Policy in 2014, in a process that led to its approval in 2017. The objective of this policy is to incorporate climate change management into public and private sector decision-making. This was intended to promote climate-resilient and low-carbon development, capable of minimizing climate change risks and taking advantage of potential opportunities. Colombia’s NDC was designed with a focus on high levels of participation from local territories and sectors, for developing and prioritizing their own climate change strategies that take different regional circumstances into account and are capable of being adapted to the particular characteristics of each area.</p>
Coordination			
Political-legal-institutional	<p>The main government entity is the Ministry of Environment and Sustainable Development. All institutional arrangements were established by the National Climate Change Policy and Law 1931 (2018), which defines the guidelines regarding climate change related decisions made by public and private individuals throughout the country. Such entities include regional departments, municipalities, districts, metropolitan areas and environmental authorities, concerning their work on climate change adaptation and mitigation. The objective is to reduce the vulnerability of people, and ecosystems, and to promote the transition towards a competitive, sustainable, low-carbon economy. The National System for Climate Change (SISCLIMA) was developed to be consistent with the set policies, regulations, processes, state and private sector entities, resources, plans, strategies, instruments and mechanisms and relevant climate change information, all of which is applied in a systematic fashion to manage GHG mitigation and climate change adaptation.</p>		

Coordination	
Political-legal-institutional	<p>SISCLIMA coordinates the implementation of the four climate change strategies prioritized by the government: the National Climate Change Adaptation Plan (NAP); the Colombian Strategy for Low Carbon Development (ECDBC); the Integrated Strategy for the Control of Deforestation and Forest Management (EICDGB); and the Fiscal Protection Strategy for Natural Disasters. Four permanent committees that mirror the SISCLIMA structure are responsible for coordination. They implement sectoral and sub-national policy, and also address international issues related to climate change adaptation and mitigation, based on technical research carried out by specialized working groups. The Committee of Finance coordinates financing activities, directing efforts towards identifying and coordinating funding sources available at national and international levels, for initiatives that require finance. Finally, at the highest level, the Inter-Sectoral Climate Change Commission of Colombia (CICC-Colombia) brings together various ministries and national institutions to coordinate and direct institutional efforts on climate change, and to act as the bridge between SISCLIMA and the government, including the office of the president. The CICC also shares findings on climate change and guides policy decisions at the highest level of government.</p> <p>A total of 14 policies or standards relating to climate change management have been identified for Colombia,⁴⁷ 11 of which were established prior to 2015, and three after the Paris Agreement. Colombia also has various policies centred on the reference framework or institutional arrangements. Likewise, 8 policies are centred on energy-related issues, 2 on adaptation, and a further 2 on carbon pricing.</p>
Sectoral	<p>Law 1931 established the Sectoral Integrated Climate Change Management Plans (PIGCCS) and the Territorial Integrated Climate Change Management Plans (PIGCCT) as instruments that identify, evaluate and guide the incorporation of GHG mitigation and climate change adaptation measures into policy and planning.</p> <p>At the time Colombia presented its NDC, it had 2 integrated sectoral climate change management plans, one PIGCCS for the mining & energy sector, and one for the transport sector. Since 2018, the country has made progress in formulating PIGCCS for the water and basic sanitation, housing, industry (including the sub-sector of manufacturing), farming, and health sectors.</p> <p>Furthermore, Colombia has carried out an equitable distribution of responsibilities for NDC work at a sectoral level, distributing emissions responsibilities according to IPCC categories. In this way, both the emissions included in the National GHG Inventory (INEGI) and prioritized mitigation measures, can be monitored on a sector by sector basis.</p>
Multilevel	<p>The priority of the Directorate for Climate Change and Risk Management of the Ministry of Environment and Sustainable Development is to implement the National Climate Change Policy (PNCC), integrating the sectoral and sub-national agenda to ensure proper coordination of national climate change strategies throughout the country, as well as to incorporate relevant actions by the different management and planning instruments at sub-national and sectoral levels to ensure proper implementation. To this end, and in accordance with the Law 1931 of 2018, efforts at sub-national scales have been directed towards the promotion of and technical assistance for local governments and environmental authorities, to assist with the formulation and implementation of Territorial Integrated Climate Change Management Plans (PIGCCT).</p> <p>Article 18 of the 2018 Law 1931 states that: “the Territorial Integrated Climate Change Management Plans (PIGCCT) are instruments by which governments and regional environmental authorities, identify, evaluate, prioritize and define adaptation and mitigation measures and actions, based on a vulnerability analysis and a GHG emissions inventory, or other instruments, in order to be implemented in the territories for which they were designed. These plans will be formulated for each department, under the responsibility and coordination of their respective governments, the regional environmental authorities, according to their jurisdiction, and the National Natural Parks of Colombia service, whenever applicable.”</p> <p>To date, 21 PIGCCTs have been established in accordance with the law, which play an important role in aligning policy at a departmental level with national climate change policy, and also provide a good opportunity to contribute to fulfilment of the country’s international climate change adaptation and mitigation commitments.</p> <p>SISCLIMA also includes the Regional Climate Change Nodes, which are regional entities responsible for promoting, guiding and supporting the implementation of climate change policies, strategies, plans, programmes, projects and other actions in the regions.</p>

47 See Annex 3.

Social	<p>The private sector has been involved in NDC development from the beginning. During the NDC development process, over 200 representatives from private and public companies participated in workshops for the development of emissions reduction scenarios for different sectors.</p> <p>Colombia sees its NDC as an opportunity to enhance its climate change mitigation and adaptation work both in sectors and across regions. This will help formulate and coordinate policies, programmes, plans and projects between the different productive sectors, as well as between public and private institutions, NGOs, and civil society in general.</p>
Finance	<p>According to information reported by the National Planning Department (DNP 2018), the estimated annual investment required to comply with the unilateral target for the reduction of GHG emissions within the framework of the NDC is COP\$3.1 billion (Colombian pesos). It is estimated that 38% of those resources – or COP\$1.2 billion– will come from the public sector (DNP, 2018). The investment needed to fulfil the established adaptation targets within the NDC framework has not been quantified. The Committee for Financial Management (CGF) was created to manage financial coordination within the framework of the National Climate Change System (SISCLIMA). It is an inter-institutional entity to facilitate public-private dialogue on climate financing in Colombia. The CGF's vision in terms of climate finance consists of the systematic incorporation of relevant criteria at every stage in the cycle of planning, implementation, and economic and financial evaluation in Colombia.</p> <p>Within the framework of the CGF, a Financial Strategy for Climate Change was established that sets out the strategic lines of action to promote the implementation of the National Climate Change Policy. The action plan for this Strategy is reviewed annually. For additional information on this matter, and the institutions involved, see the website of the Committee for Financial Management of SISCLIMA.⁴⁸</p>

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - SISCLIMA is an initiative that enables inter-institutional coordination and the integration of various levels of government throughout the country. Likewise, it promotes monitoring, reporting and verification for following up on the NDC. - There is an MRV system for financing climate change. - Colombia already has experience with the implementation of climate change adaptation and GHG mitigation measures - Climate change management has been incorporated into national planning instruments. 	<ul style="list-style-type: none"> - Calculating the cost of the sectoral measures proposed for implementation of the NDC. Financing via public-private proposals is expected, but there is a lack of clarity on how it will come to be implemented. There is a need for improved dialogue with the private sector. - Technical assistance is needed for the standardization of methodologies for identifying indicators, monitoring and reporting, and should include training for those working on implementation in terms of what can and cannot be measured. - Capacity building at a local/territorial level is needed. There are over one thousand sub-national entities in Colombia, which makes training initiatives from a ministry level difficult. <p>There is a need to improve information flows between sectors and on a territorial level.</p>

• Costa Rica

Country	Costa Rica
NDC	
<p>Costa Rica presented its iNDC in September of 2015. It ratified the Paris Agreement through Law 9405 in 2016, when its iNDC became its official NDC. An updated and improved version is due to be presented in 2020. The country presented its Third National Communication in December of 2014, and its first Biennial Update Report (BUR) in December of 2015. It is currently putting the finishing touches on its second BUR.</p>	

⁴⁸<https://finanzasdelclima.dnp.gov.co/Paginas/inicio.aspx>

<p>Summary</p>	<p>Mitigation – The Costa Rican NDC covers the whole economy and establishes targets for an absolute maximum of GHG emissions of 9,374,000 tCO₂eq by 2030. This target is consistent with the global projections necessary to comply with the 2°C target.</p> <p>The NDC is unconditional and includes 41 actions, both for mitigation and adaptation, with some cross cutting measures. In terms of mitigation, transport has been prioritized, both with regards to improving sustainable transport and promoting electrified buses. The NDC also provides for targets to make electricity production 100% renewable.</p> <p>The NDC, specifically referring to land use change, includes a target for 60% of the country's territory with forest cover by 2030, as well as other actions within the framework of the REDD+ Strategy.</p> <p>Adaptation – Adaptation work is based on the National Adaptation Plan; disaster risk reduction; community-based adaptation; ecosystem-based adaptation; local planning and management for territorial adaptation; public infrastructure adaptation; environmental health; capacity building; technology transfer; and financing for adaptation.</p>	<p>Development process</p>	<p>The NDC is founded on the participation of citizens and on cooperation across institutions. A consultative process took place that included 450 participants from all sectors working in different modalities.</p>
<p>Coordination</p>			
<p>Political-legal-institutional</p>	<p>Costa Rica has a variety of policies and standards relating to climate change, some are specific and others are designed for key sectoral areas, such as transport, farming, REDD and energy.⁴⁹ Most were established prior to 2015, before the Paris Agreement and the ND., The implementation of the latter began with a review of current public policies, to establish if their implementation was sufficient in order to fulfil the level of ambition contained in the NDC. The results of that enquiry were negative, and therefore the development of a new package of public policies was initiated that raises ambition, both in terms of mitigation and adaptation. At the same time, through these new policies, relevant instruments and platforms have also been updated and enhanced.</p> <p>Costa Rica launched its Decarbonisation Plan 2018-2050 in February of 2019. Recently, it has also ratified the following instruments: the National Adaptation Policy (DE 41091-MINAE); the National Metrics System for Climate Change (SINAMECC; DE 41127-MINAE); the National Programme for Carbon Neutrality 2.0 (DE 41122-MINAE); the Consultative Citizen Commission on Climate Change 5C (DE 40616-MINAE); and the Scientific Commission on Climate Change 4C (DE 40615-MINAE). On a sectoral level, the law to promote incentives for electrified transport (Law nr. 9518) is notable, as well as other, complementary decrees, such as the decree for the promotion of sustainable transport for public institutions (DE 41427 MOPT); the decree of incentives for used electric vehicles (DE 41426); and the decree to repeal incentives for hybrid vehicles (DE 41425 H- MINAE-MOPT).</p> <p>Another key project is centred on enhancing public transport, for which creating an inter-urban railway corridor is a central pillar. Law 9366 was approved in support of this measure, which is focused on the electrification of the railway system. The modernization of the Costa Rican Railway Institute (INCOFER) allows for it to acquire debts for up to a maximum of 40% of its total assets, for the purpose of constructing an electrified railway network that will reduce GHG emissions for the transport sector. A key development within the political and institutional framework is the new National Development Plan that establishes decarbonisation as one of its four main objectives at a national level (cross-cutting). Thus the subject is no longer being addressed as a sectoral issue for the environment, but has become a highly relevant objective for national policy.</p>		

⁴⁹ See Annex 3

<p>Sectoral</p>	<p>Costa Rica has had an Inter-ministerial Technical Commission for Climate Change since 2012, which was established via Decree 36823. Its purpose is to assess projects and supply the Ministry of Environment and Energy (Ministerio de Ambiente y Energía-MINAE) with technical support for designing and implementing and monitoring climate policies with an inter-institutional focus. This committee meets once a month and is currently evaluating adjustments that would allow the incorporation of other institutions that have been invited to participate, such as the Ministry of Housing and Urban Planning (MIVAH) and the National Institute of Women (INAMU). The committee made up of technical representatives and complemented by input from the Secretariat of Sectoral Planning for the Environment (SEPLASA), which coordinates the work on climate change.</p> <p>At a sectoral level, ministers can dictate policies relating to the institutions that are part of his or her sector. It was through this process that the National Adaptation Policy was recently approved and ratified. The permanent institutional structure for inter-institutional and multi-sectoral coordination are complemented by ad-hoc structures that have been arranged to support the implementation of processes in line with the NAMA framework. Currently, there are permanent coordination committees for NAMA regarding coffee and livestock farming, which include representation from the corresponding sectoral ministries (Ministry of Agriculture and Livestock-MAG, and the Ministry of Environment and Energy-MINAE), as well as from the chambers of commerce representing producers in the sub-sectors.</p> <p>Roundtables have also been established to promote sectoral agreements for GHG emissions reductions. The Sectoral Agreement for the Reduction of Emissions for the agriculture and livestock sector was signed at the beginning of 2018, and the same is planned for the transport sector. In both cases, ad-hoc structures were created, including ministerial representatives, and consultation processes with other actors were included to broaden the scope of the development process for such agreements. Sectoral agreements are valid for 5 years and establish the sectoral contributions within the commitment outlined in the NDC framework. It is expected that the level of ambition will be increased in the future, given that the agreements incorporate the principle of progression.⁵⁰</p>
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50 References to the Agreement can be accessed at: Press statement: https://ccafs.cgiar.org/es/news/media-centre/press-releases/costa-rica-lleva-la-lucha-frente-al-cambio-clim%C3%A1tico-al-siguiente#.W0OF_tJKiUk

<p>Multilevel</p>	<p>The government has acknowledged the importance of a multilevel focus for climate change action, evolving from a sectoral focus to a more integrated, territorial approach. One of the earliest actions along these lines was the establishment of the NDC targets for urban, rural and coastal areas, and the work carried out to include municipalities, and to improve multilevel planning processes at both local and regional levels.</p> <p>Adjustments have been made to the Country Programme for Carbon Neutrality 2.0 (PPCN2.0) to facilitate and expand the involvement of sub-national representatives, which now also includes a new category for working with municipalities. The framework for this programme also includes a methodology for measuring GHG emissions at a territorial level, and guides on mitigation measures have been produced to help municipalities carry out their duties. These guides are closely aligned with the priorities set out in the NDC and suggest actions in areas such as sustainable transport, electrified transport, and integrated waste management. At present, a pilot plan is being carried out with six municipalities, in order to measure their emissions and define reduction measures. This pilot is being implemented in the municipalities of San José, Golfito, Desamparados, La Unión, Belén and Monteverde. Another four municipalities are implementing projects specifically aimed at sustainable transport (Montes de Oca and Curridabat) or general territorial management measures (San Ramón, Sarapiquí). In addition, guides are being produced on the inclusion of adaptation planning at local and regional levels. The objective of these guides is to make climate and adaptation variables transversal within the current sub-national (regulatory plans) and strategic (cantonal development plans) planning instruments. These guides are being tested through a pilot experience in the Huetar Norte region, with funding from the Adaptation Readiness fund within the Green Climate Fund, which will support capacity building in various regions. These processes are include coordination with the Institute of Municipal Development and Assistance (IFAM), the National Emergency Commission (CNE), and the Ministry for National Planning and Economic Policy (MIDEPLAN).</p> <p>IFAM is also expanding the climate agenda for municipalities and is developing pilot projects regarding the mitigation of the effects of climate change in different territories. These include projects for mapping 'hot spots' that can be considered when defining the location of vital public infrastructure; shielding critical local infrastructure, such as aqueducts and health centres, among others; and the development of territorial management plans with a focus on the inclusion of risk management indicators.</p> <p>Other projects that have been developed at a territorial level include Aborda REDD+, through production models for sustainable materials on the scale of landscapes. This work has been carried out by Verified Carbon Standard in collaboration with associates from Guatemala, Costa Rica, Ghana and Peru, and is intended to develop sustainable landscape indicators for evaluating results and mobilizing investment by the private sector in the production of low-carbon, zero-deforestation raw materials, which will complement public financing and REDD+ strategies carried out by the government.</p> <p>Another project is the Energy Solutions for Cities of the Future, the objective of which is to enable cities to use more renewable energy by increasing knowledge on policies and framework regulations; capacity building at a municipal level; developing tools and information regarding technical solutions; and identifying synergies between cities for sharing best practices and replicating innovative solutions. This will allow municipalities to design and implement changes in terms of how energy is produced, distributed and consumed in cities, which will contribute towards urban sustainable development and the mitigation of GHG emissions.</p> <p>With the ultimate goal of decarbonising public transport, a mitigation measure that is being promoted is the electrification of Costa Rica's buses. An exchange of knowledge and information regarding projects related to the electrification of public transport is being coordinated with the participation of the Ministry of Environment and Energy, the Ministry of Public Works and Transport, directors in the bus sector, and other entities.⁵¹ At the same time, the Costa Rican Railway Institute (Incofer) is developing an electric train that will operate in the Greater Metropolitan Area.</p>
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51 Including multilateral international assistance from the United Nations Environment Programme, and bilateral assistance from the German government via GIZ, and from the government of the USA via the CRUSA Foundation.

<p>Social</p>	<p>The country has an active Consultative Citizens Commission for Climate Change (5C) that participated in COP24. The 5C has representatives from various urban, producers, women’s, indigenous, and private sector collectives. Meanwhile, the Scientific Commission (4C) is currently being formed, made up by representatives of academia.</p> <p>To encourage the participation of social groups and promote transparency and access to information, a platform is planned that will contain user-friendly climate information, as well as content provided by the Climate Change Metrics System (SINAMECC).⁵² SINAMECC is an integrated, multi-purpose system made up of a variety of modules. The main components are: mitigation, adaptation, climate finance, and co-benefits. The top priority is to measure progress in terms of national climate policies, including the NDC, and to facilitate the establishment of science-based climate policy. It will also be integrated into the National System for Statistics (SEN), and must incorporate information regarding the compensation mechanisms that are currently in place for GHG emissions in Costa Rica, into the National System for Environmental Information (SINIA). Furthermore, it will provide a catalogue of organizations and institutions committed to implementing the national carbon neutrality targets, including information on the private sector and local governments.</p> <p>Another mechanism in place for the participation of the private sector is the country programme for carbon neutrality 2.0. Through this programme, over 120 organizations and private businesses are measuring their carbon footprints, implementing emissions reduction measures, as well as compensating actions through the purchase of Costa Rican Compensation Units (UCC). Assistance for small and medium-sized businesses is provided through a public-private alliance on carbon neutrality, which has helped over 60 people representing small businesses, by training them on how to measure their carbon footprints and develop action plans.</p>
<p>Financial</p>	<p>The Climate Change Directorate is developing an investment plan for NDC implementation. This plan uses a territorial approach, for the purpose of implementation, including a territorial division into urban areas (urban landscape), rural areas (rural landscape), and coastal areas and hydrological resources (blue landscape). This division and separation of strategic actions for each territory includes calculating the financial needs for implementation in each one.</p> <p>Among these actions, investment needs are being identified regarding technical studies, capacity building, and technology transfer or investment, relating to both mitigation and adaptation. An initial estimate of the cost of actions planned for these primary cornerstones of climate action has been made, and are outlined below. Please note that these are initial estimates that have not been analysed nor validated:</p> <p>Estimated implementation cost for mitigation actions contained in Costa Rica’s NDC over the next 15 years:</p> <ul style="list-style-type: none"> • Mitigation actions: US\$6.5 Bn • Adaptation action: US\$4 Bn • Total estimated implementation cost of Costa Rica’s NDC over the next 15 years: US\$10.5 Bn. <p>The financing strategy being developed uses a programmatic approach. The main framework is comprised of climate policies (NDC, Decarbonisation Plan, Adaptation Policy and Plan), which are summarised in the NDC investment plan. The investment plan characterizes the investment needs and determines who should make these investments – the public sector or the private sector – and the typology of support required. The Green Climate Fund’s Country Programme, along with the priorities identified and negotiated with other bilateral and multilateral entities, will be derived from the investment plan.</p> <p>Costa Rica has a financing mechanism within its financial system made (lines of green credit), and is developing a system of green bonds. Currently, the country is also working on accrediting its Banking System for Development as the entity for direct access to the Green Climate Fund, and analysing new negotiating models for the electric transport sector, including leasing schemes for buses, and the light vehicle fleets.</p>

⁵² The SINAMECC platform will enable data processing related to climate change at national, sub-national and sectoral levels, and the review of specific actions. It will provide access to data to improve decision-making and compliance with national and international reporting requirements that Costa Rica must fulfil as part of the Paris Agreement.

Financial	<p>The country has assigned substantial sums for environmental services and the protection of forests and forest management, derived from fuel taxes and issued through the Forest Financing Fund (FONAFIFO). Over US\$400 million have been invested in this fund over the past 15 years. These funds have been channelled to rural areas and indigenous communities that are experiencing significant socio-economic difficulties.</p> <p>The Costa Rican government is currently developing measures to analyse the traceability of public funds, international aid, and private funds utilized for climate change action. As part of this exercise, a process for defining what factors constitute climate finance is underway, as well as for defining an action typology associated with climate finance.</p> <p>Some of the general financial data that has already been systematized includes the amounts invested in the reparation and reconstruction of the capital city after extreme hydro-meteorological events caused by climate change. According to the National Treasury, an estimated CRC\$202,681 million (Costa Rican colons) was spent on such recovery in 2010, representing 1.03% of GDP, as calculated by the Central Bank for that year.⁵³</p> <p>There is a plan to analyse public funds according to the same concept and typology used for the system of public investment. This data should be available by the end of 2019. Regarding international aid, work is being carried out by MIDEPLAN, the Treasury, MINAE and other environmental sector offices for international cooperation, in order to identify relevant projects that correspond with the typologies established.</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> -The country launched its long-term Decarbonisation Plan in February of 2019, which covers the period 2018-2050, and includes actions in all key economic areas. The country also has a national adaptation policy up to the year 2030. - Costa Rica is developing an NDC investment plan as a tool for channelling public, private, and international financing. Currently, it is aligning its investment attraction strategy with the Investment Promotion Agency of Costa Rica (CINDE) and the Foreign Commerce Ministry of Costa Rica (COMEX). - The country has tools for the involvement of private and sub-national actors in its Country Programme for Carbon Neutrality 2.0. - The country has multi-sectoral and multi-dimensional coordination structures in place, such as the Inter-ministerial Technical Commission, the Consultative Citizens Commission (5C), and the Scientific Commission (4C). - Costa Rica has a new National Climate Change Metrics System (SINAMECC), which is currently most developed for the mitigation module of climate change policies. 	<ul style="list-style-type: none"> - Developing feasibility studies for key investments and proposals regarding new business models that take the serious limitations in terms of public debt into account. - Establishing financing mechanisms at a local level for the development of territorial projects. - Completing the National Adaptation Plan (NAP), in order to promote the implementation of this recently approved national policy. - Strengthen the adaptation, finance and co-benefits modules of the SINAMECC.

⁵³ Document on the pressure on the public treasury in the context of climate variability. General Treasury of Costa Rica.

• Cuba

Country	Cuba		
NDC			
Cuba presented its iNDC in November of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it the following December, when the iNDC became its official NDC. Cuba presented its Second National Communication in 2015. Cuba's Third National Communication and first Biennial Update Report (BUR) are scheduled for 2020, and are currently being finalized.			
Summary	<p>Cuba's NDC is based on mitigation and adaptation policies and actions supported by foreign aid (in the case of mitigation work) and domestic investment. However, their integrated and effective implementation is dependent on international financing.</p> <p>Mitigation – The majority of mitigation actions are focused on the energy sector and include the introduction of 2,144 megawatts (MW) into the national electricity grid to augment energy efficiency. Cuba's NDC is comprised of a combination of projects tied to taking advantage of renewable energy sources, such as bio-electricity, hydroelectricity, wind farms and solar energy, for the purpose of increasing energy production and efficiency. These projects are being implemented within a timeframe up to 2030.</p> <p>Adaptation – Cuba's NDC prioritizes actions aimed at reducing coastal vulnerability, the restoration of mangroves and coral reefs, food production, integrated water management, national waste disposal, forestry production, fishing, tourism, and health.</p>	Development process	<p>National energy targets in line with development plans up to 2030 were taken into account during the NDC development process, which also included a wide-ranging consultation process with the main institutions involved in developing related public policy, and which are also responsible for the implementation process.</p>
Coordination			
Political-legal-institutional	<p>Cuba has a number of policies and regulations that relate to climate change.⁵⁴ In fact, even before its NDC was established, the country had plans and programmes (soil programme, forestry programme) that have been applied in a dynamic and flexible manner to respond to adaptation and mitigation targets. Cuba's priority is adaptation, although mitigation is also a part of its commitment and seen as a development opportunity for the country. The NDC is consistent with the Baseline Plan for Economic and Social Development (2030), in which the stated objective is 'the search for low-carbon development.' In 2017, the Cuban Commission of Ministers presented its State Plan for Climate Change. This document is known as 'Life Task' (Tarea Vida) and its implementation will require a programme of progressive investments that will be applied in the short (2020), medium (2030), long (2050), and very long (2100) term, all across the country.</p> <p>Adaptation and mitigation measures are also part of the new developments of the legal framework. Law nr 124 on national waterways was adopted in 2017, in which a framework of regulations was established for the key objective of resilience to climate change for the country's inland waterways. Other amendments being made to the legal framework that are related to climate change policies include actions related to the energy sector, coasts, and environmental protection in general.</p>		

54See Annex 3

Sectoral	<p>The institution responsible for the coordination of national efforts regarding climate change is the Ministry of Science, Technology and the Environment. Each relevant sector, such as water, agriculture, forestry, fishing, transport, constructions, energy and others, will be developed according to its specific strategic framework, and based on the country's general policies. Each province will carry out its own policy according to the same methodology.</p> <p>The National Group for Climate Change is presided over by the Ministry for Science, Technology and the Environment (CITMA) and the Meteorological Institute (INSMET), and brings together national sectors involved in climate change management, such as energy and mines, land use, agriculture, foreign relations, transport, fishing, construction, and hydrological resources. It also includes academic institutions and a variety of NGOs. There is a high level of communication and coordination between sectors in relation to relative adaptation measures for natural disasters, as well as for decision-making and evaluations based on meteorological data. The Commission of Ministers also has an important role to play in the coordination and control in terms of the effective implementation of the actions set out in the State Plan for Climate Change, and the President is directly responsible for monthly monitoring of this plan.</p>
Multilevel	<p>At a territorial level, there is a local government plan for dealing with climate change that mirrors the Life Task Plan. The plan is adapted to the relevant needs of each territory, but its common denominator is that it attends to all municipalities and sectors. It also focuses on important national and international projects, including:</p> <ul style="list-style-type: none"> • Ecosystem-based adaptation to reduce vulnerability to flooding in coastal areas in the southern provinces of Artemisa and Mayabeque. The project is financed by the Adaptation Fund and seeks to reduce the vulnerability of coastal communities in southern Cuba that are highly exposed to the impact of climate change. • Environmental Foundations for Local Food Sustainability (BASAL) is an environmental project intended to reduce vulnerability to climate change in Cuba's farming sector, and seeks to address the following priorities: environment and climate change, food safety, and local development. Pilot projects to demonstrate solutions are being carried out in the municipalities of Pinar del Rio (Los Palacios), Artemisa (Güira de Melena) and Camagüey (Jimaguayú), which were selected for their differing climate characteristics and their particular farming and livestock conditions. • A macro-project for evaluating hazard and vulnerability scenarios for Cuba's coastal zones associated with rising sea levels, for the years between 2050 and 2100, is a national programme with the general objective of improving and increasing knowledge regarding risk related to rising sea levels (SLR), and in particular the environmental, economic and social risks.
Social	<p>Cuba recognizes that facing climate change requires active involvement of its entire society. Task 11 of the State Plan indicates that 'measures and actions to raise risk awareness and increase knowledge must be prioritized, as well as the level of civic participation in facing climate change...' This is also the basis for updating the Cuban Public Communication, Education and Awareness Programme for Climate Change, as well as for the hazard, vulnerability and risk studies that are being undertaken to promote a culture of full awareness regarding the problem, as well as its consequences, and the adaptation measures required. A variety of organizations and associations are involved in developing the programme, as well as representatives from a wide range of sectors in Cuban society.</p>

Financial	<p>Both adaptation and mitigation are categories included in plans for state climate change investments. Adaptation receives priority attention in terms of the government's financial planning. Nevertheless, there is still no methodology for calculating precise estimations of adaptation and mitigation financial needs, nor for the corresponding measures required for more cost-effective action. Estimates for adaptation are particularly difficult to assess, but the preference is for establishing the cost of natural, ecosystem-based solutions, and an understanding of environmental assets and services. In terms of mitigation, a need has been noted for financing of over US\$4 Bn in order to reach the targets stated in the NDC.</p> <p>Cuba has prioritized measures for facing climate change by annually earmarking resources specifically aimed at this issue. Other elements of the financing strategy include:</p> <ul style="list-style-type: none"> • Foreign investment that also supports an important part of energy targets. • The use of foreign development funding • A higher use of economic and financial instruments, such as credit, taxes and fiscal mechanisms. <p>At the same time, the concept of green investment is being developed, by which financial resources received by any channel (and not only for climate change), are used to finance conditions and needs to promote adaptation and mitigation to climate change in Cuba.</p> <p>Cuba has an internal system for developing financial strategies for climate change. It has an Inter-Institutional Commission for the Green Climate Fund, coordinated by the Central Bank of Cuba, and which includes the participation of the Ministries of Economy and Planning, Finance, Foreign Trade, and Science, Technology, and the Environment. The system assesses financial strategies for climate change, and also evaluates and approves relevant projects for implementation at national and sub-national scales.</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - There is a high level of understanding of the problem of climate change, which is reflected in national policy. - Climate change is closely tied to social and economic development plans at sectoral and sub-national levels. - There has been progress in the development and implementation of adaptation projects. 	<ul style="list-style-type: none"> - The economic blockade is a challenge for technology transfer and receiving funds for implementing climate change projects. - There is a need to increase national capacity for developing and promoting projects.

