MÉXICO

GOBIERNO DE LA REPÚBLICA

INTENDED NATIONALLY DETERMINED CONTRIBUTION

Mexico is a country committed to address climate change, as demonstrated by the mitigation and adaptation actions undertaken over the last few years in a systematic way and supported mainly with national resources. In the international arena, Mexico has expressed its willingness to achieve a legally binding agreement with the participation of all Parties in order to keep the global average atmospheric temperature below 2°C.

Since the year 2000, Mexico has published three National Strategies on Climate Change and in 2009 adopted its first Special Program on Climate Change. In addition, Mexico has presented five National Communications with their respective greenhouse gas inventories to the United Nations Framework Convention on Climate Change.

In April 2012, the Mexican Congress unanimously approved the General Law on Climate Change (LGCC in Spanish), which entered into force in October of that year and made Mexico the first developing country to have a comprehensive law on this subject.

As a result of the implementation of this new LGCC, the country has established institutions and effective instruments to reduce greenhouse gases (GHG) and particle emissions, as well as to increase the adaptive capacity of the country.

Regarding mitigation, the LGCC sets a clear obligation to give priority to the least costly mitigation actions, that at the same time derived in health and wellbeing co-benefits to the Mexican population. For this reason, both the National Strategy on Climate Change adopted in June 2013 - which sets the vision for the next 10, 20 and 40 years - as well as the Special Program on Climate Change (PECC in Spanish) 2014-2018 incorporate greenhouse gases and particles, also known as Short Lived Climate Pollutants (SLCPs).

The INDC that Mexico is submitting encompasses for mitigation purposes both the reduction of all GHG and SLCPs.

SLCPs have an important Global Warming Potential and a shorter life span in the atmosphere than CO_2. Actions to abate SLCPs simultaneously contribute to climate change mitigation in the near term and to the immediate improvement of air quality, as well as to generate positive impacts on human health and ecosystems conservation; in consistence with the recommendations contained in the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), as well as with the guidelines of the Clean Air and Climate Coalition (CCAC) of which Mexico is a member.

For Mexico, the inclusion of SLCPs constitutes an increase of its level of ambition and commitment since it is additional to what the country has committed to previously.

The INDC of Mexico has two components, one for mitigation and another one related to adaptation. In turn, the mitigation portion includes two types of measures: unconditional and conditional. The unconditional set of measures are those that Mexico will implement with its own resources, while the conditional actions are those that Mexico could develop if a new multilateral climate regime is adopted and if additional resources and transfer of technology are available through international cooperation. This is unprecedented, since it is the first time Mexico assumes an unconditional international commitment to carry out certain mitigation actions.

This INDC is consistent with Mexico´s pathway to reduce 50% of emissions by the year 2050, with respect to the year 2000, as mandated by the LGCC.

In presenting its INDC, Mexico reaffirms its commitment to combat climate change, to the multilateral rules-based climate regime that requires the participation of all countries, and to sustainable development, as well as its solidarity with the most vulnerable countries.

Multiple stakeholders were consulted during the preparation of the INDC, including non-governmental organizations, academia and representatives from private industry of all economic sectors, through workshops and consultations at the national level.

In sum, the INDC of Mexico is ambitious provided that for the first time it translates previous aspirational commitments into mandatory goals. This constitutes a considerable increase in the level of ambition for a developing country with moderate levels of emissions.

Unconditional Reduction	Mexico is committed to reduce unconditionally 25% of its Greenhouse Gases and Short Lived Climate Pollutants emissions (below BAU) for the year 2030. This commitment implies a reduction of 22% of GHG and a reduction of 51% of Black Carbon[1]. This commitment implies a net emissions peak starting from 2026, decoupling GHG emissions from economic growth: emissions intensity per unit of GDP will reduce by around 40% from 2013 to 2030.
Conditional Reduction	The 25% reduction commitment expressed above could increase up to a 40% in a conditional manner, subject to a global agreement addressing important topics including international carbon price, carbon border adjustments, technical cooperation, access to low-cost financial resources and technology transfer, all at a scale commensurate to the challenge of global climate change. Within the same conditions, GHG reductions could increase up to 36%, and Black Carbon reductions to 70% in 2030.
Type	Emissions reduction relative to a Business As Usual baseline

[1] This commitment is coherent to the mandate established in Mexico´s Climate Change Law to prioritize cost-effective mitigation actions with social benefits such as the improvement of public health.

