

SPECIAL CLIMATE CHANGE PROGRAM 2014-2018

The Special Climate Change Program (PECC) is one of the policy planning instruments derived from the General Climate Change Law (LGCC), and is aligned to the National Development Plan (PND), the Cross-Sectional Programs from the federal government, and the Sectorial programs from Mexico's federal ministries that participate in the Inter-Ministerial Commission on Climate Change (CICC).

The PECC aims to reduce vulnerability of population, ecosystems and productive sectors to climate change, as well as to increase resilience in strategic infrastructure.

It depicts the federal government's contribution to the GHG emissions reduction indicative goals prescribed by the LGCC for the period 2014-2018.

- 30% GHG emissions reduction with respect to the business-as-usual scenario by 2020
- 35% of electricity generation from clean energy sources by 2024¹

The contribution of States and municipalities (sub-national governments) and the private and social sectors will be essential to attain the goals adopted by Mexico both in adaptation and mitigation to climate change.

The 14 ministries that compose the CICC took part in the construction of this PECC. The work was coordinated by the Secretariat for Environment and Natural Resources with the participation of the Climate Change Council, and the social and academic sectors.



¹ Other Special Programs from the federal government also contribute to achieve these climate change goals. Of special importance are: the Special Program for Developing Renewable Energy, the Concurrent Special Rural Development Program and the Special Sustainable Production and Consumption Program.

BUDGET

Each line of action is attached to a specific budget from the responsible agency. All budgetary programs that support PECC's lines of action are integrated in the "Annex 15: Resources for Adaptation and Mitigation of Climate Change" within the yearly Federation Expenditure Program (PEF).

STRUCTURE

The PECC lays out a diagnosis of the present situation of Mexico regarding climate change. It comprises five objectives, 26 strategies and 199 lines of action, of which 77 focus on adaptation, 81 on mitigation and 41 on the construction of public policies for tackling climate change. It also includes an annex with 31 complementary climate-change-related activities and 10 performance indicators to monitor the results of the Program during the 2014-2018 period using a 2013 baseline, a 2018 goal and a calculation methodology.

DIAGNOSIS

Relevant data in PECC's vulnerability analysis:

- Maps showing heat waves, drought and flood risks.
 - A flood risk map for both PEMEX and CFE's strategic infrastructure.
- Potential impacts of climate change in priority sectors:
 - Reduction of corn productivity, pinewood coverage, and marine populations.
 - Increases in droughts, sea level and ocean temperatures.
- For the period 2015-2039 a temperature increase of 1°C to 1.5°C is expected in most of the country. In the north, it could reach up to 2°C.
 - Tendencies to diminish rainfall will range from 10 to 20%.
- Earmarked public expenditures for post-disasters reconstruction (e.g. 69.6 billion pesos) vs disasters prevention (1.8 billion pesos), during the period 2005-2011.
- Maps displaying economic impact of hurricanes, floods and extreme rainfall.
 - 319 municipalities identified as most vulnerable to climate change.
 - These municipalities contain 26,288 km of roads, 499 medical units and 5,984 schools.
- National average temperature increases from the 60's to date is 0.85°C.

The mitigation diagnosis contains the following data:

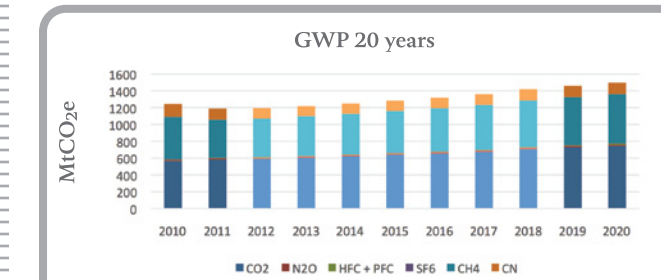
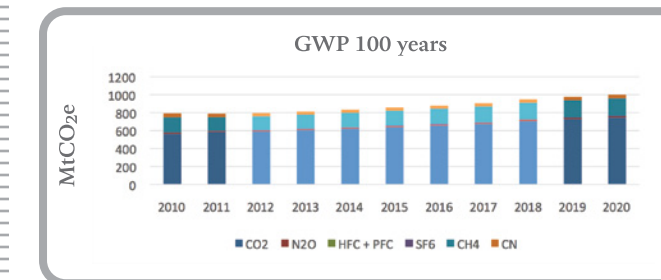
- GHG emissions by source and sector (power generation, oil and gas, transport, industry, agriculture, waste, forestry and residential).
- Short Lived Climate Pollutants (SLCPs) emissions generation by gas including : methane, black carbon and hydrofluorocarbons.
- Present coupling of economic growth with emissions.
- 2020 Greenhouse Compounds growth projections per gas and per sector with 20-year GWP and 100-year GWP.
- Participation of clean technologies to meet power generation targets.

