

## **Carbon Footprinting the Gold Coast City consumption of goods and built environment products**

Topic: Regional Analysis

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A number of studies have been published demonstrating the importance of measuring greenhouse gas (GHG) emissions from a consumer perspective in addition to the traditional producer perspective - triggering debates among politicians with respect to countries' responsibility for carbon emissions. Multi-Region Input-Output (MRIO) Analysis has been used as an appropriate tool for GHG emissions studies appraising the trade between the regions: country, state and city-level, for example. MRIO and Multi-Region Supply-Use Tables (MR-SUT) tables were not available for small regions in the past, but a change in this scenario can be seen in new initiatives like The Australian Industrial Ecology Virtual Lab (IELab) - which is a collaborative virtual platform database that hosts MR-SUT data and satellite accounts at various levels. Thus, we are able to obtain a SUT table of one specific city and its relationship with the rest of the state, the rest of the country and the rest of the world. We aim to assess the carbon footprint (CF) of Gold Coast City's final demand of specific products: construction materials, goods and construction and estate services. Assessing their supply chains by using this MR-SUT model of Australia with four distinct regions from the IELab, we have concluded that the largest CO<sub>2</sub> embodied products by the consumption of these products are the ones that are produced by industry, goods manufacturing, electricity, transport, construction materials manufacturing and construction and estate services industry.