Coverage	Nation -wide
Scope	• Carbon Dioxide (CO_2) • Methane (CH_4) • Nitrous Oxide (N_2O) • Hydrofluorocarbons (HFCs) • Perfluorocarbons (PFCs) • Sulphur hexafluoride (SF_6) • Black Carbon
Baseline	Business As Usual scenario of emission projections based on economic growth in the absence of climate change policies, starting from 2013 (first year of applicability of Mexico´s General Climate Change Law)
Adaptation	Mexico includes an Adaptation component with commitments by 2030 described in the Annex I of this document. The priority of these actions are: the protection of communities from adverse impacts of climate change, such as extreme hydro meteorological events related to global changes in temperature; as well as the increment in the resilience of strategic infrastructure and of the ecosystems that host national biodiversity. In order to reach those priorities Mexico will, *inter alia*, strengthen the adaptive capacity of at least by 50% the number of municipalities in the category of "most vulnerable", establish early warning systems and risk management at every level of government and reach a rate of 0% deforestation by the year 2030. Some of the adaptation actions presented foster positive synergies with mitigation actions.
Planning Process	Mexico supports its INDC in a robust national climate change policy that includes, *inter alia*, the following instruments: • General Climate Change Law. 2012 • National Strategy on Climate Change, 10-20-40 years. 2013 • Carbon tax.2014 • National Emissions and Emissions Reductions Registry. 2014 • Energy reform (laws and regulations). 2014 • Ongoing process for new set of standards and regulations The elaboration of this INDC includes a public participatory process through multiple sectorial meetings and a web based public survey.
Fair and ambitious	Mexico is a developing country, highly vulnerable to the effects of climate change. National emissions of GHG represents only 1.4% of global emissions and our net per capita emissions, inclusive of all sectors, are 5.9 tCO_2e. Nevertheless, Mexico is a responsible party committed to tackling global climate change by transforming its development route to a low emissions pathway, which requires progressive decoupling of carbon emissions from economic growth.

	Existing commitments adopted by Mexico under its General Climate Change Law and presented to the UNFCCC are indicative and aspirational, subject to international support from developed countries. The INDC submitted by Mexico is fair and ambitious because it includes for the first time an unconditional GHG mitigation commitment of 22% by 2030 that increases to 25% reduction by including Black Carbon, a well-known Short-Lived Climate Pollutant. The SLCPs reductions actions will be done with national resources, in an unconditional manner. These reductions are additional to other mitigation actions. Further ambition is reflected in the efforts of the Government of Mexico to establish synergies between adaptation and mitigation, using national resources. These actions not only help tackle global warming and reduce social and ecosystem vulnerability, but also promote inclusive green growth in the country. In summary, Mexico's INDC is highly ambitious as it entails unconditional and transformational investments to change our patterns of production and consumption and achieve peak net emissions within the commitment period.
Gender perspective	These policies and actions include a cross-cutting human rights and gender perspective in order for the measures to be implemented to take into account women as important decision makers regarding energy consumption. They also emphasize the importance of implementing them such that they do not exacerbate the impacts of climate change that already have disproportionate adverse effects based solely on gender.
Key Assumptions on Mitigation	
Metric Applied	GWP 100y values published in IPCC AR5 (CO_2e): ▪ $CH_4 = 28$ ▪ $N_2O = 265$ GWP 100y for Black Carbon (CO_2e) described in Bond *et al.* 2013, J. Geophys. Res. Atmos., 118, no. 11, 5380-5552: ▪ BC = 900
Methodologies for Estimating Emissions	IPCC guidelines; national statistics: sector activity and economic forecasts.
Baseline	2020: 906 $MtCO_2e$ (792 GHG and 114 BC / 127,177 metric tons) 2025: 1013 $MtCO_2e$ (888 GHG and 125 BC / 138,489 metric tons) 2030: 1110 $MtCO_2e$ (973 GHG and 137 BC / 152,332 metric tons)

Coverage	

Sectors/Source Categories	• Energy
	  ○ Fuel Combustion
	  ▪ Energy industries
	  ▪ Manufacturing industries and construction
	  ▪ Transport
	  ▪ Other sectors
	  ○ Fugitive emissions from fuels
	  ▪ Solid fuels
	  ▪ Oil and natural gas and other emissions from energy production
	  ▪ CO_2 transport and storage
	• Industrial processes and product use
	  ○ Mineral industry
	  ○ Chemical and Iron&Steel industry
	  ○ Non-energy products from fuels and solvent use
	  ○ Electronic industry
	  ○ Product uses as substitutes for ODS
	  ○ Other product manufacture and use
	  ○ Other
	• Agriculture
	  ○ Enteric fermentation
	  ○ Manure management
	  ○ Rice cultivation
	  ○ Agricultural soils
	  ○ Field burning of agricultural residues
	  ○ Other
	• Waste
	  ○ Solid waste disposal
	  ○ Biological treatment of solid waste
	  ○ Incineration and open burning of waste
	  ○ Wastewater treatment and discharge
	  ○ Other
	• Land Use, Land-Use Change and Forestry
	  ○ Afforestation, reforestation
	  ○ Deforestation
	  ○ Forest management
	  ○ Cropland management
	  ○ Grazing land management
	  ○ Or equivalent land-based accounting using UNFCCC reporting categories
	  ○ Other categories

