



PROPOSED AGENDA FOR  
**U.S.-MEXICO CLIMATE CHANGE**  
DISCUSSIONS AND **POTENTIAL**  
**COLLABORATION**

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## **The U.S.-Mexico Climate Change Working Group**

SPONSORED BY

Center for U.S.-Mexican Studies, UCSD (USMEX)

Institute of the Americas

Initiative on Sustainable Development Goals at the Instituto  
Tecnológico y de Estudios Superiores de Monterrey (ITESM)

The Brookings Institution

# PROPOSED AGENDA FOR U.S.-MEXICO CLIMATE CHANGE DISCUSSIONS AND POTENTIAL COLLABORATION

BROOKINGS

UC San Diego  
SCHOOL OF GLOBAL POLICY AND STRATEGY  
Center for U.S.-Mexican Studies



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The U.S.-Mexico Climate Change Working Group—sponsored by the Center for U.S.-Mexican Studies, UCSD (USMEX); the Sustainable Development Goals Initiative of the Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM); The Brookings Institution; and the Institute of the Americas (IOA)—proposes to assist the U.S. and Mexico in developing a coordinated climate action program.

**The goal is to help both countries advance their climate mitigation and adaptation agendas, including Paris Agreement commitments.**

We assembled a team of climate change and energy experts from both countries to develop an agenda for U.S.-Mexico discussions on climate change. The experts who participated in our meetings—either as advisors or speakers—are listed in *Exhibit A*. We covered the following topics, chosen because they each provide opportunities for significant impact and fruitful cooperation:

- Reduction of short-lived climate pollutants, particularly methane
- Energy efficiency
- Adaptation to climate change
- International climate finance
- Renewable energy

For each topic, we prepared a briefing paper with a survey of current efforts and a discussion of potential action items. Meetings occurred in order of increasing political complexity. Some issues lend themselves to two-way cooperation but for others, U.S. assistance to Mexico is the more likely course of action.

**Now, by means of this report, we present our recommendations on how the U.S. and Mexico, working together, could identify realistic, practical action items for each of the five identified topics with the ultimate objective of reducing greenhouse gas emissions and increasing adaptation and resilience to climate change. As an initial step, these recommendations could serve as a basis for prompt discussions between the U.S. and Mexico on: (1) the 2022 updates to their respective Nationally Determined Contributions (NDCs) to strengthen 2030 emission targets, and (2) the annual high-level ministerial roundtables on pre-2030 climate ambition to begin in November 2022 at COP27/CMA4 in Egypt, all as contemplated by the Glasgow Climate Pact.**

The sponsoring organizations for the Working Group, i.e. USMEX, ITESM, Brookings and the IOA, together with the representatives of those organizations identified as the Leadership Team on Exhibit A, take responsibility for these recommendations. Other individuals who participated in the Working Group's sessions contributed to the process but are not responsible for the final form of the recommendations as presented in this report.

## Reduction of Short-Lived Climate Pollutants

**Goal** – Reduction of methane, hydrofluorocarbon (HFC), and black carbon emissions. Mexico’s government has announced that the reduction of Short-Lived Climate Pollutants (SLCPs) is a priority Mexican goal. The Biden Administration is also broadening programs to reduce SLCPs, along with several U.S. states.

- The U.S. and Mexico are both signatories to the Global Methane Pledge signed by more than 120 countries at COP26. Methane causes more than 25% of current global warming and has a high Global Warming Potential (GWP) compared to CO<sub>2</sub>, so reduction can have a big impact.
- From a Mexican perspective, reducing methane emissions from oil and gas operations means more revenues and more energy for Mexico, supporting energy sovereignty.
- Black carbon, i.e. particulate carbon, affects the climate and also has negative health impacts. Mexico has specific and ambitious black carbon reduction goals in its NDC.
- HFCs have very high GWPs, so a reduction in emissions of these chemicals has high impact. U.S. and Mexico are parties to the Kigali Agreement to phase out HFCs.

**Current Setting** - Both Mexico and the U.S. have regulatory structures in place for methane, black carbon, and HFCs, as summarized in [Briefing Paper #1](#) on SLCPs.