• Ecuador

Country	Ecuador		
NDC			
<p>Ecuador presented its iNDC in October of 2015. It signed up to the Paris Agreement in July of 2016, and ratified it in 2017. However, it decided not to ratify its iNDC, and instead initiated a participatory process as part of continued work towards designing the country's definitive NDC. That process took place between February and December of 2018, within the scope of the national assistance programme for the construction of the NDC. It was presented to the United Nations Framework Convention on Climate Change in March of 2019, after going through a sectoral technical validation process, which also included review by the Inter-Institutional Commission on Climate Change (CICC). It should be noted that Ecuador's first Biennial Update Report (BUR) was presented in 2016, and its Third National Communication was presented in 2017.</p>			
Summary	<p>The following outlines the targets and characteristics of the NDC published in 2019.</p> <p>Mitigation - the mitigation component of the NDC is made up of contributions from the energy, agriculture, industrial processes and waste sectors, as well as by the land-use and land-use change (LULUC) sector,, which was analysed separately.</p> <p>The estimated potential reduction in GHG emissions for the above sectors has been calculated at 9%, compared to the trend scenario up to 2025, using 2010 as the baseline year. For the same period, an estimated potential reduction of 20.9% has been estimated, conditioned on support from international cooperation.</p> <p>In the case of the LULUC sector, the NDC indicates a 4% reduction up to 2025, using 2008 as the baseline year. Under the conditional scenario, this would be increased to 20%, conditioned on international funding.</p> <p>Adaptation – Ecuador's NDC has a combination of conditional and unconditional adaptation measures that apply to 6 prioritized sectors: Human settlements; water resources; natural resources; productive and strategic sectors; health; and food sovereignty, agriculture, livestock, aquaculture and fishing. The transversal focus is on risk management and a focus on priority groups.</p>	Development process	<p>The development of the NDC began in 2017, by means of a participatory process that included a gender focus, and the participation of multi-sectoral and multi-level actors, which worked in different sectors of both national and sub-national government.</p> <p>The process was highly ambitious and sought to include the participation of civil society. The intention was to encourage interaction between the different actors involved, as well as develop scenarios for mitigation, produce financial analysis, and an NDC implementation plan, to be validated by the Inter-Institutional Committee for Climate Change.</p>

Coordination	
Political- legal- institutional	<p>This study has identified 19 policies relating to climate change management in Ecuador.⁵⁵ The sectors most closely associated with the issue in this legal and institutional framework are energy and forestry (REDD+, forests and change of land-use).</p> <p>It should be noted that the Minister of Environment authorized the National Environmental Policy (PAN) through Executive Decree 1815 in 2009, which is an instrument providing a framework for all activities relating to environmental issues. Mitigation and adaptation to climate change were declared as state policy through this decree.</p> <p>The Inter-Institutional Committee for Climate Change (CICC) in Ecuador was founded in 2010, by means of Executive Decree 495, and modified by Executive Decree 64, in 2017. This committee coordinates policies and actions related to climate change, and has an inter-sectoral focus. The CICC includes representatives from the ministries of Environment, Foreign Affairs, Agriculture and Livestock, Energy and Non-Renewable Natural Resources, and Industry and Productivity. It also includes the participation of the Secretariat for Risk Management and the Secretariat for Water, a representative from the Ecuadorian Association of Municipalities, and a representative from Ecuador's Consortium of Provincial Governments (CONGOPE). The CICC has been formalized through a series of regulations governing its operations, and operates through sectoral roundtables, and an expert consultative team.</p> <p>The main plan for climate change management in the country is the National Strategy for Climate Change 2012-2025, which provides lines of action for public policy for the development of programmes and projects that deal with climate change on a national level. It also dictates the importance of developing national plans on climate change for each prioritized sector, for both mitigation and adaptation. Likewise, the National Plan for Living Well (PNBV) 2013-2017 establishes the following in its objective nr. 7: to guarantee the rights of nature and promote environmental sustainability at sub-national and global levels; furthermore, objective 7.10 states that mitigation and adaptation measures for climate change to reduce economic and environmental vulnerability must be implemented, and include an emphasis on groups with specific needs.</p> <p>The Organic Environmental Code (COA) was presented in 2017, the objective of which is to guarantee people's 'rights of nature' as to live in a healthy and ecologically balanced environment, and to protect the 'rights of nature' as defined in the Constitution of Ecuador. The overall objectives for the Code include establishing effective and efficient inter-sectoral measures to face the impacts of climate change through mitigation and adaptation actions. The environmental principles established in the Code include the principles of 'polluter pays,' sustainable development; and 'when in doubt, in favour of nature' (en dubio pro natura). The country published its COA regulations (rCOA) through Executive Decree nr.752, announced in May of 2019, and published in 'Book 4 on Climate Change,' which promotes the development of technical standards for the implementation of the NDC.</p> <p>In addition, the Minister of Environment has facilitated a series of agreements⁵⁶ that help create a framework for action to work on a mechanism for clean development (MDL); to design, plan and/or implement nationally appropriate mitigation actions (NAMA), and focus on REDD+.</p>
Sectoral	<p>Part of Ecuador's NDC development process has included making sure the contributions have a firm institutional and political foundation. For this reason, from the beginning, sectoral leaders have been included in bi-lateral meetings to define strategic objectives for the NDC. These meetings were followed by participatory workshops with technical consultants for each sector, and included representatives of academia, civil society, and the private sector.</p> <p>In terms of mitigation, the potential for emissions reduction and/or actions required include responsibilities at a sectoral level. For the mitigation component, it is expected that the implementation plan will begin to be carried out during 2019, a process that will include all actors who were involved in the participatory process.</p> <p>Planning for work in 2019 also includes working on the conditional measures contained in the NDC for the energy sector, by implementing integrated programmes for reducing costs, and improving the efficiency of the implementation processes. Such a measure is the Programme for Biofuels that is aimed at the energy, agriculture (farming waste), waste (municipal waste), and for industrial (industrial waste processing) sectors.</p>

Sectoral	<p>Regarding adaptation, planning files have been designed for use as guides for public institutions, to help them identify and recognize how their projects or initiatives contribute – or have the potential to contribute – to climate change adaptation. In this way, projects that may not be officially dedicated to climate change can be identified as having potential relevance to climate adaptation work in Ecuador. The Ministry of Environment is also accompanying these institutions in this process, being able to develop a map of initiatives that were later prioritized for adaptation action within the NDC.</p> <p>It is worth noting that the strategic adaptation objectives of the NDC are aligned with national management and planning tools, as well as with the National Climate Change Strategy (ENCC), and will also be tied to the National Adaptation Plan (NAP). The proposal for the development of the NAP has been approved by the GCF. The proposal includes a clear design and objectives to guide climate change adaptation processes in Ecuador over the coming ten years.</p> <p>As part of the agreements made within the framework design of the NDC for Ecuador, the country has indicated which ministries and secretariats will be directly involved in managing climate change adaptation:</p> <ul style="list-style-type: none"> • Productive and strategic sectors: the Ministry of Energy and Non-Renewable Natural Resources; the Ministry of Transport and Public Works • Natural environment sector: Ministry of Environment • Hydrological sector: Ministry of Water • Human settlements sector: Ministry of Urban Development and Housing • Food sovereignty, agriculture and livestock farming sector: Ministry of Agriculture and Livestock • Health sector: Ministry of Public Health <p>The following sectoral projects and programmes are worth highlighting:</p> <ul style="list-style-type: none"> • In the energy sector, the Ecuadorian government has developed a variety of projects aimed at changing the energy matrix. The country’s second wind farm is under construction on the Galapagos Islands. Known as Baltra, it will generate 2.25 megawatts. There is also the Villonaco wind farm in the province of Loja, in the district of the same name that is already operational, and producing 16.5 megawatts. In addition, the Minas de Huaschachaca wind farm is under construction, located southeast of the city of Cuenca, which is expected to produce 50 megawatts. • The NAMA for the optimization of electricity generation and energy efficiency (OGE&EE) takes advantage of the gas associated with oil for electricity production, through a combination of concrete actions aimed at the reduction of gas burning by PetroAmazonas. Those measures enable the substitution of imported diesel, which not only implies savings for the state, but also eliminates gas flaring, thereby avoiding GHG emissions. Later, that NAMA became an important part of the NDC energy component, and it has also provided a baseline for other national policy plans, such as adherence to the World Bank’s ‘Zero Routine Flaring by 2030,’ an initiative by the Ministry for Energy and Non-Renewable Natural Resources. This commits oil and gas companies to seek economically viable solutions to eliminate routine gas flaring by 2030. • Regarding the forestry sector, Ecuador has the REDD+ Action Plan: Forests for Good Living 2016-2025, which enables the strengthening of national policies and initiatives, and supports the reduction of GHG emissions. Ecuador has made progress on its REDD+ actions, and is only the second country in the world to comply with all the prerequisites for receiving results-based payments for its REDD+ projects, as established by the UNFCCC. This sector also has the Socio-Forest Programme that will protect native forests, wetlands, and other natural areas to support the reduction of GHG emissions caused by deforestation. Incentives for the owners of such landscapes were established by the state, under the auspices of the Ministry of Environment, to encourage a voluntary commitment to conservation and protection. This has resulted in a commitment to protect over 1 million hectares over the next 20 years. • In the agriculture sector, there is the ‘Climate-intelligent Livestock Plan,’ the objective of which is to reduce land degradation and increase adaptive capacities to climate change, as well as the reduction of GHG emissions, by implementing inter-sectoral policies and technologies for sustainable livestock farming. There is a special focus on the particularly vulnerable provinces of Guayas, Manabí, Santa Elena, Imbabura, Loja, Napo and Morona Santiago.
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<p>Multilevel</p>	<p>The Consortium of Provincial Governments of Ecuador (CONGOPE) is a sub-national coordinating body that represents the provincial level, and is a key actor in the process of designing the NDC. Currently, it is working to enhance skills among provincial governments so they can develop their regional climate change strategies (ERCC).</p> <p>For its part, the Ministry of Environment has included a climate change toolbox in the guides for territorial planning and development plans, in order to ensure that climate change work becomes a transversal element in territorial planning instruments.</p> <p>The following territorial projects that are worth highlighting:</p> <ul style="list-style-type: none"> • The project (2019-2022) to improve the adaptive capacity of local communities, ecosystems and hydroelectric systems in the Blanco River basin, based on an ecosystem and community-based adaptation, and integrated watershed management approach, was approved in 2018, for implementation in the Pichincha and Cotopaxi provinces. The objective is to strengthen the adaptive capacity of vulnerable ecosystems, communities and hydroelectric systems in the upper Blanco River basin. • The Project ‘strengthening the resilience of communities to the adverse effects of climate change, with an emphasis on food security and gender issues’ (FORECCSA), contributed from 2011-2018, to the implementation of policies that helped communities develop adaptive capacities relating to access to water and food sovereignty, using a bottom-up approach. • Furthermore, the country has developed a vulnerability analysis for emblematic hydroelectric power stations (CHECC) in 7 secondary watersheds, where 8 power stations were reviewed, as well as one multi-purpose station. The project ran between 2013 and 2014. • The project ‘Adaptation to climate change impacts on Andean water resources’ (AICCA) will be implemented from 2018-2022. The objective of this project is to manage water resources with an integrated approach and as separate hydrographical entities, for the purpose of ensuring the availability of water and the sustainable use of this vital resource, including protecting water quality in the face of climate change, for a variety of human and environmental uses. • The project ‘National plan for climate change adaptation’ will be implemented from 2019-2021, with the objective of integrating adaptation into development on sectoral, territorial and local levels.
<p>Social</p>	<p>Ecuador sought out substantial participation from a variety of sectors during the NDC development process. Of all participants, 20% represented the private sector, 15% represented NGOs and foundations, 6% represented civil society, and 7% represented academia. This representation from the general public is considered key to the posterior development of the NDC implementation plan, to take place in 2019. In terms of allocating responsibility, the private cement industry is of particular relevance, as this actor has a direct responsibility regarding the NDC, within the industrial processes sector.</p> <p>In terms of private sector involvement, the initial method utilized was a strategy based on workshops designed to obtain information regarding mitigation scenarios. At the same time, the state provided key information. For example, experts were invited to the workshops to present private sources of funding and to provide information on implementing green projects.</p> <p>The NDC development process incorporated a gender focus that steered the debate and thinking towards the need to work on issues of equality and equal rights. This resulted in an initial assessment of the main problems regarding gender issues, among which the most common included: lack of information, lack of capacities, and the need to work with women’s groups to include them in climate change management processes.</p> <p>Likewise, the implementation of lines of action and measures for the NDC in terms of mitigation and adaptation included the participation of the public sector, the private sector, sub-national governments, academia, and society in general.</p> <p>At a territorial level, climate change is being managed through REDD+ roundtables, the commission for citizen participation, and in communities through a community-based adaptation approach.</p>
<p>Financial</p>	<p>The study ‘Assessment of climate financing in Ecuador’ was developed between July and December of 2018. The objective of this study was to establish the actors, responsibilities and procedures regarding current financial management of climate change in the country, from a multi-actor perspective. The results of this research included recommendations for a realistic model capable of optimizing coordination and to assist with accessing this climate finance.</p>

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - Ecuador has had a constitutionally established committee for inter-institutional coordination of climate work since 2012. This includes both technical and political levels, as well as the creation of sub-committees and sectoral roundtables. - Ecuador has developed public policies based on current practice, which have then been incorporated into territorial development plans. - The REDD+ Programme has allowed Ecuador to fulfil the prerequisites for receiving results-based payments. The country is due to receive its first Green Climate Fund support through the REDD+ Action Plan. - Development of the Socio-Forest Programme that promotes incentive-based conservation in indigenous and rural communities. - A tool with excellent potential for being replicated is the Information Gathering and Technical Procedures Guide, designed by the Ministry of Environment. This guide identifies public institutions and initiatives that have the potential to contribute to adaptation. - Thanks to the implementation of the OGE&EE NAMA, the market for electricity generation in the private oil industry is changing. Providers are now offering solutions for electricity generation using gas. - Ecuador's experience with the OGE&EE NAMA has the potential to become a mechanism for monetizing waste. 	<ul style="list-style-type: none"> - There is a challenge for multi-level governance, because there are no mechanisms in place for cooperation between the national and sub-national governments. Furthermore, there is a need for greater inclusion of the private sector, academia and civil society in the forthcoming NDC implementing process. This needs to be achieved through improved communication, in particular with local actors and provincial governments. - There is a need for climate change capacity building for sub-national governments, so they are able to establish climate plans and projects that are more closely related to local realities. - Climate change needs to be incorporated into development plans. - There is a need for mechanisms to enable access to climate funding at a sub-national level and improve cooperation with the private sector. - There is challenge regarding access to both domestic and international resources, for the implementation of adaptation measures. Current processes to access climate funding take an excessively long period of time, due to the technical limitations within the public sector, and the bureaucracy involved in accessing international funding. - There continues to be a large knowledge deficit regarding climate change at a sectoral level, especially on adaptation and how these variables can be integrated into internal institutional processes. - Regarding NDC implementation, the inclusion of a gender focus continues to be a challenge due to a lack of systematized information on gender and climate change. This information is needed to differentiate needs by gender concerning climate change impacts, as well as the impact of including women in climate action measures. - In the context of climate change, it is difficult to promote projects for the extractive industry (such as oil), and it is necessary to develop innovative financial mechanisms in which the private sector can participate. - The country has limited technological development and there is no incentive for industries to develop more efficient technology. - Verifiable and continuous data on climate change in Ecuador requires enhanced technical skills, specifically relating to meteorology and hydrology. - There is a need to develop MRV systems and a system of 'financial tagging' that would allow the Ministry of Environment to trace direct, non-refundable funds provided directly from international cooperation to the regional autonomous governments.

• **El Salvador**

Country	El Salvador		
NDC			
El Salvador presented its iNDC in November of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it in March of 2017. With this, the iNDC became the NDC. El Salvador presented its Third National Communication and first Biennial Update Report (BUR) in September of 2018.			
Summary	<p>El Salvador has designed an NDC based on actions and policies for the mitigation of and adaptation to climate change. The following areas have been prioritized for both of these lines of action: strengthening the institutional and legal framework for the development and sustained implementation of the NDC; a Climate Change Law; Territorial Planning and Development Law; infrastructure; water resources; agriculture, livestock farming and forestry; ecosystem restoration; energy; health; environmental health; work and social services; and transport.</p> <p>Fulfilment of all the targets contained in the NDC that contemplate domestic funding is conditioned on the macro-economic stability of the country; positive economic growth and poverty reduction; the absence of an extreme weather event associated with climate change in the coming years that could provoke loss and damages; that no event takes place that has a direct impact on the country's public funding capacity; and improved access to more efficient and cost effective technology. In the case of conditional targets, these are dependent on the availability of international funding.</p>	Development process	<p>The iNDC was developed in a process that included multi-sectoral participation, as well as input from the private sector, civil society, academia, and the central government. Its content reflects sectoral commitments to infrastructure, agriculture, transport, water resources, energy, health, and environmental health. The Technical and Planning Secretariat of the Office of the President presented a draft proposal of the iNDC to the various ministries and autonomous offices responsible for implementation, and collected their comments and proposed amendments to incorporate into the definitive iNDC presented to the UNFCCC.</p>
Coordination			
Political-legal-institutional	<p>The main actor responsible for climate change work is the Ministry of Environment and Natural Resources (MARN). Direct input also comes from: the National Commission for Energy under the auspices of the Ministry of Economy; the Ministry of Agriculture and Livestock; the Ministry of Tourism; the Ministry of Public Works; the Ministry of Transport; the Ministry of Housing and Urban Development; the Ministry of Government and National Development; the Ministry of Health; the Treasury; the Ministry of Education; the Deputy Ministry for Development Cooperation; the Deputy Ministry for Transport; the Social and Local Development Fund; the National Administration of Aqueducts and Sewerage; the Governability Secretariat; the Presidential Technical Secretariat for Planning; and the Secretariat for Vulnerability Issues.</p> <p>El Salvador has 7 regulations related to climate change management, all of which were approved prior to the Paris Agreement, and are related to the energy sector and to climate change adaptation.⁵⁷</p> <p>The new National Environment Policy in El Salvador was approved in 2012, and is aimed at reversing environmental degradation and at reducing vulnerability to climate change. Furthermore, the National Climate Change Strategy was launched in 2013, and the first National Plan for Climate Change (PNCC) was launched in 2015. The objective of the latter is to construct a climate-resilient, low-carbon society and economy.</p>		

<p>Political-legal-institutional</p>	<p>The Environment Law was also amended in 2012 to include a chapter on climate change, with an emphasis on adaptation and additional mitigation measures, thereby correcting the substantial gaps in the legislation that had previously existed on the subject.</p> <p>The draft Climate Change Law that is still under review by the Presidential Office, before it is sent to the Legislative Assembly, contains all the institutional arrangements necessary for managing climate change at all levels, including the participation of various sectors of civil society</p>
<p>Sectoral</p>	<p>The National Environment Policy presented in 2012 provides for a framework within which the government can work on climate change and environmental degradation. It requires, for example, that each ministry must incorporate environmental issues in their own policies.</p> <p>The Ministry of Environment and Natural Resources has a technical cabinet comprised of ministry officials responsible for coordinating a variety of activities among various national institutions, for the purpose of managing the environmental agenda, and integrating a climate change focus into the different policies, strategies, plans and programmes.</p>
<p>Multilevel</p>	<p>Implementation of the Council for Metropolitan Development Law (CODEMET) brought municipal government and central government officials together in order to plan and implement the development agenda for urban areas, and to integrate climate change adaptation and mitigation.</p> <p>The initial plan for adaptation to climate change in the Metropolitan Area of San Salvador (AMSS) was produced with help from the UNDP and the Ministry of Environment and Natural Resources. That plan was presented to the relevant planning organisms⁵⁸ and, during the monitoring stage, workshops were held with technical representatives of municipalities, the central government and civil society. Finally, an online consultation process was developed in order to identify adaptation measures that could be promoted in the capital city of San Salvador.</p> <p>The city of San Salvador has also developed an Integrated Transport System for the Metropolitan Area of San Salvador (SITRAMSS), which has been operational since 2015. However, it was suspended by the Supreme Court of Justice in 2016, in response to a claim that it was unconstitutional, a claim that has yet to be resolved.</p> <p>The Ministry of Environment and Natural Resources promotes the national programme for the restoration of ecosystems and landscapes, which uses an adaptation-based mitigation approach. Three strategic cornerstones are being managed to achieve the target of restoring 1,000,000 hectares of forests: restoration, reforestation, and broad-spectrum conservation of critical ecosystems that includes the restoration of degraded soils by means of reforesting agricultural areas; the adoption of resilient agroforestry systems, and the development of sustainable, climate-resilient agriculture; and the synergic development of physical and natural infrastructure.</p> <p>The programme incorporates a highly participatory landscape and restoration-based approach. Using updated information on tree cover and land use, relevant landscape actors have identified priorities that define the social, economic and ecological feasibility, as well as the potential extent to which restoration work could be carried out nationally. Furthermore, the initiative provides for a financial and economic evaluation of the proposed restoration actions, and monitoring of compliance with cost-benefit analyses, environmental and social profitability and benefits, which are then followed up on using an integrated reporting system.</p>
<p>Social</p>	<p>Representatives of the private sector and civil society participate through the National Council for Environmental Sustainability and Vulnerability (CONASAV), which includes the National Commission for Micro-Small-and Medium-Sized Businesses; the Salvadorian Chamber of Construction; the Business Foundation for Social Action (FUNDEMAS), and the Salvadorian Business Council for Sustainable Development (CEDES), among others.</p> <p>The objective of CONASAV is to facilitate dialogue and cooperation for reaching agreements and national commitments in the short, medium and long term, for the purpose of promoting sustainability, reversing environmental degradation, and reducing vulnerability to climate change. It is coordinated by the Ministry of Environment and Natural Resources and, furthermore, includes the participation of other public institutions from the central government, as well as representative of several sector, such as: academia, the Corporation of Municipalities of the Republic of El Salvador; business; transport workers; representatives of the church; indigenous communities; political parties, civil society organizations; international entities; social communication entities; and experts in the field.</p>

Financial	<p>The first study on financial flows and investment (FFFI) was carried out in 2018, focusing on energy, agriculture, health, drinking water and sanitation, and infrastructure. The information obtained enabled the first evaluation of financial needs for climate action in the above sectors, for the period 2018-2030.</p> <p>The following studies were finalized in 2018: Proposed climate financing strategy; Proposed institutional architecture for climate financing; and a Proposed monitoring, reporting and verification system for climate financing.</p> <p>El Salvador has an Inter-institutional Committee for Financing Climate Change, which was created to enhance institutional and operational capacities needed to generate financing for climate change strategies. Nevertheless, its operational limitations resulted in the need to design a more appropriate structure, based on which specific project proposals were developed to create the architecture, strategy and MRV for climate financing. These projects address the institutional arrangements considered in the proposed Law on Climate Change.</p> <p>The first Climate Public Expenditures and Institutional Review (CPEIR) study was carried out in 2018, covering the period from 2011 to 2015. This ex-post analysis of expenses verified that El Salvador spent US\$1.1 Bn of its national budget on climate change during the period under review. This was about 1% of GDP for those years.</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - El Salvador has experience with territorial ecosystem and landscape restoration, with a focus on climate change. - Progress has been made on climate change adaptation in the capital city. This has brought sectors and municipalities together for discussing various issues, including climate change. 	<ul style="list-style-type: none"> - There is a need to develop top-down regulations and lines of action for climate change, including the approval of a climate change law. - Capacity building at a sub-national/municipal, especially for smaller municipalities. - A lack of financial resources, both at national and sub-national levels, and a lack of knowledge on how to access international funding. - There is a need to develop mechanisms and procedures for coordination, design processes, follow-up, and local monitoring and evaluation.