International Market Based Mechanisms	In order to achieve rapid and cost efficient mitigation, robust global market based mechanism will be essential. Mexico´s unconditional INDC commitment will be met regardless of such mechanisms, although these would assist cost-effective implementation. Achieving our conditional goal will require fully functional bilateral, regional and international market mechanisms.

ANNEX I – ADAPTATION

INTRODUCTION

The government of Mexico considers adaptation to climate change as a priority to reduce the country's vulnerability. Furthermore, there are opportunities to foster mitigation measures and actions that also increase the adaptive capacity of its population as well as its natural and productive systems. This is captured in the General Law on Climate Change, the National Strategy on Climate Change and the Special Program on Climate Change 2014-2018, which describes specific actions grouped according to planning instruments; schemes and actions to protect, conserve and restore marine and terrestrial coastal ecosystems and their biodiversity; integral management of risk and sectorial vulnerability.

At the subnational level, States and Municipalities have also embarked on adaptation efforts as reflected in their own Climate Change Plans.

MEXICO'S VULNERABILITY TO CLIMATE CHANGE

Mexico´s geographic characteristics make it a highly vulnerable country to the adverse impacts of climate change. Its location between two oceans, as well as its latitude and topography significantly increase Mexico's exposure to extreme hydro meteorological events.

In the last 50 years, Mexico has experienced changes in temperature and mean precipitation. The country has become warmer, with an average temperature increase greater than 0.85°C. At the same time, Mexico has suffered an increased number of extreme weather events such as tropical cyclones, floods and droughts that have led to the loss of human lives as well as high social and economic costs.

Under various climate change scenarios for Mexico, there are projections of changes in the mean annual temperature of up to 2°C in the North of the country in the near term (2015-2039), while in most of the territory the scenarios project a range of 1°C to 1.5°C. Regarding annual precipitation reduction is projected to be in a range of 10 to 20 % across the country.

Furthermore impacts of hydrometeorological events have resulted in economic losses over an annual amount of 730 million pesos (around 48 million USD) between 1980-1999 and 21,950 million pesos (around 1.4 billion USD)[2] for 2000 – 2012.

In accordance to the PECC 2014–2018, in 2014 there were 319 Municipalities (13% of the total number of Municipalities in Mexico) highly vulnerable to the adverse impacts of climate change including droughts, floods and landslides.

ADAPTATION ACTIONS IN MEXICO IN THE PERIOD 2020-2030

The adaptation component of the INDC of Mexico was elaborated taking into account a gender equality and human rights approach. As stated earlier, it prioritizes synergies between mitigation and adaptation. The INDC includes concrete actions to be undertaken from 2020 to 2030 in the following three areas:

1. Adaptation to climate change for the social sector

Poverty is a determining factor of social vulnerability in Mexico. Some estimates indicate that up to 60% of the population has been affected at some point by natural disasters, coinciding with the percentage of population living in poverty and extreme poverty in the country. These groups inhabit precarious housing facilities and high-risks areas prone to climate disasters such as mountain landslides, cliffs or areas prone to flooding.

Actions to be taken in order to reduce vulnerability in this sector for the period 2020 – 2030 are the following:

[2] Exchange rate 1 USD = 14.99 MXN, as of March 25, 2015.

i. Guarantee food security and water access in light of growing climate threats through integral watershed management, biodiversity and land conservation.
ii. Ensure capacity building and participation of the society, local communities, indigenous peoples, women, men, youth, civil organizations and private sector in national and subnational climate change planning.
iii. Reduce the population´s vulnerability and increase its adaptive capacity through early warning systems, risk management, as well as hydrometeorological monitoring, at every level of government.
iv. Strengthen the adaptive capacity of the population through transparent and inclusive mechanisms of social participation, designed with a gender and human rights approach.
v. Reduce vulnerability of the population through territorial planning tools and risk management such as the National Vulnerability Atlas and the National Risk Atlas.
vi. Invert the proportion of financing currently provided to hydrometeorological disasters attention by increasing the ones invested for disasters prevention.
vii. Prevent illnesses that are exacerbated by climate change through an early warning system with epidemiologic information.
viii. Reduce at least by 50% the number of municipalities in the category of "most vulnerable" in the PECC 2014-2018 and avoid any other Municipality falling into this category.
ix. Relocate irregular human settlements in zones prone to disasters through land use regulations.

