



SECOND NATIONAL COMMUNICATION ON CLIMATE CHANGE ECUADOR

Ministry of Environment of Ecuador

Climate Change Policy in Ecuador



Ecuadorian Constitution. Rights of nature. Article 414, establishes that “the State shall adopt adequate and cross-cutting measures for climate change mitigation”



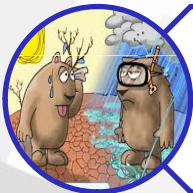
National Plan for Good Living. In its objective 4 states “to guarantee nature’s rights and the promotion of a healthy and sustainable environment.”



National Environmental Policy. To manage adaptation to- and mitigation of climate change in order to reduce social, economic and environmental vulnerability.

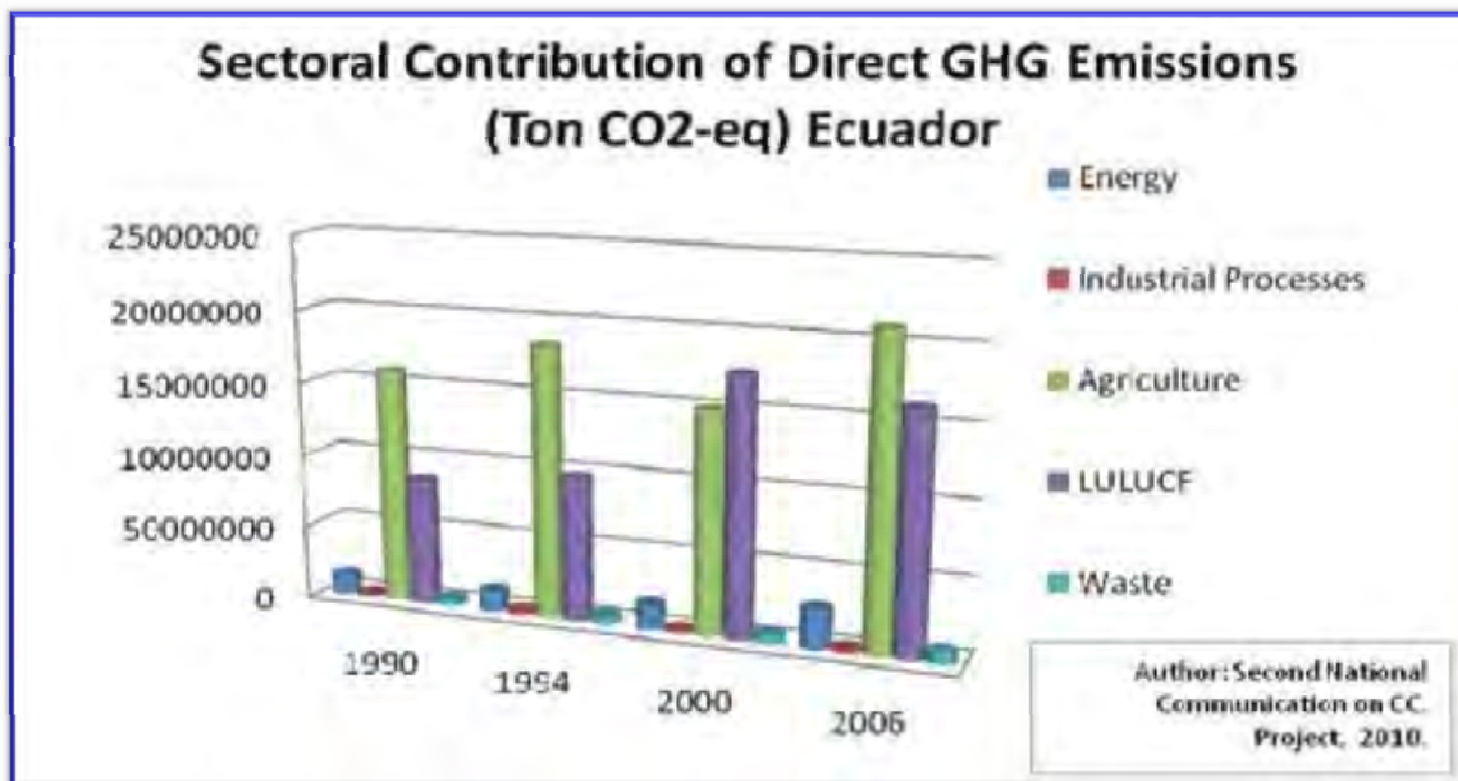


Presidencial Decree (2009). Adaptation to - and Mitigation of Climate Change is declared as a National Policy



