Journal of Environmental Management 215 (2018) 239–247

Contents lists available at ScienceDirect

Journal of Environmental Management

journal homepage: www.elsevier.com/locate/jenvman

Research article

Competing actors in the climate change arena in Mexico: A network analysis

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ARTICLE INFO

Article history:
Received 25 August 2017
Received in revised form
12 March 2018
Accepted 12 March 2018

JEL classification:
Q480
Q580
K320
K340

Keywords:
Environmental economics
Government policy
Carbon tax
Energy reform
Network analysis

ABSTRACT

This paper analyzes the actors in the climate change arena and their influence in directing Mexico toward policies that decrease greenhouse gas emissions, such as the carbon tax and climate change law. The network analysis of the agreement of these laws and public policies in Mexico is a lesson for any country that is in the process of designing and adopting environmental laws. The research is performed using a network analysis that is derived from interviews with various main actors and a discourse analysis of the media. Results show that actors do not coordinate their efforts—they meet frequently but in different inter-ministerial commissions—and do not enforce the same policies. The actors in the industry have formed strong coalitions against the carbon tax and the General Law on Climate Change, whereas international institutions have formed coalitions that support these policies and laws.

1. Introduction

Climate change is one of the most important environmental threats that countries are confronting. Mexico is considered a Non-Annex 1 country in Kyoto's Protocol; although there is no compulsory country reduction target in this classification, Mexico has made some efforts in the legal and political arenas to mitigate climate change. Its most important achievement has been the approval of the General Law of Climate Change (GLCC) in 2012, published in the official diary (DOF, 2012), making Mexico the first developing nation to enact such a law. It also imposed an average carbon tax of $3.50 per ton of CO_2 equivalent on domestic emissions and, in September 2014, announced the goal of obtaining 35% of its energy from renewable sources by 2024.

According to Mexico's Special Program of Climate Change (SPCC) described in the official diary (DOF, 2009), Mexico is grouped among the countries with a high Gross Domestic Product, high population, and high emissions[1] and has set an ambitious target: to decrease greenhouse gas (GHG) emissions by half between 2000 and 2050. This goal implies a decrease from 664 to 339 of $MtCO_2e$; the projections indicate that, with no intervention, Mexico will reach the level of 1089 of $MtCO_2e$ by 2050.[2]

These agreements represent a challenge for Mexico, whose energy infrastructure is insufficient and outdated, and whose energy services have historically been provided by government monopolies. The Mexican economy is highly dependent on oil prices and remittances, as well as on fossil fuels for production and, therefore, for economic growth. Reducing the carbon intensity of the economy is a considerable challenge since fossil fuels account

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[1] This group includes Japan, Germany, the USA, South Korea, the UK, Brazil, Italy, France, Indonesia, Turkey, Russia, and India, among others.

[2] The GHG target was part of Mexico's Copenhagen Pledge commitments, although this agreement was not legally binding. In 2010, Mexico emitted 748 $MTCo_2e$ that contributed to 1.4% of global emissions and that are mainly derived from burning fossil fuels and from productive and transformation oil processes.

https://doi.org/10.1016/j.jenvman.2018.03.056
0301-4797/

for 89% of Mexico's energy supply (OECD, 2013). Energy service providers have long been state-owned enterprises; in the case of gasoline, the only provider is the Mexican oil company PEMEX, a government monopoly. The 20 natural gas providers have a concession from the government, and they provide gas at a higher price for residential use than for industrial use.

Electricity generation through the private sector has historically been an issue that has divided opinion in Congress. Left-wing factions have advocated for national sovereignty on this issue and have taken a position against any private interference. By contrast, center-right factions in recent years have been more flexible in their position and have created instruments and regulatory frameworks that allow for co-participation. Other developing countries, like Turkey, which is in the same group as that of Mexico, according to SPCC, have adopted reforms that are more open to private capital, both national and foreign, in all energy sectors, including electricity production and distribution (Pehlivan and Demirbas, 2007), which is far too difficult in the case of Mexico given the sovereignty discourse of the left wing.