The importance of controlling and reducing emissions of SLCPs, also called Short-Lived Climate Pollutants, chiefly relies on the fact that they have a significant effect on the climate in the short term. In addition, these GHG Compounds are highly harmful to population health and ecosystems.

The PECC's strategy to reduce SLCPs coincides with the conclusions of the IPCC's Fifth Evaluation Report as well as with the guidelines of UNEP's Climate and Clean Air Coalition (CCAC). To support the effort of reducing SLCP's emissions, the PECC highlights the following:

- Actions to control SLCPs are a win-win situation for populations and ecosystems alike; not only do they improve air quality but they also reduce effects on climate change.
- A SLCPs emissions-reduction approach adds to the GHG mitigation effort and by no means substitutes actions to reduce CO₂.
- SLCPs mitigation is not translated into CO₂e since its benefits go beyond climate impacts and include co-benefits in health and well-being.
- Actions to reduce SLCPs are identified by pollutant: methane, black carbon and some hydrofluorocarbons. A sectorial approach is not suitable because economic sectors usually emit more than one pollutant.

EMISSIONS BASELINE



MEXICO'S PROJECTED GHG AND BLACK CARBON EMISSIONS UP TO 2020

Sector	GWP 100 GHGs MtCO ₂ e	GWP 20 GHGs MtCO ₂ e	GWP 100 BC MtCO ₂ e	GWP 20 BC MtCO ₂ e
transport	272.2	273.3	3.9	13.8
oil and gas	111.9	228.8	12.8	45.4
industry	191.5	228.4	1.6	5.7
agriculture	111.1	198.8	3.7	13.2
waste	72.0	199.6	2.4	8.7
power generation	161.7	162.2	0.0	0.0
forestry	59.6	59.6	0.8	2.9
residential	29.3	29.3	6.2	22.1
total	1 009.3	1 380.0	31.4	111.8

NATIONAL APPROPRIATE MITIGATION ACTIONS – NAMAS

NAMAs are voluntary actions carried out by the country to reduce GHG emissions that can be scaled up and replicated while also be aligned to national and sectorial policies and shall generate co-benefits.

The PECC contains 13 lines of action promoting the creation of NAMAs. These are not considered within the federal expenditure budget and therefore their implementation is attached to the procurement of finance and technological support. Sources can be national or international, public or private. NAMAs in the PECC are considered for terrestrial and maritime transport, housing, industry, energy, education and urban and agricultural waste.

NAMAs represent an opportunity for collaboration with the private sector in win-win schemes. They involve barrier elimination and, in some cases, can be designed to produce emission reduction certificates that can be traded in carbon markets.

INSTITUTIONS AND INSTRUMENTS

The PECC also aims to consolidate the National Climate Change System (SINACC) wherein the Federal Government, the States, the associations of municipalities, the Legislative branch and the society concur to promote the implementation of the national climate change policy. The SINACC defines an institutional framework to guarantee a cross-cutting accomplishment on the matter. The PECC includes lines of action to bring together local governments and the social and private sectors to endorse coordination agreements to jointly reach the national climate change goals, for which authorities and society act together.

Among the instruments to be designed for implementing the national climate change policy are: the National Risk Atlas with gender indicators, the National Vulnerability Atlas, the National Emissions Inventory, the National Emissions Registry, mandatory regulations to curb Greenhouse Compounds, the Climate Change Information System and financial, economic and market instruments, such as a carbon tax, an emissions voluntary trading system and the Climate Change Fund.

GENDER AND CLIMATE CHANGE

The PECC lays out strategies and lines of action with a gender approach aligned to the National Program for Equal Opportunities and NON-Discrimination against Women (PROIGUALDAD). These actions seek to reduce the gap between men and women and also to face gender-differentiated impacts of climate change.

MONITORING, REPORT AND VERIFICATION (MRV) AND MEASUREMENT AND EVALUATION (M&E) OF LINES OF ACTION

Each line of action in the PECC includes a technical file card that allows for monitoring its progress.

SEMARNAT has a reporting platform known as SIAT-PECC wherein responsible entities can report progress information of their lines of action on a yearly basis.