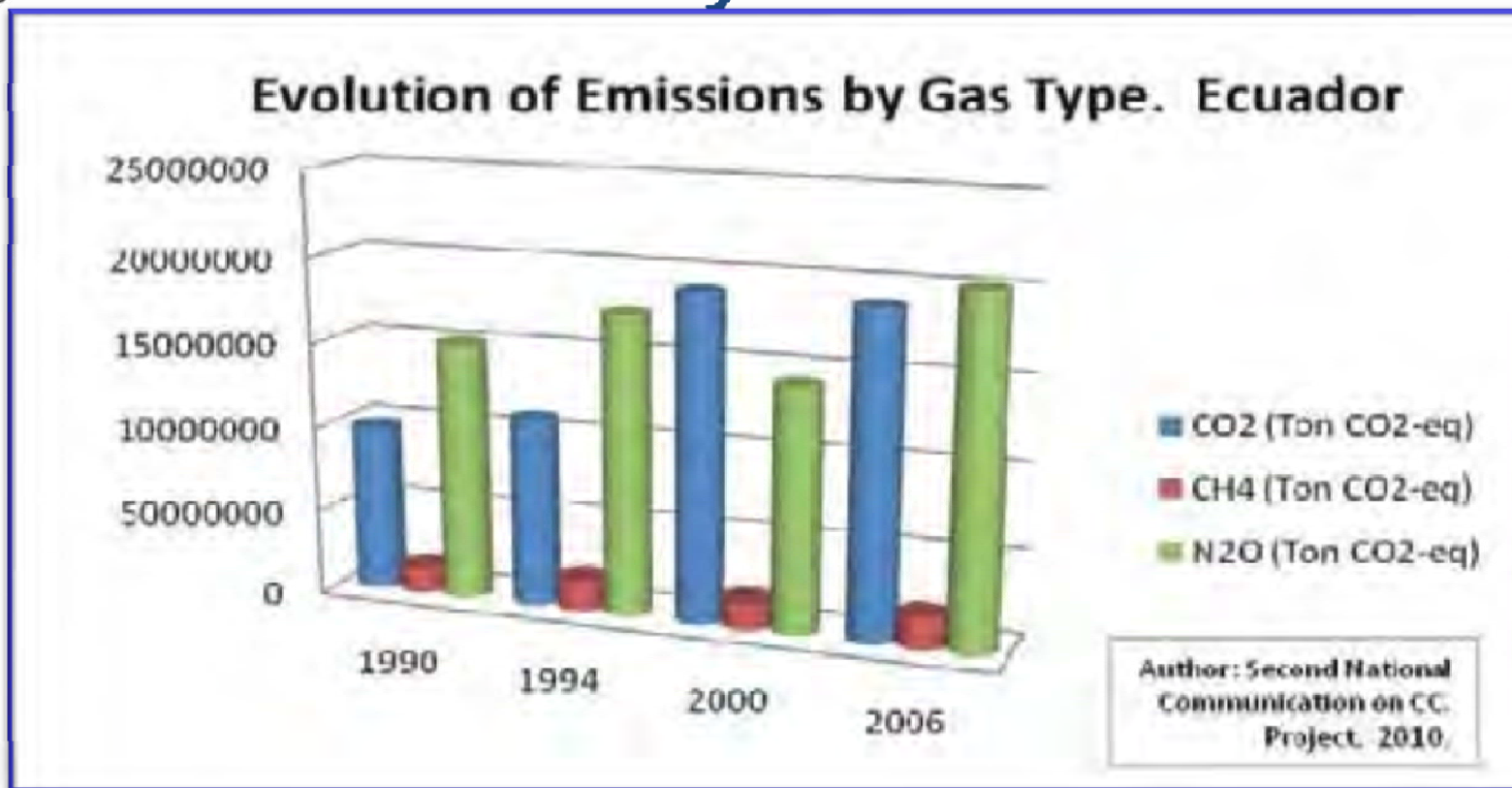
Climate Change Strategy. Vision towards 2025: adequate management of climate change issues; in order to ensure well being and nature’s rights at a national level.

