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Contribution of AIM (Asia-Pacific Integrated Model) to support carbon neutrality of Asian countries

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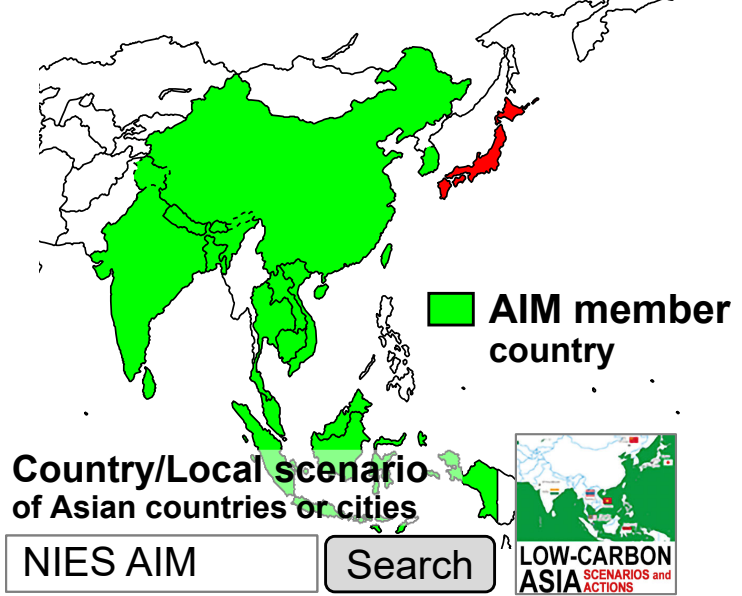
Asia-Pacific Integrated Model