### **Proposed Topics for Discussion and Collaboration**

The U.S. and Mexico should discuss existing policy structures for SLCPs and how they are implemented, enforced, and reviewed periodically:

- Data collection and monitoring are key issues. Non-Government Organizations (NGOs) have developed relevant data that should be used. The United States and Mexico should consider the possibility of data sharing.
- The U.S. and Mexico should discuss capacity-building for Mexican regulators (e.g. ASEA) and emitters, in cooperation with U.S. counterparts.
- One solution for emissions may be as simple as finding leaks and closing them. The U.S. and Mexico should discuss how to improve facility management—including incentive structures.
- Where new technology is needed, the U.S. and Mexico should discuss best practices and potential technology transfer opportunities.
- Funding needs and sources of financing, to include self-funding, Global Methane Pledge funds, and other international climate finance avenues, should also be analyzed.

The U.S. and Mexico should discuss broadening of regulations, including the Mexican methane rules adopted in November 2018 and amended in June 2020. Discussion of proposed Biden methane rules issued in November 2021 and the final HFC rule issued in September 2021 as a model for further action.

## Improvement of Energy Efficiency

**Goal** – Improve energy efficiency in transportation, buildings/appliances, and industry to reduce energy consumption, thereby reducing GHG emissions. The U.S. and Mexico have both recently committed to prioritizing energy efficiency improvement.

In its Net Zero 2050 study, the International Energy Agency (IEA) states that a global increase in energy efficiency “is an essential part” of the path to net zero emissions by 2050. The IEA proposes a global rate of efficiency improvements averaging 4% per year through 2030—about three times the average over the last two decades—with a focus on improved energy efficiency in transportation, buildings/appliances, and industry. The American Council for an Energy Efficient Economy (ACEEE) contends that projected 2050 GHG emissions could be cut in half with achievable improvements in energy efficiency.

**Current Setting** – Mexico and the U.S. have robust energy efficiency programs in place, as summarized in [Briefing Paper #2](#) on Energy Efficiency. However, the ACEEE ranks the U.S. as #10 and Mexico as #12 in its global efficiency rankings—significantly below the top five of Germany, Italy, France, the United Kingdom, and Japan.

### **Proposed Topics for Discussion and Collaboration**

The U.S. and Mexico, through relevant agencies, should review their respective regulatory regimes and incentive structures at the federal, state, and local levels to improve energy efficiency in transportation, buildings/appliances, and industry. There is significant potential for:

- Collaboration at all levels of government, with a focus on how to strengthen monitoring, data validation, and enforcement by regulators;
- Collaborative technical support and capacity building;
- Technology transfer;
- Increased financial support through self-funding, government and multilateral funding, and other stakeholder investment.

Finally, both governments should consider how to strengthen and improve existing regulatory regimes and incentive structures, including through harmonization of standards and increased coordination by U.S. and Mexican regulators and research labs. Focus on fuel economy standards, building codes, appliance and equipment standards, and government energy management. Lastly, consider potential direct funding of energy efficiency efforts, including for retrofit of old buildings, industry energy management, and support for electric vehicles.

## Climate Adaptation Programs

**Goal** – Implementation of Mexico’s National Climate Adaptation Program. Both the U.S. and Mexico have a strong interest in Mexico adapting to climate change and reducing associated risks.

According to Mexico’s NDC (2020 update), “[t]he effects of climate change are already tangible in the national territory, thereby confirming that adaptation and risk reduction are tasks that cannot be postponed.” Accordingly, Mexico expanded the adaptation component of its NDC in the 2020 update and put adaptation and mitigation actions on the same level of importance in the NDC.

The U.S. also has vested interests in Mexico’s long-term stability. Among other issues, actions that take place in Mexico can impact water resources, biodiversity, and overall environmental quality in the U.S., as well as agricultural supply chains.

**Current Setting** – [Briefing Paper #3](#) on Adaptation to Climate Change summarizes the adaptation component of Mexico’s 2020 NDC and highlights vulnerabilities, i.e. water supply. It also reviews the U.S. perspective on Mexico’s adaptation and resilience issues.