Key outcomes: National Greenhouse Gas Emission Inventory



- The total 3 direct GHG emissions in Ecuador show an increase of 54.6% during the last 16 years.
- The Energy Sector shows the highest variation levels in net direct GHG emissions between 1990 and 2006, with an increase of 110%, followed by the LULUCF, Waste, Industrial Process and Agriculture.

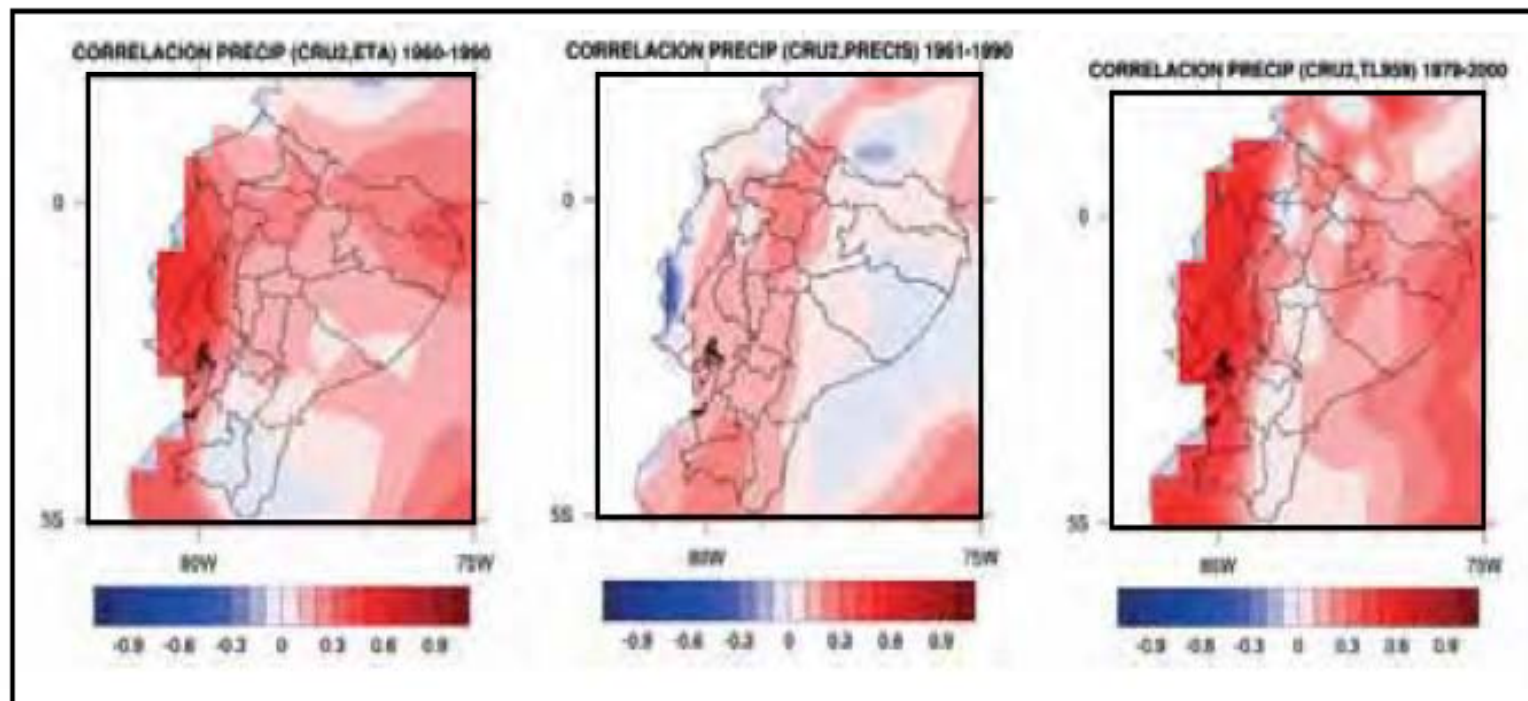
Key outcomes: Evolution of emissions by Gas