1.1. Climate change system

In 2008, Mexico designed the Climate Change National System, adopting its first Special Program on Climate Change in 2009. The current environmental sector is headed by the Secretariat of Environment and Natural Resources (SEMARNAT), followed by deconcentrated and decentralized bodies: the National Water Commission (CONAGUA); the National Institute of Ecology and Climate Change (INECC, since 2014); the Federal Attorney for Environmental Protection (PROFEPA); the National Commission of Natural Protected Areas (CONANP); the National Forestry Commission (CONAFOR); the Mexican Institute of Water Technology (IMTA); and the National Commission for the Knowledge and Use of Biodiversity (CONABIO). All of these institutions contribute to and converge with the federal climate change policy of Mexico.

1.2. The GLCC

In 2012, the Mexican Congress passed the GLCC, which came into force in June of that year. The GLCC is the main legal and political instrument for addressing climate change. It incorporates a long-term, systematic, decentralized, participatory, and integrated approach to adaptation and mitigation actions and establishes institutional mechanisms as needed. The inter-ministerial commission on climate change, which incorporates all ministries of the federal government, was strengthened under the GLCC; the federal government is in charge of formulating and conducting the national climate change policy on the basis of clearly defined principles, of which social co-responsibility significantly stands out (SEMARNAT, 2014b). Key actors meet in the commissions created under the GLCC.

1.3. The carbon tax

In January 2014, Mexico's Congress passed a fiscal reform that imposed a carbon tax on CO_2 emissions from burning fossil fuels in order to discourage activities that harm the environment and to improve air quality and reduce respiratory illness (DOF, 2013b). The justification for this tax was to internalize the social costs of the negative externalities of CO_2 emissions from fossil fuels and to incentivize the use of clean renewable energies (DOF, 2013a; SEMARNAT, 2014a). The negotiation of the energy reform occurred in an accelerated way. The laws that regulate the country's energy sector were created in just under a year. Despite the great diversity in legislative power interests, the current administration has managed to pass several high-stakes reforms, specifically energy, fiscal, labor, and education reforms. These achievements have come with challenges in the global economy and the social situation in the country. All of these reforms affect the 121 million people who live in Mexico, particularly those 55.3 million who live in poverty (Chapa and Ortega-Diaz, 2017).

1.4. Political context

Mexico is a republic of 32 states and 2457 municipalities. There are presidential elections every six years and state and municipal elections every six and three years, respectively, with no reelection. This constant change of power is a barrier to agreements concerning long-term public policies, among other consensuses (Nelson, 2010). Moreover, the legislative power that is represented by the Senate and Deputy Chambers has become more plural. The three main parties have enough votes to approve or reject legal initiatives; therefore, to reach a consensus, the use of coalitions and bargaining power is always paramount in the commitments among the parties.

1.5. Actors

In this panorama, the Mexican government has conducted major reforms that clash with opposing views due to multilevel governance, economic and political interests, and international commitments. The main actors that are analyzed in this study are the actors who take decisions at a national level and influence concerning energy regulations, climate change, and GHG emissions, as well as the political actors and agents of change who could improve the economic conditions of the population and decrease emissions without damaging the economy. A complete analysis of the main actors who have participated in the planning, decision-making processes, and policy design of the GLCC and the carbon tax requires a review of the coalitions that are for and against these policies. In the case of Mexico, the laws are highly transparent and allow us to identify the stakeholders involved in the decision process, in contrast to (Lienert et al., 2013), who started by finding the main actors first. Nevertheless, we combine a social network analysis with a media analysis of the positions of these actors in the process through which laws were designed, rewritten, passed onto Congress, and finally adopted.

Reaching agreements and approving laws and policies that converge to mitigate climate change effects under a challenging socio-political framework require coordination that not all developing countries attain. How did Mexico manage to adopt a carbon tax and approve the GLCC? Our objective is to find the answer by analyzing the network of actors who were involved and how their arguments influenced the negotiations to achieve agreements on the laws that will help to reach the GHG emissions targets. The analysis is organized as follows. Section 2 presents the methodology and section 3 the results. In section 4, we discuss the findings, and the conclusion is presented in section 5.

2. Data and methods

The present research documents the actors and political interactions that made possible the adoption of both policies—the carbon tax and the GLCC—placing Mexico ahead of many developing countries in terms of legislation. Three main tools were used for this purpose: a questionnaire to guide the interviews with the main actors, a discourse analysis of these actors on the media, and a network analysis.