### **Proposed Topics for Discussion and Collaboration**

The U.S. and Mexico should build upon existing cooperation structures. Examples are the IBWC/CILA for Colorado River and Rio Grande/Rio Bravo issues pursuant to the 1944 Water Treaty; the 1983 La Paz Agreement; the Border 2025: U.S.-Mexico Environmental Program; and the North American Development Bank for environmental matters.

The two countries should discuss potential U.S. technical support, including data sourcing and collection, knowledge transfer, and funding for Mexico’s adaptation strategies, including cooperation among states and localities. For water, this would include water basin and watershed management, irrigation technologies, agricultural water conservation strategies, and urban water treatment, reuse and recycling. For agriculture, this would also include plant varieties and agronomic strategies.

The two countries should explore support for nature-based solutions premised on Mexico’s tremendous biodiversity and rich marine and coastal ecosystems. This should include both direct regulation to preserve habitats and market-based solutions, through regulated and voluntary markets, including the new COP26 rules for carbon markets.

Finally, the U.S. and Mexico should collaborate in seeking climate funding, including bilateral, multilateral, philanthropic, and other forms of blended financing (including impact investing and social bonds), in support of Mexico’s adaptation strategies.

## Financing Climate Change Initiatives

**Goal** – Develop a funding strategy to carry out Mexico’s NDC, including financing mechanisms and funding sources.

The U.S. and Mexico share a border of almost 2,000 miles and a highly interdependent border region with 15.2 million residents. Beyond the border, the two countries will be jointly impacted by a changing climate, e.g. potential food shortages, threats to cross-border agricultural supply chains, and growing human migration pressures. To respond to these challenges, U.S. President Biden and Mexican President López Obrador met virtually in early 2021 and committed to explore ways to expand bilateral cooperation. Such cooperation necessarily includes discussions on climate finance.

**Current Setting** - [Briefing Paper #4](#) on Climate Finance analyzes the potential cost and funding gaps that Mexico will face in carrying out its NDC, which includes commitments to reduce GHG emissions and black carbon, and to adapt to climate change. The paper then discusses Mexico’s sources of funding to carry out its NDC and explores potential U.S. financial support.

### **Proposed Topics for Discussion and Collaboration**

There is substantial climate finance available from governments, multilaterals, and private sources, but the willingness to invest or lend is highly dependent on a welcoming investment climate. The U.S. and Mexico should analyze options whereby the investment climate in Mexico is attractive to potential funding sources. Such collaboration could include establishing criteria and taxonomies for green project certification and green investment/lending activities, and rules on disclosure of climate impacts, so that funding sources can avoid claims of “greenwashing,” develop co-benefits, and receive climate-benefit recognition. The U.S. and Mexico should also discuss sources of transition financing to support implementation of climate mitigation and adaptation strategies.

Both countries share strategic interests in the flourishing of climate-friendly businesses such as electric vehicles, solar manufacturing, lithium mining, and renewable energy generation. Greater bilateral collaboration to analyze new options for development of these industries is highly desirable.

The two countries can discuss how to leverage the Biden Administration’s “whole of government” approach to the climate crisis—including through direct foreign assistance; lending and credit support from the Development Finance Corporation and North American Development Bank; and influence upon multilateral development banks, the Global Environment Facility, the Green Climate Fund, and other funding sources to assemble multi-party funding packages in support of Mexico’s NDC.

## Movement Towards Renewable Energy

**Goal** – Increase electricity generation in Mexico from renewable energy sources through bilateral cooperation.

Generating electricity from renewable energy sources reduces the need for hydrocarbon-fueled generation, thereby reducing GHG emissions. The IEA's Net Zero 2050 report foresees that solar PV and wind will become the leading sources of electricity, supplemented by nuclear power, dispatchable renewable sources (e.g. hydropower), and batteries. In the IEA net-zero emissions scenario, the share of renewables in total output increases from 29% in 2020 to over 60% in 2030 and nearly 90% in 2050.

**Current Setting** – [Briefing Paper #5](#) on Renewable Energy (1) shows why renewable energy is a competitive opportunity for Mexico; (2) discusses Mexico's development of renewable energy to date; (3) reviews recent moves by the Mexican government to prioritize the state-owned enterprises PEMEX and CFE, limiting private development of renewables; and (4) reviews Mexico's plans for future development of renewables under a state-centered energy policy.