- Based on emissions data for 1990 and 2006, carbon dioxide shows an increase of 77.96%, being the most variable gas, followed by nitrogen oxide, with an increase of 47.72%.
- During the four years analyzed, the prevalence of the emissions of nitrous oxide and carbon dioxide is evident; while the quantitative contribution of methane is significantly lower.

Key outcomes: climate disasters and related losses

Map 1: Spatial evolution of loss reports due to meteorological events. 1970 – 2007

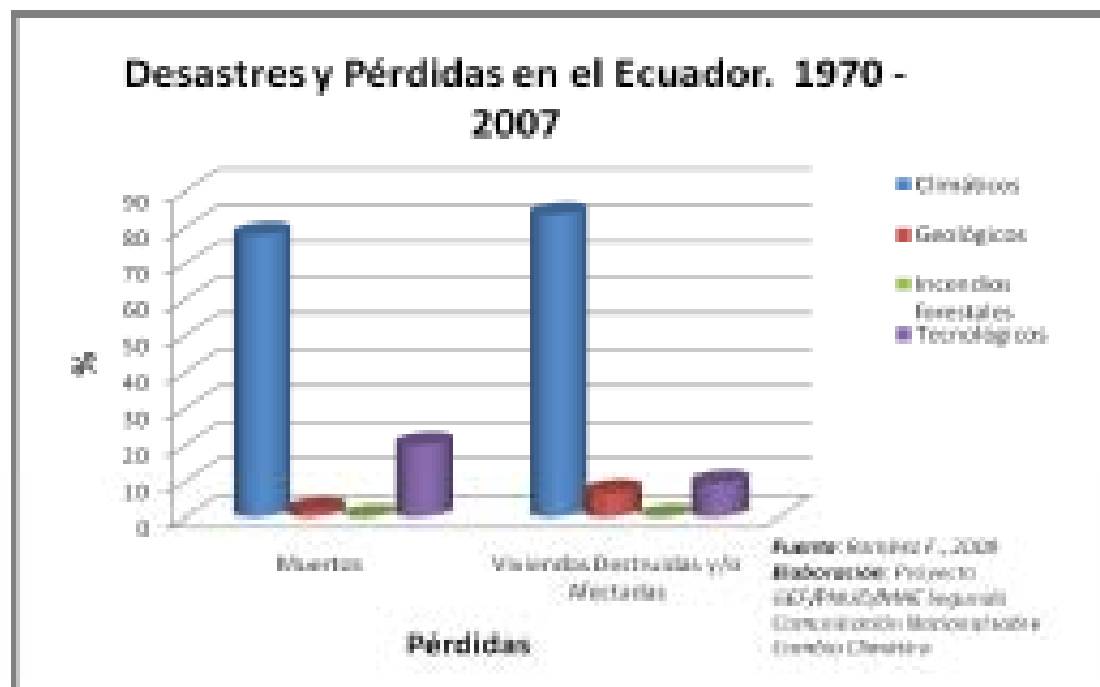


Source: Global Assessment Report on Disaster Risk Reduction, 2009.

- In the last four decades, the incidence of anomalous climate events in Ecuador has increased gradually following the territorial occupation trajectory, i.e., from the mountain range to the Coast and the Amazon.

