Climate Change in the Mexican Regions: Integration of the Direct, Indirect and Dynamic Effects in a Simulation Input Output Model

Topic: Environmental input-output modeling VII
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In the framework of the set of projects called “State Programs of Action for Climate Change in Mexico” (PEAC) sponsored by the Ministry of Natural resources and Environment (SEMARNAT), a series of sectorial studies have been developed to each one of the Mexican States on the impacts of climate change (a rise in temperature, rainfall and sea level). Among sectorial studies in these programs include the impacts on water resources; in biodiversity, energy, agriculture and cattle, urban settlements, physical infrastructure, tourism, health and economy.

However, all these programs do not consider the indirect and dynamic effects that will arise because of the direct sectorial effects. The purpose of this document is to demonstrate how the direct effects of climate change can be integrated in a Simulation Input-Output Model (using Stella/Ithink) to analyze the dynamic and indirect effects, and thus reach to get more insight about the real impact that this phenomenon could have on regional economies in four times higher than the direct effects, which shows the importance of developing tools that allow its estimate and inclusion in studies on the impacts of climate change on the Mexican regions.