### **Proposed Topics for Discussion and Collaboration**

Since Mexico's energy policy is now focused on state-owned enterprises, the U.S. and Mexico should discuss how CFE could increase renewable generation:

- The U.S. should build upon Mexico's indicative power plant program for 2021-2035, prepared by the Ministry of Energy, and discuss how the U.S. could assist CFE in implementing that program with respect to renewable energy.
- The U.S. and Mexico should engage in discussions on the financing of renewable energy projects undertaken by CFE, e.g. through green bonds, potential U.S. financial support, and private finance where CFE retains ownership.
- Nuclear generation is currently an element of Mexico's "clean energy" portfolio even though it is not "renewable." The U.S. and Mexico should discuss nuclear generation issues, including safety issues.

Mexico anticipates increased use of solar PV distributed generation. The U.S. can collaborate with Mexico on financing and implementation plans. The two countries should also collaborate on energy storage, which is key to managing the intermittency of renewable energy. This could include cooperation in research, development, and technology transfer in regard to storage systems. Transmission is a bottleneck for development of renewable energy on both sides of the border. The U.S. and Mexico should discuss how to build more transmission infrastructure quickly, confronting the relevant planning, public input, financing, and cost allocation issues. Lastly, the North American Renewable Integration Study (NARIS) is the first detailed power system integration study for the entire North American continent. The U.S. and Mexico should discuss how Mexico's renewable energy planning could be structured to foster increased North American renewable energy integration consistent with NARIS.

## Exhibit A: U.S.- Mexico Climate Change Agenda Working Group Participants

Mexican Participants		U.S. Participants	
<b>Alegre Perera, Daniel</b>	Secretaría de Relaciones Exteriores	<b>Bradley, Robert</b>	NDC Partnership
<b>Barrientos Alemán, Dolores</b>	Representative Officer in Mexico, United Nations Environment Programme (UNEP)	<b>Brownstein, Mark</b>	EDF
<b>Cavazos Pérez, Maria Teresa</b>	CICESE, Baja California	<b>Goldwyn, David</b>	Atlantic Council
<b>Creuheras, Santiago</b>	UNAM	<b>Gross, Samantha*</b>	Brookings Institution*
<b>De la Parra, Carlos</b>	Restaremos el Colorado A.C	<b>Kiy, Richard*</b>	Institute of the Americas*
<b>Fernández de Castro, Rafael*</b>	Center for U.S.-Mexican Studies, UCSD*	<b>McCord, Gordon</b>	School of Global Policy and Strategy, UCSD
<b>Fernández, Adrian</b>	Iniciativa Climática de México	<b>McNeece, John*</b>	Center for U.S.-Mexican Studies, UCSD*
<b>Heredia, Marco</b>	Independent Consultant	<b>McNeil, Michael</b>	Lawrence Berkeley National Laboratory
<b>Herrera Gonzalez, Martha</b>	Secretaría de Igualdad e Inclusión, Estado de Nuevo León	<b>Monaldi, Francisco</b>	Rice University
<b>Irastorza, Verónica</b>	The Brattle Group	<b>Omara, Mark</b>	EDF
<b>Lacy Tamayo, Rodolfo</b>	OECD	<b>Pascual, Carlos</b>	IHS Markit
<b>Martínez Acosta, Mariajulia*</b>	ITESM*	<b>Schuler, Reed</b>	U.S. Department of State
<b>Martínez Tagüeña, Damián</b>	FTI Consulting	<b>Tsuchida, Bruce</b>	The Brattle Group
<b>Merino Juárez, Gustavo</b>	ITESM	<b>Victor, David</b>	School of Global Policy and Strategy, UCSD
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<b>Ruiz Cabañas, Miguel*</b>	Iniciativa sobre los ODS, ITESM*		
<b>Ruiz Villar, Avelina</b>	WRI México		
<b>Serra Barragán, Luis</b>	ITESM		
<b>Miranda, Tania*</b>	Institute of the Americas*		
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Affiliations shown for identification purposes only.