Key outcomes: climate disasters and related losses

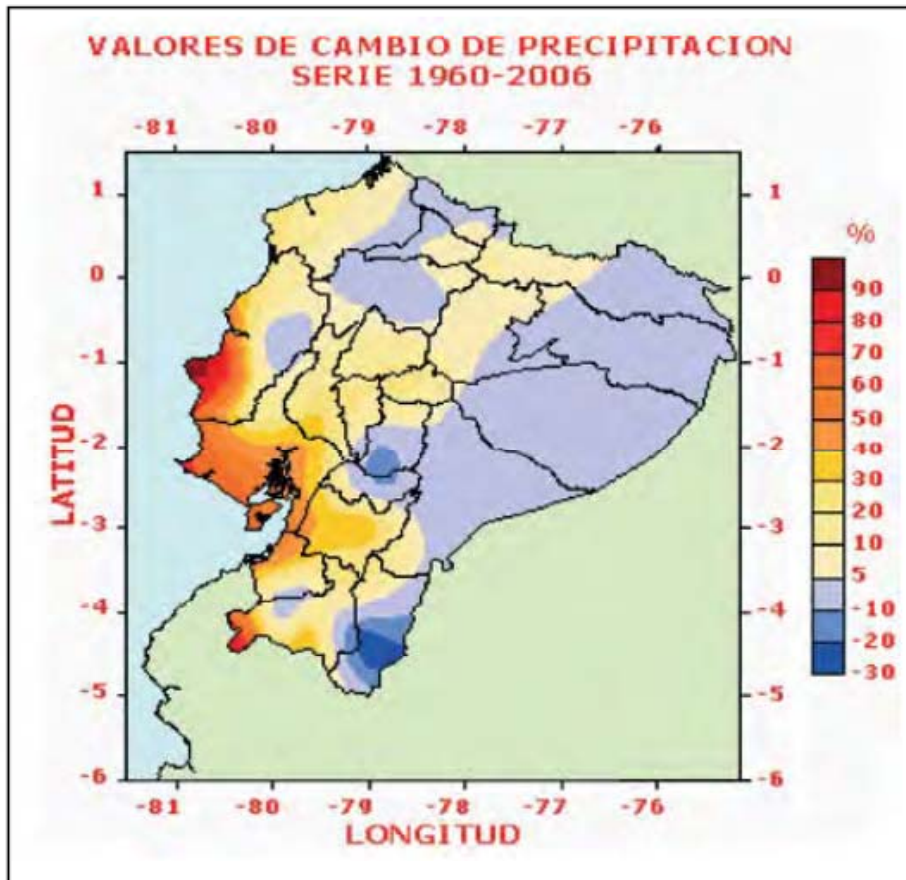
Figure 9: Distribution of disasters and losses in Ecuador. 1970 – 2007



Between 1970 and 2007, the DESINVENTAR database enclosed 3,590 national registrations (geological, climate, anthropic, and forest fires), 68% of them belong to climate events which, in turn, are associated to 78% of the total death rate and 84% to destroyed and/or affected houses. This clearly shows that among disaster events recorded in Ecuador, climate events have generated the greatest economic and human life losses.