<http://www-iam.nies.go.jp/aim/index.html>

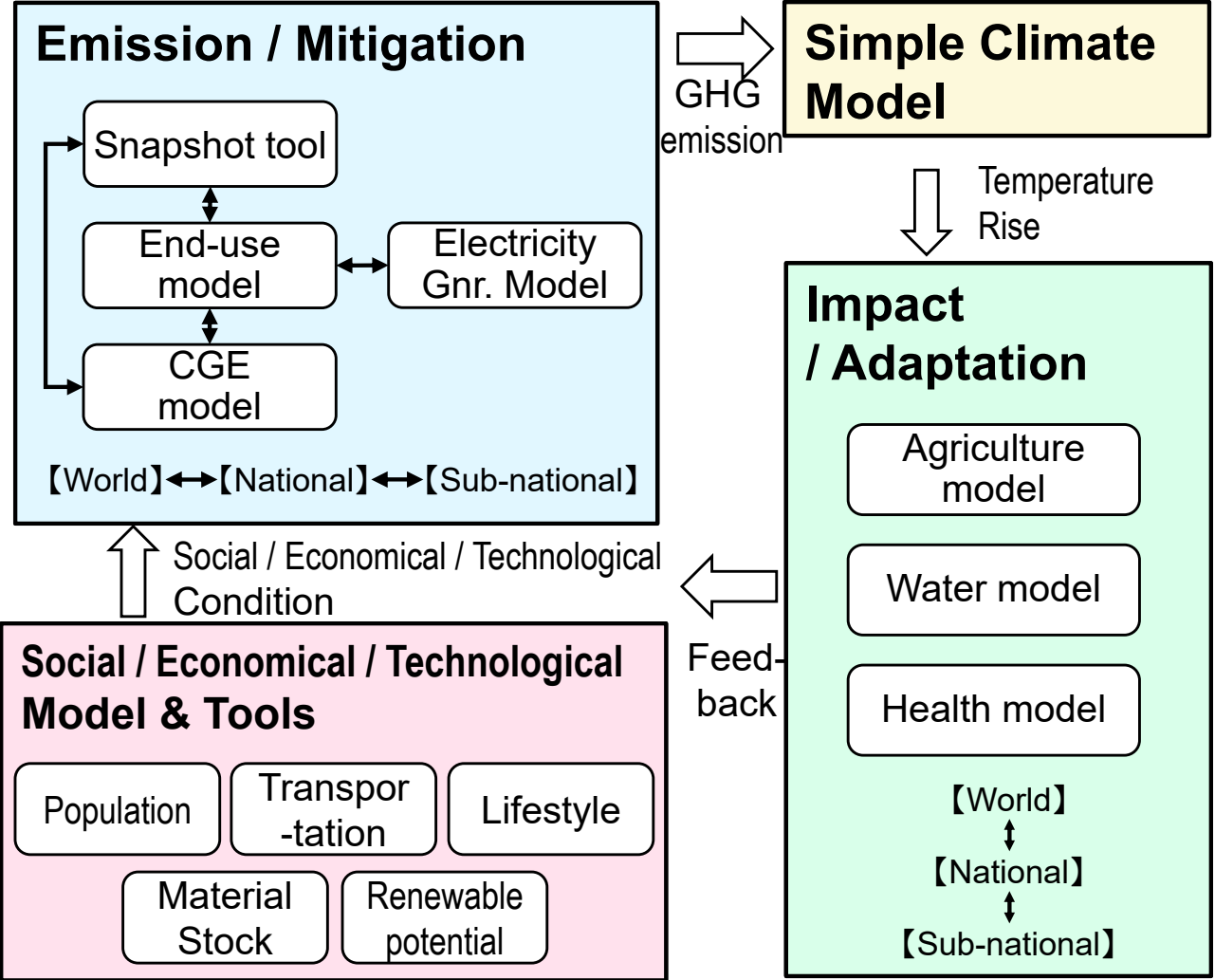


AIM (Asia-Pacific Integrated Model)

