

Session 1: Toward the Realization of a Decarbonized Society

AIM as a tool to assess transition options toward a decarbonized society

- [Chairperson] Dr. Tatsuya Hanaoka (NIES, Japan)
- [Case study 1] Prof. Kejun Jiang (ERI, China)
- [Case study 2] Dr. Ucok Siagian (ITB, Indonesia)
- [Discussants] Mr. Nuttavut Intarode (The Siam Cement, Thailand) and
Mr. Makoto Kato (OECC, Japan)

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IPCC AR6 WG3 : Mitigation of Climate Change

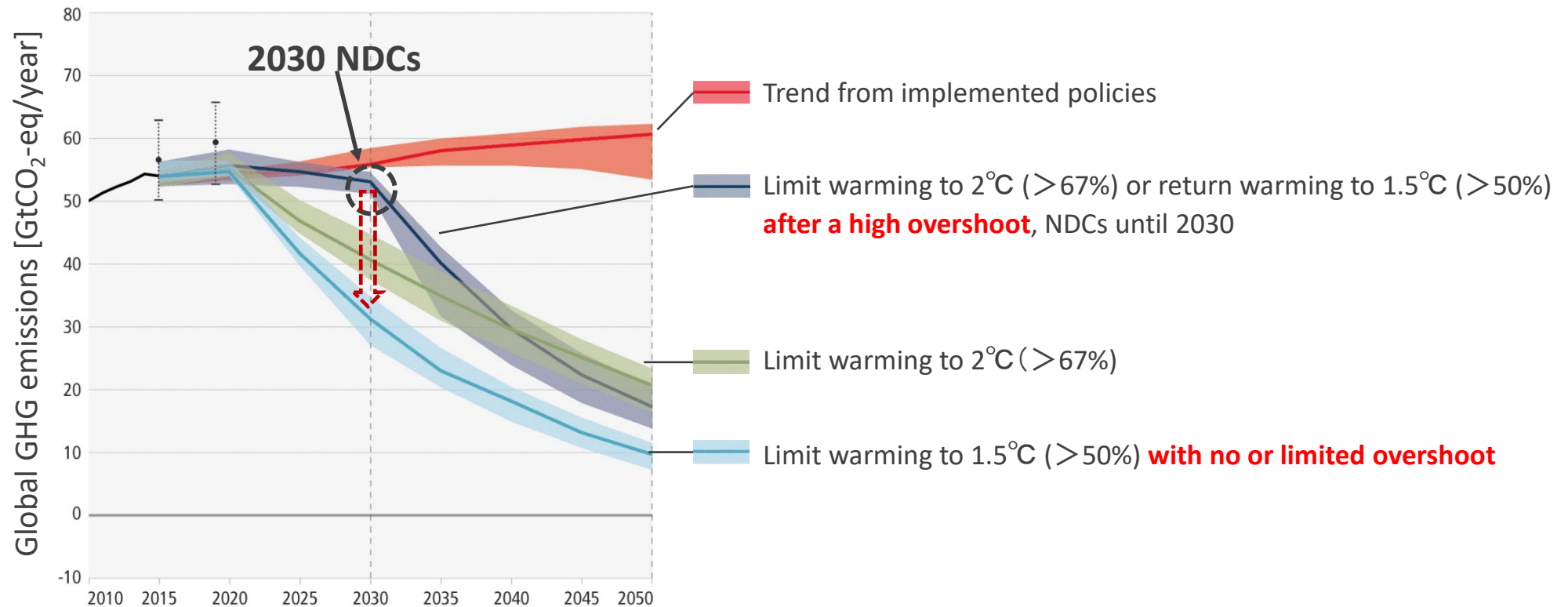
Global GHG emissions of modelled pathways and NDCs announced prior to COP26

- ❑ Global GHG emissions in 2030 associated with the implementation of Nationally Determined Contributions (NDCs) announced prior to COP26 would make it likely that **warming will exceed 1.5°C during the 21st century.**
- ❑ Likely limiting warming to below 2°C would then rely on **a rapid acceleration of mitigation efforts after 2030.**

(SPM B.6)

- ❑ How can we bridge the emission gaps?
- ❑ How can we ratchet up 2030 NDCs?
- ❑ How can we make it realized?