Key outcomes: rainfall variation

Map 2: Annual rainfall variation (%) 1960 – 2006

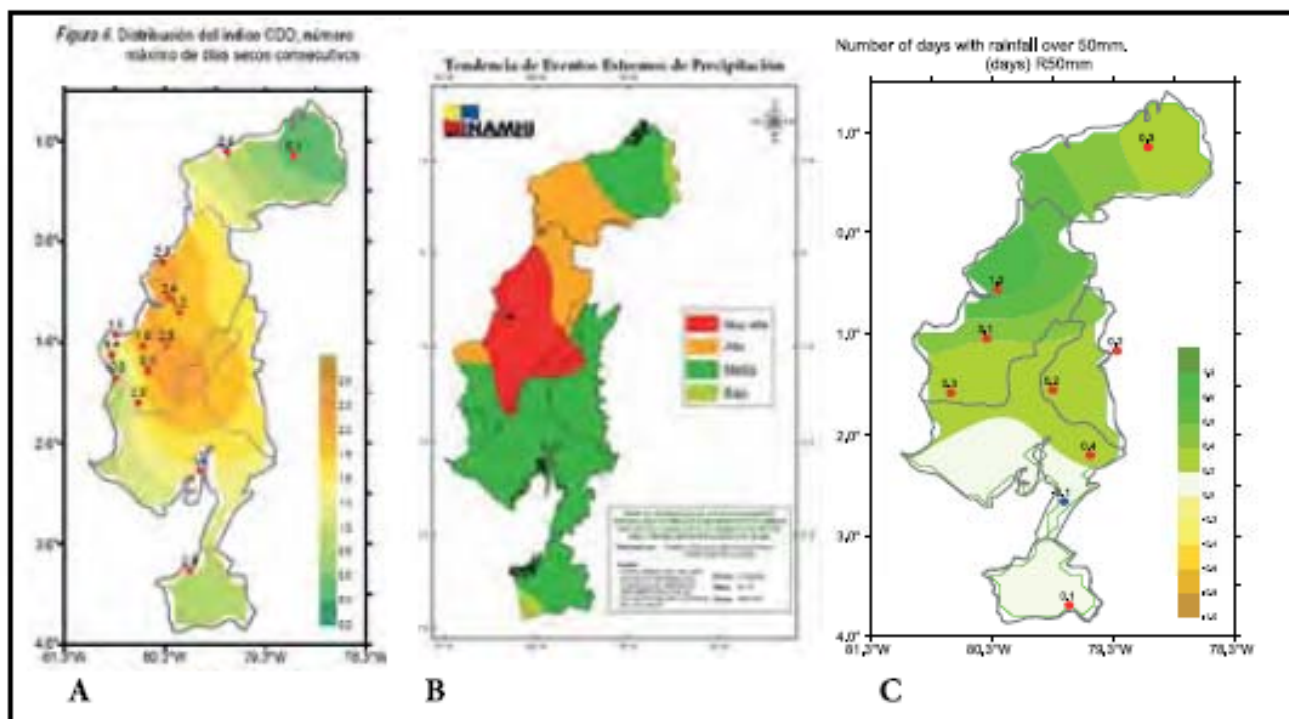


Source: INAMHI, 2007.

- Rainfall amount, frequency, and intensity have varied considerably in the country, particularly in the last few years, with significant geographic and seasonal differences.
- In average, annual rainfall increased 33% in the Coast Region and around 8% in the inter-Andean Region.