• **Guatemala**

Country	Guatemala		
NDC			
Guatemala presented its iNDC in September of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it in January of 2017, when the iNDC became the country's NDC. Guatemala presented its Second National Communication on Climate Change in 2015, and is working on the Third National Communication on Climate Change and its first Biennial Update Report (BUR), as part of its commitments to the UNFCCC.			
Summary	<p>Mitigation – Guatemala has a relative, unconditional target for reducing total GHG emissions by 11.2% below emissions projected to 2030 under a BAU scenario, using 2005 as the baseline year.</p> <p>There is also a conditional target to reduce total GHG emissions by 22.6% below projected emissions to 2030, using 2005 as the baseline year and, under a BAU scenario. The prioritized sectors include forests, agriculture and transport.</p> <p>Adaptation - Guatemala has an NDC focused on the transversal reduction of vulnerability and the improvement of adaptation processes in key sectors, such as human health, coastal zones, agriculture, livestock, protected areas, conservation and the management of strategic ecosystems, infrastructure, integrated management of water resources, soil protection, and the integrated management of risk reduction for catastrophic events.</p>	Development process	There was a technical team within the Ministry of Environment and Natural Resources (MARN) that included members from the National Commission for Climate Change, as well as technical assistance provided by USAID for the development of Guatemala's iNDC.
Coordination			
Political-legal-institutional	<p>The country has a Framework Law to regulate the reduction of vulnerability, the obligatory adaptation to the effects of climate change, and the mitigation of GHG emissions (by Decree by Congress 7-2013); as well as a National Policy for Climate Change; and a National Action Plan for Climate Change.</p> <p>The main objective of the law is to provide an immediate and coordinated response to climate change, in part through the establishment of the National Commission for Climate Change, and also through institutional adaptation and mitigation strategies for the entire public sector. A National Information System for Climate Change (SNICC) has been created, and there is a proposal to establish a National Climate Change Fund to finance risk management projects and adaptation and/or mitigation work. Furthermore, there are a series of climate change policies and regulations,⁵⁹ all of which were developed prior to the Paris Agreement. Five regulations are administrative amendments; two are related to the price of carbon; three to the energy sector; and three to the forestry sector.</p> <p>A roadmap has been developed towards compliance with the NDC that includes technical follow-up and monitoring of fulfilment with the international commitments presented by the Government of Guatemala at the NDC Partnership during COP24.</p>		

⁵⁹ See Annex 3

<p>Sectoral</p>	<p>The National Commission for Climate Change manages the inter-institutional coordination of climate action. It is headed by the President of the Republic who delegates responsibilities to the various government agencies working on policy implementation. It also receives input from the public and private sector, as well as from civil society, and is responsible for the regulation and supervision of the implementation of climate action, conflict resolution, as well as monitoring the progress of the national policy for climate change, the climate change fund, and other mitigation and adaptation strategies and programmes.</p> <p>There is a Directorate for Climate Change at the Ministry of Environment and Natural Resources; there is also a Government Policy that prioritizes the issue, sectoral plans that deal with climate change. Technical aspects regarding climate change have also been incorporated into the work of different state entities.</p>
<p>Multilevel</p>	<p>Guatemala has departmental environment commissions (CODEMA) that work together with regional governments, municipalities, development councils and others.</p> <p>There are action plans for local territorial planning, including plans for managing local and national risk, and measures related to sustainable land use are being put into place.</p> <p>The Latin American Network of Municipalities, Cities and National Territories for Climate Change is also active in Guatemala. Various municipalities participate and work with a model centred on adaptation to climate change through the municipal development councils.</p> <p>Some government entities and academics joined forces to develop a document that addresses lines of research on climate change, for the purpose of enhancing research and education on the subject.</p>
<p>Social</p>	<p>Guatemala has an environmental gender policy, and one priority of this policy is to incorporate climate change, as the gender focus is especially relevant to matters of adaptation to climate change.</p> <p>Guatemala is a multicultural country that tries to include all sectors of society in national processes. Therefore, considering that the largest sector of the vulnerable population consists of indigenous communities, Guatemala is an active participant in the recently created Local Communities and Indigenous Peoples Platform, created by the UNFCCC. The rural population, indigenous communities and academia also participate in the National Commission for Climate Change.</p>
<p>Financial</p>	<p>Guatemala's roadmap towards NDC fulfilment identified the need to enhance the work being carried out by the Global Financial Initiative for Biodiversity (BIOFIN), to identify the extent of national expenditure and international cooperation for climate change in the country. This work will be coordinated by the Ministry of Public Finance and the General Secretariat of Planning and Programming of the Office of the President.</p> <p>Some 80% of the National Climate Change Fund is earmarked for adaptation action, as this is the main focus of climate financing in Guatemala. This process is still at the development stage.</p> <p>The National Fund for Conservation and the National Fund for the Reduction of Disasters channel national and international financial resources to prevent and face up to the effects of climate change. Recently, a classification system was created for reporting public expenditures on climate change.</p> <p>The Ministry of Natural Resources has been established to act as the national authority to manage the implementation of the Green Climate Fund, and it is also developing the National Programme for Emissions Reductions for REDD+ that will include a financing mechanism for payment upon results regarding the reduction of emissions from the forest sector at a national level.</p> <p>Other proposals that promote compliance with Guatemala's NDC are currently being developed.</p>

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - The development of the National Action Plan for Climate Change by the National Commission for Climate Change (CNCC) and the Presidential Secretariat of the Republic of Guatemala for Planning and Programming (SEGEPLAN), which includes a participatory methodology. - The development of the SNICC system that will gather, systematize, process and make available different types of information relating to managing adaptation and mitigation to climate change; as well as issuing financial reports. - Guatemala's roadmap for the implementation of the NDC. - The development and implementation of the National Fund for Climate Change. 	<ul style="list-style-type: none"> - The different levels of the public sector are in need of technical skills and training. - More and improved means of mobilizing financing for the implementation of the NDC is required. - There is a need for GHG inventories.

• Honduras

Country	Costa Rica		
NDC			
<p>Honduras presented its iNDC in October of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it in September of the same year, converting the iNDC into the official NDC. Honduras presented its Second Communication in 2012. The country approved its action plan for fulfilment with the Paris Agreement in 2018, in which it included a roadmap for the implementation of the NDC that identifies periodic revision and updating as a priority.</p>			
Summary	<p>Mitigation - Honduras has a conditional relative target to reduce GHG emissions by 15% of projected emissions by 2030, under a BAU scenario. Its unconditional contribution proposes the reforestation of 1,000,000 hectares of forest prior to 2030, and a 39% reduction in the use of firewood by families.</p> <p>Adaptation - Adaptation to climate change is considered a priority for reducing the country's vulnerability in its NDC. Prioritized sectors include water resources, risk management, agriculture and food security, forests and biodiversity, coastal marine systems, human health, and infrastructure.</p>	Development process	<p>The Presidential Office for Climate Change was created as the managing body for climate policy in the country, and for coordinating NDC implementation. Furthermore, a national team was formed to design the NDC. Representatives from different sectors were also involved, such as energy, agriculture, industrial processes and waste; as well as from civil society, academia and the state. Citizens were also included through participation in workshops. Workshops were also held with key actors from each institution and national technical consultants from the National Directorate on Climate Change and from the Third National Communication team in order to carry out the process.</p>

Coordination	
Political-legal-institutional	<p>Honduras has 12 regulations on climate change. Five of them include institutional arrangements, while two are specifically designed as climate-related regulations. In addition, four policies are related to forestry issues, such as REDD+ and land-use change. All were designed prior to the Paris Agreement in 2015.⁶⁰</p> <p>The country implemented a Climate Change Law in 2013, which establishes the principles and statutes necessary for planning and prevention, and also for an appropriate, coordinated and sustainable response to the impacts of climate change.</p> <p>In May of 2018, the Presidential Office for Climate Change and the Secretariat of Natural Resources and Environment of the Republic of Honduras approved an action plan for the country to be able to fulfil its commitments, in accordance with the Paris Agreement. The plan is known as the Roadmap, and identifies five priority areas determined by the government to facilitate implementation of the NDC. The Roadmap also connects each priority area with the resources available from partners in the NDC Partnership. The five priority areas are: revision of the NDC; prioritize a list of current and established mitigation and adaptation efforts; develop roadmaps for prioritized actions and sign memorandums of understanding with key partners; set up a monitoring, reporting and evaluation system; and strengthen inter-institutional coordination for climate change action.</p>
Sectoral	<p>Honduras has the Presidential Office for Climate Change (Clima+). The operational arm on a political level is the Inter-Institutional Committee for Climate Change, which is led by the Secretariat of Natural Resources and Environment. There is also the Technical Committee for Climate Change, managed by the National Directorate of Climate Change. The Climate Change Law states that the President of the Republic directs and guides action through the Inter-Institutional Committee for Climate Change, which is a permanent, consultative, deliberative and evaluatory body. The committee includes a representative from the Office of the President of the Republic; the Secretariat for Natural Resources and Environment (SERNA); the Secretariat of the Finance Committee; the National Institute for Forest Conservation, Protected Areas and Wildlife (ICF); the Honduran Institute of Tourism; the National Electric Company; the National Congress' Commission on Environment and Climate Change; the Honduran Commission of Private Enterprise; the Association of Honduran Municipalities; the Commission for Higher Education; the Honduran Foundation for Climate Change Initiatives; the National Commission for Sustainable Development; the Permanent Contingency Committee; and representatives of organized civil society. Finally, there are also other coordination bodies, such as the Sub-Committees of the Technical Committee for Climate Change.</p>
Multilevel	<p>On a sub-national level, the Urban Adaptation Programme for Climate Change in Central America is being developed for Honduras through the Secretariat of Foreign Relations, with the assistance of the German Development Bank (KfW) and the Mayoral Office for the Central District (AMDC). The programme will be carried out in vulnerable areas of the Central District, which includes the cities of Tegucigalpa and Comayagüela.</p> <p>The Presidential Office for Climate Change and the Honduran Coffee Institute (IHCAFE) have been working to restore 250,000 hectares of conventionally farmed coffee land by means of multi-layered agroforestry systems, whereby native species are used and ecosystem-based adaptation practices are incorporated into buffer zones for protected areas where there are coffee plantations. Likewise, it is sought to reduce GHG emissions from the coffee sector, the country's largest productive and social sector, in order to contribute to the target of one million restored productive hectares and to fulfil with the country's NDC. One initiative being managed by MiAmbiente, Climat, and IHCAFE is to make the transformation and added value processes for coffee more energy efficient</p>
Social	<p>The main national actors are the Presidential Office for Climate Change (Clima+); the Secretariat of Natural Resources and Environment; the Institute for Forest Conservation (ICF); the Secretariat of Agriculture and Livestock (SAG); and the National Electric Company. From the private sector, there is participation of the Honduran Commission of Private Business (COHEP) and the Honduran Association of Small Producers (AHPER). The main representatives for civil society are the Foundation for Climate Change Initiatives (Fundación MDL), and the Vida Foundation.</p>

60 See Annex 3

Financial	<p>According to the evaluation of investments and financial flows, Honduras needs US\$6.6 Bn up to 2030, to effectively face climate change in the land-use change, transport, and water sectors.</p> <p>As part of its financing strategy, the Presidential Office for Climate Change (Clima+) is working with an inter-governmental group and the private sector to develop a micro financing proposal for climate action focused on specific sectors, such as coffee, palm oil, and livestock, among others. In an initial analysis, contributions to adaptation and mitigation currently being carried out by Honduran producers have been valued. This valuation will be used as matched funds for contributions by the private sector, for the purpose of raising other financial resources, either as concessions or as donations</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - Honduras has a roadmap for the implementation and review of its NDC. - There are MRV mechanisms in place for the implementation of the NDC in the forestry sector. - A Climate Change Law was passed in 2013. 	<ul style="list-style-type: none"> - Strengthening inter-institutional government mechanisms. - Capacity building for the teams responsible for the negotiation and management of climate financing in Honduras. - Capacity building for staff working in territories, such as municipalities. - Two-way technology transfer (from central to local level, and from local to central level). - Training for decision makers managing financial resources with a focus on climate change - Building alliances with municipalities for managing the implementation of sub-national action plans. - The establishment of project portfolios at national and sub-national levels, based on local capacities and conditions. - The establishment and improvement of MRV systems for sectors linked to the NDC, in order to promote active participation from relevant actors. - An exchange of best practices regarding participation of the private sector and civil society in the implementation of the NDC.

• Mexico

Country	Mexico		
NDC			
<p>Mexico presented its iNDC, complete with climate change mitigation and adaptation components, in March of 2015; the NDC also included measures for the reduction of vulnerability to the impacts of climate change. The country signed up to the Paris Agreement in April of 2016, and ratified it the same year. Mexico presented its low-carbon development strategy up to 2050 at the COP22 in 2016, which was based on the commitments proposed in its iNDC, which subsequently became official. The strategy is known as the Mid-Century Strategy, and it proposes a 50% reduction in GHG emissions by 2050, compared to 2000. During COP24, in December of 2018, Mexico also presented its Sixth National Communication and its Second Biennial Update Report (BUR).</p>			
Summary	<p>Mitigation - Mexico has an unconditional target to reduce its GHG emissions by 22%, and its black carbon emissions by 51% in relation to its BAU for the year 2030. Furthermore, it has a conditional target to reduce its GHG emissions by 36%, and its black carbon emissions by 70% in relation to its BAU for 2030. The National Inventory of GHG and Pollutant Emissions was carried out in 2018, including estimates for anthropogenic GHG emissions and their absorption through Mexico's carbon sinks.</p> <p>Adaptation - There are 21 actions planned regarding adaptation to climate change that are organized into three priority areas: adaptation in the social sector; ecosystem-based adaptation; and adaptation of strategic infrastructure and productive systems. In addition, continuous capacity building is identified as a priority for adaptation processes, to promote development, share adaptation technology, and improve knowledge on how to access and manage financial resources to support adaptation work.</p> <p>As part of its targets up to 2030, Mexico intends to reduce the number of municipalities identified as the most vulnerable to climate change impacts by at least 50%; and also to transition to a zero net ratio for deforestation; and to improve the operational level of its early warning system within a preventative focus.</p>	Development process	<p>The federal government designed its NDC development process through the Secretariat of Environment and Natural Resources (SEMARNAT), using the 2013 National Inventory of GHG and Pollutant Emissions as its starting point, along with the analysis of potential support and approval of mitigation measures that were identified in conjunction with representatives from relevant sectors. The Inter-Secretarial Commission for Climate Change was responsible for leading the discussion and gaining approval for the measures in question. The NDC development process included public participation through meetings with organizations from the private sector, civil society, and academia; as well as consultation with industrial chambers of commerce, and a survey that included over one thousand representatives from the public and private sector, as well as academia and civil society organizations.</p>

Coordination

Political-
legal-
institutional

Mexico has a General Climate Change Law (LGCC) that establishes the foundations for the creation of institutions, legal frameworks and financing for progressing towards a low-carbon economy. This law outlines the different responsibilities within the federation and for the various federal entities and municipalities that make up the country. It establishes Mexico's commitment to reduce its emissions up to the year 2020 by 30%, according to its baseline, and also to reduce GHG emissions by 50% up to 2050, as compared to the year 2000. In consideration of the country's high level of vulnerability to the impacts of climate change, the LGCC puts a strong emphasis on prioritizing and implementing adaptation measures. Finally, the law also resulted in the foundation of the National Ecology Institute, which is based within the National Institute for Ecology and Climate Change (INECC), as well as various public policy instruments. Among others, there is the National Emissions Registry (RENE) and its corresponding regulations, which enable the compilation of information relevant to pollutant and GHG emissions (CyGEI) from the different productive sectors across Mexico.

Furthermore, the Federal Government has designed and is currently implementing the National Climate Change Strategy (ENCC) Vision 10-20-40, which was conceived as a framework planning instrument that dictates and guides national policy, with a roadmap that establishes national priorities in terms of climate change. It also describes the strategic cornerstones and lines of action for aligning climate change mitigation and adaptation policies with those of the General Law, and supports synchronized action between the various sectors of society.

After publication of the ENCC, a Special Climate Change Programme (PECC) was developed and for the first time emitted through the LGCC, as an instrument that defines the short-term action of the Federal Government, both in terms of emissions reductions, and for the preparation and response to extreme weather events due to progressive climate change. The PECC establishes objectives, strategies, actions and targets for facing climate change by defining priorities for adaptation, mitigation and research, as well as by assigning responsibilities, timeframes for execution, coordinating actions and results, and the estimation of costs, in accordance with the National Strategy for Climate Change.

In addition, a Climate Change Fund has been set up, the objective of which is to gain and channel financial resources from public and private sources, as well as from national and international funding, to support the implementation of climate action with adaptation as a specific priority.

After the country presented its NDC and the Paris Agreement came into force in 2018, the LGCC was revised in order to update its contents and focus, with a view towards facilitating the implementation of the NDC within the context of the Paris Agreement, and incorporating its principles, objectives and precepts.

Mexico also has a Climate Change Mid-Century Strategy (MCS) to 2050, which is an instrument for determining national policy in the face of the impacts of climate change, and for developing a low-carbon economy in the medium and long term. It defines the strategic lines of action to be taken by the three levels of government.

As a result of the reforms of the LGCC, the ENCC is also being revised and updated, for the purpose of integrating Mexico's Vision to 2050, as manifested in its Mid-Century Strategy (MCS), and also to include the new administration's views. It should be noted that the MCS signalled an early start to the implementation of the Paris Agreement, by fulfilling one of the commitments contained in Article 4 of the Agreement. Likewise, the Special Programme for Climate Change (PECC) 2019-2024 will include GHG mitigation actions as well as climate change adaptation measures, to be implemented by the Federal Government over that period.

Regarding adaptation, a National Adaptation Policy (NAP) has been formalized, the main objective of which is to define the roadmap for the implementation of the NDC in this area. This instrument envisages integrating a territorial focus, as a cornerstone of the NAP, along with development and consolidation of a monitoring and evaluation system to improve transparency regarding the country's progress in fulfilling its NDC.

<p>Political- legal- institutional</p>	<p>The General Law for Climate Change (LGCC) has been continuously updated to include progress made in terms of the international climate agenda. For example, in April of 2018, the Senate of the Republic of Mexico approved a decree by which various legal provisions in the General Climate Change Law were revised, amended or eliminated, for the purpose of being able to incorporate elements of the Paris Agreement. Among these modifications, the following are worth noting:</p> <ul style="list-style-type: none"> - The NDC was adopted as the instrument, associated with the Paris Agreement, by which Mexico will establish the objectives and national mitigation and adaptation targets, as well as the long-term objectives within the United Nations Framework Convention on Climate Change. - A mandate was established to create a National Adaptation Programme and develop an early warning system to reduce vulnerability to extreme events caused by climate change. - A mandate has been established to gradually create a carbon market to promote the reduction of emissions at the lowest possible cost, in a measurable way that can be reported and verified without compromising the competitive advantage of participating sectors. <p>Finally, based on the reforms of the LGCC, it was provided that SEMARNAT will publish the preliminary basis of the carbon market system, with a view to encouraging the largest GHG emitting sectors to reduce their emissions in the cheapest possible way and, at the same time, to comply with the national NDC targets. To support the process of implementation, SEMARNAT ran a simulated exercise between 2017 and 2018, with support from the World Bank.</p> <p>After the presentation of the Paris Agreement in 2015, Mexico presented a strategy to promote the use of cleaner technologies and fuels in the medium and long-term. It also already had ten regulations, of which eight were directly related to the energy sector; as well as policies related to institutional arrangements and forests (REDD+ and land-use change).⁶¹</p> <p>Mexico has a National System for Climate Change (SINACC), which is a mechanism for effectively dealing with the country's vulnerability and risk, and also for identifying the most important actions required for climate change mitigation and adaptation. SINACC is comprised of the Inter-Secretarial Commission for Climate Change (CICC), presided over by the President of the Republic and organized into 14 State Secretariats; the National Institute of Ecology and Climate Change (INECC); and the Commission for Climate Change (C3), which is the permanent consultative body for the CICC. The latter is comprised of members of the social, private and academic sectors; federal entities; the associations of municipal authorities; and the General Congress of the United Mexican States.</p> <p>The Inter-Secretarial Commission for Climate Change (CICC) is the institution responsible for coordinating government action on climate change and for designing and implementing national policy on adaptation and mitigation. The CICC has working groups for developing climate policy at a federal level, and these are:</p> <ul style="list-style-type: none"> - The Working Group for Adaptation Policies (GT-ADAPT) dedicated to improving coordination across institutions on the subject of adaptation, and to supporting the process of defining the actions required for the adaptation component of the NDC within the framework of the National Adaptation Policy (NAP). - The Working Group for the Special Programme on Climate Change of the CICC (GT-PECC) is intended to support the CICC in the formulation of policies and monitoring of the special programme on climate change, and to facilitate transversal dialogue on the issue. It provides a space for the exchange of information and experiences regarding the development and implementation of the special programme, and also assists with monitoring and reporting the commitments agreed to by the technical secretary and the participating public offices and federal entities. - At the same time, there is the working Group for the Reduction of Emissions from Deforestation and Degradation (GT-REDD+). Some of the activities that correspond to this group include supporting inter-institutional coordination for the REDD+, assisting in the process for the development of a monitoring and evaluation mechanism for the implementation of the national strategy for REDD+, and to supply technical support for defining actions required for the forestry component of the NDC. - The Working Group for International Negotiations (GT-INT) seeks to formulate the national position to be adopted at international forums and organizations on climate change, specifically at the UNFCCC Conference of Parties (COP) and with its subsidiary entities. It also supports the Inter-Secretarial Commission in its communications with the UNFCCC. - Finally, the CICC recently approved the establishment of the Working Group for Finance (GT-FIN) that will identify and support the mobilization of financial resources for the implementation of climate change mitigation and adaptation actions.
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61 See Annex 3

	<p>The Mexican Committee for Projects to Reduce Emissions and capture GHGs (COMEGEI) receives and evaluates draft proposals and projects for the reduction of emissions proposed to be implemented under the Clean Development Mechanism (CDM), included in Article 12 of the Kyoto Protocol. This Committee also provides letters of approval or objection, as the case may be, and confirms the voluntary participation of those involved in projects associated with CDM and their contribution to sustainable development in Mexico.</p>
<p>Sectoral</p>	<p>The document 'Climate Change Mitigation and Adaptation Commitments for the Period 2020-2030,' includes the expectations for the various participating sectors on how to achieve targets included in the country's NDC. The energy and industrial sectors are expected to produce 43% of their output with clean energy by 2030, and to substitute heavy fuels with natural gas, clean energy and/or biofuel for national industries. For its part, the transport sector has proposed increasing its fleet of vehicles that run on natural gas, and to increase the availability of clean fuels, as well as to promote multimodal transport for cargo and passengers. Regarding the urban sector, the construction of buildings with integrated low-carbon and energy efficiency standards will be promoted, as well as the recycling and use of methane from sewage and waste water treatment plants. Finally, it is expected that the forestry, farming and livestock sector will achieve a zero deforestation rate by 2030, recover pastures, and promote the use of biogas on farms.</p>
<p>National</p>	<p>For the purpose of effective coordination between the three branches of government, and constructive dialogue between the public, private and social sectors on the subject of climate change, the National System for Climate Change (SINACC) incorporates all the members of CICC, the Coordination of Evaluation of National Climate Change Policy, the C3 Commission, the National Institute of Ecology and Climate Change, and 32 local entities, municipal associations, and the National Congress. SINACC also works with the academic, social and private sectors, on the design of short, medium, and long-term strategies for developing inclusive policies, a low-carbon economy, a resilient society and ecosystems, and measures to promote sustainable development.</p> <p>In line with this approach, states need to cooperate with local governments in large cities and metropolitan areas, which are considered the territorial base from where actions for growth and development are to be implemented, developed and decided upon, and which today have very serious repercussions in terms of climate change. It is therefore also necessary to promote innovative cities where mitigation and adaptation actions are carried out, and have a direct and positive impact on fulfilment of the NDC commitments. For this reason, the federation should support and encourage sub-national governments, so that solutions to social, economic, environmental and national challenges can emerge.</p> <p>The targets outlined in the NDC are directed at federal entities within the country. However, their fulfilment requires cooperation and alignment between state and local governments, so that actions and information can be shared and reported to the federation. In this way, such actions can be counted among those contributing to achieving the objectives contained in the Paris Agreement.</p> <p>Regarding institutional challenges and multilevel governance, there is a need for state and municipal leaders to actively support ways of managing the country in a sustainable way and for incorporating and implementing actions that can contribute to changing production and consumption patterns, and thereby also assisting in generating transversal and integrated mitigation and adaptation policies in the long term.</p> <p>In this way, coalitions could be formed to promote changes within society, and to stimulate the consolidation of new low-carbon development mechanisms, and strengthen support for institutional entities. Rights and legal responsibilities could be redefined and contribute to changing the dominant paradigms and expectations held by society, and make it possible to aim for more ambitious targets that contribute to a reduction of the effects of climate change.</p> <p>The state of Michoacán has implemented various climate change initiatives. For example, to address the loss of up to 25,000 hectares of forest per year (2016) due to illegal land-use change, a Forestry Law was implemented to reduce the level of deforestation, dismantle illegal farms, and enable reforestation. Furthermore, it is adopting technology developed by the Japanese company Takase Tech for the treatment of solid waste for the generation of fuel. Other states, such as Sonora, have also implemented a strategy for green development that is focused on low-carbon growth and resilience in the medium and long-term. The initiative is developed by the State Government of Michoacán through the Secretariat of Environment, Climate Change and Territorial Development.</p>

<p>Multilevel</p>	<p>With the help and cooperation of local associates, the Mexican Alliance for REDD+ has implemented the project 'Strengthening capacities for the identification and implementation of forestry technology and best practices for livestock farming in the communities of El Barrio de la Soledad'. This is a strategy designed to reduce emissions from deforestation and degradation of forests in the Isthmus of the Tehuantepec Region, of Oaxaca State. The Mexican Carbon Platform is also being implemented, which is the first pilot programme for a carbon market in Latin America.</p> <p>In 2018, energy efficiency rules and guidelines were presented for offices and entities of public administration on the federal level, in line with the framework programme on energy efficiency for federal public administration (APF). Since 2010, there has also been the 'National energy efficiency project for public municipal lighting,' established through an agreement signed by the Secretary of Energy (Sener); the National Commission for Efficient Energy Use (Conuee); The Federal Commission for Electricity (CFE); and the National Bank of Public Works and Services, S.N.C. (Banobras).</p>
<p>Social</p>	<p>Mexico has a growing population that is increasingly more pluralistic and dynamic. The education and knowledge citizens have at their disposal allows them to fully exercise their rights and be aware of their responsibilities, as well as to be capable of making well-informed and well-founded decisions.</p> <p>Therefore, climate policies being developed over the past five years have included social participation through workshops, online surveys, and specialized roundtables with representative participants from social, private sector and academic organizations.</p> <p>The results obtained from these meetings were used to design, focus and prioritize the measures included in Mexico's NDC. Likewise, the NDC was submitted for review by the Commission on Climate Change, the entity made up of expert representatives from the previously mentioned sectors, which were authorized to provide recommendations on the direction of national climate change policy.</p> <p>Currently, work is being done to develop a System of Information and Action for Transparency of the NDC (SIAT-NDC), which will integrate systematized information on progress made in climate policy at national, state and municipal levels. It will also include information on social, academic and government sectors, for the purpose of keeping activities transparent in accordance with the framework of Article 13 of the Paris Agreement, and as a component of the NDC. This process has also included the participation of members of the public, private and academic sectors, as well as civil society organizations, by means of an online survey.</p>
<p>Financial</p>	<p>The costs of implementing Mexico's NDC were evaluated through the National Institute for Ecology and Climate Change (INECC), in which the optimal cost roadmaps were defined, and institutional capabilities were reinforced to enable the analysis of a variety of economic aspects related to the issue. The evaluation included:</p> <ul style="list-style-type: none"> • Analysis of disaggregated costs for each measure and sector. • Public-private dialogues (PPD) with sector representatives to assist in the definition and application of mitigation measures. • Analysis of social criteria and of cost-benefits associated with sustainable development targets. <p>Part of the development of this cost estimate included interaction with implementing agencies and financial institutions in order to include accounting criteria. For the purpose of making progress on the activities contributing to fulfilment with the NDC, SEMARNAT and INECC also estimated the investment needs associated with fulfilment of the mitigation actions by the eight sectors included in the NDC (transport, industry, electric power generation, oil and gas, farming, waste, housing, and land-use). As a result of this exercise, the investment required was estimated at between 120 and 130 million US dollars over 15 years, in order to meet the target of reducing GHG emissions by 22% (INECC, 2018).</p> <p>The following lists the country's financing strategy for the public and private sectors, and for international cooperation.</p> <p>Public: Development Banking (FONADIN)</p> <ul style="list-style-type: none"> • Public budget. • Green/climate bonds. • Climate Change Fund (FCC). • Carbon tax. • Reform of subsidies for fossil fuels.

