

Drivers on Climate in a Neotropical City: Urbanizations and Natural Variability

Authors : Nuria Vargas, Frances Rodriguez

Abstract : Neotropical medium cities have opportunities to develop in a good manner. Xalapa City (Veracruz capital, Mexico) and its metropolitan region, near to the Gulf of Mexico, has already <1 million inhabitants, a medium city size, but it's growing rapidly as several cities in Latin America. Inside a landscape where it had been a forest cloud and coffee land, emerges the city with an irregular topography. The rapid grow of the urbanization and the loss of vegetation has result in a change on the climate parameters. Frequently warms spells, floods and landslides had been impacted last 2 decades, also a higher incidence of dengue and diarrhea is mentioned in the region. Therefore, the analysis of hydrometeorological events is crucial to understand the role they play in its problem. The urbanization and others radiative forces has created a modulation that can explain the decadal climate changes on the Xalapa region. The Atlantic Multidecadal Oscillation directly influences the temperature and precipitation of the region, even more than climate change does. The total effect of these drivers can create a significant context that origin more risk. However, the most policies frequently consider only the climate change as a principal factor, but other drivers are important to consider and evaluate for the implementation of actions that improve our ambient and cities, in a context of climate change. Medium-sized cities could create better conditions for future citizens, preventing with urban planning that considers possible risks associated with weather and climate.

Keywords : natural variability, urbanization, atlantic multidecadal oscillation, land use changes

Conference Title : ICUC 2024 : International Conference on Urban Climate

Conference Location : Rome, Italy

Conference Dates : June 03-04, 2024