

INTERVIEW TO MARIO MOLINA

He was born in Mexico City in 1943. His studies in physical chemistry brought him to the University of California in Berkeley where he also obtained his Ph.D. In 1974 he co-authored a paper that appeared in the renowned science Magazine "Nature". The article, published well before the first measurements of the Antarctic ozone hole became available, described how chlorofluorocarbon (CFC) gases (that were widely used in industry at the time) destroy the atmospheric ozone layer which protects life on Earth from the sun's harmful UV-radiation. In 1995, he was honored with the Nobel Prize in Chemistry for his work on ozone depletion. As Professor of Chemistry and Professor of Earth, Atmosphere, and Planetary Sciences at the Massachusetts Institute of Technology, he continued his research on the various ways in which human society affects atmospheric chemistry. In 2004 he joined the faculty at the University of California in San Diego.



1. Which are the most visible aspects and characteristics of climate change in your country? What are the prospects for the upcoming decades?

Mexico is a country that is most vulnerable to climate change since it is located between two oceans and in the Northern Hemisphere where temperature variations and the exacerbation of climate phenomena are greater. In the last decade, the intensity of hurricanes and cold fronts has increased thus producing severe damage to coastal tourist infrastructure and severe floods in densely populated areas where there are also important oil and farming-related activities.

Additionally, the national territory is splitted by the Tropic of Cancer. Therefore, the northern part has vast arid areas and in the south, the tropical ecosystems have great biological diversity. It is estimated that temperatures in the northwest of the country -known as the Sonora Desert- are already one centigrade higher, thus increasing water stress in the area. Most of the models that forecast changes in rainfall during this century should, if the current upward trend of greenhouse gas (GHG) emissions continue, agree that rainfall will decline by up to 20% in the states surrounding the Gulf of California. This drop in rainfall will have significant effects on agriculture and cattle raising.

On the other hand, tropical ecosystems in the southeast of the country will be equally affected by changes in the rainfall pattern, thus altering the natural evolution of many endemic species which are currently a part of our cultural heritage. Coral reefs in the Caribbean will face changes in sea alkalinity and as is happening in other latitudes they have started dying in an irreversible coral bleaching process.

There are also areas in Mexico where it will be possible to increase productive activities since the weather will be milder and humidity will decrease. However a negative outcome is expected from climate change in our country.

2. Which are the most relevant concerns of climate change negotiations in your country? Who are the most relevant actors in this debate?

The main concern in Mexico is related to the funding sources for mitigating GHGs and adapting its economy and urban and productive infrastructure to extreme climate phenomena and climate change, overall.

Not all required actions to reduce GHG emissions can be carried out through mechanisms set forth in the Kyoto Protocol. Indeed, the greatest potential in our country can be found in the industrial sector where technological change is necessary to increase energy efficiency and competitiveness at the global level. Ironically, these two premises practically exclude the country from the so-called Clean Development Mechanism (CDM) which only includes projects that meet "additionality" criteria which leave aside profitable projects to favour those on renewable energy or those of low economic feasibility. The Mexican Government proposed the creation of the "Green Copenhagen Fund" as an alternative mechanism to promote a more efficient reduction of emissions through measures, including new norms and laws established by different government levels.

Europe and the United States (US) are essential players to face the problem of climate change and have offered resources to developing countries (DGCs) like ours. Such an offer is a direct response to a claim by many nations that will be affected by CO₂ emissions historically accumulated in the atmosphere and coming from industrial development that has not favoured them directly or at the same level as other countries, which nowadays have a great material and technological wealth. Should the resources offered by those countries be more equitably channeled through the different funds set up by the United Nations (UN), the funds could be more efficiently distributed and targeted to the core of the problem, without the need for market rules which are necessarily governed by the scarcity of trade in goods, in this case carbon credits or bonuses.

Emerging countries like China, India, Brazil and Mexico are also very important players in the enhancement and extension that everybody expects of the Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC). Equally important actors are the countries that face the risk of disappearing or being dramatically affected by climate change as some island countries or those located mostly in areas with extreme climate conditions.

3. From the point of view of the interests in your country and of the Latin America and the Caribbean agenda, how do you evaluate the Copenhagen results?