Finance	<p>Private: Commercial Banking</p> <ul style="list-style-type: none"> • Green/climate bonds. • Carbon market. • Insurance for catastrophic climate events. • Investment in assets and operating expenses. • Loans. • Equity. • A sustainability index in the stock market. <p>International cooperation:</p> <ul style="list-style-type: none"> • Official development aid; mixed funds, donations; triangular cooperation. <p>• For the purpose of encouraging a transition to low-carbon technologies that support fulfilment with national targets set out in the NDC, work was done to accelerate investment in key climate change projects. In this way, it was possible to establish public-private partnerships that strengthened the economic and environmental viability of a variety of projects with good mitigation potential for reducing GHG emissions. Thus, a national climate financing strategy was designed to contribute to and promote fulfilment with national mitigation and adaptation commitments, enhance efforts and resources, and avoid duplication of climate efforts.</p> <p>• The General Climate Change Law created the Climate Change Fund (FCC) that channels public, private, national and international financing projects that contributes to adaptation and mitigation action. They also support climate action at the state level, innovative research projects, technology development and transfer, and the purchase of Certified Emissions Reductions (CER).</p> <p>• Since its inception in November of 2012, the FCC has supported 30 projects with approximately 183 million pesos for climate mitigation and adaptation actions. The FCC has been accredited as a donating entity authorized to issue tax deductible receipts, as well as initiate processes for receiving international aid to support fulfilment with NDC targets.</p> <p>• Furthermore, since 2013, the Federal Expenditure Budget contains a transversal Annex for climate change that incorporates the government's programme budgets aimed at mitigation and adaptation to climate change.</p> <p>• In 2016, the FCC put out a call to identify and present a business portfolio to promote low-carbon, green development. In the end, 11 projects were identified, of which three could potentially be presented to the Green Climate Fund for financial support, and the rest to other sources of financing.</p> <p>• An initial result of the investment accelerator so far has been that projects have been considered that imply investment values of around USD 300 MM</p> <p>• Mexico has received funding from the GCF for two projects. The Low-emission climate resilient agriculture risk sharing facility (MSMES) focuses both on adaptation and mitigation, and has a total financing of US\$158 MM. Another mitigation project is GEEREF NeXt, for a total of US\$765 MM in over 20 countries, including Mexico.</p>
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Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - Mexico has a climate financing mechanism called the Climate Change Fund (FCC) that channels public, private, national and international investments. - It has established an institutional and programmatic framework for the management of climate change at the federal level. 	<ul style="list-style-type: none"> - There is a need to raise the ambition of Mexico's NDC in response to the 1.5°C scenario. - Technical assistance and capacity building is needed, especially at sub-national levels. - The development of a financing strategy that includes all sectors and actors. - Mechanisms for monitoring and follow-up of climate action at sub-national levels.

• **Nicaragua**

Country	Republic of Nicaragua		
NDC			
<p>Nicaragua signed up for the Paris Agreement on October 20th, 2017, and has developed instruments aimed at the implementation of the agreement. Nicaragua presented its NDC in August of 2018, and that same year, it also presented its Third National Communication on Climate Change.</p>			
<p>The fundamental principle underpinning Nicaragua’s NDC is common but differentiated responsibility, which is differentiated according to capacities. Ambition for the reduction of emissions should be highest in countries with very high levels of emissions, and means for implementation and financing should be provided to lower emitting countries, to support fulfilment with established targets.</p>			
<p>Summary</p>	<p>Mitigation - Nicaragua has sectoral targets. Its unconditional target is that 60% of electricity production should come from renewable sources by 2030; and the country also promotes conservation of the absorption capacity of its carbon sinks, all with regards to the Reference Scenarios for emissions up to 2030. Nicaragua’s conditional target is for its capacity for carbon absorption to rise by 20% with regards to the reference scenario for 2030.</p> <p>Adaptation - The country requires financial assistance for developing its prioritized adaptation measures that relate to infrastructure, disasters risk management, early warning systems, of resilient ecosystem management, and the sustainable use and management of protected areas.</p>	<p>Development process</p>	<p>An ad-hoc mechanism was established for the design of the NDC that includes the Ministry of Foreign Affairs, the Private Secretariat of National Policy, and the Ministry of Environment and Natural Resources.</p> <p>Information used in the development process came from the studies prepared for the three National Communications presented to the UNFCCC. Nicaragua’s NDC is a reflection (synthesis) of the Climate Change Mitigation and Adaptation Policy, which integrates priority actions for adapting to climate change. Both the policy, and the NDC, were developed according to a model based on alliances, dialogue, and consensus among the different productive sectors.</p> <p>The country’s mitigation policy in the NDC focuses on developing actions in the energy, land-use and land-use change sectors, as well as on developing forest conservation and restoration measures designed for adaptation to climate change. In general, the country has defined important measures that can be summarized in 13 priority actions that seek to reduce emissions by 2030.</p>

Coordination	
Political- legal- institutional	<p>Nicaragua has 11 regulations or policies related to climate change management. All were presented in 2015, prior to the Paris Agreement, and are mostly related to the energy sector and climate change adaptation.⁶²</p> <p>The country has a Commission for Climate Change created by ministerial resolution nr. 014.99, which is a consultative body for recommendations on relevant climate-related activities, and which is also responsible for promoting national consensus on climate strategies, programmes, projects and actions. It also participates in the formulation of the national position to be taken during international negotiations. It is made up of entities from both the public and private sectors, as well from civil society.</p> <p>One of the most important policy instruments is the National Environment and Climate Change Strategy developed in 2010. This strategy includes five strategic lines of action that promote environmental awareness for life; environmental protection and defence of natural resources; the conservation, restoration and maintenance of water resources; and sustainable soil management.</p> <p>Between 2017 and 2018, Nicaragua developed its climate change policies, including the NDC, according to a process that included consultation with various sectors, such as the Nicaraguan Superior Council of Private Enterprise, municipal governments, the productive sector, universities, and government entities.,. The fundamental basis for implementing the NDC is the National Policy on Climate Change.</p> <p>The Law to Promote Electricity Generation from Renewable Sources (Law 532) is designed to promote renewable energy and change the country's energy matrix.</p> <p>A significant step forward has been the presentation of a strategy for the reduction of emissions from deforestation and forest degradation (ENDE-REDD+), which is in its second stage of development.</p>
Sectoral	<p>Nicaragua has the following sectoral initiatives:</p> <ol style="list-style-type: none"> 1. The National Programme for Sustainable Electrification and Renewable Energy (PNESER). 2. The National Transport Plan that will be developed over a period of 20 years, with a proposed investment of US\$8 Bn for road infrastructure, including necessary construction work for containing the effects of climate change, and also others for protecting the environment. 3. The project for developing a strategy for the reduction of emissions from deforestation and forest degradation (ENDE-REDD+) is being carried out, and is currently in the second stage of development for 2018-2020, with support from the Readiness Plan of the Forest Carbon Partnership Facility (FCPF) of the World Bank. 4. Another project being carried out is for the Sustainable development of the means of life for rural families in Nicaragua's dry corridor' project (NICAVIDA), with the support of the Central American Bank for Economic Integration (BCIE), through their International Development Fund (FIDA).
Multilevel	<p>Nicaragua is also implementing a National Programme to avoid Deforestation (ENDE) that includes elements from the international REDD+ Programme, but also has the objective of combatting climate change and poverty. The project includes input from a broad spectrum of society, including national, regional and local governments, the leaders of indigenous communities and African descendants, rural communities, farm producers, the owners of forests, universities, the media, environmental movements, the police, the army, women and youth.</p> <p>Across Nicaragua, local governments have a Strategic Municipal Development Plan 2018-2022, which includes 12 cornerstones for development that have also been identified as strategic priorities for the country's NDC. Those actions are aimed at reinforcing local institutions and governance, including the management and restoration of hydrological resources, the restoration of soils, the protection of water sources and forests, the conservation of biodiversity in protected areas, and the establishment of protective systems in forestry, agriculture and livestock.</p> <p>On a regional level, Nicaragua has the Development Plan for the Caribbean Coast.</p>

62 See Annex 3

<p>Social</p>	<p>Nicaragua's Constitution states that: "The Nicaraguan State acknowledges the individual, the family, and the community, as the origin and ends for its work, and it is therefore organized to ensure the common good, taking on responsibility for promoting human development for each and every Nicaraguan..."</p> <p>In order to fulfil the statutes of its constitution, the Nicaraguan Government of Reconciliation and National Unity promotes a variety of strategies and development plans within the context of the National Human Development Plan that directs policy-making in the country.</p> <p>The government has acknowledged the historical rights of the indigenous population and African descendants, and restored their land rights. To date, it has provided 22 land titles that represent over 80% of the territory originally pertaining to indigenous communities, and which represents an area of over 31,500 square kilometres.</p>
<p>Financial</p>	<p>Nicaragua is facing the great challenge of growing economically so it can reduce poverty, in the context of climate change that is creating threats in terms of loss and damage. To strike this balance, the country requires access to financial resources for climate change adaptation, which means there is a need to enhance climate-financing capacities.</p> <p>According to the ECLAC study on economy and climate change, Nicaragua requires US\$2 Bn dollars to face the impacts of global warming. The country is therefore preparing a strategy for the management and mobilization of funds and means of implementation regarding adaptation, and loss and damages associated with climate change.</p>

<p>Opportunities/ Offers</p>	<p>Challenges/ Demands</p>
<ul style="list-style-type: none"> - The ongoing formulation of the ENDE-REDD+ Programme to combat climate change and poverty in Nicaragua, authorized by Presidential Agreement Nr 21-2018, La Gaceta Nr.16, January 23rd, 2018, with support from the Carbon Fund of the FCPF-WB - The possible approval of the Project for Agriculture Resilient to Climate Change in Nicaragua's Dry Corridor, with support from the World Bank. - The Project currently under development to enhance institutional capacities and technical skills in the farming and forestry sectors, to better fulfil the requirements of the transparency framework supported by the Paris Agreement. This project, supported by FAO-GEF, was at the preliminary idea stage in August of 2018. - Another Project at the preliminary stages (as of August of 2018) and supported by FAO-BCIE-GCF, is for the integrated improvement of climate change resilience in the biosphere reserves of BOSAWAS and the San Juan River basin. 	<ul style="list-style-type: none"> - Access to financing, especially for adaptation to climate change. - The development of sectoral technical capacities, including improved knowledge on emissions reductions, technology transfer, and accessing financial resources. - The development of reporting, monitoring and early warning systems to face extreme weather events. - Continue strengthening the institutionality of the NDC through the implementation of the National Climate Change Mitigation and Adaptation Policy, and continue to work using the model of dialogues and alliances with the productive sector.

• Panama

Country	Panama		
NDC			
Panama presented its iNDC in April of 2016, and also signed up to the Paris Agreement at the same time, which it ratified the following September. The iNDC became the NDC and the country presented its Third National Communication in 2018, and its first Biennial Update Report (BUR) in December of 2018.			
Summary	<p>Mitigation - The targets are sectoral. The unconditional target for energy is 15% of the electrical power matrix coming from renewable energy sources by 2030, rising to 30% by 2050. Meanwhile, an increased absorption rate for GHG emissions of 10% is planned for the forestry sector, based on a BAU scenario up to 2050. This will be achieved by work in reforestation and the restoration of protected areas. The conditional contribution in the forestry sector plans for an 80% increase in the absorption capacity of GHG regarding the scenario to 2050, by means of support from international cooperation.</p>	Development process	<p>The NDC development process was led by the Ministry of Environment, with support from the National Panamanian Commission for Climate Change (CONACCP). A public consultation mechanism was used to include a variety of sectors, including representation from the ten provinces and nine entities representing the indigenous communities of Panama.</p>
Coordination			
Political-legal-institutional	<p>Nine policies and regulations have been established for the management of climate change in Panama. These are related to the energy sector, institutional or administrative arrangements, and climate change adaptation. All of these were developed prior to the approval of the Paris Agreement in 2015.</p> <p>The main regulation for climate management is the National Policy of Climate Change (PNCC, 2007), which constitutes the defining framework for all work to be carried out to stabilize GHG emissions in the public and private sector, as well as in civil society. It also promotes adaptation measures and secures progress towards sustainable development. The Ministry of Environment was established by Law nr. 8 in 2015, and Title V was added to address climate change in chapters I and II, which cover adaptation and mitigation respectively. This modification reflected the State of Panama's acknowledgement of climate change as an important global threat to the environment that effects the population, ecosystems, and all productive sectors of the country's economy. Thus it is accepted the state has a responsibility to establish the necessary mechanisms to find financial and economic resources for low-carbon development.</p> <p>The National Panamanian Commission for Climate Change (CONACCP) was established in 2009,63 for the purpose of implementing the PNCC. The CONACCP has as its objectives to consolidate the coordinating system for fulfilment with national and international climate change agreements adopted by Panama (considering both adaptation and mitigation), to promote the issue of climate change transversally in each of the member institutions by sharing information and opportunities with each one, as the entities responsible for their particular areas. Currently, the CONACCP is the only inter-institutional coordinating mechanism to address all work relating to climate change at a national level.</p>		

Sectoral	<p>Despite the fact that Panama's NDC only establishes targets for the energy and forestry sectors, the country acknowledges the importance of other sectors, such as waste, industry, and agriculture, which will progressively be included in future NDC updates, when the means for implementation at a national level have been enhanced.</p> <p>Panama's Law nr 8 and the National Energy Plan 2015-2050 are the foundation for reaching the NDC target focused on the energy sector and, specifically, to reinforce lines of action for reducing carbon emissions in the electrical matrix.</p> <p>Regarding the land use, land use change, and forestry sector (LULUCF) in the NDC, Panama has established the Alliance for One Million Hectares initiative. This initiative is promoted by a public-private management venture that seeks to increase the country's forest cover by one million hectares, over a period of 20 years. A variety of measures are planned, including reforestation, conservation, early replacement of secondary forests, and restoration of degraded areas and forests. Over fifty public and private institutions and NGOs have joined this initiative since it was launched in 2014, and it has succeeded in reforesting 7,451 hectares so far. Furthermore, an Incentive Law for Forests and Tree Coverage was approved in 2017, which provides for an annual national expenditure of US\$15 MM dollars provided by the Panamanian Reforestation Fund. A budget is also being developed to mobilize funds for reforestation related to the law of forestry incentives. In order to fulfil its NDC targets for the forestry sector, Panama needs to implement policies and programmes, including the law of ecological crime, environmental awareness programmes, the creation of collective regions and territories pertaining to indigenous groups and protected areas, and to strengthen the institutions responsible for environment work.</p> <p>The National Directorate for Climate Change is the coordinating entity for the Alliance for One Million Hectares, operating out of the Ministry of Environment. It is responsible for monitoring, measuring, reporting and verifying, and cooperates with the regional offices to implement the actions involved in the initiative.</p> <p>In accordance with Panama's NDC, in order to increase its ambition, the country requires a new regulatory framework for the LULUCF sector, which would include the design and implementation of a supporting policy for reforestation and restoration. It also needs to redesign the regulatory framework for the sub-sector of electricity, to ensure the private sector is supported in developing unconventional renewable energy.</p>
Multilevel	<p>Between 2009 and 2011, Panama implemented a programme to incorporate climate change adaptation and mitigation measures into the management of two of the natural resources in two priority river basins in Panama: the Chucunaque River and the Tabasará River basins. The programme was financed by the Development Fund for the Millennium Development Goals Achievement Fund (MDG-F), and carried out by four Panamanian institutions (ANAM, MIDA, MINSA and SINAPROC), together with four United Nations agencies: UNDP, UNEP, FAO and PAHO/WHO. The main objective was to increase adaptation and mitigation capacities regarding climate change that could also help reduce poverty and promote environmental sustainability for the population in the targeted areas.</p> <p>In addition, the project 'Protection for reserves and mangrove carbon sinks and protected areas of Panama (2014-2017)' sought to show how mangrove ecosystems have a role to play in risk management, and also contribute to climate change adaptation and mitigation. The programme supports mangrove management at national and local levels in three districts of the Chiriquí Region, and is coordinated by UNDP, in conjunction with the Ministry of Environment (MIAMBIENTE) and the Authority of Water Resources of Panama (ARAP), with support from Wetlands International and Conservation International.</p>
Social	<p>At a government level, the main actors are the National Committee for Climate Change in Panama (CONACCP) and the Ministry of Environment. At a regional level, there is the Association of Municipalities of Panama. The main participants from the private sector are the National Commission for Sustainable Development (CONADES); pig-farming associations; Cemex; Panama Green Innovations (plastic recycling company); and MELO (chicken and chicken products producer).</p> <p>Banitsmo and Citibank manage programmes associated with Corporate Social Responsibility; and civil society participants include the National Association for Nature Conservation (ANCON); the Panamanian Association of Empresarios (APE); the Panamanian Chamber of Construction (CAPAC); and the following indigenous communities supporting the REDD+ Programme: Madugandí, Wargandí, Guna Yala, Ngäbe, Buglé, Emberá, Emberá Wounaan, Embera de Alta Bayano, Naso Tjër Di, Bri bri, Takargunyala and collective lands.</p>

Financial	<p>Panama's NDC contains an estimate for the investment necessary to promote renewable sources of energy that amounts to US\$2.2 Bn dollars; while the sum needed for reforestation of degraded areas is estimated at an additional 2.2 Bn dollars. Furthermore, the promotion of a sustainable forest culture and the development of an international carbon market for emissions reductions, would require an investment of US\$250,000. And a further estimated US\$1,000,000 is necessary to support the implementation of mitigation and adaptation policies and projects.</p>
	<p>A National Adaptation Fund was established through Law nr.8. These funds must be invested for adaptation in the ten most vulnerable districts of the country.</p>
	<p>Law 69, which was passed on October 30th, 2017, established a programme of incentives for forest cover and the conservation of natural forests among other elements. This law has as its primary objective to protect, recover and conserve forest cover, in compliance with the goals of the Alliance for One Million Hectares and the 2030 Sustainable Development Objectives. This law also established the Panamanian Reforestation Fund, with mixed funds and administration, which will be endowed by the General State Budget, but whose legal statute also allows for funds to be received in the form of donations and public or private financing.</p>

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - The institutional support for climate action has been strengthened by the creation of the Ministry of Environment and the Committee for Climate Change, and by the subsequent Energy Efficiency Plan including water security and the farming sector. - The Alliance for One Million hectares. - A two-tier decision-making process between technical and political levels, and a functional model for the development and approval of climate change plans and projects. 	<ul style="list-style-type: none"> - Capacity building programmes for local government and public institutions regarding climate change, in order to support the implementation and transversal management of climate policy and the NDC. - Multilevel coordination of municipalities through a network or other mechanisms. - A mechanism for the development of up-to-date statistical information on climate change, which supports decision-making and transparency for climate action. - Capacity building and the development of initiatives and a monitoring mechanism for the transport sector. - Avoid major reversals to progress on projects, policies and capacity building as a result of changes of government.

• Paraguay

Country	Paraguay		
	NDC		
	<p>Paraguay presented its iNDC in October of 2015, and signed up to the Paris Agreement in April of 2016, ratifying it later that year, in October. Paraguay's iNDC became its NDC. Furthermore, the country presented its Third National Communication in September of 2017, and its second Biennial Update Report (BUR) in December of 2018.</p>		
Summary	<p>Mitigation - Paraguay has a relative target for the reduction of its GHG emissions by 20% of projected emissions up to 2030, based on a BAU scenario. This target consists of a 10% unconditional component, along with a 10% conditional component.</p> <p>Adaptation - The sectors prioritized for the country's adaptation contribution are water resources, forests, agricultural production and livestock, energy, infrastructure, health and sanitation, natural disaster risk management, and early warning systems.</p>	Development process	<p>The NDC development process included a high level of participation from civil society, in line with the statutes set out by the National Climate Change Commission. All sectors and institutions were involved. The Commission is made up of 24 institutions as full members, including all ministries and decentralized public entities. Representatives of the private sector, a network of environmental organizations, as well as a variety of other organizations unaffiliated with the National Climate Change Commission were also included.</p>

Coordination	
Political-legal-institutional	<p>The country has 16 policies or regulations related to climate change management⁶⁴, which are mostly related to the energy sector, as well as to institutional matters and forestry (including REDD+ and land-use change). The country presented its Energy Policy for the Republic of Paraguay (2016) after signing up for the Paris Agreement, and also a National Climate Change Law (2017) that sets out the regulatory framework for mitigation and adaptation, including the establishment of the National Climate Change Commission, the National Directorate of Climate Change, and the Climate Change Fund.</p> <p>Paraguay has a National Commission for the Environment (CONAM), which is an inter-institutional entity including members of the public, private and civil society sectors. Paraguay also has the National Climate Change Commission (CNCC), an inter-institutional think tank and consultative body for national policy on climate change, the function and structure of which is established by the National Law on Climate Change. Currently, the CNCC is made up of 34 institutions represented by full members, and 11 affiliated institutions. The presidency of the Commission is held by the Secretariat of Environment, and the vice-presidency is held by the Ministry of Foreign Affairs. Items on the agenda during its first annual session in 2018 were projects approved by the Green Climate Fund (GCF) for the Republic of Paraguay, presented by the Ministry of Planning; and the NDC Implementation Plan, presented by the Programme for Climate Policies.</p> <p>Paraguay has plans and strategies that seek to establish a regulatory framework for climate action. The country has a National Mitigation Plan for Climate Change, as well as action programmes (2017) that outline the national priorities for effective implementation of its NDC. Meanwhile, adaptation work at a national level is a priority in the National Development Plan for 2014-2030, which contains the National Adaptation to Climate Change Strategy (ENACC, 2015) and the National Plan for Risk Management and Adaptation to Climate Change for the agricultural sector; as well as an analysis of vulnerability and action plans for the agricultural, livestock, health and water resources sectors.</p> <p>The 2018 NDC Implementation Plan was designed to establish the framework for national public policy, identifies concrete sectoral lines of action regarding GHG emissions, and also takes into account the actions required at a national level, as well as those that are already up and running. Some initiatives imply emissions reductions; however, their methodology needs to be improved to ensure coherence with the methodology for their inventories. The Plan also contains a financial strategy for each line of action to be implemented.</p>
Sectoral	<p>The National Adaptation Plan for Climate Change was approved in 2016, in which priority actions were divided according to seven key sectors, and also according to their relevance to the components and implementation mechanisms of the National Adaptation to Climate Change Strategy (ENACC).</p> <p>Paraguay has developed a guide for designing sectoral climate change adaptation plans, which is intended to assist sectoral government agencies with their planning for adaptation. The Sectoral Mitigation and Adaptation Plan is currently being formulated by the Public Works and Communications sectors.</p> <p>To date, there are no targets set by sector, though the implementation plan does quantify data for some initiatives. A significant limiting factor is the lack of methodological skills for quantifying all the initiatives and how to establish a baseline.</p>
Multilevel	<p>A Declaration of Interest by the municipalities of the Metropolitan Area of Asuncion to respond to Climate Change was signed in April of 2016. The network's first meeting was held in May 2017, during which each municipality presented the different actions they are developing in relation to mitigation and adaptation measures in their territories. Among these, action areas such as sustainable waste management reforestation of districts with native species along avenues and public squares, the installation of agro-ecological gardens, and territorial watershed management are all notable action areas. Despite interest on the part of the municipalities, to date there is no measurement of GHG emissions by individual municipalities, due primarily to a lack of capacity building among technical staff.</p> <p>In accordance with the National Adaptation Plan for Climate Change, the Guide for developing local climate change adaptation plans was developed through a participatory process. The Secretariat of Environment, through its National Directorate for Climate Change, has provided training to over 3,000 municipal staff in 14 departments, in order to install key actors for the formulation of local adaptation plans.</p>

64 See Annex 3

<p>Multilevel</p>	<p>The country also has initiatives in the context of the GCF Readiness Project, designed to strengthen the role of local development councils to help them contribute effectively to the implementation of the NDC. These initiatives support local councils in the design, formulation and monitoring of their climate change projects and programmes, ensuring that climate action is an integrated part of their planning, and a transversal dimension in the development plans.</p> <p>The Alternative Energies Office of the Ministry of Mines and Energy is implementing a reforestation plan to fulfil with energy goals regarding local consumption. The initiative has been developed in line with the National Reforestation Plan.</p> <p>The forestry sector has also implemented an initiative for sustainable forest management in the Paraguayan Chaco, which was intended to show that forestry could be an additional source of income for livestock farmers, as well as to fulfil the objective of reducing deforestation in this ecosystem.</p>
<p>Social</p>	<p>The Climate Change Commission coordinates a network of environmental organizations, universities, the Industrial Union of Paraguay, and the Rural Association of Paraguay, involving them in climate change management.</p>
<p>Finance</p>	<p>The NDC implementation plan that is currently under review proposes a financial strategy for each line of action. However, a mechanism for national public action is needed.</p> <p>The National Climate Change Law established the Climate Change Fund, the regulations of which are currently being formulated.</p> <p>Paraguay has developed the consulting project 'Quantifying the Public Cost of Climate Change Action in Paraguay,' in which the cost of climate change as reflected in the country's national budget for the period of 2010-2015 will be identified and quantified. In this way, the distribution of mitigation and adaptation actions by programme and/or area within sectors will be analysed, along with verifying the financial sources of these resources.</p> <p>According to the analysis of public expenses, the Government of Paraguay spent an average of just over US\$1 Bn dollars per year on climate change activities, with the highest expenditures registered for the year 2015. After dividing costs by the different climate change actions, it was established that 86% of programmes are aimed at adaptation activities, and 14% at climate change mitigation. This research was done in collaboration with the Technical Secretariat of Planning. However, the Treasury has proposed updating the information. There are currently no calculations on future financial needs.</p>

<p>Opportunities/ Offers</p>	<p>Challenges/ Demands</p>
<ul style="list-style-type: none"> - Confidence has been established between the different agencies involved. - An exchange of knowledge and experience regarding the development of regulations and designing national commissions for climate change. - The country's establishment of a National Climate Change Fund by law, which affirms Paraguay's commitment to mitigation and adaptation action. 	<ul style="list-style-type: none"> - Support academia so it can produce effective information regarding climate change. - Improve coordination between relevant sectors to develop joint action on climate change. - Technical assistance for implementation at local and sectoral levels regarding mitigation and adaptation work, to ensure that current plans are carried out. - Fine tune and summarize methodologies to ensure lower costs of initiatives. - Identify technical needs.