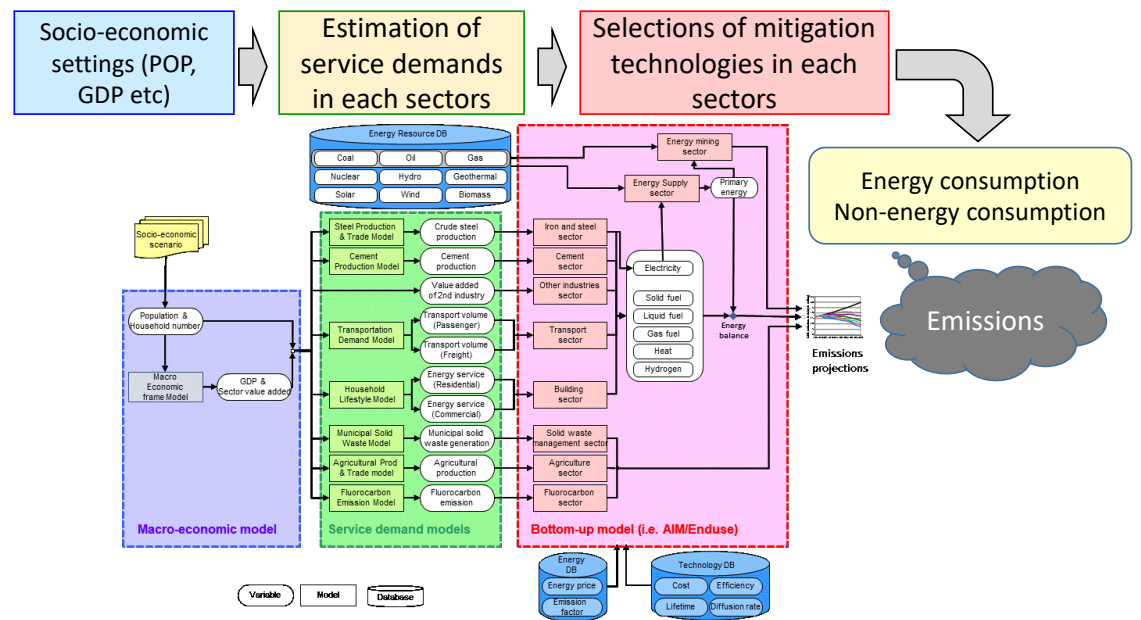
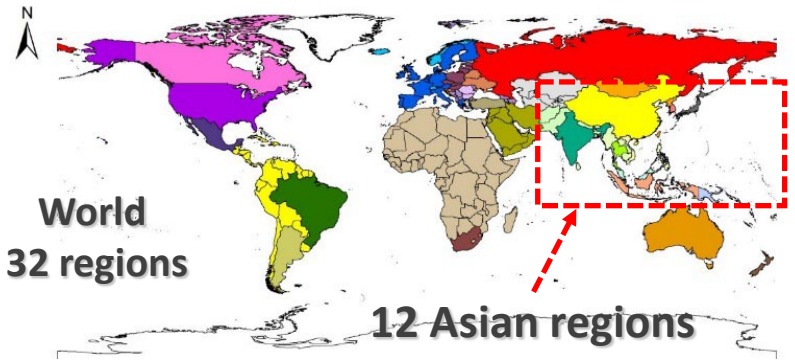
Discussion points




Source) Excerpted and edited from IPCC AR6 WG3 SPM Figure SPM.4

Overview of the AIM/Enduse[Global] model

- Bottom-up type model with detailed technology selection framework with optimizing the total system cost
- Recursive dynamic model (=Calculating year by year)
- Analyzing effects of technological transitions and policies such as carbon/energy tax, subsidy, regulation and so on.
- Global 32 regionals, especially focusing on Asia, such as Japan, China, India, Korea, Indonesia, Thailand, Vietnam, Malaysia, etc.

