The carbon future - Bridging Science and Policy based on the case of UTM and Iskandar Malaysia

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Modeling GHG emission is one of challenging tasks for environmental researchers. However, the use of the modeling result for policy makers to assist them for a more objective decision for a lower carbon future is equally important. This paper aims to examine how CO_2 emission baseline study can be used to develop a Low carbon society blueprint in Iskandar Malaysia.   The paper is based on the SATREPS research findings which uses the reviewed Comprehensive Development Plan (reviewed CDP 2012) and AIM (Asia Pacific Integrated Model) model and Consensus buildings with major stakeholders in Iskandar Malaysia.

This blueprint contains future society scenario based on major socio economic variables, quantitative modeling of CO_2 emission and 12 actions in Triple Bottom Line   (TBL) pillars, namely Green Economy, Green Community and Green Environment. These 12 actions are then translated and are detailed into specific programs and measures which Iskandar Malaysia Regional Authority (IRDA) and local authorities can adopt and implemented directly. It covers wide range of topics which include urban planning transportation, industry, building, energy efficiency, renewable energy, life style change, education and awareness, governance, forest conservation, waste management and air environmental quality.

The modeling result showed a potential reduction of 30.2 MtCo2 (2025 BAU) to 18.3 MtCo2 (CM 2025) by the year 2025 if the review Comprehensive Development Plan adopts low carbon measures outlined in the 12 major actions. With the implementation of programs in the blueprint, it will help the IRDA development authority to achieve a 40% reduction in emission intensity and reduced its CO_2 emission per capita from 7.7 tCO2 eq (2005 BAU) and 10.1 tCO2 eq (2025 BAU) to 6.1 tCO2 eq (2025 CM).