Asia-Pacific



Integrated Model



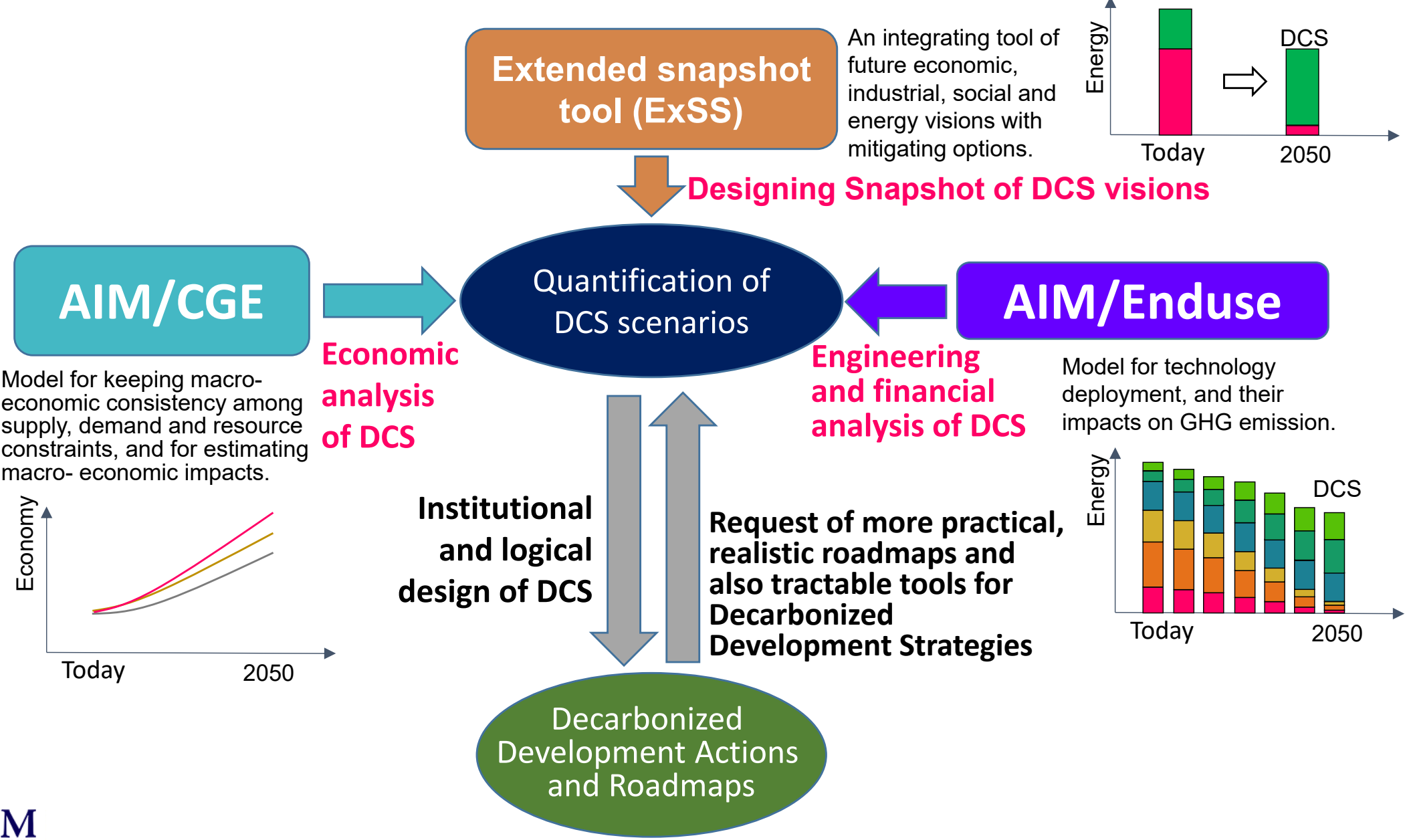
International network



The 27th AIM International Workshop
(Online; Sep. 30 & Oct. 1, 2021)

