Social Equity versus the Environment Dilemma: Evaluating the GHG Impact of Poverty Alleviation in India

Topic: Input-output applied to social issues I
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The Copenhagen taught us that still there is a deep-seated chasm between developed and developing countries. Although India has achieved rapid economic growth in over the years, whether or not this rapid economic growth was actually accompanied by the sustainable development which protects environment and narrows the gap between rich and poor is questionable. The National Sample Survey Organisation (NSSO) conducted a Household Consumer Expenditure Survey in 2004-05 which shows that 45% of people living in the rural area in India (more than 300 million people) do not use electricity as a primary source of lighting, on the other hand 92% of people living in urban area are using electricity as a primary source of lighting. These high level of disparities make a developing country such as India, hesitant to share the responsibility for future climate change.

While from a social equity point of view it can be argued that the fruits of growth need to necessarily percolate down to the lowest rungs of the economy, the reduction in the gaps between the energy rich and poor in India would bring forth changes in life-styles in that may or may not be environmentally friendly. Therefore, studying the changes in lifestyles and their concomitant impact on the environment become crucially important.

To analyze the changes in life-styles of households, many studies adopt the rural-urban and income (expenditure) level classification of households. However, this is a very narrow way of pegging different lifestyles to different households. There are different attributes that need to be analyzed in association with the expenditure levels to understand the lifestyles and energy consumption patterns in households. Therefore, the proposed study would look at different dimensions of household-level energy poverty such as occupation, energy consumption intensity and composition, social class, asset ownership, etc. in addition to the expenditure criterion and try to identify the energy consumption patterns and therefore emission intensity of the energy poor.

The construction of future scenarios of income distribution among households and improvements in lifestyles, would be done based on different trajectories of occupational changes and migration (for example, from agricultural workers in rural area to wage labor in urban area). For this, we would reconstruct the household sector in Indian IO tables with rich information available from the NSSO survey and classify the household sectors by rural-urban and occupational classes. We would construct alternative future scenarios of migration and occupational changes in rural households in India and analyze the impacts on output and CO2 emissions using IO tables for environmental analysis of Indian economy developed by our research group.