• Peru

Country	Peru		
NDC			
Peru presented its iNDC in September of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it in July of the same year, converting its iNDC into the formal NDC. Peru has begun a revision of its NDC, for the purpose of agreeing on and expanding the measures it contains. Furthermore, it presented its first Biennial Update Report (BUR) in 2014, and its Third National Communication in 2016.			
Summary	<p>Mitigation – Peru has a relative target for GHG emissions reduction of 20% in relation to projections up to 2030 under a BAU scenario. An additional 10% would be conditional on international funding.</p> <p>Adaptation – Peru has indicated that its priority for adaptation lies in the water, agriculture, fishing, forests, and health sectors, in order to achieve a reduction in vulnerability to climate change.</p>	Development process	<p>The Ministry of Environment was responsible for leading the iNDC development process.</p> <p>There were three levels of dialogue: technical-scientific, with experts in the design and calculation of emissions, based on the PLANCC model; technical-political, with representatives of the ministries associated with the sources of emissions as well as the options for managing them; and high-level political discussions, for which a multi-sectoral commission was created that included ministers and/or deputy ministers charged with developing the technical report containing the proposal for the iNDC.</p> <p>A decentralized public consultation mechanism was established with national and sub-national governments, and representatives of civil society, including indigenous organizations, to both develop and consult on the progress and results of the process.</p> <p>Later, a multi-sectoral working group was founded for the implementation of the NDC (GTM-NDC), the objective of which was to review the progress of the technical working groups, towards a more detailed version of the NDC.</p> <p>A recent innovation is the ‘Let’s Talk’ initiative, in which the private sector, civil society, and the general public can be included in the progress being made on the NDC, as well as the regulations of the Climate Change Law⁶⁵.</p>

⁶⁵For the final report of the NDC working group, issued towards the end of 2018, we are grateful for the assistance of the PMR projects of the World Bank, administered by UNDP; the NDC-SP of the German Government, administered by the UNDP; EG-LEDS of USAID; NDC Partnership; European Union; WWF-Peru; UN REDD of the Multi-Partner Trust Fund Office (MPTF) administered by UNDP; FinanCC Peru of GIZ; AICCA of CAF and CONDESAN; Proambiente III of BMZ, implemented by GIZ; Country Programme for NAP Implementation of IISD; NAMA for energy administered by UNDP; Graciares+ from COSUDE, implemented by CARE and the University of Zurich; and the COSUDE Assistance Project for Climate Change Management carried out by Libélula.

Coordination	
Political-legal-institutional	<p>There are 29 policies and regulations that apply to climate change management in Peru⁶⁶ that are mostly related to the energy and transport sectors (11). Of the total, 21 policies or regulations were presented prior to the Paris Agreement, and 8 were established afterwards. The sectoral multi-annual Strategic Plan for the Environment 2017-2021 (PESEM) was approved in 2016, which was also the year in which the National Strategy for Forests and Climate Change was developed. The new General Law for Solid Waste and the Framework Law on Climate Change were approved in 2018. During 2018, Peru has been working on the regulations for the new law, including a public consultation process.</p> <p>Peru's Framework Law on Climate Change established the National Commission on Climate Change and also the High Level Commission for Climate Change. The former is comprised of representatives from the public, private, and civil society sectors, and is presided over by the Ministry of Environment (MINAM). The latter works on proposing climate change adaptation and mitigation measures, as well as the NDC. The High Level Commission for Climate Change was established by Supreme Decree, and is a permanent entity headed by the Presidential Office of the Council of Ministers, while the Ministry of the Environment acts as Technical Secretariat. The specific regulations for the Framework Law on Climate Change is currently at the preliminary consultation stage.</p>
Sectoral	<p>Peru had already established a number of NAMAs prior to the Paris Agreement. For example, the NAMA for the cement industry was developed in conjunction with representatives from that industry and the public sector, and is currently being prepared for implementation. NAMAs for transport, solid waste, energy, bio fuels, and agriculture International cooperation have also been developed, with the assistance of international cooperation.</p> <p>Recently, sectoral work has been carried out within the framework of the GTM-NDC working group, to develop tentative programmes and implementation plans for mitigation measures in energy, transport, industry, waste and forests, as well as for adaptation measures in forestry, health, agriculture, water, fishing and aquaculture.</p> <p>A total of 91 adaptation measures have been defined for 46 corresponding products in the NDC. These are spread over the sectors of agriculture (17); forests (12); fishing and aquaculture (18); health (14); and water (30). A total of 62 mitigation measures have also been defined, which are distributed across sectors in the following manner: stationary energy combustion (23); mobile energy combustion (14); industrial processes and product usage (2); agriculture (6); land use and land-use change (LULUC; 8); and waste (9). Peru's NDC contains a 30% target for the reduction of GHG emissions by 2030, going from 298.3 MtCO₂eq to 89.4 MtCO₂eq (MINAM, 2018).</p> <p>Regarding implementation of the NDC, the Framework Law on Climate Change obligates sectors to include mitigation and adaptation measures in their planning and budgets.</p>
Multilevel	<p>The Organic Law for Regional Governments approved in 2002, makes regional climate change strategies (ERCC) compulsory, and these instruments must include both mitigation and adaptation components. The ERCC is a legally binding instrument aligned with the National Strategy for Climate Change through its objectives, indicators, targets and implementation measures, which must be connected to the Regional Development Plan.</p> <p>Peru has a number of territorial projects that are aligned with its NDC. Among them, the project 'Support for Managing Climate Change' has worked in the Arequipa and Ucayali regions, and has also made progress in incorporating a specific NDC focus at a sub-national level. This project has experimented with the kind of support that should be provided (regulations, governance models, multi-level and inter-sectoral relations, capacities) in order to encourage adaptation and mitigation projects in sub-national territories.</p> <p>Technological adaptation measures, promoted by the Adaptation to Climate Change Programme (PACC), have been developed at a local level to support local communities.</p> <p>It should be noted that within the GTM-NDC framework, implementation of NDC measures and achievements associated with adaptation strategies, are specifically tied to each region and interest group. In the case of mitigation, the analysis carried out for the transport sector also highlighted implications for territorial management in the development mitigation scenarios.</p>

66 See Annex 3

<p>Multilevel</p>	<p>There is a plan for a second phase of the ‘Let’s Talk about the NDC’ participatory initiative to focus on publicising adaptation and mitigation measures that have been confirmed in the final GTM-NDC report; and to seek agreements and design roadmaps for priority actions and enabling conditions to be implemented in the short-term (2019-2020). This phase will include a multilevel focus, given that regional and local governments are responsible for the various adaptation and mitigation measures.</p> <p>Regarding the implementation of the NDC, the Framework Law on Climate Change obligates regional and local governments to include NDC mitigation and adaptation actions in their planning and budget.</p>
<p>Social</p>	<p>The participatory process of the ‘Let’s Talk’ initiative is ongoing,⁶⁷ and there are four subjects being discussed for the purpose of listening, sharing, and building policy in a constructive and transparent manner for adaptation and mitigation mechanisms, processes and action. These 4 subjects are: regulations for the Framework Law on Climate Change; the NDC; climate change and forests; climate change and desertification. The initiative creates a permanent forum for discussion and facilitates viable alliances and agreements between the various key actors involved, such as the public and private sectors, academia, NGOs, international donors, indigenous communities, grassroots organizations, and the general public. It also creates enabling conditions for the implementation of agreed measures.</p> <p>The ‘Let’s Talk’ initiative by the Ministry of Environment has the objective of implementing the NDC based on a participatory process that includes sub-national and non-state actors. It is a permanent forum to facilitate interaction, obtain viable alliances and agreements from a variety of sectors, and ensure enabling conditions for the implementation of measures.</p> <p>In terms of the private sector’s contribution to the NDC, the most notable initiatives are the establishment of a registry of mitigation actions, and a tool for measuring carbon footprints. Both have been developed within the framework of the project ‘System for the accreditation of mitigation actions with potential in the carbon market (Partnership for Market Readiness, PMR).</p>
<p>Financial</p>	<p>Guides to economic evaluation of the NDC measures for both mitigation and adaptation have been produced within the framework of the GTM-NDC working group.⁶⁸ In the specific case of climate change mitigation, consultants worked with sectors to develop a methodological guide for the economic evaluation of measures that included a calculation table for the selection of determined variables and how to use them. A total of 16 of the 62 mitigation measures of the NDC have been fully evaluated using the economic guide. This represents 26% of the total, and the evaluation of the remaining 74% is pending. Each one of the mitigation measures is shown with the cost for its implementation, although the GTM-NDC report suggests that costs should not simply be added up to obtain an aggregated figure, because the costing process was not carried out with a uniform methodology.</p> <p>The process of developing a guide for the economic evaluation of adaptation measures has also been initiated. This evaluation has been based on the advice for the economic evaluation of adaptation measures for climate change. A total of 14 adaptation measures prioritized by their relevant corresponding government sectors have been fully evaluated in this manner.</p> <p>Peru does not, so far, have a financial strategy for its NDC, although a preliminary identification of potential financing sources has been carried out within the framework of the GTM-NDC working group. A pending agenda has been agreed upon, the objective of which is to fill the gaps between the development plans for each sector and the public budget available, with funding from private sources, international cooperation, and other incentive mechanisms (MINAM, 2018).</p> <p>The GTM-NDC report states there is a need for solid institutional arrangements, and for well-informed public officials on the subject of climate change, in order to channel financial flows. Another key point is the importance of promoting discussion on carbon prices and carbon markets, among other topics, to enable public officials to efficiently pinpoint the costs of the impact of GHG emissions, and to facilitate a path towards a low-carbon economy.</p>

67 More information on the ‘Let’s Talk’ initiative is available at: <http://www.minam.gob.pe/cambioclimatico/dialoguemos/>

68 Carried out with support from NDC Support Programme.

<p>Finance</p>	<p>The GTM-NDC working group has identified a number of existing and potential mechanisms, such as those within the NAMA framework. The most important are currently being applied at a reduced scale, but it is hoped that they will be brought to scale in the context of the NDC. For example, in the mitigation component, there is a 'junk bond' that is an incentive for the removal of old cars; there are renewable energy auctions that provide a "premium" for the development of renewable energy generation projects to supply the national grid; and there is the 'My Green House' (FONDO MIVIVIENDA, FMV) programme that provides preferential mortgage rates (from 6.99%), and also includes an additional, non-refundable financial subsidy or 'green bond', of between 3% and 4% of the total value of the mortgage for the house.</p> <p>In the adaptation component, lines of action are being developed to include criteria for natural infrastructure and risk management in the context of climate change, within the framework of reconstructing with changes.⁶⁹ The reconstructing with changes concept is a public investment programme in response to the massive flooding event in 2017, known as the Niño Costero, which will be taking up a significant amount of the country's public spending in the coming years.</p> <p>In addition, Law nr. 30.215, passed in 2014 and regulated in 2016, was approved to promote, regulate and monitor the design and implementation of compensation mechanisms for ecosystem services (MERESE), the objective of which is to improve both the quality and quantity of water supplies. These mechanisms are designed to create, channel and invest in conservation and restoration work, and to maintain ecosystem services by means of voluntary agreements between contributors and creditors. The focus of the law is on vulnerable locations and natural infrastructure that is most compatible with the promotion of climate adaptation.</p> <p>Finally, the vision of the Climate Change Law and its statutes, which are still under review, is that the NDC will definitely be included in both the budget and in public investments at every level.</p> <p>When the GTM-NDC report was presented, 35 mitigation measures were identified as having primary sources of financing for their implementation, of which 91% were primarily funded by the public sector. Other sectors were highlighted as having investment gaps that needed filling; these included the solid waste sector, as well as the public transport and sanitation sectors.</p> <p>In terms of funding from international cooperation, Peru currently benefits from both multilateral and bilateral funding sources. The country has had projects approved by both the Green Climate Fund and the Adaptation Fund. Furthermore, the Operational Manual of the Green Climate Fund was approved for Peru in 2017.</p> <p>To increase the number and viability of future adaptation projects, Peru has also presented a request for Readiness funding from the GCF to prepare a National Adaptation Plan, together with Fundación Avina. Also through GCF Readiness funds, the Ministry of Economy and Finance (MEF) is developing a Country Programme for the GCF, which would contain a portfolio of prioritized projects based on the NDC, equally balanced between mitigation and adaptation measures.</p>
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⁶⁹Approved by Supreme Decree N°017-2018-MINAM, passed on December 28th , 2018.

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - Cross-sectoral coordination and with the three government levels. - Formulation and design of participatory processes: 'Let's Talk' (Dialoguemos) - Construction of the Framework Law on Climate Change at national level and the regional strategies for climate change. 	<ul style="list-style-type: none"> - Integrating climate change into national planning and development processes. - Strengthen links between plans of the national and subnational governments. - Create and improve capacities to analyze, develop and implement policies that are aligned with development climate goals. - Establish a transversal political mandate aimed at coordinating actions within the NDC framework and its implementation. - Address the scarcities of resources for the development and implementation of "climatized" policies. - Access to financial instruments that reduce risks associated with investment projects on mitigation and adaptation with emphasis on the private sector. - Coordination of the multi-sectoral process of the NDCs with the sub-national governments. - Adequacy of criteria, instruments and economic policies in order to integrate climate change with a higher priority (Ministry of Economy in coordination with three levels of the government).

• Uruguay

Country	Uruguay		
NDC			
<p>Uruguay presented its iNDC in September of 2015. It signed up to the Paris Agreement in April of 2016, and ratified it on October of the same year. After the COP21, Uruguay began developing its National Climate Change Policy (PNCC), which was the foundation for the development of the NDC that is considered as the instrument for the implementation of the policy. Uruguay's first NDC was presented in 2017.</p> <p>The country presented its Fourth National Communication in 2016, and its second Biennial Update Report (BUR) and first Adaptation Communication (in line with its NDC framework) in 2017.</p>			
Summary	<p>Mitigation – Uruguay's NDC contains the main unconditional and conditional mitigation measures by sector, each associated with the strategies contained in its PNCC. The country has GHG emissions intensity per unit of GDP (1990), which covered 99.4% of its GHG emissions in 2012.</p> <p>Uruguay has an unconditional 24% reduction target for the energy, transport and industrial processes sectors (22.2% of total emissions in 2012), rising to a target of 29% conditioned on international support. For CH4 emissions in the energy and agriculture sector, which includes livestock farming, waste and industrial processes (accounting for 43.2% of emissions), the unconditional target is a 57% reduction, and a conditional target of 59%. For nitrous oxide (N2O) emissions from energy, agriculture, waste, and industrial processes (which accounts for 34% of emissions), Uruguay has set an unconditional reduction target of 48%, and a conditional reduction target of 52%.</p> <p>Uruguay's NDC also makes provisions for specific objectives for the intensity targets relating to food production, which accounts for 51.1% of emissions: an unconditional reduction of 32% of CH4 emissions per kilogramme of live beef, and a conditional reduction of 37%; and an unconditional reduction of 34% of N2O emissions per kilogramme, and a conditional reduction of 38%.</p> <p>The land use, land-use change and forestry (LULUCF) sector, which produced net removals between 1998 and 2012, include unconditional CO2 objectives: For the live biomass category in terms of forested territory, there is a plan to maintain 100% of the native forest area at 2012 levels (and conditionally increase it by 5%); maintain 100% of plantation forest areas at 2015 levels; and maintain 100% of the area of forest plantations destined as shade and protective coverage at 2012 levels, and conditionally increase it by 25%.</p> <p>In the category for CO5 soil organic carbon, a 10% reduction is planned for pastures (30% conditional); a 50% reduction for tuber growing surfaces compared to 2016 (100% conditional); and a 75% reduction for surfaces cultivated under land-use management plans dating back to 2016, thereby sequestering 25% of CO2 for the remaining surface.</p>	Development process	<p>Uruguay developed its NDC with the basis of PNCC, a strategic instrument with a temporary horizon to 2050 that also foresees its development and implementation in the short, medium and long terms. There has been a review of the mitigation policies that were being implemented and also an analysis of the mitigation potential of the current strategic approaches. Additionally, there has been an evaluation of the planning context and endeavors on adaptation. On the grounds of this, the mitigation goals as well as the priorities on adaptation were defined. The NDC was built in an inter-institutional manner within the framework of the national response system to climate change, including its regard in public consultation. The NDC was approved by the Decree Number 310 of the Executive Power on the 3rd of November 2017.</p>

Summary	<p>Adaptation - Uruguay's NDC can also be considered its First Communication on Adaptation, in which the general and specific context by area is presented, as well as the measures that have been implemented. The country has established its main priorities, implementation and financing needs, and adaptation plans and measures in the areas of: social vulnerability; health; disasters risk reduction; cities, infrastructure and land-use planning; biodiversity and ecosystems; coastal areas; water resources; fishing; energy; tourism; and climate services. Quantified measures and schedules for progress in each area have been established within the context of the National Climate Change Policy (PNCC).</p>		
Coordination			
Political-legal-institutional	<p>The main regulatory instrument for climate change in Uruguay is the National Climate Change Policy (PNCC). This policy's general objective is to promote adaptation and mitigation in the face of the challenges presented by climate change, and on a timeframe up to 2050.</p> <p>The country's first NDC is fully aligned with international climate agreements, such as the Paris Agreement and Agenda 2030 for Sustainable Development, as well as its own national instruments such as the Constitution of the Republic, and national laws governing the protection of the environment and natural resources, land-use planning and sustainable development, and decentralization and public participation.</p> <p>There are 20 policies or regulations in Uruguay that specifically deal with climate change.⁷⁰ They relate to energy efficiency, the promotion of renewable energy, and climate-friendly agriculture.</p> <p>The National System in Response to Climate Change (SNRCC) was created by Decree nr. 238 in 2009, and has matured institutionally since then. The same instrument is also responsible for the coordination and planning of public and private actions needed for risk prevention, as well as climate change mitigation and adaptation actions.</p> <p>The SNRCC is managed by a Coordination Group (GdC/SNRCC) presided over by the Minister of Housing, Land Management and Environment (MVOTMA) through its Climate Change Division. It includes the participation of 9 ministries, as well as the Planning and Budget Office (OPP), the National Meteorological Institute, the Congress of Mayors, the National Emergency System, and other organizations that are included as invited members. In the context of the SNRCC, an MRV mechanism is being developed that will be used to measure progress, results and impact of the country's climate policies and the measures included in the NDC.</p> <p>Additional institutional arrangements designed to combat climate change were made in 2016, such as the creation of the National Environment System; the National Environment Cabinet, and the Secretariat of Water, Environment and Climate Change. All of these, among other things, coordinate actions with other institutions and organizations that make up the National Environment System.</p>		

70 See Annex 3

<p style="text-align: center;">Sectoral</p>	<p>In the public sector, the main institution responsible for climate management is the Ministry for Housing, Land Management and Environment (MVOTMA). Other entities involved include: the Ministry of Livestock, Agriculture and Fishing; the Ministry of Foreign Affairs; the Ministry of Economy and Finance; the Ministry of National Defence; the Ministry of Industry, Energy and Mining; the Ministry of Public Health; the Ministry of Tourism; the Ministry of Social Development; the Ministry of Transport and Public Works; the Planning and Budget Office; the Uruguayan Meteorological Institute; and the National Emergency System.</p> <p>In general, the most important climate change actions are designed and agreed to by the Coordination Group of the SNRCC, and always in conjunction with the various ministries. The mitigation objectives of the NDC were coordinated and agreed by sector, taking into account the nature and work of each sector, with each one establishing its own projections, which were then aggregated. Regarding adaptation actions, the national adaptation plans covering the prioritized areas, such as coastlines and cities, also have a sectoral focus.</p> <p>Policies and regulations for the energy, agriculture and climate services sectors, also directly contribute to climate change mitigation and adaptation. These sectors have their own specific MRV systems integrated into the National System in Response to Climate Change. This is indicated in the country's NDC, where a list was published displaying the main operational and planned mitigation measures by sector, which also support the fulfilment of NDC objectives.</p>
<p style="text-align: center;">Multilevel</p>	<p>The National Climate Change Policy (PNCC) was designed in conjunction with local governments. The NDC was based on coordinated work throughout the country channelled through four events designed to receive contributions from the regions and in Montevideo. Currently, there is an explicit intent to go back to the regional territories in order to consult with and include local actors in the implementation of the NDC.</p> <p>Multilevel coordination has been particularly important for adaptation work. The process for the development of national adaptation plans, which are closely tied to the NDC, includes an important regional component. Specifically, coastal areas, the farming sector, cities,⁷¹ infrastructure and local planning, are especially significant sectors. The coastal zone plan works with six departments or local coastal governments. The NAP for cities specifically seeks to bridge gaps in integrating adaptation into city planning and local government budgets.</p> <p>Work is also being carried out on a sub-national level regarding disaster risk management, through the National System for Emergencies, and with help from departmental coordinators.</p> <p>There is also a National Energy Efficiency Plan that has the objective of promoting the inclusion of energy efficiency measures in homes, businesses, and public institutions. This also includes planning and diagnostic tools, as well as incentives at a local level.</p> <p>The Ministry of Tourism is working with support from the SNRCC to implement the Green Seal for Tourism, which seeks to encourage participation in the sustainable tourism plan by accommodation services, and includes actions for sustainable water and energy management to mitigate and adapt to climate change. The Green Seal for Tourism is directly linked to measures established in the NDC.</p> <p>Uruguay is developing a variety of initiatives through the Ministry of Industry, Energy and Mining, Ministry of Environment, Ministry of Transport, Ministry of Economy, local government departments, and the state electricity company, to promote sustainable transport.⁷² Likewise, within the framework of the PNCC, other concrete initiatives are being developed in the different territorial departments. For example, the department of Montevideo has designed a GHG emissions inventory.</p>

71 The National Adaptation Plan for cities is being developed with support from the GCF and the UNDP.

72 The projects are tied to sustainable and efficient urban metropolitan transport (GEF), EUROCLIMA+ (urban sustainable transport, NUMP) and Private GCF (100 electric buses).

<p>Social</p>	<p>In addition to working with public sector representatives within the framework of the SNRCC, other key actors have been identified in Uruguay, including chambers of commerce and associations of rural and industrial producers and of services and exporters, environmental NGO networks, and employee associations (LEDS-LAC, 2016). The participatory process for development of the PNCC is worth highlighting, which included the participation of experts from civil society, the private sector, and academia. Furthermore, the PNCC envisages its development and implementation through participation from the various levels of Uruguayan society: “The development and implementation of this policy must guarantee the participation of relevant institutions...including public, private, civil society and academic institutions and organizations, through efficient inter-institutional and sectoral forums that promote, formulate, implement, monitor and evaluate said policy.” The fifteen-year evaluation cycle set out in the framework of the SNRCC includes the provision that relevant institutions shall evaluate the policy and its lines of action.</p> <p>Furthermore, in the future there will be a public registry of actors responsible for implementation of each measure, and this registry will be tied to the planning and MRV mechanism for the policy and the NDC.</p> <p>Uruguay’s NDC was reviewed through a public consultation process between August 24th and September 24th of 2017. The country also includes the private sector in NDC implementation, which is reflected in investments in renewable energy, energy efficiency for homes, rural producers who are applying GHG emissions reduction and resilience measures, and private tourism enterprises that are cooperating with the Green Seal programme. There are currently initiatives being promoted to increase the involvement of the private sector in the NDC agenda.⁷³ It should be noted that in the context of its energy policy, Uruguay has also made arrangements to include the private sector in a supportive financial framework.</p>
<p>Financial</p>	<p>There is a current provision in Uruguay to broaden efforts for identifying both domestic and international financing sources⁷⁴ for the different measures in the NDC. To these ends, the resources required for NDC measures will be quantified.</p> <p>In terms of its current mechanisms, Uruguay’s NDC indicates that: “The state has also contributed to the reduction of the economy’s emissions, providing benefits to producers investing in low-carbon measures, as in forestry, in which government subsidies accounted for half the running costs of plantations over a period of fifteen years; and also with regards to renewable energy projects, by means of investment incentives. Likewise, in the beef livestock, dairy farming, and rice production sectors, there are public policies promoting major investments and technology transfer to increase productivity as well as reduce emissions per unit produced.”</p> <p>Uruguay’s second Biennial Update Report presented to the UNFCCC in 2017, identified the qualitative financial needs for continued progress in reaching its climate change mitigation objectives, especially regarding the conditional targets⁷⁵. It also quantified and reported on the financial assistance that had already been received for mitigation projects, and transparency measures carried out in 2017.</p> <p>According to the platform established by Budget Transparency regarding the national budget directly related to climate change management, it can be observed that for the year 2018 there is a loan for UYU\$9.3 million under the category “design and promotion of policies for facing climate change and variability.” This loan is spread between MVOTMA and MGAP (OPP, 2017).</p>

<p>Opportunities/ Offers</p>	<p>Challenges/ Demands</p>
<ul style="list-style-type: none"> - Progress made in programming, monitoring, reporting and verification of the National Climate Change Policy and the NDC, as well as in evaluating policies, programmes and projects. - The development of multi-sectoral platforms with improved capacity to include public opinion and publicise the political agenda. - An energy policy that promotes low carbon development. - Inclusion of adaptation in the NDC. 	<ul style="list-style-type: none"> - Improving monitoring of adaptation and its various features. - A roadmap for coordinating climate change at a sub-national level. - Access to financing for medium-to-high-income countries. Mobilization of domestic climate funding. - Coordinated participation of the private/business sector in the NDC.

73 Specific actions are to be developed in order to encourage private sector involvement in the framework initiative of the NDC through the NDC Invest Programme of the IDB.

74 With technical assistance from the IDB.

75 The BUR includes mention of assistance from the TNA and CBIT Projects to identify financial needs for implementation measures.