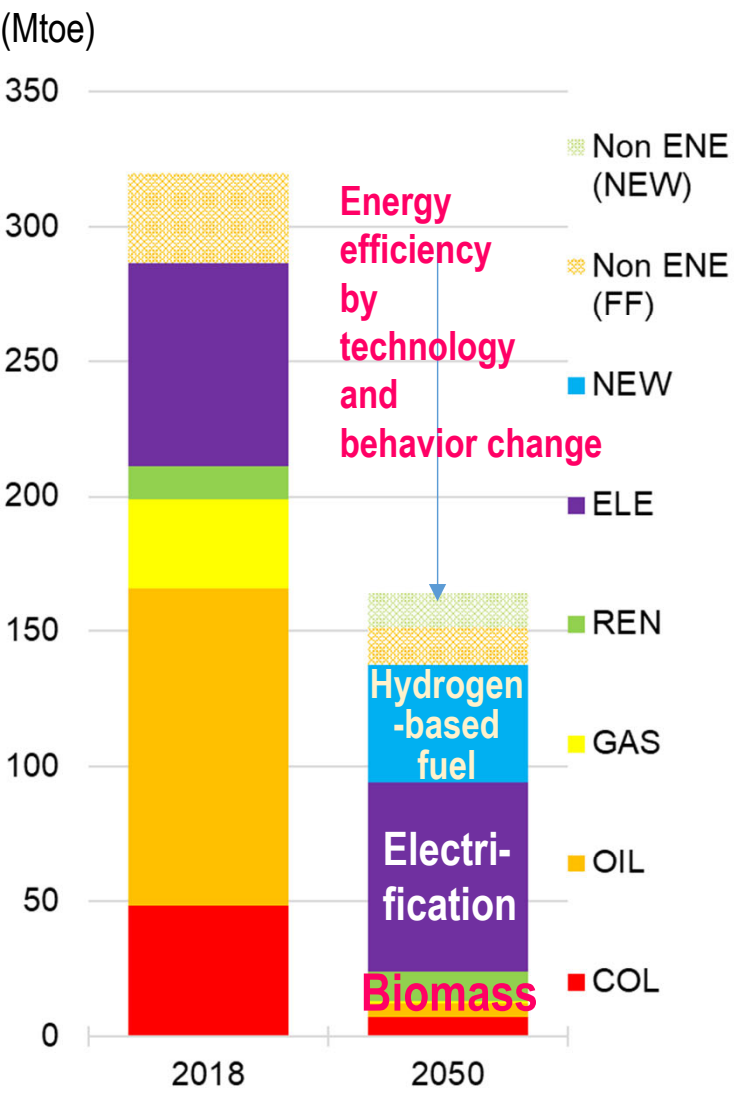
Combination of three tools

How to combine the tools in order to keep consistency and unity among socio-economic policies and DCS actions.