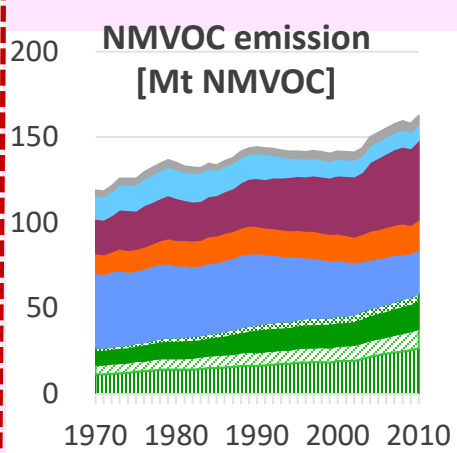
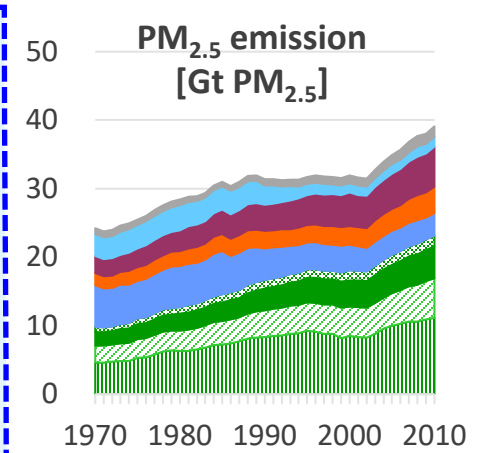
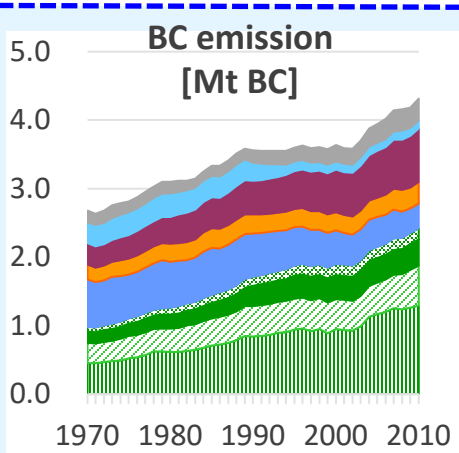
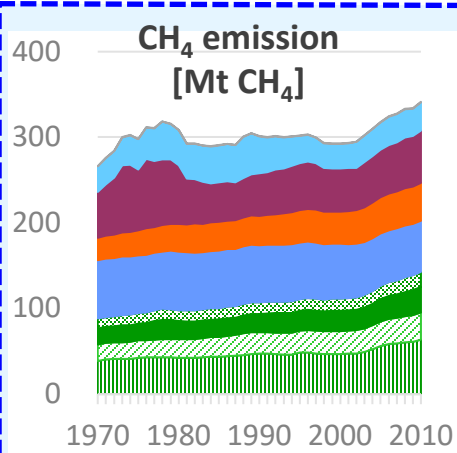
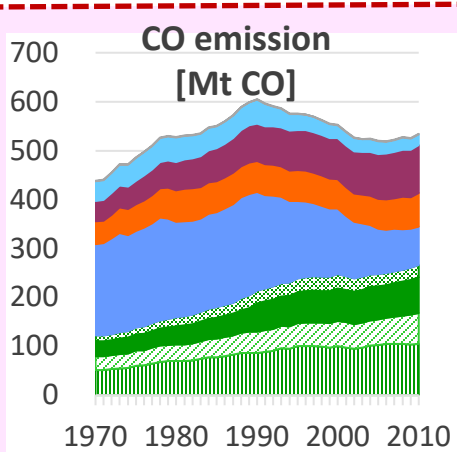
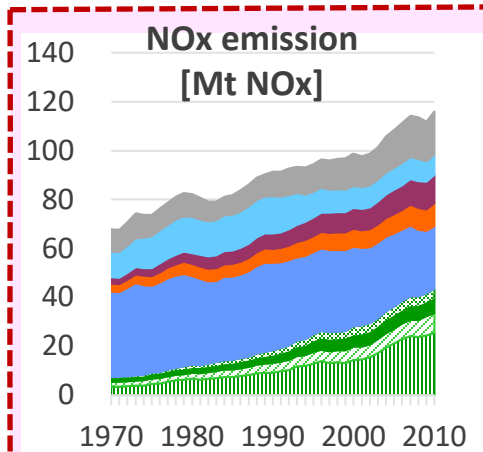
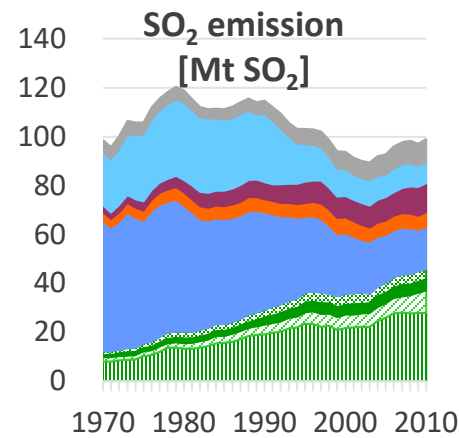
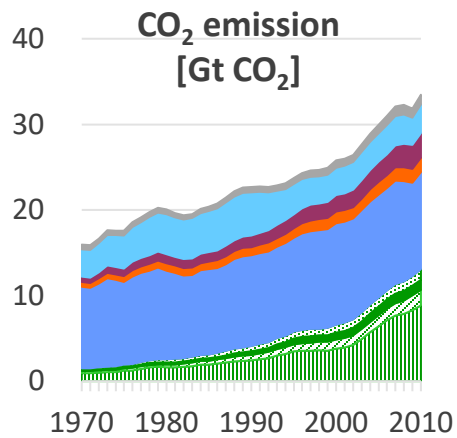
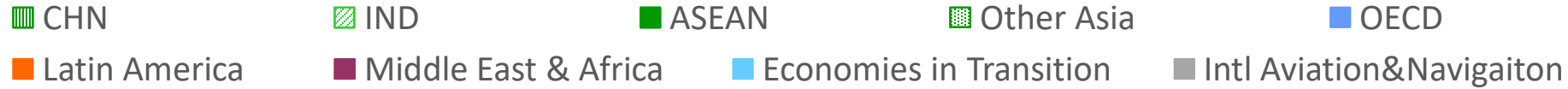


https://www-iam.nies.go.jp/aim/data_tools/enduse_model/aim_enduse_manual.pdf

Why Asia regions are important ? 

- ✓ Exploring technological potentials and Global Carbon-Neutrality pathways, focusing on **both GHGs and SLCFs** (Short-Lived Climate Forcers)
- ✓ Analyzing **cobenefit and tradeoff effects** on other environmental issues such as air pollution, waste, etc, **especially in Asia regions.**

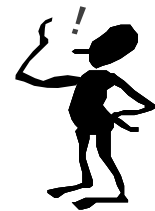
Global Anthropogenic Historical Emissions of CO₂ and non-CO₂



Short-Lived Climate Forcers

Precursors of tropospheric O₃

Asia account for a large proportion of air pollutants, SLCFs as well as CO₂



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