• **Venezuela**

Country	Bolivarian Republic of Venezuela		
NDC			
<p>Venezuela presented its iNDC in December of 2015, during the COP21 held in Paris. The country signed up to the Paris Agreement in April of 2016, and ratified it in July of 2017, converting its iNDC into its formal NDC. It presented its Second National Communication on climate change in January of 2018.</p> <p>Venezuela is currently designing a roadmap for its NDC with help from EUROCLIMA+, which will be validated through a national consultation process that will also include all ecological social movements.</p>			
Summary	<p>Venezuela’s NDC is founded on anticipated climate scenarios and takes the vulnerabilities of the various prioritized sectors and the National Plan for 2013-2019 into account.</p> <p>Mitigation – Venezuela has a relative mitigation target of up to 20% reduction in GHG emissions in its current NDC, in relation to an inert emissions scenario. It should be noted, however, that most of the NDC relating to this area is conditioned upon receiving the necessary means of implementation (Article 4.7 of the Convention), and that the country reserves the right to review the provisions of the NDC in accordance with national priorities.</p> <p>Adaptation: – Adaptation to the adverse effects of climate change is one of Venezuela’s national priorities. It has measures and actions planned in the spheres of electrical energy, industry, housing, transport, health, organization and popular participation, biological diversity, food security and sustainable agriculture, conservation and water management, conservation and sustainable forestry, systematic research, monitoring and observation, education and culture, waste management, national land-use management, and disaster risk and emergency management. In addition, municipal and local plans are being developed for adaptation in risk management scenarios that involve cooperation between state organisms and the general public.</p>	Development process	<p>Cross-sectoral meetings were held in which the participants were involved in the different subjects associated with mitigation and/or adaptation processes. As a result of these meetings, a document was developed in 2015 with the iNDC, which was later reconsidered from the same sectors, with the ratification taking place of 2017.</p>
Coordination			
Political-legal-institutional	<p>Political, legal and institutional coordination is a requirement for the design, implementation, monitoring and review of climate change action.</p> <p>Venezuela has a Development Plan and a National Plan established by Organic Law, in which objective nr 5 refers to the fight against climate change and its causes and effects, for the purpose of saving life on planet earth.</p> <p>In institutional terms, Venezuela depends on the expertise of the Ministry of People’s Power for Ecosocialism; and the progress that has been made in risk management by the Ministry of People’s Power for the Interior, Justice and Peace, among others.</p> <p>In the case of the Ministry of People’s Power for Ecosocialism, as the technical focal point to the UNFCCC, a line of action focused on territorial planning and management in response to the consequences of climate change is being promoted.</p>		

Sectoral	Venezuela is currently developing a decree for the creation of a Presidential Commission for Climate Change. The political commitment is that this entity will include all ministries relevant to the issue, and that its mission will be to contribute to decision making for reducing vulnerability to the effects of climate change.
Multilevel	<p>The Sustainable Forest Management and Forest Conservation Project has an ecosocial perspective, with the objective of integrating conservation of biodiversity, sustainable soil management and climate change mitigation into sustainable forest management through innovations in information management, incentive schemes, participatory governance, empowering communities working with forests, and using multiple mechanisms for the recovery of forested areas where ecosystem degradation has occurred. This project is carried out by the General Directorate of Forest Heritage, which is attached to the Ministry of People's Power for Ecosocialism.</p> <p>Another project being carried out by the same ministry is designed to reinforce the system of protected marine ecosystems along coastal areas, to improve the management, administration and operation of these areas, as well as to contribute to the conservation of globally and nationally significant biodiversity.</p> <p>A pilot plan for an early warning system has been established that seeks to empower communities through hydro-meteorological education, as well as to coordinate with local mayors and governments to prevent natural disasters.</p>
Social	<p>In line with the principle in Venezuela's Constitution that gives the people a leading role, organized communities are closely involved with the various entities responsible for co-managing national institutions and instruments, such as the pilot plan for an early warning system that seeks to provide both hydro-meteorological community education, as well as how to work with mayors and sub-national governments, for the prevention of natural disasters.</p> <p>Likewise, policies such as the Technical Ecosocialist Roundtables create forums for joint-management that allow for the implementation of actions aimed at adaptation to climate change to be applied in sub-national territories, with a gender focus and emphasis on vulnerable populations.</p>
Finance	_____

Opportunities/ Offers	Challenges/ Demands
<ul style="list-style-type: none"> - The pilot plan for an early warning system that coordinates communities, municipal and regional governments. - Sustainable forest management and conservation. - The experience gained from the consultative process with organized communities and grassroots ecosocialist movements. - Progress in governance through the Technical Roundtables in coastal zones that integrated various institutions and civil society organizations. - The high level of popular organization. - The high proportion of the national territory that is protected by some measure. 	<ul style="list-style-type: none"> - Identify successful multilevel coordination processes that can be replicated in other parts of the country. - Include all regional governments, mayors and grassroots ecosocialist movements. - Include climate change action in development plans at national, regional and local levels. - Conformation of an institutional entity responsible for the coordination of climate change processes and actions. - Financing for the formulation of sectoral adaptation plans in response to climate change. - Develop a National Climate Change Strategy. - Create inter-institutional technical roundtables to establish the general criteria for the National Adaptation Plan. - Fine-tune climate scenarios to identify spatial priorities according to threats and vulnerability resulting from the effects of climate change. - The implications of the economic and financial blockade against Venezuela.

4. Conclusions and main challenges



4. A new context points to additional challenges

The current ecological and climate crisis presents humanity with a new context marked by increasing inequality, social problems and complex environmental challenges that are putting life on earth at risk. In terms of climate, Latin America is a vulnerable region, with a continuously increasing level of greenhouse gas emissions (ECLAC, 2018). This reinforces the need for urgent climate action.

According to the 2018 Emissions Gap Report by the United Nations Environment Programme, to limit global temperature increases to 2°C associated with a less damaging trajectory, global emissions in 2030 need to be 25% less than they were in 2017; and in order to limit global temperature increases to 1.5%, they would need to be 55% less. The emissions gap to achieve this objective is therefore 29%. That is to say, emissions in 2030 would need to be 29% less than currently projected, taking into account the current unconditional and conditional targets in the NDCs reported to the United Nations Framework Convention on Climate Change (UNFCCC). For its part, the Intergovernmental Panel on Climate Change (IPCC) has reiterated that in a scenario of global temperature increases limited to 1.5%, the risks to natural and human life systems from climate change will still be greater than those that exist today (IPCC, 2018).

On the other hand, the Paris Agreement proposes the challenge of moving forward from development of policies and plans to the implementation of the NDCs, in cooperation with the. It is expected that the NDCs will produce tangible results, as well as evidence of results in terms of impact. According to ECLAC (2018), stabilizing global climate increases to 2°C means going from 7 tons of GHG emissions per capita annually, to 2 tons by 2050. Timely climate action at the required scale to achieve this target demands for a higher

capacity for implementation within governments, both at national and sub-national levels, as well as a fundamental commitment by non-state actors.⁷⁶

Current state of NDC implementation in 18 Latin American countries

Even though the countries under review are at different stages in terms of the revision and implementation of their NDCs, there are differing levels of ambition, making it possible to identify and characterize the most significant progress and remaining challenges. The main findings of this research are listed below, based on the six dimensions of coordination established by the conceptual framework:⁷⁷

Formulation processes of the NDC: Countries need to make progress towards using the best available scientific information.

In analysing the processes used for defining the iNDCs in the countries under review, it was possible to observe the following:

- Undeniable progress has been made in terms of commitments and global climate actions based on the Paris Agreement. Nevertheless, the global context shows that the aggregate effect of all current NDCs would still carry the global increase in temperatures to well beyond 3°C by the end of the current century, according to the IPCC Special Report on Global Warming of 1.5°C, published in late 2018.

⁷⁶Conclusion extracted from the event report “Sectoral and multi-level coordination to enhance implementation of the NDCs in Latin America”

– First Peer-to-Peer Dialogue of EUROCLIMA+ and the VII Regional Workshop LEDES LAC held in Santiago de Chile, 1-3 August, 2018.

⁷⁷These are i) formulation process of the NDC; ii) political-legal-institutional coordination; iii) sectoral coordination; iv) national coordination; v) social coordination; and vi) financing.

- The current report confirms that although the countries under review submitted commitments in the context of the Paris Agreement, the development of their Intended Nationally Determined Contributions (iNDC) and their formalized NDCs, including the current revisions of NDCs, are still in need of integrating the latest scientific research to properly define their targets.
- Given the above, countries can still improve on their implementation of the Paris Agreement in terms of the definition of their NDC mitigation component, and by establishing their targets and peak levels for GHG emissions. This can be achieved through use of carbon budgets, whereby GHG emissions estimated for their NDC are reworked until they meet the needed emissions reduction targets. This would be a considerable contribution towards reducing the uncertainty surrounding the aggregated total of emissions associated with NDCs. Formulation of the mitigation component of the NDCs by using the logic of the carbon budget would be an exercise in climate ambition, in the context of the urgency and the increasingly limited capacity of the atmosphere to absorb GHG emissions without exceeding the agreed targets for temperature increases. Furthermore, from the perspective of the environmental integrity of the NDCs, as required by Article 4 of the Paris Agreement, the logic of the carbon budget is intrinsic, given that it is from the accumulated emissions estimated for the implementation period of the NDC that results can be identified, and thus the environmental integrity of the mitigation commitments can be evaluated.

To rise to the challenge of an improved, transparent and more ambitious implementation of the Paris Agreement, it will be vital for countries to define their mitigation goals in a quantitative format and, ideally, to establish their proportional responsibility for GHG emissions reductions that is considered fair. In this way, new targets could be adjusted to match the requirements agreed during COP24, for the Paris Agreement Work Programme, which explicitly states that participating countries must incorporate quantifiable mitigation targets into their permanent NDC review schedules, as well as arguments that justify their figures as fair and sufficiently ambitious.

Political-legal-institutional coordination: Leadership at the highest political level is the top priority in order to achieve efficient and timely legal and institutional coordination that will ensure transition to low-carbon and socio-economically climate-resilient systems.

This research confirms that all the countries analysed have ratified the Paris Agreement and have formally presented their Nationally Determined Contribution (NDC), or are in the process of doing so. In this context, it is possible to note the following, in regards to political, institutional and legal coordination:

- The development and implementation of the NDC by any government is dependent on the highest political and technical authorities in the country recognizing the transformations required by the statutes of the Paris Agreement as a development opportunity, and as a matter of state. In this context, it is also important to consider that for strong and ambitious climate action to occur, traditional policy and cost-benefit feasibility analyses, in being restricted solely to analysing interests of the nation state, are limited and ineffectual in terms of the climate crisis. Such approaches even contradict the Precautionary Principle (principle 15 of the 1992 Rio Declaration on Environment and Development), by failing to take potentially transnational environmental damage into account.
- Research for this report showed that countries are committed to institutionalizing climate action by establishing framework laws on climate change, and by creating entities responsible for inter-institutional coordination and management. Such efforts certainly represent best practices and are very relevant for enhancing the conditions necessary for NDC implementation. To achieve these institutional arrangements, governments must have the scientific and technical foundations, and other means necessary, to legitimately and comprehensively address the dilemmas posed by transversality, administrative duplicity, and multilevel capabilities. It is therefore important to avoid the conflicts that make coordination difficult, arising from the different agendas of the various

ministries, commissions and/or agencies, and focus on shared interests, which will enable the timely formulation and prioritization of climate policies and strategies in the long-term.

- The research for this report also identified gaps for institutional coordination, in terms of the public policy evaluations needed to face the climate crisis. For example, a general challenge identified is the lack of opportunities and institutional mechanisms for evaluation that would allow a review of the impact of climate policies, in order to determine aspects that need redesigning.
- It is of concern that Mexico is the only country that has ensured consistency between its targets presented at an international level within the framework of the Paris Agreement, and its targets as established by law. In the next level of long-term sustainability, only Costa Rica, Guatemala, and Peru have passed laws and policies that include climate objectives that are at least of equal or more ambitious than the targets set out in their current NDC. Nevertheless, all countries have increased the development of new legal instruments designed with the objective of implementing their NDCs.

Sectoral and multilevel coordination: The implementation of the NDCs would benefit considerably from the development and effective use of data and information, and its coherent use in combination with other relevant processes, such as the Sustainable Development Goals and Agenda 2030.

- In terms of coordination between sub-national policy and productive sectors of the economy, there are notable efforts to permeate the management of these dimensions with the needs and criteria required for climate action. A particular trend worth highlighting is the considerable effort countries have made in delegating responsibility for mitigation, both with a top-down focus for defining carbon budgets, as well as with bottom-up strategies for identifying measures with mitigation potential that could be expanded. The work of Colombia and Mexico stands out in this

area. Also of significance is the development of sectoral adaptation plans, an area in which Chile sets a good example.

- In this way, although a significant effort to establish targets and indicators can be observed in the region –concurrent with work to face the same challenge for adaptation– it is clear that in order to make progress in the development of climate action at sectoral and sub-national levels, there is a need to strengthen information systems that feed into the design, implementation and monitoring and evaluation processes of climate mitigation and resilience management plans. It could be particularly beneficial to promote South-South Cooperation (with capitals) between countries in the region in order to address this issue, as a positive format for incorporating resilience and the cooperative approaches envisaged by the Paris Agreement.
- Another significant element is the network of sub-national governments that are trying to promote a joint agenda for the promotion of initiatives that support NDCs throughout the country. Their united vision is based on the understanding that climate action is a development opportunity for local territories. These sub-national collaborative networks should be promoted and supported regarding their ability to work with central governments. This would facilitate timely and proactive climate governance that should increase the impact of bottom-up actions and promote the enthusiasm and motivation needed to face the global climate crisis from small communities up to cities, provinces, regions and countries.
- On the other hand, our research also revealed a generalized lack of integration between the governance mechanisms established to promote the NDCs and others in place to promote similar agendas, such as the Sustainable Development Goals (SDG), Green Growth, etc. It is clear that in the case of the countries under review, such governance frameworks are fragmented across a variety of supervisory institutions and/or coordination mechanisms.

In this regard, the experience of Honduras is relevant, as a country that has produced an analysis of co-benefits regarding the implementation of both its NDC and the Agenda 2030, in order to align these two multilateral agendas and to find synergies for joint implementation. It would be recommendable for the countries of Latin America to carry out similar processes, in order to discover synergies among sustainable development agendas, reduce structural fragmentation in governance, and to avoid the duplication of human and financial efforts.

Social coordination: Despite recorded progress, there is still a need to enhance participatory mechanisms for private actors, academia, civil society, and indigenous peoples.

- Social legitimacy is an inescapable requisite for managing the implementation of the transformations implied in the climate policies promoted by NDCs and the Paris Agreement. In this sense, a fair and just transition is important for minimizing negative impacts and maximizing opportunities for climate action.
- Research for this report identified new spaces for coordination, interaction and reaching agreements between private actors, civil society, and those sectors most affected by the climate crisis and the implementation of the public policies needed to face it. Nevertheless, there is still a need to improve the relationship with multi-sectoral representatives, especially with those from the private sector, civil society, academia, and indigenous communities.
- It is worth pointing out that the social management of a just transition does not require an unvarying set of fixed rules, but rather needs a vision and process based on dialogue and a multi-actor agenda that includes participants and input from industry, authorities, workers, and civil society. Furthermore, the process needs to take into account the specific geographical, political, cultural and social contexts of each country, territory and/or economic sector. It is of vital importance that social coordination for ambitious climate action should be understood

as a fundamental component of decision making, so that decisions made to accelerate needed transformations are perceived as valid and legitimate.

Financial coordination: This dimension is still in the embryonic stage, though the participation of local financial system representatives is key to strengthening climate action.

- This report confirms that the financial sphere is one of the least developed in the countries under review. Despite this generalization, some pioneering initiatives in the region have been identified, aimed at financial coordination to support climate action. Some examples include budgets for the implementation of NDCs, the design of financial strategies, and the establishment of funds or lines of credit using both national and international funding. However, this dimension needs to strengthen the capabilities required for a coherent implementation of the commitments acquired in the context of the Paris Agreement.

The experience of Colombia is noteworthy, as the country has established a preliminary budget for the implementation of its NDC, as well as a financial strategy for climate change. Chile and Honduras, on the other hand, have prioritized the formulation of financial strategies and investment plans for their NDCs.

In this context, our report demonstrates the need for better information on financing. In general, the figures considered are based on specific projects on a territorial level, and financed by international development agencies. Although there are notable exceptions, it is fair to say that a more structured coordination is required for the development of this dimension.

- At the same time, involving private actors from the local financial sector is a key aspect for building and enhancing capacities, identifying climate risks, and creating financial products and services compatible with climate action. In this sense, Finance or Treasury ministry portfolios

could be used to implement a transition towards more costly financial schemes for those who do not have a climate change strategy integrated into their operations. This is recommended as the long-term decarbonisation and resilient development models required by the Paris Agreement will not be possible without the participation of the local banking systems in each country. This research has also confirmed that the requirement of the Paris Agreement to make “finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development”⁷⁸, remains a pending task in all the Latin American countries reviewed.

In this way, the ‘Helsinki Principles’ recently agreed by the Coalition of Finance Ministers for Climate Action, which are centred on the promotion of national climate action through fiscal policies and the efficient use of public financial resources, must promote and guide multi-level financial coordination in the participating countries.

9 fundamental challenges for the implementation of NDCs in Latin America

Challenge 1: How can the ambition of NDCs be increased when, at the same time, there is no clarity on how to proceed with implementation? The potential of long-term strategy development and NDC revision processes up to 2020.

The most recent scientific information confirms the need to increase the ambition of commitments contained in current NDCs. This means that the implementation of long-term strategies that are, so far, at an incipient stage in the region, is a crucial opportunity for countries to establish the baselines for transformative development, and for identifying measures that could raise the ambition of current contributions. Countries are therefore invited to review and up-date their NDCs by 2020, taking into account the latest available scientific information.

Challenge 2: The need to redefine the relevance of NDCs. What purpose is served by their implementation, and what are the expected impacts?

The context of climate management that grew out of the Paris Agreement, along with the most recent scientific information available, highlights the need for countries to raise the bar in terms of the ambition of their commitments, clarify their progress on implementation and the results in terms of their national targets and coherence with global objectives. It is possible that the roles played by relevant organizations need to be adjusted to this challenge by improving management capabilities, in order to ensure they maintain their relevance in the new scenario.

Based on the information provided by government representatives who lead the region’s climate action, it is possible to identify current actions being taken in the region (what is being done). At the same time, the case studies also document the approaches being used to implement these actions (how it is being done). However, the concrete impacts by which the efficiency and efficacy of actions currently being implemented can be assessed (why it is being done) remain diffuse and difficult to identify and characterize. There is, therefore, an urgent need to identify and – wherever possible, quantify– the expected impacts of these actions, designed to comply with the objectives of the NDC.

We therefore invite reflection on the issue of efficient management in relation to actors and their roles, on the relevance of participatory and multi-actor forums and whether or not they are fit for purpose to catalyse progress and results and prioritize actions; as well as to consider what concrete support is needed to develop relevant roles in these processes. Some questions that aid such a reflection include:

78 Artículo 2.1.c del Acuerdo de París.

- How do the roles of Climate Change Offices or UNFCCC focal points change in light of this new context? Where are structural changes needed? What do these entities need to carry out their new objectives?
- Who exactly are the people responsible for moving the implementation of the NDC in each country forward? What is the level of their interest? What do they need to efficiently carry out this essential task?
- Who are the specific actors that need to be called upon to carry out implementation? Which stages and prioritized issues are each of these actors responsible for, and in what capacity? What would be their motivation to carry out implementation?
- What criteria are being used to prioritize implementation actions? Who is responsible for prioritizing and according to what mechanism? What has to happen to go from prioritizing to implementation?
- What is the purpose of the multi-actor dialogue spaces that have been created? What results have been achieved? How can their work be made more efficient? Are their objectives relevant and in tune with the new implementation requirements? How do they demonstrate the progress and impact of their actions?

Challenge 3: The designation of targets and the attribution of responsibilities for economic sectors to comply with NDCs is a pending task in most countries. How can this be achieved in the shortest timeframe possible?

The immediate challenge identified for the majority of Latin American countries analysed is the design of a mechanism that would allow them to move on from dialogue and agreement with the general framework, to setting targets and assigning responsibility for emissions reductions for different government sectors, respecting in each case the level of capacity, maturity and legal mandate to carry out such work, and generating instruments that acknowledge the need for gradually incrementing levels of ambition with regards to implementation.

Questions that all those responsible for climate policy in each country should consider include: How do emissions reduction commitments tie in with the country's overall development targets? What contribution do they make to the sectoral targets that need to be included?

The Paris Agreement is an excellent international mandate for initial action. However, as it is a general framework, it does not involve the actors needed within each sector for implementation quickly or efficiently enough.

In this context, the experience of the European Union in implementing the Kyoto Protocol and its European Union Emissions Trading Scheme (EU ETS) represents a case that could help inform Latin American countries at this stage. Spain's experience, for example, includes the following lessons learned:

- The strategic distinction between different sectors responsible for emissions reductions, between those for which it is easy to attribute direct emissions (such as energy and industrial processes), and others with more indirect impacts, such as multiple smaller sectors (such as transport, waste and agriculture).
- An organization needs to establish clear roles for those involved and identify the mechanisms with which they will work, and what it is hoped will be achieved. For example, the role of the Office of Climate Change; the policy coordination mechanism between ministries; the network of cities for climate change, for local implementation; and the climate action platform to promote public-private collaboration and to align corporate objectives with national NDCs.

Challenge 4: How to align sub-national priorities with national priorities for climate action, and how to make them compatible?

One of the great challenges of the climate agenda is figuring out how to connect the real priorities of territories with the national climate commitments that have been acquired at an international level. Progress will be made in sub-national implementation when the problems and real issues faced by local actors are tied to current and future climate challenges, and can thus be effectively prioritized by sub-national actors.

Though they were not included among the information compiled for this study, the cases of the Tarapaca Region in Chile and the city of Oslo can act as benchmarks for how, on the basis of a clear agenda, it is possible to create the conditions for a market that fosters investments in support of climate action, and which can also transform an entire city. Chile's Tarapaca Region is looking to become the country's circular economy capital,⁷⁹ and Oslo has set an emissions reduction target of 95% by 2030, and has created a demand for electric cars that is higher than the market can supply.⁸⁰

Challenge 5: If you cannot measure it, you cannot manage it. Based on the expected impacts, and considering that climate action in Latin American countries represents an opportunity for promoting development objectives, what should be measured?

When projects or forums are established, it is important to clearly define their purpose and the expectations for results in the short, medium, and long-term.

⁷⁹ For more information see the website of the Regional Government of Tarapaca: <https://www.goretarapaca.gov.cl/tag/economia-circular/>

⁸⁰ Oslo is considered a leader in climate action and is a member of city platforms such as C40, the Global Covenant of Mayors, and Climate Neutral Cities: <https://carbonneutralcities.org/cities/oslo/>

Peru has carried out notable work for the adaptation component of its NDC by establishing a baseline and indicators for the years 2021 (which is also the bicentennial of its independence), 2025, and 2030.

The methodology used by France for its long-term strategy, including contextual, process and results-based indicators, is another example worth looking at.

Challenge 6: How to achieve an effective use of domestic and international financial resources that can generate actions or enabling conditions propitious for acting in accordance with the Paris Agreement?

Given the urgency for immediate and effective action, and the limited availability of resources, it is important to make strategic investment plans that include the potential for influential climate action. In this context, the development of spaces and mechanisms for institutional evaluation that can determine the impact of investments on climate policies, as well as on the requirements for redesigning them, is also of key importance.

Challenge 7: How to identify and account for the efforts of non-state actors? How can more such initiatives be encouraged?

The majority of the region's NDCs will be achieved with a significant percentage of investment coming from the private sector, and there are various independent initiatives in this sphere. Many such actions are inspired by actors who see the climate crisis as either an opportunity, a business risk, or a corporate responsibility to act.

The challenge for governments is to maintain up-to-date information on these initiatives, to invite their representatives to design joint-budgets, and to provide a forum for creating conditions, incentives and public-private instruments that promote climate action that can be accounted for as support for the NDC.

Challenge 8: Is it necessary to create new financial instruments to mobilize funding, or can existing ones simply be adjusted? Where is climate financing most effective?

It is crucial that state authorities define priorities and create the necessary conditions to align financial flows with the objectives set out in the Paris Agreement. In this regard, it is vital to promote capacity building in order to facilitate climate financing; as well as to design strategies that include existing instruments and new ones, based on which favourable conditions are created for the development of project portfolios that do not exacerbate the climate crisis.

Challenge 9: Information management. How can knowledge be shared systematically? What results can be achieved by it?

There is an important collection of experiences and best practices for mitigation, adaptation and various types of coordination mechanisms, from all the countries in the region. The main challenge is how to share that information and define its usefulness. The experience of creating Communities of Practice based on questions, specific topics and objectives is undoubtedly a good way to find solutions and produce results. In the same way, South-South cooperation and Peer-to-Peer Dialogues are vital strategies for managing and sharing knowledge.

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6. Annexes



Annex 1 Methodology

The current study is based on a predominantly qualitative analysis, using some quantitative data and numerous methods for gathering and analysing information. The objective was to establish the state of the art regarding NDCs in the 18 countries of Latin America involved in the study. Secondary sources and the views of key informants were also used. The methodologies utilized were selected and organized in order to respond to key questions relating to the six dimensions of coordination explained in the conceptual framework section of this report. Based on the results, the following questions were analysed:

- What experiences have the 18 countries had during the implementation process of their NDCs at sectoral and sub-national levels?
- How well prepared for implementation is each of the countries?
- How can we characterize their NDC implementation process, in terms of: the legal-institutional, the political-institutional-sectoral, multilevel, financial, capacity and technological development contexts?
- Which experiences and cases could promote learning and exchange between countries? Which platforms and programmes exist to facilitate such exchanges, and what gaps need filling to improve these experiences?
- What 'supply and demand' is there for promoting exchange between Latin American countries, and also with countries of the northern hemisphere?

Design structure

This study is based on a transversal observational design and used data from various sources. The objective was to understand the barriers, challenges and key enabling factors for the

efficient implementation of NDCs, at a specific moment in time.

The data collected allowed us to describe the characteristics and nature of the challenges to implementation, and helped in identifying relationships between those characteristics that provided a better idea of the level at which each country is operating, in terms of its capacity to implement its NDC.

It should be noted that this study compiled information based on the perspective of the public sector in each country. In this way, the information is not exhaustive, because there are other actions related to NDCs that are promoted by non-state actors, which are only partially represented or completely absent from this study.

Multiple Sequential Qualitative Methods

This study used a combined methodology of semi-structured and unstructured interviews, as well as a literature review in order to examine the six dimensions of coordination for each country. Hence the design followed a sequential methodology. Each unstructured interview was carried out with a single interviewee, and the results informed the design of the following interview. The results of the unstructured interviews also informed the design of the semi-structured interviews, as well as the focus and reach of the literature review.

Stage 1: Unstructured interviews

The study included 6 unstructured interviews that were mostly used in the early stages of the research to inform the other two aspects of the methodologies utilized. Knowledgeable individuals close to the NDC implementation process in Latin America were involved in these interviews.

Stage 2: Literature review

The literature review was also done sequentially at the same time as the first interviews performed in Stage 1, and included a review of the following: the most recent National Communications; the Biennial Update Reports (BUR); information from EUROCLIMA+ and its component sectors and other initiatives, such as ActionLAC of Fundación Avina; LEDS LAC; LECB of UNDP; PATPA; BM-PMR; UNFCCC and NDC Partnership; LSE GR on

- a) Best practices and lessons learned regarding NDC implementation in the countries under review;
- b) Barriers and opportunities for the implementation of NDCs.

These sources suggested some potential routes for describing the state of the art of this process and for characterizing the implementation experiences, regarding the following issues:

- (i) NDC development processes;
- (ii) political-legal-institutional coordination;
- (iii) sectoral coordination;
- (iv) social coordination;
- (v) multilevel coordination;
- and (vi) financial coordination.