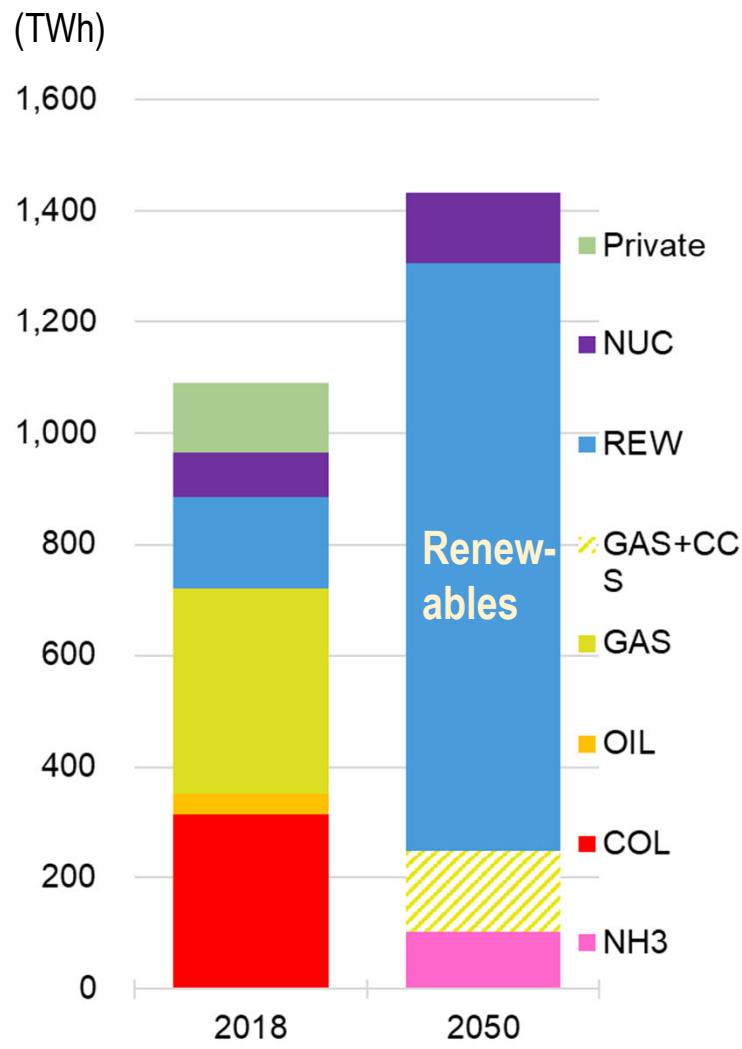


Japan's Carbon Neutral Scenario

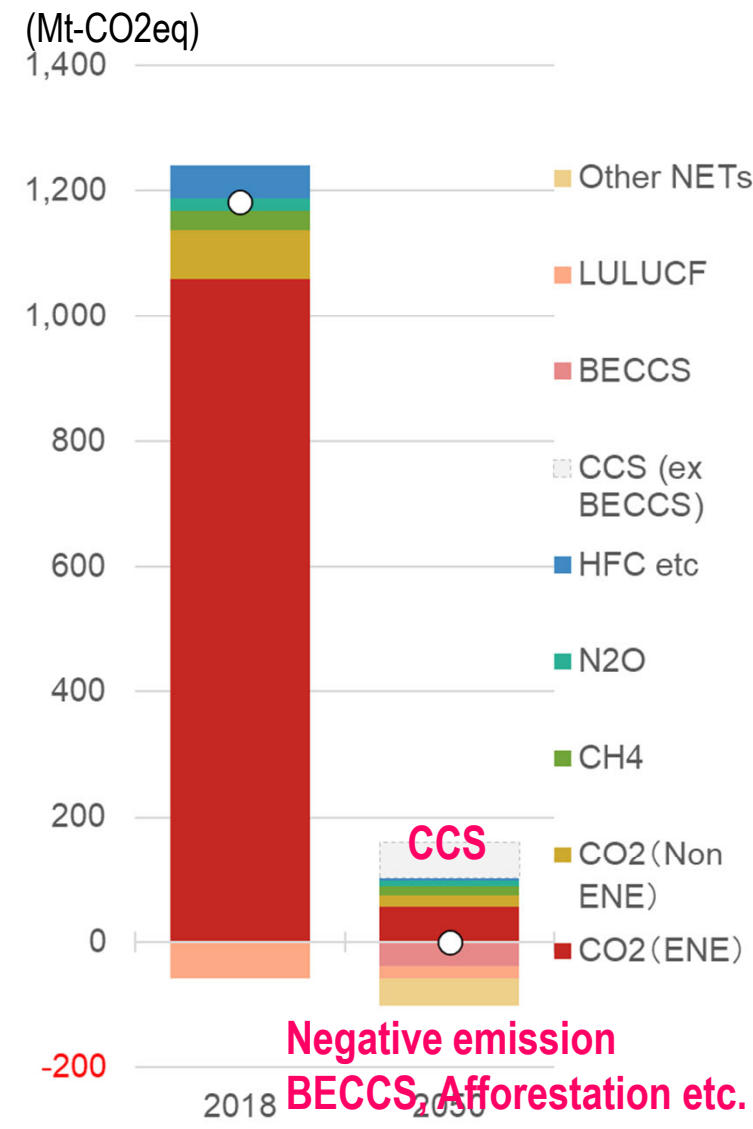
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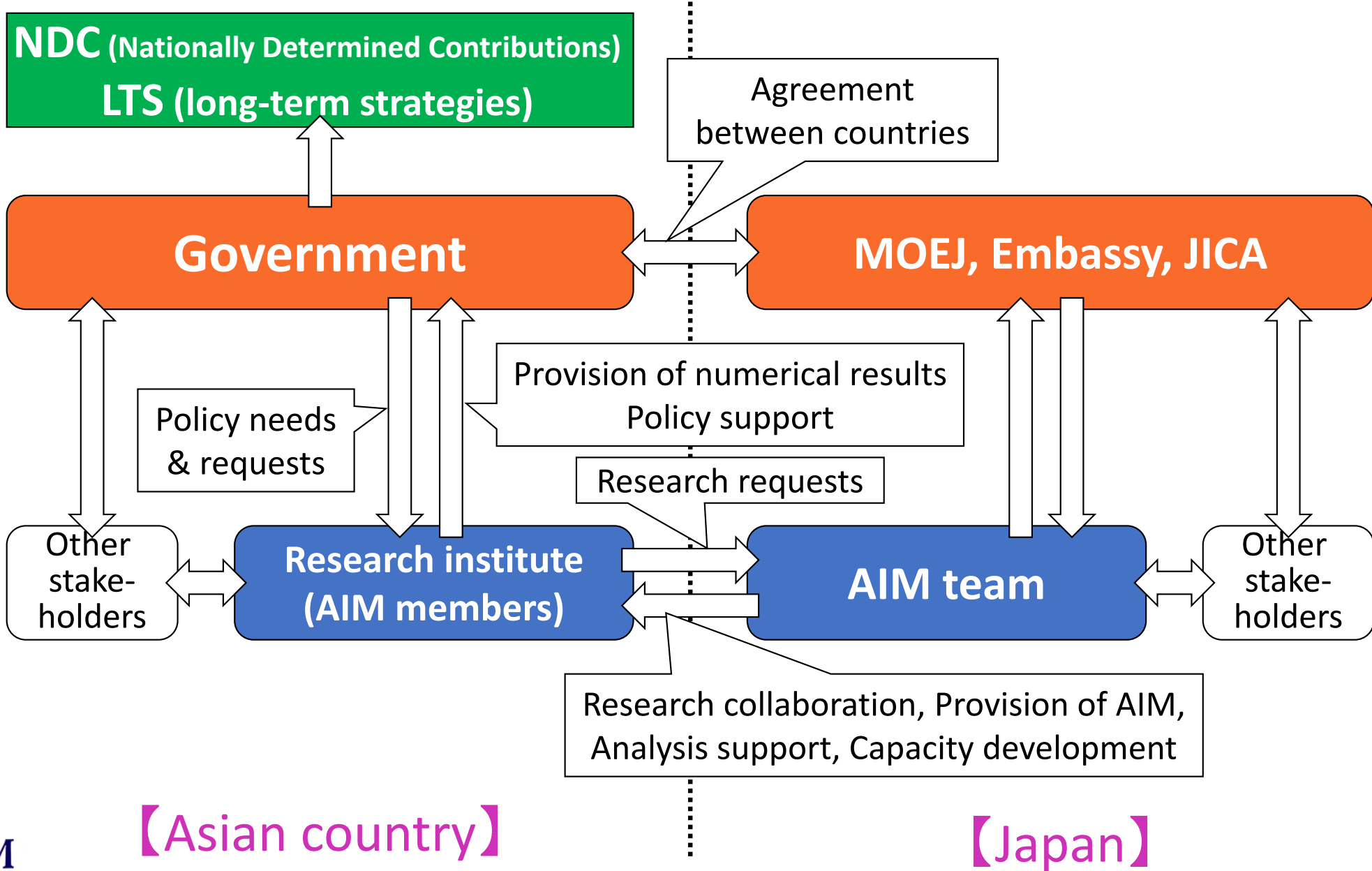