In the first two months of every year, SEMARNAT will publish a progress estimation report of the PECC in the following website <http://www.semarnat.gob.mx>

EVALUATION OF PECC

The PECC will be revised, evaluated and, if necessary, adjusted or modified according to Articles 98 and 104 of the LGCC which establish that the national climate change policy is subject to periodic and systemic evaluation carried out by the Evaluating Coordination of INECC and that the evaluation must be fulfilled every two years.

For further information, visit

http://www.semarnat.gob.mx/sites/default/files/documentos/transparencia/programa_especial_de_cambio_climatico_2014-2018.pdf



SEMARNAT
SECRETARÍA DE MEDIO AMBIENTE
Y RECURSOS NATURALES

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PECC'S OBJECTIVES

Using the diagnosis as a starting point, the PECC lays out the following objectives:

OBJECTIVE 1

Reduce vulnerability of population and productive sectors and increase its resilience and the resistance of strategic infrastructure. The objective seeks to consolidate and modernize actions and instruments to reduce social vulnerability, favouring prevention and risk management over disaster reconstruction.

STRATEGIES

- 1.1 Develop, strengthen and modernize necessary tools to reduce vulnerability to climate change
- 1.2 Implement actions to reduce climate change risks in rural and urban populations
- 1.3 Strengthen strategic infrastructure adding climate change criteria in its planning and building stages
- 1.4 Promote adaptation actions in productive sectors

RELEVANT SUBJECTS IN LINES OF ACTION

National Vulnerability and National Risk Atlas. **Modernization and consolidation of early warning systems. Implementation of national programs for droughts and water contingencies. Municipal vulnerability atlas. STANDARDS AND REGULATIONS FOR CLIMATE RESILIENT URBAN DEVELOPMENT. Modernization of the National Meteorological System. Inclusion of climate change criteria in the Fund for Disaster Prevention (FOPREDEN). Consolidation of the National Emergency Center.** Integration of civil protection committees. INTEGRATED RISK AND VULNERABILITY MANAGEMENT.

INDICATOR

Percentage of development progress of instruments to reduce vulnerability of population and productive sectors.
Baseline 2014: NA | Goal 2018: 100%

INDICATOR

Percentage of area that has an Ecological Land Use Planning Program (POET) or an Urban Development Program (PDU) that integrate strategies or criteria for climate change mitigation or adaptation.
Baseline 2013: 33% | Goal 2018: 75%

OBJECTIVE 2

Conserve, restore and sustainably manage ecosystems to guarantee their environmental services to promote climate change mitigation and adaptation. The objective seeks to implement and modernize actions and instruments that simultaneously reduce emissions and vulnerability of ecosystems.

STRATEGIES

- 2.1 Promote protection, conservation and restoration actions and schemes of terrestrial, marine and coastal ecosystems and their biodiversity
- 2.2 Increment and strengthen ecosystem connectivity
- 2.3 Implement sustainable agriculture, forestry and fishery practices to reduce emissions and ecosystem vulnerability
- 2.4 Develop tools to promote sustainability and emission reductions in agriculture, forestry and fisheries and to reduce eco-systemic vulnerability
- 2.5 Reduce environmental threats aggravated by climate change
- 2.6 Restoration and integrated hydrological basin management

RELEVANT SUBJECTS IN LINES OF ACTION

INTEGRATED REFORESTATION AND RESTORATION OF DETERIORATED FORESTS. Protection, conservation and restoration of terrestrial, marine and coastal ecosystems and their biodiversity. **Protection of species risk-vulnerable to climate change.** Adaptation Programs in Protected Natural Areas. **Conservation and protection of genetic biodiversity. Ecological connectivity.** Promotion of sustainable practices in agriculture, forestry and fishery to reduce both emissions and ecosystem vulnerability. **Restoration and integrated hydrological basin management.**

INDICATOR

Vulnerability reduction index through infrastructure and actions for conservation, restoration and sustainable management of natural resources.
Baseline 2013: 0.2 | Goal 2018: 0.6

OBJECTIVE 3

Reduce GHG emissions to move towards a competitive economy and a low emission development. The objective seeks to accelerate the transition to a low carbon development in primary, industrial and construction sectors, as well as in urban, tourism and transport services. It promotes the use of high efficiency technologies and systems with low or zero emissions.