As far as the Mexican agenda is concerned, Copenhagen was a productive meeting that showed specific progress since the green fund proposed by President Felipe Calderón was formally established and our country was designated to host the forthcoming Conference of the Parties (COP 16) to be held in Cancun in November this year, although all this is not enough. The Copenhagen meeting is a great challenge to us because many people, organizations

and countries are hoping that an agreement will be reached in Mexico on numeric goals for reducing GHGs in 2012-2020 as well as on the financial and technological fluency which was not achieved in Copenhagen.

We wish to view COP 16 as a meeting to be held within the context of the United Nations (UN) and in the Americas, including Latin American but also North American countries. Several development and cultural exchange and trade partnerships have been set up in this continent and could be enhanced by including the climate variable, more so if the US and the rest of the emerging economies decided to integrate their national or sector-based strategies into a global climate governance regime.

With regard to Latin America, it is already suffering the severe consequences of climate change because of extreme climate events whose effects have been worsened by the economic vulnerability and social organization of the region's countries. Copenhagen provided no specific answers to repair damages suffered and expected to be suffered by millions of persons.

Although it is essential to face climate change with determination and enough economic resources that can be easily accessed, as well as with a broad deployment of new technologies and sustainable forms of urbanization and industrial production, there is no way to force international agreements if these are resisted by the countries that emit the most or that have greater historical responsibilities.

4. Considering the Copenhagen results and conclusions, will it be necessary to review the national strategy in your country in relation with the international negotiations? In which areas and how? Do you see elements for the articulation of regional strategies?

The answer is YES since as a country we must develop a national strategy that includes all sectors and has GHG reduction goals for the medium and long term. Our aspiration of achieving a 50% reduction of GHG emissions by 2050 calls for detailed planning decade after decade, based on the possibility of the Copenhagen Green Fund being nurtured with economic resources that will be accessed.

Likewise, in our capacity of COP 16 hosts we must deploy a diplomatic strategy to catalyze and materialize international agreements to really tackle the problem of climate change, including all parties under tension or whose positions have not been appropriately weighted in the past. It is necessary to underscore that the negotiation rules and procedures before and during the conferences of the parties have been exhausted and move ahead slowly. At each UN Conference, operation and rules must be fixed; COP rules were adopted a long time ago and have changed very little in 20 years. We believe it would be very timely to set different procedures and create new regulations within the Framework Convention and the Kyoto Protocol to overcome current stagnation, opening up different paths to agreement.

At present, awareness about climate change is widespread. As time goes by there is more scientific information and a positioning of the countries and their political and economic communities. The groups of diplomats and government officials that negotiate on behalf of their countries thus receive greater internal and external pressures, including social demands which go beyond their institutional competencies. Many heads of state, for instance, cannot go beyond what is mandated by their Parliaments or their time in office. Anyhow, this is also an opportunity to talk about agreeing on deeper scopes and dimensions, with a greater social backing and a more expeditious response by the emitting sectors involved.

Latin America has very similar climate and management problems. This is a region where it is necessary to intensify the development and transfer of low carbon emission technology, a region where there is insufficient funding for economic growth. We are, however, a region in which it is easier to achieve sustainable development given our great diversification of energy sources and the ancestral environmental awareness of our peoples.

5. Are there chances for regional cooperation in the efforts for mitigation and adaptation? In which areas?

There is room for cooperation in Latin America, mainly in the sectors of energy, transport, sustainable construction and the fight against deforestation, in which there are very successful mitigation projects that have proprietary solutions. For instance, since the CDM was established within the Kyoto Protocol, there has been an intensive exchange of experiences and a development of methodologies which has helped our projects in these fields to be accepted, thus increasing the region's funding possibilities. Anyhow, this is not enough. It is necessary to have new funding sources and more promptly replicate the most successful projects for GHG reduction. We would all like to learn from low carbon experiences with bio-fuel in Brazil; quick transport systems financed with carbon bonds in Colombia, Green Mortgages in Mexico for low-cost sustainable housing or the momentum of wind energy in Costa Rica.

Our industrial GHG emissions are not as high as in developed countries (DDCs) but -according to preliminary figures- we do have a great level of deforestation and changes in land use. The defense and loss of tropical forests such as the Lacandon or Amazon jungles is a problem shared by all in this continent and that could be greatly solved through new international agreements in the field of climate change. Payment of forest environmental services may no longer be a local matter to become a worldwide issue. In Latin America, rural communities that have forests lag behind in the technological field and are isolated without justification given current progress in communications. The fight to halt climate change during this century should improve the standard of living of millions of people who are still at the margins of development.

