

The Carbon Footprint and Carbon Leakage of Prefectures: A Case Study of Japan

Topic: Carbon footprinting and trade

Author: Shigemi Kagawa

Co-Authors: Ryoji Hasegawa, Makiko Tsukui

The local governments in Japan recently have been increasingly concerned with environmental problems in their own regions according to the trends of decentralization. It is essential to estimate environmental effects of regional economic activities and establish effective energy policy at the regional level. However, those effects are still unclear because basic data is lacking. In this paper, we constructed the multi-regional input-output table with inter-regional shipments among 47 prefectures in Japan using the intra-regional input-output tables compiled by the local governments and applying a non-survey technique. Using the multi-regional table, we estimated the carbon footprint and carbon leakage of the Japanese 47 prefectures and argued the regional emission responsibilities from the point of view of both consumer responsibility and producer responsibility.