Stage 3: Semi-structured interviews

The study includes 7 semi-structured interviews that were designed on the basis of the results of the other two, previously described research methods. Interviews were carried out via Skype or in person, and the interviewees were EUROCLIMA+ focal points.

Between 4 and 11 interviews were held with informants able to provide detailed information on NDC implementation processes and the case study initiatives for each country selected for this report. The following table summarizes the interviews held for each case study.

Country	Institution	Interview date
Honduras	NDC-GIZ Project	27/11/2018
	National Directorate of Climate Change, MiAmbiente	27/11/2018
	Presidential Climate Change Office	27-28/11/2018
Argentina	National Directorate of Sustainable Development for Industry	08/01/2019
	National Climate Change Directorate – Ministry of the Environment & Sustainable Development	08/01/2019
	Mitigation – Ministry of the Environment and Sustainable Development	08/01/2019
	National Climate Change Cabinet	08/01/2019
	UN-REDD Argentina	08/01/2019
	Energy - National Climate Change Cabinet	09/01/2019
	Ecuador	NDC- IPCC Commission
	Ministry of Environment	23/01/2019
	NDC SP Project	23/01/2019
	Consortium of Provincial Governments of Ecuador	23/01/2019
	Project – Provincial Climate Change Strategies	23/01/2019
	Secretariat for Water	24/01/2019
	Gender- Project NDC SP	24/01/2019
	Ecuadorian Association of Renewable Energy & Energy Efficiency - AEEREE	25/01/2019
	Natural Heritage – NDC adaptation component	25/01/2019
	Ministry of Transport and Public Works	25/01/2019
	Deputy-Secretariat for Climate Change (E)	25/01/2019

Guiding questions for the semi-structured interviews

The following were used as guiding questions for the semi-structured interviews.

A brief description of the objective for the interview and the focus of analysis:

- **Objective:** this interview seeks to corroborate and complement the information needed to produce a report systematizing information on the character of NDC implementation in Latin American countries, with an emphasis on multilevel and sectoral coordination. The research and systematization of information will be carried out within the climate governance component of the EUROCLIMA+ Programme (Peer-to-Peer Dialogue initiative, supported by GIZ-ECLAC and Fundación Avina).

- **Analytical focus:** the analysis is based on a conceptual framework that will enable researchers to understand the NDC development process in each country, as well as the progress made so far regarding implementation. The interviews will also seek information on the NDC development process in preparation for COP21, and any NDC revision activities that have occurred thus far in the context of the 2020 updating process. In addition, information will be sought also sought on: political-legal-institutional coordination (laws, regulations, institutionality); sectoral coordination; multilevel coordination; social coordination (actors who participated in the NDC development and implementation processes, and the level of their participation, participatory mechanisms, etc.); and financial coordination (financing strategies, financial instruments used, level of financing, amounts, etc.).

We have created a table of secondary information available on the countries under review, which will be corroborated and complemented by the country informants' responses to the following questions:

NDC development and implementation processes:

1. What was the process for the development of the NDC, and what entity leads the implementation process?
2. What methodology was used to establish the mitigation/emissions reduction commitment in the NDC?
3. Who were the key actors in the development and approval of the NDC?
 - a. What institutions participated in its design? What was their role?
 - b. Was there a consultative process prior to its approval?
 - c. If the answer to the above is affirmative, which sectors were consulted and how?
4. What barriers were encountered during the development of the NDC and how were they overcome?
5. How is the NDC framed as a country development strategy?
6. How is the NDC framed as a long-term decarbonisation strategy in line with the requirements set out in the Paris Agreement?
7. What instrument provides the framework for the adaptation component of the NDC?
8. How have the low-emissions development and climate resilience strategies been linked to the NDC of your country? Please explain.
9. How has the NDC been implemented in your country?
10. What are the main barriers to the NDC implementation process? What is the approach for overcoming them?
11. Do you believe an exchange of experiences between countries could represent a possible solution? What kind of exchange do you think would be possible?
12. As a country, do you think your NDC is fair and sufficiently ambitious?

These questions were adjusted, modified, or complemented by others, according to the particular case and context of each country (see additional questions below).

Political-legal-institutional:

- 1.Regarding the legal and institutional framework, what has your country done and what further needs have been identified?
- 2.Is there a climate change law? If not, is there one planned? What is the main obstacle to making one?
- 3.Have changes in the law been required, or do legal changes have to be made to implement the NDC? If so, what are they?
- 4.Have new institutions been created in relation to climate change (mitigation and/or adaptation)?
- 5.To what degree has your country's parliament raised or participated in initiatives related to climate change and NDC implementation?
6. Are there environmental justice tribunals that can cover relevant climate change and NDC-related issues?

Sectoral coordination:

1. How does the country define/measure/ make decisions among sectors regarding the implementation of adaptation and mitigation measures?
2. How have decisions been made, or are currently being made, or could be made in future, regarding the allocation of commitments among different sectors?
3. Do you know of an example of climate action that has been implemented in a coordinated fashion between different scales (local, state/ regional, national), or between different sectors (private, public, academia or civil society)?
4. What are the national and sectoral plans and strategies for adaptation and mitigation in your country, and at what stage of implementation are they?
5. Has a clear mandate been officially established in the country for one or more coordination mechanisms between institutions, as far as climate change is concerned? If the answer is yes, which document establishes such mechanisms? What are these mechanisms called? Please provide a brief description.
6. Is this coordination mechanism currently active?

7. What are the functions of the inter-institutional coordination mechanism?

Consultative Coordination

Binding decisions

Other _____

Describe:

Questions for countries not participating in the LEDS-LAC study on inter-institutional coordination mechanisms:⁸¹

7. Is this coordination mechanism permanent?
8. Does it have a technical secretariat and/or a coordinating entity? If the answer is affirmative, who is in charge of this secretariat and/or coordinator? What is its sphere of responsibility?

National

Sub-National Multi-sectoral

Other _____

9. Is the technical secretariat or coordinator a political or technical entity?

Multilevel coordination:

1. How are national, regional and local commitments defined?
2. What institutional arrangements or models of multi-level governance have been applied in your country?
3. Is there any kind of MRV system for the mitigation work in your country (such as a national climate change metrics system)? If affirmative, please explain.

81 MAJANO et al. Mecanismos de Coordinación Interinstitucional para una Política Climática Efectiva en Latinoamérica y el Caribe. 2017. Available at: http://ledslac.org/wp-content/uploads/2017/06/02-Mecanismos-Coordinaci%C3%B3n-Interinstitucional-Working-Paper_final.pdf

Social coordination:

1. To what degree has civil society participated in the development of the NDC for your country? To what degree is it involved in the implementation of the NDC?
2. To what degree has the private sector participated in the development of the NDC for your country? To what degree is it involved in the implementation of the NDC?
3. To what degree has academia participated in the development of the NDC for your country? To what degree is it involved in the implementation of the NDC?
4. Are there any forums for dialogue between different actors that contribute towards the NDC implementation process in your country?
5. Are there any specific participatory mechanisms for including the private sector, academia, or civil society?

Financial Coordination:

1. Has the level of investment and finance that the NDC requires been quantified? How?
2. Regarding your country's low-carbon and climate resilient development strategies, how much of the funding for these strategies is domestic and how much comes from international sources? Please note: if they do not know the answer, request an estimate or a reference to where the information can be found.
3. How is this funding channelled? What financing mechanisms have been created in the country?
4. Is there a strategy for attracting investment from the private sector in your country? Are there specific mechanisms in place for this purpose?

Stage 4: Data processing and analysis

The data compiled from the interviews and the literature review, along with personal memos and communications, was entered into an Excel file for codification and analysis. An initial analysis of the information was presented at the workshop on 'Sectoral and multi-level coordination to enhance NDC implementation in Latin America' during the First Peer-to-Peer Dialogue, organized by EUROCLIMA+ and the VII Regional LEDS-LAC

workshop, held in Santiago de Chile, August 1-3, 2018.

The case studies contain specific information compiled through personal interviews with key actors in the region. A set of selection criteria was utilized to determine the case studies to be included in the study. These selection criteria were reviewed and agreed upon by the counterparts of the EUROCLIMA+ Peer-to-Peer Dialogue initiative, including Fundación Avina, ECLAC and GIZ. In addition, two case studies from Europe were also chosen.

Annex 2: Selection criteria for case studies

The criteria used for prioritizing and selecting the case studies included in the study are presented below.

Countries that demonstrate substantial progress in at least 3 of the 6 dimensions of NDC implementation

The aspects and qualities utilized for characterizing ‘a substantial level of progress’ were defined as follows:

- NDC development process: The design of the NDC included clear steps for decision-making. A technical process was developed for the formulation of scenarios to define mitigation and adaptation actions and their impacts.
- Political-legal-institutional: There is a Climate Change Law, and/or other laws and policy instruments that prioritize adaptation and mitigation within the political agenda.
- Sectoral coordination: The country defines, measures and makes decisions between sectors regarding adaptation and mitigation work for the NDC.
- Multilevel coordination: Commitments have been made to coordinate at national, regional and local levels.
- Social coordination: There is evidence that the private sector, academia, and civil society were included in the NDC development process, and the participation of these sectors is also foreseen for the implementation process.
- Financial coordination: Financial needs have been quantified, developing a set of strategies for financing the NDC has been proposed, and mechanisms for the implementation of climate financing are in place.

Based on these criteria, the following table summarizes the progress made by the 18 countries of Latin America included in the study. Those that fulfil with at least 3 of the aforementioned criteria relating to what defines progress stand out:

Country	Process	Political/ legal/ institutional	Sectoral	Multilevel	Social	Financial
Argentina	*		*	*	*	*
Bolivia		*				
Brazil	*		*		*	*
Chile	*		*			
Colombia	*		*	*	*	*
Costa Rica	*	*	*			
Cuba		*		*		*
Ecuador	*		*	*		
El Salvador	*				*	*
Guatemala	*	*	*	*	*	*

Honduras	*	*	*		*	
Mexico	*	*	*	*	*	*
Nicaragua			*	*	*	
Panama	*		*			
Paraguay	*	*		*		
Peru	*	*	*		*	
Uruguay	*		*		*	
Venezuela						

Countries that exhibit a feature that could be of common interest to other countries

Countries that also had ‘a story to tell’ in terms of a particular way of doing things in the context of the highlighted aspects were also sought out. This criterion sought to identify innovative experiences in the approach towards the dimensions identified. Cases that had already been documented within the framework of the Good Practice Analysis (GPA) were excluded.⁸²

Taking into account the countries prioritized using the above criteria, the specific features identified in each country that presented a significant level of progress in three or more of the dimensions of coordination are listed below:

Country	Sectoral	Multilevel	Legal	Process	Social	Financial
Argentina		RAMCC	Political		Energy	Trusts
Chile				NDC development process		NDC includes design of a financial strategy, yet to be developed
Colombia	Sectoral delegation	Advanced progress in multilevel coordination		Colombian low carbon strategy		Monitoring system for climate investment/ carbon tax
Costa Rica						
Cuba			Carbon neutrality			Mobilization of capital for EbA
Guatemala			Adaptation agenda			National Climate Change Fund
Ecuador			Climate Change Law	Multi-actor and multi-level process for policy making		
Honduras				Roadmap for NDC implementation		Micro financing
Mexico						Climate Change Fund/voluntary emissions market
Perú	GTM – NDC		Climate Change Law	NDC development process		

⁸² The Good Practice Analysis (GPA) is an initiative financed by the German government that has two versions, with a third in progress. Versions 2.0 and 3.0 include best practices in NDC development.

Honduras	*	*	Framework Law for Climate Change		*	
Mexico	*	*	*	*	*	*
Nicaragua			*	*	*	
Panama	*		*			
Paraguay	*	*		*		
Peru	*	*	*		*	
Uruguay	*		*		*	
Venezuela						

Countries willing to document their experience

For the application of this criterion, an official letter to the EUROCLIMA+ Focal Points of each country was prepared, requesting that they declare their willingness to document their experiences with the development and implementation of their NDC, and providing information to assist this study. The communication was sent to the participating Focal Points of EUROCLIMA+ on October 5th, 2018. In it, instructions were provided for those countries willing to participate in the research, to send a formal reply with the text: "I hereby confirm my country's willingness and availability to be documented as a case study in the context of the research being carried out by EUROCLIMA+, in order to identify and characterize the experience of implementing NDCs."

A positive response was received from the following countries:

Country	Date of confirmation
Honduras	31/10/2018
Ecuador	10/11/2018
Argentina	30/10/2018

Diversity of the countries selected

This criterion sought a balance between the typology of countries in terms of both their implementation focus and the issues they face in terms of the particularities identified. In this way, the broadest possible range of issues are considered, and all countries will have reference implementation models for aspects similar to their own. Cases that are currently at different stages of development were also sought out. In addition, the type of mitigation objectives in the NDC (absolute, relative, year of peak emissions, intensity, etc.) and the adaptation objective, among other aspects, were also considered.

Case study selection results

Once the criteria had been applied, Argentina, Ecuador and Honduras were chosen for the case studies.

Annex 3. Policies or regulations relating to climate change management, by country

A list of policies and regulations relating to the management of climate change identified for each of the countries in Latin America analysed is presented below. The information presented here is based on the work of the Graham Research Institute in Climate Change and the Environment at the London School of Economics and the Sabin Center on Climate Change Law at Columbia Law School in New York, and has been up-dated based on the results of the interviews held with representatives of some of the countries (Argentina, Uruguay, Paraguay, and Peru).

Country	Name	Categories
Argentina	Law 25.019 states the national intention to generate electricity based on wind and solar power.	Energy, research and development.
Argentina	National Decree 1070/05 (2005). Created the Argentine Carbon Fund.	Institutions/administrative changes.
Argentina	Law 26.093 (2006) Regulatory framework for the promotion, production and use of sustainable biofuels.	Energy, energy demand, transport, research and development.
Argentina	Law 26.123 (2006) Promotion of Hydropower.	Energy, research and development; institutions; administrative changes.
Argentina	Decree 140/2007: presidential decree making rational and efficient energy uses a national priority.	Energy, energy demand, transport, institutions; administrative changes.
Argentina	Law 26.190 National promotion of the production and use of electrical power using renewable sources.	Energy, research and development.
Argentina	Law 26.639 On minimum standards for the preservation of glaciers and the periglacial environment.	REDD+ and LULUCF, adaptation, research and development.
Argentina	Law 26.473 Prohibiting the commercialization of incandescent light bulbs.	Energy demand.
Argentina	Law 27191 on renewable energy.	Energy, energy demand.
Argentina	Decree 891/2016. Created the National Climate Change Cabinet.	Institutions/ administrative changes.
Argentina	Law 27.424 creates the framework for promoting the distribution of renewable energy integrated into the public electricity grid.	Energy, energy demand, institutions, administrative changes.
Argentina	National Action Plan for Energy and Climate Change (2017).	Energy, energy demand, institutions, administrative changes.

Country	Name	Categories
Argentina	National Action Plan for Forests and Climate Change (2017).	REDD+ and LULUCF, institutions, administrative changes.
Argentina	National Action Plan for Transport and Climate Change (2017).	Transport, institutions/ administrative changes.
Argentina	National Action Plan for Industry and Climate Change (2018).	Energy, institutions/ administrative changes.
Bolivia	Forestry Law N° 1700	REDD+ and LULUCF
Bolivia	Executive Decree N° 29.466, for the approval of the National Energy Efficiency Programme .	Energy supply and demand, research and development.
Bolivia	Supreme Decree N° 071/2009, establishing the Inspection Authority and Social Control for Forests and Mother Earth.	REDD+ and LULUCF, institutions/ administrative changes.
Bolivia	Supreme Decree N° 29.894 on the organizational structure of the Plurinational State's Executive Branch.	Institutions/ administrative changes.
Bolivia	Law on the Rights of Mother Earth	REDD+ and LULUCF, adaptation, institutions/ administrative changes.
Bolivia	Law N° 305 on the efficient and rational use of energy.	Energy demand
Bolivia	Framework Law for Mother Earth and Integrated Development for Living Well, Law N° 300	REDD+ and LULUCF, transport, adaptation, research and development, institutions/ administrative changes.
Bolivia	Law N° 602, Law on Risk Management.	REDD+ and LULUCF, adaptation, research and development, institutions/ administrative changes.
Brazil	Decree establishing the Inter-ministerial Commission on Climate Change (CIMGC).	Institutions / administrative changes.
Brazil	Laws N° 9.991 and 13.280 for energy efficiency in the electrical sector and on the National Programme for Energy Conservation Funds.	Energy demand.
Brazil	Law N°10.295 / 2001 established National Policy for Conservation and the Rational Use of Energy; and Decree 4.059 / 2001.	Energy demand, institutions/administrative changes.
Brazil	Law N° 10.438 / 2002, established the Incentive Programme for Alternative Electricity Sources (PROINFA).	Energy, institutions / administrative changes.
Brazil	Law N° 11.097 / 2005 made the use of biodiesel obligatory; Laws N° 13.033 and N° 13.263.	Energy, transport.
Brazil	Law N° 11.284 / 2006 covers the management of public forests, the Brazilian Forestry Service, and the National Fund for Forestry Development.	REDD+ and LULUCF, institutions / administrative changes.
Brazil	Decree 6.263 / 2007 established the Inter-ministerial Committee on Climate Change (ICCC).	Energy, institutions / administrative changes
Brazil	National Energy Plan 2030 (PNE 2030).	Energy, energy demand, transport, research and development, institutions / administrative changes.

Country	Name	Categories
Brazil	National Climate Change Plan (Decree N° 6.263).	Energy, energy demand, REDD+ and LULUCF, transport, adaptation, research and development, institutions / administrative changes.
Brazil	Law 12.144 / 2009 and Decree 7.343 / 2010 established the National Climate Change Fund (NFCC).	Energy, adaptation, institutions / administrative changes.
Brazil	Law 12.187 / 2009 established the National Climate Change Policy (NPCC), regulated by Decree 7.390 / 2010.	Energy, energy demand, REDD+ and LULUCF, transport, adaptation, research and development, institutions / administrative changes.
Brazil	National Energy Efficiency Plan.	Energy, energy demand, transport, research and development, institutions / administrative changes.
Brazil	Law N° 12.805, established the National Policy for Integrated Farming, Livestock and Forestry.	REDD+ and LULUCF, adaptation, research and development.
Brazil	Law N° 13.186 covers Education Policy for Sustainable Consumption.	Energy demand.
Brazil	Law N° 13.203 covers the renegotiation of hydrological risks from electricity generation and other matters relating to electricity generation.	Energy.
Brazil	Portaria N° 150, 2016, National Adaptation Plan for Climate Change (NAP).	Adaptation, institutions / administrative changes.
Brazil	Decree 9.082 re-established the Brazilian Forum on Climate Change.	Energy, energy demand, REDD+ and LULUCF, transport, adaptation, research and development, institutions / administrative changes.
Brazil	Decree N° 9.179 on administrative offences and sanctions for the environment.	Institutions / administrative changes.
Brazil	Law N° 13.576 on the National Policy on Biofuels (RenovaBio) and Decree N° 9.308.	Carbon price, energy, energy demand..
Chile	Law N° 19.657 on Geothermal energy and its regulation by Decree 114.	Energy supply, institutions/ administrative changes.
Chile	Law N° 19.940 modifies the General Law on Electrical Services (LGSE) of 1982.	Energy supply, institutions/ administrative changes.
Chile	Law N° 20.257 on non-conventional renewable energy.	Energy supply.
Chile	National Action Plan for Climate Change (2008-2012; 2017-2022).	REDD+ y LULUCF, adaptación, investigación y desarrollo, instituciones/ arreglos administrativos.
Chile	National Energy Strategy 2012-2030.	Energy supply, energy demand.
Chile	Law N° 20.365 on Tax Exemption for Solar Power Systems.	Carbon pricing, Energy supply.
Chile	Law N° 20.571 regulates the tariffs paid for residential electrical suppliers.	Energy supply, institutions/ administrative changes.
Chile	Resolution 370 regulates subsidies for energy transmission lines to facilitate access to the grid by renewable energy installations.	Energy supply.

Country	Name	Categories
Chile	National Strategy for Forests and Climate Change.	Carbon price, REDD+ and UTCUS, institutions/ administrative changes.
Chile	Law N° 20.780 (tax reform that implemented a green tax)	Carbon price, Energy supply.
Chile	National Plan for Adaptation to Climate Change.	REDD+ and LULUCF, adaptation, research and development, Institutions/ administrative changes
Chile	Mitigation Plan for GHG emissions in the energy sector.	Energy supply and demand.
Chile	National Action Plan for Sustainable Consumption and 2017-2022.	Energy supply and demand, transport, research and development.
Colombia	Columbian Strategy for low carbon Development.	Energy supply.
Colombia	Decree N° 1073/2015 is the basis for the regulation of the administrative sector of mining and energy; and Decree N° 0570/2018 regulates the electricity sector.	Energy supply.
Colombia	Decrees N°1625/2016 and N° 926/2017 on the carbon tax.	Carbon price.
Colombia	Document CONPES 3700 is on the institutional strategy for coordinating climate change policy and actions.	Institutions / administrative changes.
Colombia	Law 1450 established the National Development Plan 2010-2014.	Energy supply and demand, REDD+, transport, adaptation, research and development, institutions / administrative changes.
Colombia	Law N° 1523 adopted the National Policy for Risk Management and the National System for Risk Management.	Adaptation, institutions / administrative changes.
Colombia	Law N°1715/2014 regulates the integration and promotion of non-conventional renewable energy.	Energy supply and demand, institutions / administrative changes.
Colombia	Law N° 1819/2016 covers tax deductions for renewables and the carbon tax.	Carbon price, Energy supply.
Colombia	Law N° 697 promotes the rational and efficient use of energy and the use of alternative non-conventional energy sources.	Energy supply and demand, research and development, institutions / administrative changes.
Colombia	Law 788/2002, enabled the establishment of the Tax Reform.	Energy supply.
Colombia	National Climate Change Decree.	Institutions / administrative changes
Colombia	National Energy Plan 2006-2025.	Energy supply and demand, research and development, institutions / administrative changes.
Colombia	National Plan for Adaptation to Climate Change.	Adaptation, research and development, institutions / administrative changes.
Colombia	The Ministry of Mines & Energy issued Resolution 18-0919 that adopted the Action Plan for 2010-2015 to develop a programme for rational and efficient energy use and the use of alternative non-conventional energy sources.	Energy supply and demand, institutions / administrative changes.

Country	Name	Categories
Costa Rica	Energy Law (Law N° 7200).	Energy supply and demand.
Costa Rica	Regulation on efficient energy use (Law N° 7447).	Energy demand, transport.
Costa Rica	Forestry Law (Law N° 7575).	REDD+ and LULUCF, institutions/ administrative changes.
Costa Rica	National Climate Change Strategy.	Energy supply, REDD+ and LULUCF, adaptation.
Costa Rica	National Energy Plan 2008-2021.	Energy supply and demand, transport.
Costa Rica	Biofuel Regulations (Executive Decree N° 35.091)	Energy supply, transport, research and development.
Costa Rica	Decree N° 36.823-MINAET.	Institutions/ administrative changes.
Costa Rica	Executive Decree N° 37352-MINAET.	REDD+ and LULUCF, institutions/ administrative changes.
Costa Rica	Ministerial Decree N° 37.926-MINAE that created a voluntary carbon market.	Carbon price, institutions/ administrative changes.
Costa Rica	7th National Energy Plan 2015-2030.	Energy supply and demand, transport, institutions/ administrative changes.
Costa Rica	Law 93.66 on Rail Electrification.	Transport, institutions/ administrative changes.
Cuba	National Programme for the Development of Energy Sources.	Energy supply and demand.
Cuba	Decree-Law N° 147 on the reorganization of the administrative entities of the Central State, which created the Ministry of Science, Technology & Environment responsible for climate change policies.	Institutions/ administrative changes.
Cuba	Law N° 75 on Civil Defence and Decree-Law N°170 on the System of Measures for Civil Defence that manages disasters and responds to frequent extreme weather events.	Adaptation, institutions/ administrative changes.
Cuba	State Energy Saving Programme by the Ministry of Education.	Energy demand, institutions/ administrative changes.
Cuba	National Group for the accelerated development of renewable energies and energy efficiency.	Energy demand, institutions/ administrative changes.
Cuba	Resolution N° 136/09 on the technical regulation of energy efficiency for electrical equipment.	Energy demand.
Cuba	National Environment Strategy 2011-2015.	REDD+ and LULUCF, Adaptation, Institutions/ administrative changes.
Cuba	Decree Law N° 337 on inland waterways.	Adaptation.
Ecuador	National Climate Change Strategy of Ecuador 2012-2025 (Executive Decree N° 1815 & Ministerial Agreement N°095).	Energy supply and demand, REDD+ and LULUCF, adaptation, institutions / administrative changes.
Ecuador	Executive Decree N°495 for the creation of the Inter-Institutional Committee on Climate Change.	Institutions / administrative changes.
Ecuador	Executive Decree N° 004 / 11 on the rate for non-conventional renewable energy sources.	Energy supply.

Country	Name	Categories
Ecuador	RENOVA Programme (Executive Decree N° 676/ Executive Decree N° 741).	Energy demand.
Ecuador	Ministerial Agreement N° 089 that established the National Authority for Nationally Appropriate Mitigation Actions (NAMAs).	Institutions / administrative changes.
Ecuador	Ministerial Agreement N° 33 on REDD+.	REDD+ and LULUCF.
Ecuador	National Plan for Living Well (2013-2017).	Energy supply and demand, REDD+ and LULUCF, adaptation.
Ecuador	Organic Law on Public Service and Electrical Energy.	Energy supply and demand, institutions / administrative changes.
Ecuador	Organic Environment Code.	Energy supply and demand, REDD+ and LULUCF, transport, adaptation, research and development, institutions / administrative changes.
Ecuador	Ministerial Agreement N°160 – Risk Management Certification (RMC) for mitigation projects.	Mitigation.
Ecuador	Ministerial Agreement N° 103 – Certificate of Registration REDD+.	REDD+ and LULUCF.
Ecuador	Ministerial Agreement N° 128 – Guide on requirements and procedures for REDD+.	REDD+ and LULUCF.
Ecuador	Ministerial Agreement N° 045 – Regulations on Desertification, Land Degradation and Drought.	Institutions / administrative changes.
Ecuador	Ministerial Agreement N° 137 – Baselines for Climate Change Plans.	Institutions / administrative changes.
Ecuador	Ministerial Agreement N° 141 – Environmental Authority for Carbon Neutrality	Institutions / administrative changes.
Ecuador	Ministerial Agreement N° 264 – Ecuadorian Certification of Carbon Neutrality.	Mechanism by which Ecuador can issue 'Carbon Neutral' certification.
Ecuador	Ministerial Agreement N° 265 – Guide for 'Carbon Neutral' consultants.	Qualifying and registering process for consultants in the Ecuadorian 'Carbon Neutral' recognition framework.
Ecuador	Ministerial Agreement N° 116 – Action Plan for REDD+ for Living Well.	REDD+ and LULUCF.
El Salvador	Civil Protection Law for Prevention and Mitigation of Disasters (Decree N° 777).	Institutions/ administrative changes.
El Salvador	Tax incentives for improved renewable energy use within the Electricity Generation Law (Law N° 422).	Energy supply, institutions/ administrative changes.
El Salvador	National Energy Policy 2010-2024.	Energy supply and demand, institutions/ administrative changes.
El Salvador	Modification of the General Education Law (Legislative Decree N° 714).	Adaptation, institutions/ administrative changes.
El Salvador	Amended Higher Education Law (Decree N° 715).	Institutions/ administrative changes.
El Salvador	National Environment Policy.	Energy supply and demand, adaptation, institutions/ administrative changes, institutions/ administrative changes.