STRATEGIES

- 3.1 Implement energy efficiency actions and projects
- 3.2 Speed up energy transition to energy sources that are less carbon intensive
- 3.3 Develop tools and instruments to facilitate energy transition
- 3.4 Promote and facilitate mitigation actions in the private sector
- 3.5 Develop sustainable mobility and transport schemes
- 3.6 Promote NAMAs development

INDICATOR

Million tons per year of CO2 equivalent (MtCO2e) mitigated by PECC, calculated with 20-year GWP and 100-year GWP.
Baseline 2013: 0 MtCO2e mitigated
Goal 2018: 83.2 MtCO2e-(PCG100)/year mitigated
95.97 MtCO2e-(PCG20)/year mitigated

INDICATOR

Tons of CO2 equivalent emissions per MegaWatt hour generated (tCO2e/MWh)
Baseline 2013: 0.456 tCO2e/MWh | Goal 2018: 0.350 tCO2e/MWh

OBJECTIVE 4

Reduce SLCPs emissions promoting public health and population well-being co-benefits. The objective seeks to mitigate SLCPs emissions (black carbon, methane and hydrofluorocarbons), set up periodical and reliable information, include different stakeholders in SLCPs control, and directly regulate emission sources.

STRATEGIES

- 4.1 Use of fuels and technologies that reduce black carbon emissions, improving public health and air quality
- 4.2 Methane emissions reduction from waste water treatment plants, landfills and the oil and mining sectors
- 4.3 Control refrigerant emissions with high Global Warming Potential
- 4.4 Develop regulations and foster tools to regulate SLCPs
- 4.5 Promote NAMAs that reduce SLCPs

INDICATOR

Methane emissions mitigated per year.
Baseline 2013: 0 tons of methane mitigated per year
Goal 2018: 161,724 tons of methane mitigated per year

INDICATOR

Black carbon emissions mitigated per year.
Baseline 2013: 0 tons of black carbon emissions mitigated per year
Goal 2018: 2,157 tons of black carbon emissions mitigated per year

RELEVANT SUBJECTS IN LINES OF ACTION

Smart grid and non-technical losses. GHG emissions reduction in PEMEX operations. **ENERGY EFFICIENCY REGULATIONS. Diversification of energy mix including clean energies.** Energy efficiency in public lighting and federal buildings, vehicles and installations. **Carbon capture and sequestration. Clean Transport Program. Efficiency in freight transport.** Railways and BRT systems for public transportation. Reduction in chemical fertilizers. Elimination of large fishing vessels. ENGINE SUBSTITUTION IN SMALL FISHING VESSELS. **Promotion of NAMAs in urban transport, housing, brick industry, marine transport, schools, cattle land, agricultural waste and sugar mills.**

RELEVANT SUBJECTS IN LINES OF ACTION

Black carbon mitigation in energy sector. **FUGITIVE EMISSIONS IN PEMEX. Public transport corridors. Solid waste management. Municipal waste water treatment. Green harvest of sugar cane. Efficient stoves.** PROMOTE NAMAS IN NATURAL GAS LEAKS, REFRIGERANTS, WASTE WATER TREATMENT AND FREIGHT TRANSPORT.

OBJECTIVE 5

Consolidate the national climate change policy through the implementation of efficient instruments and an effective coordination with local governments, the Legislative branch and the society. The objective seeks to integrate the National System for Climate Change (SINACC) as the framework to guarantee a cross-cutting implementation of public policies. These include development, consolidation and application of several economic, political, informative, research, capacity building and participation instruments and tools.

STRATEGIES

- 5.1 Create and consolidate institutions and instruments established under the General Climate Change Law
- 5.2 Develop and implement tools to consolidate the national climate change policy
- 5.3 Develop and use economic, fiscal and financing tools to facilitate implementation of climate change policies
- 5.4 Strengthen capacity building, research and public information related to climate change
- 5.5 Consolidate Mexico as a responsible country committed to strengthen international cooperation for climate change

INDICATOR

Percentage of development progress of the National Climate Change System
Baseline 2013: 0 % | Goal 2018: 100%

INDICATOR

Percentage of development progress of the National Emissions Registry
Baseline 2013: 0 % | Goal 2018: 100%

INDICATOR

Number of signed agreements to support the achievement of national climate change goals.
Baseline 2013: 0 | Goal 2018: 32

RELEVANT SUBJECTS IN LINES OF ACTION

NATIONAL CLIMATE CHANGE SYSTEM. Evaluating Coordination of INECC. **National Emissions Inventory. National Emissions Registry.** Financial, market and economic instruments like carbon tax, voluntary emissions trading system, and the Climate Change Fund. **Coordination agreements with state governments, private and social sectors. CAPACITY BUILDING AND RESEARCH PROGRAMS.**