

AIM/CGE for global and country analyses

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We have been developing various types of computable general equilibrium (CGE) models for the analyses of the greenhouse gas mitigation policies at the global scale and also at the country scale as component of AIM models. A brief of the model features, applications, and contributions are given in this presentation.

(1) Global model

AIM/CGE [Global] covers the world economic activities and GHG emissions and has contributed in the following projects;

a. RCP: AIM has provided the results of GHG emissions and other information on RCP 6 (stabilization at 6W/m² of radiative forcing) with support from other division of NIES, JAMSTEC and Ibaraki University. AIM/CGE [Global] has been the core model in the project.

b. EMF: EMF24 has started since 2010 and the AIM/CGE [Global] and AIM/Enduse models have participated and contributed in the modeling exercise.

c. AME: For AME scenario development, using the results of energy efficiency improvement calculated from the AIM/Enduse [Global] model, simulations were carried out by the AIM/CGE [Global] model.

d. Environment Research Fund, S-6: In this project, the activities in Asia has been estimated for the scenario target when the global GHG emissions in 2050 will be half compared with the 1990 level.

e. New Model Development: The existing AIM/CGE [Global] model has 24 regions and 20 commodities. The model is being modified and updated which will have 35 regions and 36 commodities. For the new model version, the social account matrix since 1970 with energy balance table and emission data is also being prepared.

(2) Country Models

a. AIM/CGE [Japan]: This model contributes to the Japan's mid-term and long-term roadmap committee in the Ministry of the Environment. Based on the energy efficiency improvements and additional costs estimated from AIM/Enduse [Japan] model, the economic impact of 25% reduction of GHG emissions from Japan in the year 2020 compared to the 1990 level has been estimated.

b. AIM/CGE [China]: In order to assess the 40-45% reduction of carbon intensity in China up to 2020, AIM/CGE [China] has being developed.

c. Training Course for Asia Low Carbon Scenario Study: A training course for hands-on learning of the Country CGE model is being planned (June/July, 2011). The schedule and programme outline will be announced shortly.