Key outcomes: extreme events

Map 3: Extreme rainfall events in the Ecuadorean Coast

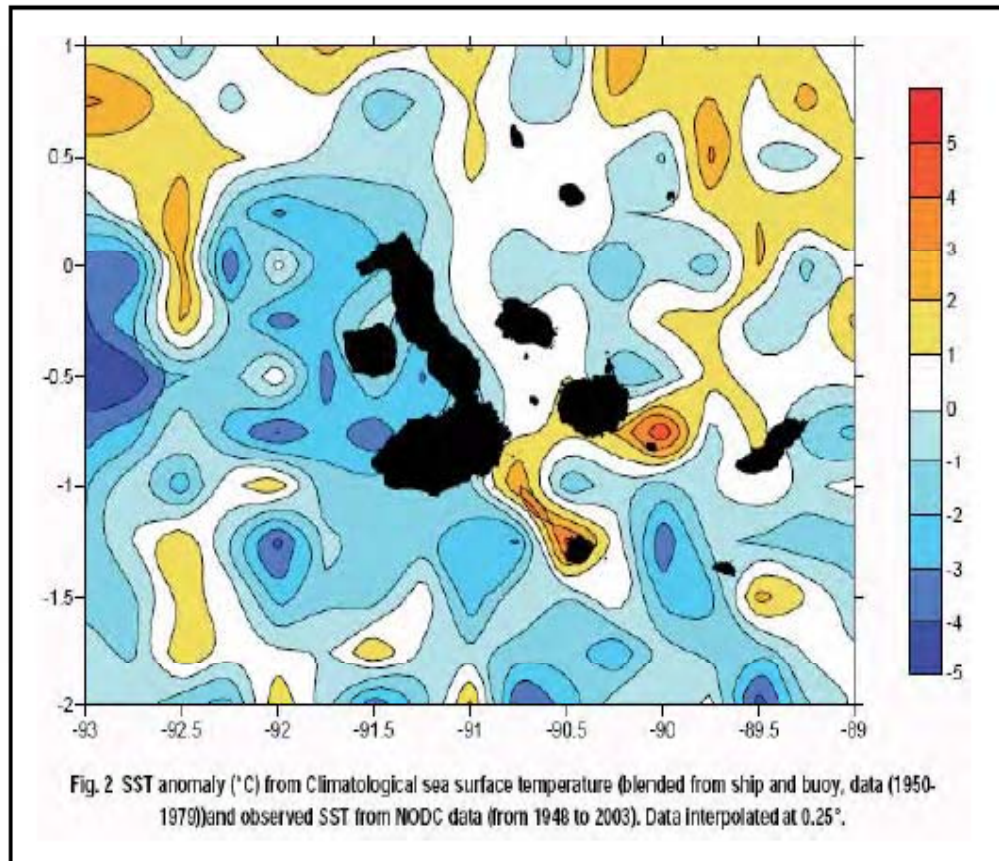


Source: INAMHI, CIIFEN, 2008.

- According to the study “Climate Information on Hydro-Meteorological Threats in the Ecuadorean Coast Provinces”, it can be inferred that a zone such as the center of Manabí (Map 3 C) can be vulnerable to both, scarce rain events (Map 3 A) and excessive rainfall (Map 3 B). An analysis performed in the city of Guayaquil for the period 2000–2006 identified a significant gap at the beginning and end of the rainy season, as well as the occurrence of strong but shorter rainfall time periods.