Country	Name	Categories
El Salvador	National Climate Change Policy.	Adaptation, institutions/ administrative changes.
Guatemala	Law on Incentives for Renewable Energy Development Projects (Legislative Decree 52- 2003).	Carbon price, Energy supply, research and development, institutions / administrative changes.
Guatemala	Climate Change Policy (Government Agreement N.329-2009).	Carbon price, Energy supply and demand, REDD+ and LULUCF, adaptation, research and development, institutions / administrative changes.
Guatemala	National Policy on Integrated Management of Marine Coastal Areas (Government Agreement N° 328-2009).	Adaptation, institutions / administrative changes.
Guatemala	National Policy on Cleaner Production (Government Agreement N.258-2010).	Energy demand, research and development.
Guatemala	National Biodiversity Policy (Government Agreement N.220-2011).	REDD+ and LULUCF, adaptation, research and development.
Guatemala	Energy Policy 2013-2027.	Energy supply and demand, REDD+ and LULUCF.
Guatemala	Framework Law to regulate the reduction of vulnerability, obligatory adaptation to climate change, and mitigation of GHG emissions (Legislative Decree N° 7-2013).	REDD+ and LULUCF, adaptation, institutions / administrative changes.
Honduras	Decree N° 267-98 (modified Decree 85-98) on the generation of renewable energy.	Energy supply and demand.
Honduras	Decree N° 103-2003 (guarantees the correct implementation of previous laws on renewable energy).	Energy supply and demand.
Honduras	Decree N° 70-2007 (Law to promote the production of electricity using renewable energy).	Energy supply.
Honduras	Law on the Production and Use of Biofuel (Decree 144-2007).	Energy supply, REDD+ and LULUCF.
Honduras	Executive Order N° PCM-022-2010 (Created the National Climate Change Office).	Adaptation, institutions/ administrative changes.
Honduras	Executive Order N° PCM-046-2010 Adopted the National Climate Change Strategy.	Institutions/ administrative changes.
Honduras	National Vision 2010-2038 and National Plan 2010- 2022.	Institutions/ administrative changes.
Honduras	Decree N° 279/10 – Special Regulatory Law on public renewable energy projects.	Energy supply.
Honduras	Readiness Proposal for Honduras	REDD+ and LULUCF, Institutions/ administrative changes.
Honduras	Regional Programme for REDD CCAD GIZ.	REDD+ and LULUCF.
Honduras	Decree N° 297-2013 (Law on Climate Change	Carbon price, Energy supply and demand, REDD+ and LULUCF, adaptation, research and development, institutions/ administrative changes.

Country	Name	Categories
Honduras	National Climate Change Strategy.	Energy supply, institutions/ administrative changes.
Mexico	Organic Law on Public Federal Administration.	Energy, energy demand, institutions / administrative changes.
Mexico	Special Tax Law on Production and Services (carbon tax and credits).	Carbon price, energy, institutions / administrative changes.
Mexico	General Law on Sustainable Forest Development.	REDD+ and LULUCF, research and development, institutions / administrative changes
Mexico	Accelerated depreciation for investments with environmental benefits.	Energy, institutions / administrative changes.
Mexico	Law on the promotion and development of biofuels.	Energy, REDD+ and LULUCF, research and development, institutions / administrative changes.
Mexico	General Climate Change Law	Carbon price, energy, energy demand, REDD+ and LULUCF, transport, adaptation, research and development, institutions / administrative changes.
Mexico	Regulations for the General Climate Change Law regarding the National Emissions Registry.	Emissions, standards and verification.
Mexico	Energy Reform Package	Energy, institutions / administrative changes.
Mexico	National Climate Change Strategy	Energy, energy demand, REDD+ and LULUCF, Transport, Adaptation.
Mexico	Decree for the Law on the Electricity Industry, the Law on Geothermal Energy, and the Amendment of the Law on National Waterways.	Energy, institutions / administrative changes.
Mexico	Law on Energy Transition.	Energy, energy demand, institutions / administrative changes.
Mexico	Transition Strategy to Promote the Use of Cleaner Technology and Fuels.	Energy, energy demand.
Mexico	Planning Law.	Planning, standards and execution.
Mexico	General Law on Ecological Balance and Environmental Protection.	Environment, sustainable development.
Nicaragua	Presidential Agreement N°146/98 on the restoration and protection of forest resources.	Institutions/ administrative changes.
Nicaragua	Ministerial Resolution N° 014.99 created the Climate Change Commission.	Adaptation, research and development, institutions/ administrative changes.
Nicaragua	Law N° 443 – Law on the exploration and exploitation of geothermal resources.	Energy supply.
Nicaragua	Decree N° 13/04 established National Energy Policy.	Energy supply, institutions/ administrative changes.
Nicaragua	Laws N° 532, 901 and 967 – covers the promotion of electrical power using renewable sources.	Energy supply.
Nicaragua	Law N° 217 on the Environment and Natural Resources was modified by Law N° 647.	Adaptation, institutions/ administrative changes.
Nicaragua	Resolution A.N. N° 003-2009 on climate change and adaptability.	Adaptation, institutions/ administrative changes.

Country	Name	Categories
Nicaragua	Action Plan 2010-2015 covered the national strategy on environment and climate change.	Energy supply and demand, adaptation, institutions/ administrative changes.
Nicaragua	Plans to expand electricity generation. (2013-2027 and 2016-2030).	Energy supply
Nicaragua.	Adaptation Plan for Climate Change in the Farming, Forestry and Fishing sectors.	Energy supply, REDD+ and LULUCF, adaptation
Nicaragua	Decree N° 38/14 approved an amendment to establish Law N° 835 on Sustainable Rural Tourism.	Adaptation
Panama	Environment Law.	Institutions / administrative changes.
Panama	Law N°45 – Law to promote renewable energy.	Energy supply.
Panama	Executive Decree N° 35 – National Policy on Climate Change.	Adaptation, institutions / administrative changes.
Panama	Executive Decree N°1 – created the National Committee on Climate Change in Panama.	Institutions / administrative changes.
Panama	Law N° 42 – Directives on national policy regarding biofuels and electrical energy using biomass in Panama.	Energy supply.
Panama	Law N° 44 – Incentives to promote the construction and operation of wind farms designed to provide public service electricity.	Energy supply.
Panama	Law N° 69 – covers the general baselines for national policy on the rational and efficient use of energy in Panama.	Energy demand.
Panama	Law N° 37 – Incentives to promote the construction and operation of solar power sources and the maintenance of solar electrical power stations.	Energy supply.
Panama	Law N° 8 – created the Ministry of the Environment and amended the statutes of the Water Resources Authority of Panama.	Adaptation, institutions / administrative changes.
Paraguay	Law N° 536/95 promotes forestation and reforestation.	REDD+ and LULUCF.
Paraguay	Law N° 1561/00 created the National Environment Council.	Institutions / administrative changes.
Paraguay	Decree N° 14943 / 01 implemented the National Climate Change Programme.	Institutions / administrative changes.

Country	Name	Categories
Paraguay	Law N° 2748/05 promotes biofuels.	Energy.
Paraguay	Law N° 2524/04 promotes zero deforestation in the Eastern Region.	REDD+ and LULUCF, institutions / administrative changes.
Paraguay	Framework Law on Natural Gas N° 3254 / 07	Energy, energy demand, institutions / administrative changes.
Paraguay	Mitigation of environmental impacts.	REDD+ and LULUCF.
Paraguay	Resolution 941/07 defines 'forest' for carbon sink and carbon reduction projects.	Energy, energy demand, transport, adaptation, institutions / administrative changes.
Paraguay	National Climate Change Policy.	Energy, energy demand, adaptation, institutions / administrative changes
Paraguay	Decree N° 2794: National Development Plan 2030.	Energy, energy demand, transport, institutions / administrative changes.
Paraguay	Law N° 5211 on air quality.	REDD+ and LULUCF, adaptation.
Paraguay	Preparedness Plan to reduce emissions from deforestation and forest degradation.	Energy, institutions / administrative changes.
Paraguay	Decree N° 4056 establishes a regime for the sustainable use of biofuels.	Energy, energy demand, institutions / administrative changes.
Paraguay	Decree 6092/2016: Energy Policy of the Republic of Paraguay.	Adaptation, institutions / administrative changes.
Paraguay	National Climate Change Law N° 5875.	Institutions / administrative changes.
Paraguay	Law N° 6123/18 elevated the Environment Sec-retariat to the Ministry of Environment and Sustainable Development.	REDD+ and LULUCF, institutions / administrative changes.
Peru	Law N° 27345 and Executive Decree N°053-2007-EM to regulate corresponding Law N° 27345. Law to promote the efficient use of energy.	Energy demand, transport, research and development.
Peru	Organic Law of Regional Governments, Law N° 27867.	Institutions/ administrative changes.
Peru	Law to promote the biofuels market: Law N°28054 and its corresponding regulations specified in Federal Decree N° 013-2005-EM.	Energy supply, research and development.
Peru	Executive Decree N° 086-2003-PCM. National Climate Change Strategy.	Energy supply, REDD+ and LULUCF, adaptation, research and development, institutions/ administrative changes.
Peru	Executive Decree N° 213-2007-EF. Established the temporary system for the renovation of cars to promote changing to the new energy matrix.	Energy demand, transport.

Country	Name	Categories
Peru	Legislative Decree N° 1058. To promote investment in electricity generation using hydropower and other renewable sources.	Energy demand.
Peru	Legislative Decree N° 1002. To promote investment in electricity generation using renewable energy.	Energy supply, research and development.
Peru	Decree N° 238-2010-MINAM. Adaptation and Mitigation Action Plan for Climate Change	Carbon price, Energy supply and demand, REDD+ and LULUCF, adaptation, research and development, institutions/ administrative changes.
Peru	Executive Decree N° 008-2010-MINAN. National Forest Conservation Programme to mitigate Climate Change.	REDD+ and LULUCF.
Peru	Executive Decree N° 26-2014-SERNANP. Directive on the commercialization of tariffs for ecosystems conservation projects in protected areas on a national level.	REDD+ and LULUCF.
Peru	Law N° 30215. Compensation mechanisms for ecosystem services.	REDD+ and LULUCF.
Peru	Decree N° 011-2015-MINAM. National Climate Change Strategy.	Energy supply and demand, REDD+ and LULUCF, transport, adaptation, research and development.
Peru	Ministerial Resolution N° 174-2016-MINAM. Sectoral Strategic Plan 2017-2021 for the Environment Sector.	Energy demand, REDD+ and LULUCF, adaptation.
Peru	National Forestry and Climate Change Strategy.	REDD+ and LULUCF, adaptation, research and development, institutions/ administrative changes.
Peru	Framework Law N° 30754 on climate change.	REDD+ and LULUCF, adaptation, institutions/ administrative changes.
Peru	General Law on Solid Waste.	Adaptation, institutions/ administrative changes.
Uruguay	Law N° 17.283 General law on the protection of the environment. (2000).	Adaptation, institutions/ administrative changes.
Uruguay	Law N°17.503 Farm Reconstruction and Financing Fund (2002).	Adaptation, institutions/ administrative changes.
Uruguay	Law N° 18.195 on Biofuels Funding and Regulation of biofuel production, sales and usage (2007).	Energy supply and demand.
Uruguay	Decree N° 238/009 created the National Climate Change and Variability Response System (2009).	Adaptation, institutions/ administrative changes. research and development, energy supply and demand
Uruguay	Law N° 18.585 on Solar Energy (2009).	Energy supply, research and development.
Uruguay	Law N° 18.597 on the efficient use of energy in Uruguay (2009).	Energy supply and demand, institutions/ administrative changes.
Uruguay	Intelligent Agriculture Policy (2010).	Energy supply, institutions/ administrative changes.
Uruguay	Law N° 18.719 Approved the National Budget 2010-14 (2010).	Adaptation, institutions/ administrative changes.

Country	Name	Categories
Uruguay	Law N° 18.719 Approved the National Budget 2010-14 (2010).	Adaptation, institutions/ administrative changes.
Uruguay	National Response Climate Change Plan (2010).	Energy supply and demand, transport, adaptation, research and development, institutions/ administrative changes.
Uruguay	Decree N° 50/012 to research, develop and build solar powered energy (2012).	Energy supply, research and development.
Uruguay	Decree N° 86/012 approved the Uruguayan Savings Trust for Energy Efficiency (FUDAEE, 2012).	Energy supply and demand, institutions/ administrative changes.
Uruguay	Law N° 19.147 created the National Environmental Observatory (2013).	Institutions/ administrative changes.
Uruguay	Law N° 19.126 covers mining activity in Gran Porte (2013).	Adaptation, institutions/ administrative changes.
Uruguay	Law N° 19.158 created the Uruguayan Meteorology Institute (2013).	Research and development, institutions/ administrative changes.
Uruguay	Law N° 19.355 approved the National Budget 2015-2019 (2015).	Adaptation, institutions/ administrative changes.
Uruguay	Decree N° 58/015 established policies for the development of the energy sector (2015).	Energy supply.
Uruguay	Law N° 19.355 created the National Secretariat for Environment, Water and Climate Change (2015).	Mitigation/adaptation, institutions/ administrative changes.
Uruguay	Decree N° 172/016 created the National Environment System and amended article 33 of Law nr. 19.355 to establish the National Secretariat of Environment, Water and Climate Change (2016).	Institutions/ administrative changes
Uruguay	Decree N° 310/017 approved the National Policy on Climate Change and the First NDC (2017).	Mitigation in all sector, REDD+ and LULUCF, Adaptation.
Venezuela	Organic Law on the Environment N° 5833.	Energy demand.
Venezuela	Law on the integrated management of socio-natural and technological risks.	Adaptation, research and development, institutions / administrative changes.
Venezuela	Law on the National Plan: Second Socialist Economic and Social National Development Plan 2013-2019.	Energy supply and demand, REDD+ and LULUCF, transport, adaptation, research and development, institutions / administrative changes.

Annex 4: Projects funded by GCF and the Adaptation Fund in Latin American countries

Country	GCF / Adaptation Fund		Approved Project	Topic
Argentina	Green Climate Fund	Projects	FPO30 – Catalysing private investment in sustainable energy in Argentina - Part 1.	Mitigation
			FPO64 – Promoting mitigating instruments for risk and funding for investments in renewable and efficient energy.	Mitigation
			FPO54 – Implementation Project and Integrated Management Plan for the Lujan River Headwaters.	Adaptation
	Adaptation Fund	Readiness	National Adaptation Plan.	
			Strengthening financing for climate and NDC implementation by developing mitigation proposals through a national participatory process.	
			Development and Initial Aid Proposal for capacity building and development of projects for rural change in Argentina (UCAR).	
	Adaptation Fund		Increasing climate resilience and improving sustainable land use management in the southwest of the Buenos Aires Province.	Adaptation
		Adaptation and resilience to climate change and its variability for family farms in the northeast of Argentina (NEA).	Adaptation	
Country	GCF / Adaptation Fund		Approved Project	Topic
Bolivia	Green Climate Fund	Projects	PROPOSAL/Concept Note: increasing resilience and adaptation in the communities of the Poopó and Katari headwaters.	Adaptation
		Readiness	Improving NDC and National Planning	
Country	GCF / Adaptation Fund		Approved Project	Topic
Brazil	Green Climate Fund	Projects	FPO65 – Financial instruments for energy efficient cities in Brazil (FinBRAZEEC).	Mitigation
			FPO38 - Geeref Next.	Mitigation
		Readiness	Evaluation of technical needs for the implementation of climate action plans in Brazil.	

Country	GCF / Adaptation Fund		Approved Project	Topic
Chile	Green Climate Fund	Projects	FP038 - Geeref Next.	Mitigation
			FP017 – Programme for climate action and the development of solar energy in the Tarapaca Region of northern Chile.	Mitigation
		Readiness	Support for enhancing public-private financial planning processes at a sub-national level, for the development of local programmes in Chile.	
			Support with possible accreditation and establishing implementing agencies at a local level.	
			Assistance with Strategic Entities and Frameworks.	
			Improving NDC and national planning.	
Adaptation Fund		Improving resilience to climate change by small agriculture in the O'Higgins Region of Chile.	Adaptation	
Country	GCF / Adaptation Fund		Approved Project	Topic
Colombia	Green Climate Fund	Projects	FP056 – Expanding climate-resilient practices in water management in vulnerable La Mojana communities.	Adaptation
			Readiness	Assistance for implementing the Colombian Financial Innovation Pilot Scheme - Green Protocol.
		Support with adaptation planning processes in Colombia.		
		Preparatory proposal for the municipal solid waste NAMA in Colombia.		
			Improving NDC and national planning.	
Adaptation Fund		Reduction of risk and vulnerability to climate change in the La Depresión Momposina Region of Colombia.	Adaptation	
Country	GCF / Adaptation Fund		Approved Project	Topic
Costa Rica	Green Climate Fund	Projects	FP097 – Investment initiative for adaptation to climate change (CAMBio II).	Adaptation
			FP038 - Geeref Next.	Mitigation
		Readiness	Sub-national capacity building for the implementation of the National Adaptation Plan of Costa Rica.	
	Costa Rica: towards responsible and sustainable funding of climate action.			
Adaptation Fund		Vulnerability reduction focused on the critical sectors of agriculture, water resources and coastlines, to reduce negative impacts from climate change and improve coping capacity in those sectors.	Adaptation	

Country	GCF / Adaptation Fund		Approved Project	Topic
Cuba	Green Climate Fund	Proyectos	PROPOSAL/Concept Note: Coastal adaptation to climate change in Cuba through ecosystem-based adaptation.	Adaptation
		Readiness	Preparation of the GCF and preparatory support for Cuba.	
	Adaptation Fund		Vulnerability reduction to coastal flooding through ecosystem-based adaptation in the southern zones of the Artemisa and Mayabeque Provinces.	Adaptation

Country	GCF / Adaptation Fund		Approved Project	Topic
Ecuador	Green Climate Fund	Projects	FP095 – Transforming financial systems for climate.	Cross-cutting
			FP019 – Prepare financial and land-use planning instruments to reduce emissions arising from deforestation.	Mitigation
			Capacity building for decentralized autonomous governments to access and administer climate funding in Ecuador, and contribute to NDC implementation.	
			Prepare application for preliminary climate aid from the GCF to help with the National Adaptation Plan in Ecuador.	
			Prepare application for preliminary climate aid for Ecuador from the GCF.	
	Adaptation Fund		Increasing adaptive capacity of local communities, ecosystems and hydro-electrical installations in the upper Blanco River basin (Toachi-Pilatón basin), with a focus on ecosystem and community-based adaptation and integrated adaptive management of hydrological basins.	Adaptation
			Improving resistance of communities to the adverse effects of climate change, with a focus on food security, in Pichincha Province and the River Jubones basin.	Adaptation

Country	GCF / Adaptation Fund		Approved Project	Topic
El Salvador	Green Climate Fund	Projects	FP097 – Productive investment incentive for adaptation to climate change (CAMBio II).	Adaptation
			FP089 – Improving climate resilience measures for agro-ecosystems in El Salvador’s dry corridor (RECLIMA).	Cross-cutting
			FP009 – Energy saving insurance for private investments in energy efficiency of small and medium-sized businesses.	Mitigation
			Readiness	Enhancement of NDC and planning in El Salvador.

Country	GCF / Adaptation Fund		Approved Project	Topic
Guatemala	Green Climate Fund	Projects	FP097 – Productive investment incentive for adaptation to climate change (CAMBio II).	Adaptation
			FP087 - Creating resilience for means of living to climate change impacts for those living at the high-altitude river basins in the Guatemalan Highlands.	Adaptation
			FP048 – Enabling risk sharing in climate-resilient, low-emissions agriculture for small and medium-sized businesses.	Cross-cutting
			FP038 - Geeref Next.	Mitigation
	Readiness	Preparation of a NDC with better information regarding proposals for financing in the Agriculture, Forestry and other Land-Use (AFOLU) sector in Guatemala.		
		Institutional capacity building for the Ministry of Environment and Natural Resources of Guatemala as the GCF focal point, including a wider group of stakeholders.		

Country	GCF / Adaptation Fund		Approved Project	Topic
Honduras	Green Climate Fund	Projects	FP097 – Productive investment incentive for adaptation to climate change (CAMBio II).	Adaptation
		Readiness	Increase understanding of the social and environmental guarantees applicable to climate change programmes and projects in Honduras.	
			Preparation of an NDC with improved information regarding proposals for financing in the AFOLU sector of Honduras.	
			Support for strategic planning for collaboration with the GCF, and for fulfilling national commitments acquired through the Paris Agreement, in the context of the Land Use, Land Use Change and Forestry (LULUCF) sector.	
		Improving the NDC and planning for Honduras.		
	Adaptation Fund	Ecosystem-based adaptation in the communities along the central forest corridor of Tegucigalpa.	Adaptation	
		Facing climate change risks to the water resources of Honduras: improving systemic recovery and reducing vulnerability of the urban poor.	Adaptation	

Country	GCF / Adaptation Fund		Approved Project	Topic
Mexico	Green Climate Fund	Projects	FP048 – Enabling risk sharing in climate-resilient, low-emissions agriculture for small and medium-sized businesses.	Cross-cutting
			FP038 - Geeref Next.	Mitigation

Country	GCF / Adaptation Fund		Approved Project	Topic
Nicaragua	Green Climate Fund	Projects	FP097 – Productive investment incentive for adaptation to climate change (CAMBio II).	Adaptation
		Readiness	Dialogue with the Indigenous Communities of Latin America and the Caribbean.	
			Improve Nicaragua's framework for climate governance.	
	Adaptation Fund		Risk and vulnerability reduction from flooding and drought in the Estero Real basin.	Adaptation

Country	GCF / Adaptation Fund		Approved Project	Topic
Panama	Green Climate Fund	Projects	FP097 – Productive investment incentive for adaptation to climate change (CAMBio II).	Adaptation
		Readiness	Panama's Readiness Support Proposal 2017.	
	Adaptation Fund		Adaptation to climate change via integrated water management in Panama.	Adaptation

Country	GCF / Adaptation Fund		Approved Project	Topic
Paraguay	Green Climate Fund	Projects	FP063 – Promotion of private sector investment in energy efficiency for the industrial sector of Paraguay.	Mitigation
			FP062 – Poverty, Reforestation, Energy and Climate Change Project (PROEZA).	Cross-cutting
		Readiness	Paraguay: "Improving access mechanisms and financing for climate change projects."	
			Improving the role of local development councils to enhance the implementation of the NDC of Paraguay, and to ensure access to climate funding.	
	Adaptation Fund		Ecosystem-based approaches to reducing the vulnerability of food security to climate change in the Paraguayan Chaco Region.	Adaptation

Country	GCF / Adaptation Fund		Approved Project	Topic
Peru	Green Climate Fund	Projects	FP001 – Creating resilience for wetlands in the Datem del Marañon Province of Peru.	Cross-cutting
		Readiness	Capacity building of Profonanpe as the DAE in Peru - Stage II.	
			Assistance for accreditation of entities for direct funding.	
			GCF Readiness and Preparatory Support for Peru.	
	Adaptation Fund		AYNINACUY: Climate change adaptation strategies for the preservation of the capital and means to life for livestock among high-altitude Andes communities.	Adaptation
			Adaptation to the impacts of climate change for the marine coastal ecosystems and fishing in Peru.	Adaptation
Country	GCF / Adaptation Fund		Approved Project	Topic
Uruguay	Green Climate Fund	Readiness	Improving capacity of the NDC to provide direct access to the GCF in Uruguay.	
			Preparation of Green Climate Fund and Preparatory Support for Uruguay – Second Phase.	
			Integration of adaptation in cities, infrastructure and local planning in Uruguay.	
			Preparation of Green Climate Fund and Preparatory Support for Uruguay.	
			Support for GAP accreditation evaluation and action plan for the direct access entity.	
	Adaptation Fund		Developing resilience to climate change among small vulnerable property owners.	Adaptation

Source: Taken from the GCF Country Profiles portal. Available at: <https://www.greenclimate.fund/countries>

Annex 5. References-Case Studies

Country	Honduras
Case	Roadmap for the implementation of the NDC in Honduras
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References	Information based on interviews carried out between November 27th & 28th, 2018 with: Name: Sergio Palacios Position: National Director for Climate Change Institution: Energy Secretariat, Natural Resources and Environment Contact: spalacios@miambiente.gob.hn Name: Irene Ortega Position: Technical Assistant for Mitigation Institution: Secretariat of Natural Resources and Environment Contact: iortega@miambiente.gob.hn Name: Bertha Argueta Position: Technical Evaluator Institution: Aid Project for Compliance of the Honduran NDC (NDC-GIZ Project) Contact: bertha.argueta@giz.de
Author	Natalie Rona, Libélula
Country	Argentina
Case	National Level Coordination for the Review and Implementation of NDC in Argentina
Contact for enquiries:	Name: Soledad Aguilar Position: National Director for Climate Change Institution: Secretariat of Environment and Sustainable Development Contact: aguilar.envt@gmail.com
Website(s):	https://www.argentina.gob.ar/ambiente
References:	Information based on interviews carried out between January 8th and 10th, 2019 with: Name: Juan José Galeano Position: National Director of Sustainable Development in Industry Institution: Secretariat of Industry and Services, Ministry of Production Contact: jjgaleano@produccion.gob.ar Name: Luis Panichelli Position: National Coordinator UN-REDD Argentina Institution: Secretariat of Environment and Sustainable Development Contact: lpanichelli@gmail.com Name: Rocío Rodríguez Position: Focal Point for Energy, National Cabinet for Climate Change Institution: Ministry of Energy
Author	Maite Cigarán, Libélula

Country	Ecuador
Case	Participatory Process for NDC development, with emphasis on the energy sector
Contact for enquiries:	Name: Gabriela Vargas Position: Coordinator for the Set of Policies on Climate Change Institution: Ministry of Environment Contact: gabriela.vargas@ambiente.gob.ec
Website(s):	http://www.ambiente.gob.ec/contribuciones-determinadas-a-nivel-nacional/
References:	Information based on interviews carried out between January 23rd and 25th, 2019 with: Name: Stephanie Ávalos Position: Deputy Secretary for Climate Change Institution: Ministry of Environment Name: Fernando Andrade Position: Project coordinator for the Aid Project for designing the NDC Institution: Ministry of Environment Name: Verónica Guayanlema Position: Energy Specialist NDC-SP Institution: Ministry of Environment Name: Paúl Melo Position: Climate Change Specialist Institution: Ministry of Environment Name: María Inés Rivadeneira Position: Gender specialist for the NDC-SP Project Institution: Ministry of Environment
Author	Carolina Chambi, Libélula

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