

Decomposition of tourism green house gas emission using the environmental input-output

Topic:

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The tourism sector has an important place in the society, given its global economic and social value, its role in sustainable development and its strong relationship with climate and carbon emission. While Taiwan has been eagerly embarked on the tourism development over the past decade, one of the pressing issues is to address the emission of greenhouse gases (GHG) associated with the tourism development in a comprehensive framework. The call comes from a growing recognition that the tourism industry consumes a greater amount of energy for transportation, accommodation, and amenities directly serving visitors, as well as energy consumption associated with indirect and induced materials and services, up to the supply chain.

Therefore, the purpose of this study is to construct an Environmental Extended Input-Output Model (EEIO) and apply the decomposition analysis in Taiwan as a macro-economic approach to study the relationship between tourism industry, tourism policies and GHG emission from 1999 to 2009. Study purposes are

1. To estimate tourism green house gas (GHG) emission in Taiwan from 1999 to 2009.
2. To decompose total tourism green house gas (GHG) emission by individual factors, including, a) final demand, b) energy requirement per dollar of final demand, c) the relative composition of different energy required, d) the energy converting ratio with respect to GHG emission, and f) domestic production input-output table.

This is an on-going research and preliminary results will be available before May 2012