Key outcomes: oceanographic evidence

Map 4: Sea surface temperature anomalies. Galapagos Archipelago

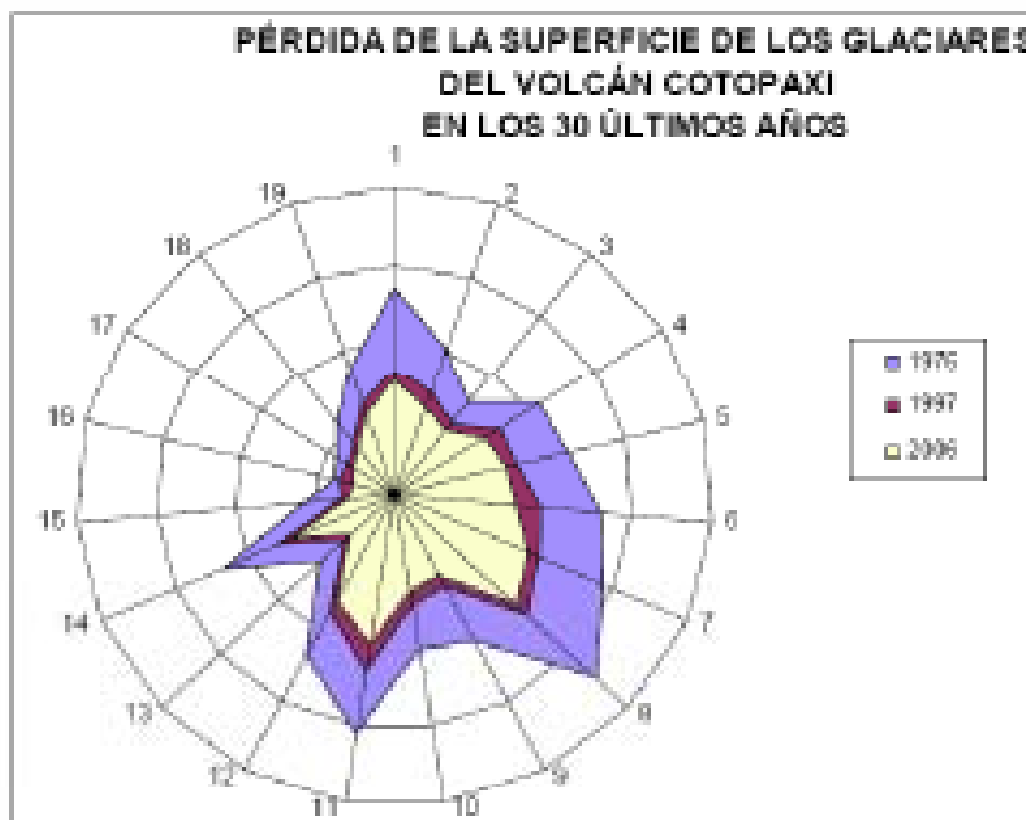


Source: Martínez R. Nieto I. 2009

- Global climate change evidence indicates an increment in the sea surface temperature and a gradual average increase in the sea level.
- The study “Analysis of oceanographic factors with potential impacts on biodiversity and ecosystem services in the Galapagos Islands” illustrates that the space distribution of sea surface temperature has a persistent increasing trend on the East, and a cooling trend in the West.

Key outcomes: glaciological evidence

Figure 10: Loss of glacier surface in the Cotopaxi Volcano. 1976 – 2006



According to the preliminary results of the Glacier Inventory in Ecuador, between 1997 and 2006, the Ecuadorean glacier coverage decreased 27.8%. In the case of the Cotopaxi Volcano, 39.5% of its glacier area (7.4 sq. km) was lost between 1976 and 2006; of that area, the loss of 12% took place in the last ten years, as illustrated in Figure.

Mitigation

Ecuador, as a Non-Annex I country of the United Nations Convention on Climate Change and the Kyoto Protocol, **has no mandatory obligation to reduce greenhouse gas (GHG) emissions. However, a significant number of national voluntary mitigation actions are being developed.**



LULUCF The 2009–2013 National Plan for Good Living sets three specific goals for the LULUCF sector by 2013, which are aligned with climate change mitigation efforts. 1) to increase the territory under conservation or environmental management by 5%, 2) to reduce the deforestation rate by 30%; and 3) to reduce the ecological footprint in a way that does not exceed Ecuador's bio-capacity



ENERGY According to the 2009–2013 National Plan for Good Living, the main goal of the policies and strategies addressed to change the energy matrix by 2020, is to diversify this matrix through the promotion of an efficient and improved use of sustainable renewable energies. The policies and guidelines established in the Plan provide concrete goals, such as to increase the installed capacity in 1.091 MW by 2013, and in an extra 487 MW by 2014; and to achieve a participation of alternative energies of 6%.



GALAPGOS ISLANDS

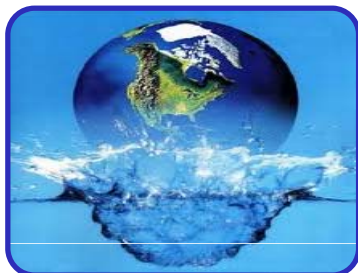
- The policy of “zero fossil fuels for Galapagos” together with the Galapagos Government Council, are preparing the Galapagos Strategic Agenda which includes the component for the energy matrix change and the Sustainable Mobil Plan for the Islands.



In 2007, President Rafael Correa announced to the United Nations General Assembly Ecuador's commitment to indefinitely leave unexploited 846 million barrels of oil in the ITT

Adaptation

Five of the twelve objectives of the National Plan for Good Living include policies, guidelines and goals related to climate change impacts, vulnerability, and adaptation measures.



To manage water heritage with a comprehensive and integrated approach, considering hydrographic basin, strategic use by the State, and social-cultural and environmental value.



To promote adaptation to - and mitigation of climate variability with emphasis on the climate change process.



To reduce social and environmental vulnerability to the effects produced by natural and anthropic risk-generating processes.

Key challenges

- ☐ Besides financing, technology, and capacity, the analysis considers other relevant elements resulting from the National Communication modules, which are also important for the national process, e.g., methodologies, information availability, and institutionality.
- ☐ Institutionalization for the development of National Communications.
- ☐ Strengthen capacities at the sectoral level for climate change management and National Communications development. Inventories of greenhouse gases.
- ☐ Systematise the registration process for mitigation and adaptation actions in Ecuador, in order to integrate them to the Ministry of Environment Information System (SUIA)
- ☐ **Currently, Ecuador is making the PIF for the third national communication, and hopes to begin the process by the first quarter of 2013.**



Thanks



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