Simulated by NIES AIM (2021.6)

https://www-iam.nies.go.jp/aim/projects_activities/prov/2021_2050Japan/20210630_NIES.pdf



Expected structure to support climate policy in Asian country



Third National Communication (2018)

Mid-century, Long-term Low Greenhouse Gas Emission Development Strategy (2021)

3.2.1 NAMAs roadmap

Thailand's NAMAs aims at voluntarily reducing greenhouse gas emissions in the energy and transportation sectors by 7% by 2020 from the Business as Usual (BAU) levels. With sufficient international support, Thailand's NAMAs aims to lower the carbon trajectory up to 20% below the BAU level by 2020. The key mitigation actions committed and implemented in the Thailand's NAMA roadmap include:

- Development of renewable energy and alternative energy sources;
- Energy efficiency improvements in power generation, industries, buildings, and transportation;
- Substitution of bio-fuels for fossil fuels in the transport sector; and
- Thailand's Transport Infrastructure Development Plan.

3.2.2 Thailand's NDC

Thailand submitted its INDC and relevant information to the UNFCCC in 2015 to restate that GHG emissions can be reduced by 20% from the BAU levels by 2030, and up to 25% if the required support is received from international organizations. In addition to this progress, the NCCC established the Subcommittee on Climate Change Policy and Planning Integration, which is tasked with preparing and proposing mitigation mechanisms and measures that encompass the legal, economic, fiscal and social instruments that are required to translate the measures into the policies, strategies, and work plans to meet the medium-term and long-term mitigation targets. Since the submission of its first Biennial Update Report and ratification of the Paris Agreement in 2015, several climate change mitigation policies and measures have been put in place at the national level to fulfill Thailand's drive toward a low carbon and resilient society. In 2017, Thailand launched its NDC Roadmap to reduce 115.6 MtCO₂e, which will account for a 20.8% reduction by 2030 when compared to the BAU level.

