

MAPPING HUMAN HEALTH VULNERABILITY TO CLIMATE CHANGE IN MEXICO

Horacio Riojas-Rodríguez, *Instituto Nacional de Salud Pública, Cuernavaca, México*

Magali Hurtado-Díaz, *Instituto Nacional de Salud Pública, Cuernavaca, México*

Grea Litai Moreno-Banda, *Instituto Nacional de Salud Pública, Cuernavaca, México*

Aldo Castañeda Martínez, *Instituto Nacional de Salud Pública, Cuernavaca, México*

Background and Aims: Mexico is particularly vulnerable to climate change and climate variability due to its geographical location topography, hydrology and other factors like urbanization, deforestation and relative growth of poverty. For this reason we are building a human health vulnerability atlas, in order to assisting decision-makers in identifying risk, and planning and mapping a future, which would be more resilient to the changing climatic conditions in México.

Methods: The first stage of the analysis was to obtain baseline data of climatic variables (1970-1999) and epidemiological data from acute diarrheal disease (ADD) and dengue (1998-2005). Secondly we generated a regionalized climate change projections for Mexico, from the downscaling of the results of General Circulation Models (GCMs): HadCM3, GFDL and ECHam4, and the A2 scenario. Finally we projected the incidence of ADD and dengue in 2030, including information of precipitation, temperature and human vulnerability.

Results: Our study predicts that in 2030 the states of Veracruz, Tabasco and Chiapas will have high risk to ADD and almost all costal states will have high risk to dengue. There will be an increase in 2030's rate ratios from the month of June and September for ADD and dengue, respectively.

Conclusions: The preliminary results indicate that in 2030 there will be an excess for ADD and dengue cases attributable to climate change. Climate change will add to the burdens of those who are already poor and vulnerable. The results of the analysis are thus indicative only. Even so, they are useful for several purposes.