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GHGs EMISSION REDUCTION TARGETING BASED ON HORIZONTAL EQUITY CONCEPT AT A COUNTRY LEVEL

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Abstract

This research attempts to evaluate the target of 15-30% emission cut by 2020 of developing countries which were discussed in COP17 of UNFCCC in late 2011. Iran is ranked amongst the top ten large emitters of GHGs and would soon be required to reduce its emissions. Thus, this research suggests and applies different combinations of some principles in order to explore different kinds of burden sharing rules at a country scale for Iran. The focus is on “Horizontal Equity” on the premise of reduction target setting, economic development and the fulfillment of regional equity. Amongst the models examined for the appropriateness in a developing country such as Iran, the model which assigns a greater weight to the criteria of CO₂ per Added Value demonstrated to be the most viable economic choice to both address the developed as well as less developed provinces at the national level. It can be argued that asking developing countries (e.g. Iran), which have energy-dependent economies, for reducing emissions means freezing the standard of living at this stage of their development and remaining one step behind the others forever. Therefore, instead of selecting a particular rate for emissions cut among countries, conversion into a “number game” with focus on the ratio of GDP loss, is proposed to be mathematically a logical approach. The results of this study show that a 20% cut in Iran’s GHGs emission will lead to high rates of reduction in GDP over the period 2010-2020.

Keywords: allocation, climate change, economy, equity, reduction

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