As mentioned, both Thailand's NAMAs and Thailand's NDC were developed on the basis of BAU (Figure 3-1). The BAU scenario was created by using the Asia-Pacific Integrated Assessment Model (AIM). The AIM model was developed in collaboration between the National Institute for Environmental Studies (NIES) Japan, Kyoto University, the Mizuho Information & Research Institute, and other Asian researchers including Thailand. The AIM model focuses on relevant policies to support low-carbon pathways.

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3.1 Methodology for the Development of Long-term Low Greenhouse Gas Emission Pathways

3.1.1 Model for Low Greenhouse Gas Emission Pathways

Thailand's mid-century, long-term low greenhouse gas emission development strategy was developed based on the scenario of net-zero greenhouse gas emissions in the second half of this century, in line with science and the Paris Agreement. The BAU scenario was developed using input information of the current country's circumstances and status provided by related ministerial agencies into the Asia-Pacific Integrated Assessment Model (AIM) (Figure 3-2).

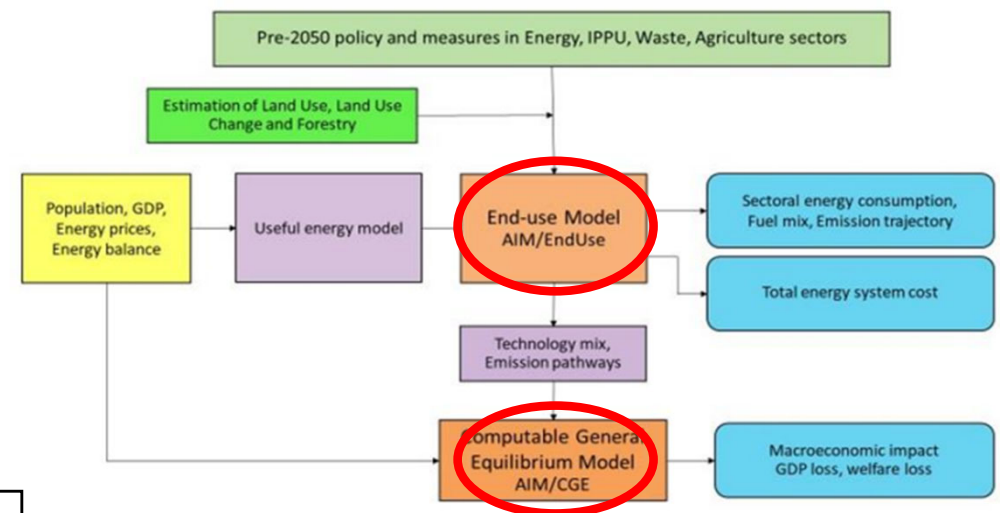


Figure 3-2: Framework of Thailand's LEADS Development

<https://unfccc.int/documents/181765>

https://unfccc.int/sites/default/files/resource/Thailand_LTS1.pdf

Long-term strategy for Low Carbon and Climate Resilience 2050 (2021)



4.1.1. Models for Mitigation Pathways

Indonesia used a set of models in developing the emission pathways with two stages of analysis. In the first stage, separate models were developed for modelling agriculture, forestry and other land uses (AFOLU), and energy. The AFOLU sector used AFOLU Dashboard (a spreadsheet model), meanwhile energy sector used AIM-EndUse and the AIM-ExSS (Extended Snapshot). In both models, economic and population growth are the key drivers for changes in food and energy demand. In the second stage, the economic and economic impact of both AFOLU and energy sector mitigation are analysed by utilizing the Asia Pacific Integrated Model/Computable General Equilibrium (AIM/CGE)-Indonesia (see Figure 3).