2. Ecosystem-Based Adaptation

In Mexico there is a large diversity of ecosystems that provide society with a vast amount of environmental services such as carbon sequestration, provision and maintenance of water, habitat conservation for the permanence of species, reduction of impacts caused by meteorological disasters, and the formation and maintenance of soils. These environmental services are seriously threatened by human activities and by the effects of climate change.

Ecosystem-based adaptation consists of the conservation of biodiversity and ecosystem services as part of an integral adaptation strategy to assist human communities to adapt to the adverse effects of climate change.

Actions to be implemented for the period 2020 – 2030 on this topic are the following:

i. Reach a rate of 0% deforestation by the year 2030.
ii. Reforest high, medium and low watersheds with special attention to riparian zones and taking into account native species in the area.
iii. Conserve and restore ecosystems in order to increase ecological connectivity of all Natural Protected Areas and other conservation schemes, through biological corridors and sustainable productive activities. This approach will take into account the equitable participation of the population and will have a territorial approach.
iv. Substantially increase the Programs of Action and Conservation of Species in order to strengthen the protection of priority species from the negative impacts of climate change.
v. Increase carbon capture and strengthen coastal protection with the implementation of a scheme of conservation and recovery of coastal and marine ecosystems such as coral reefs, mangroves, sea grass and dunes.
vi. Guarantee the integral management of water for its different uses (agriculture, ecological, urban, industrial and domestic).

3. Adaptation of strategic infrastructure and productive systems

Climate change poses significant challenges in terms of adaptation of productive systems. The characteristics of impacts and the different ways of dealing with them will depend on the type of system: agriculture and livestock, forestry, wildlife use, aquaculture, fisheries, industrial, mining and tourism. They will also depend on the risks these productive systems are exposed to. In each production system it is necessary to take into account climate change aspects to increment their productivity and competitiveness.

Strategic infrastructure, including communications, transport, tourism, energy, sanitation, water and waste management, is vulnerable to the effects of climate change. Therefore, it is necessary to incorporate climate change criteria as part of its design, construction and throughout its useful life span, in order to reduce its vulnerability and increment its resilience.

Actions to be implemented for the period 2020 – 2030 on this topic are the following:

i. Execute infrastructure relocation programs currently located in high-risk zones in priority tourism destinations and implement restoration actions of vacated locations.
ii. Incorporate adaptation criteria for public investment projects that include infrastructure construction and maintenance.
iii. Guarantee urban and industrial waste water treatment, ensuring quantity and good quality of water in human settlements larger than 500,000 inhabitants and to monitor their performance.
iv. Apply the norm on specifications for environmental protection and adaptation to the adverse effects of climate change in the planning, design, construction, operation and abandonment of tourism facilities in coastal ecosystems.
v. Guarantee the security of dams and strategic hydraulic infrastructure, as well as communications and transportation strategic infrastructure.
vi. Strengthen the diversification of sustainable agriculture by conserving germplasm and native maize species, thermal comfort for livestock, development of agro-ecosystems, through the incorporation of climate criteria in agriculture programs.

CAPACITY BUILDING, TRANSFER OF TECHNOLOGY AND FINANCE FOR ADAPTATION

The implementation of the abovementioned adaptation actions for the period 2020 – 2030 requires the continuous development and strengthening of Mexico's capacities. Therefore, it is imperative to consolidate platforms for the exchange of knowledge and information related to adaptation at the three levels of government, as well as to strengthen the networks with academic institutions and civil society.

Furthermore, it is fundamental to incorporate a gender and human rights approach into capacity building, prioritizing the most vulnerable sectors and regions in order to reduce social inequality and the gap between women and men rights.

Capacity building requires both cooperation from developed countries to developing countries as well as south-south cooperation.

Furthermore, Mexico requires international support for the development of its own technologies as well as for technology transfer and innovation to increase its adaptive capacity.

For Mexico, the increase of investment in disaster prevention is of utmost relevance, as well as the development of an insurance market against hydrometeorological and catastrophic risks, in which the private sector is invited and expected to play a relevant role.

The Mexican Government has identified a series of areas where technology transfer could be of benefit of the country for adaptation, including through:

- Access to information systems in order to monitor hydrometeorological events in real time and thus consolidate and enhance early warning systems.
- Availability of methods and tools to assess climate impacts, vulnerability and adaptation in specific sectors and regions.
- Water technologies for savings, recycling, capture, irrigation and sustainable management for agriculture purposes.
- Transportation technologies that are resilient to the adverse effects of climate change in particular for roads and massive transportation
- Technologies for the protection of coastal and river infrastructure.