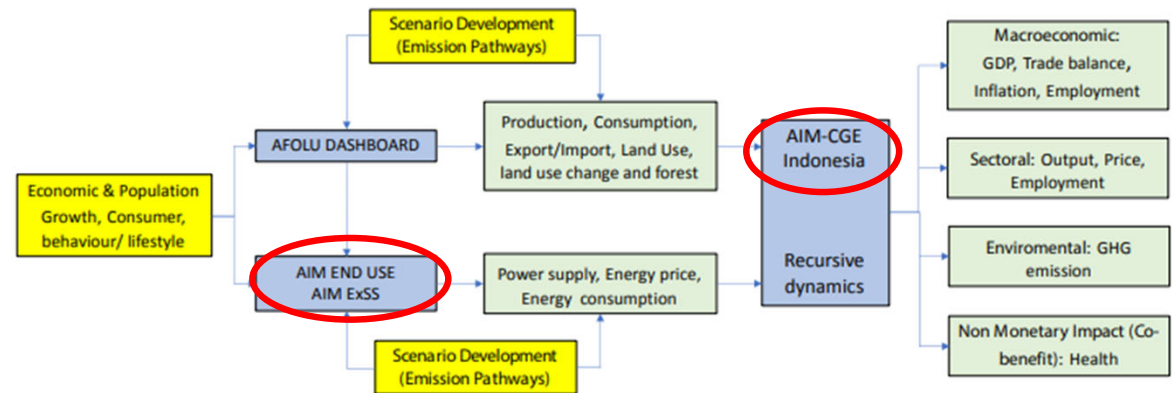


Figure 3. Models for developing emission pathways in Indonesia

Vietnam

Joint Ministerial Statement: 6th Viet Nam - Japan Environmental Policy Dialogue (2020.8)

Joint Ministerial Statement
6th Viet Nam - Japan Environmental Policy Dialogue

The 6th Viet Nam - Japan Environmental Policy Dialogue between the Ministry of Natural Resources of Viet Nam and the Ministry of the Environment of Japan was organized virtually on 24th and 25th August 2020. Following is the summary of discussions of the meeting:

Session 1: Review on Progress of the Cooperation

- Both sides welcomed the outcome of the cooperation between the two Ministries since the 5th Policy Dialogue and shared the progress of the cooperation in various areas within the framework of the dialogue, including in the Joint Credit Mechanism (JCM), Partnership to Strengthen Transparency for co-innovation (PaSTI), supporting climate adaptation plans for three provinces in Viet Nam, revision of Environmental Protection Law 2014, amongst others.

Session 2: Climate Change

- Both sides shared the review of climate change measures after the adoption of Paris Agreement and confirmed commitment for continuous and enhanced cooperation in the areas of mitigation, transparency, and adaptation.
- Regarding mitigation, both sides agreed on comprehensive cooperation for advancing transition towards decarbonization in Viet Nam through introducing and/or updating policies, instruments, capacity building and diffusion of low-carbon and decarbonized technologies, including developing the long-term strategy and mainstreaming renewable energy by for instance utilizing AIM model.
- Both sides welcomed the progress of renewing the bilateral document on the JCM and confirmed that the JCM continues to be an important mechanism in contributing to mitigation activities. Both sides also recognized the potential in utilizing the JCM for the achievement of SDGs and facilitating multilateral partnerships among the JCM partner countries and relevant stakeholders through the JCM Global Partnership.
- Regarding transparency, both sides agreed to promote identification of specific activities in the Partnership to Strengthen Transparency for co-Innovation (PaSTI) and to cooperate in Long-term Strategy towards reducing emissions, and confirmed to discuss detailed activities.
- Both sides also agreed on accelerating efforts to advance lifecycle management of fluorocarbon including continued engagement to global actions, such as the Initiative on Fluorocarbons Life Cycle Management, amongst others.
- Recognizing the strategic importance of engaging cities in advancing decarbonization, both

3. Regarding mitigation, both sides agreed on comprehensive cooperation for advancing transition towards decarbonization in Viet Nam through introducing and/or updating policies, instruments, capacity building and diffusion of low-carbon and decarbonized technologies, including developing the long-term strategy and mainstreaming renewable energy by for instance **utilizing AIM model**.

