

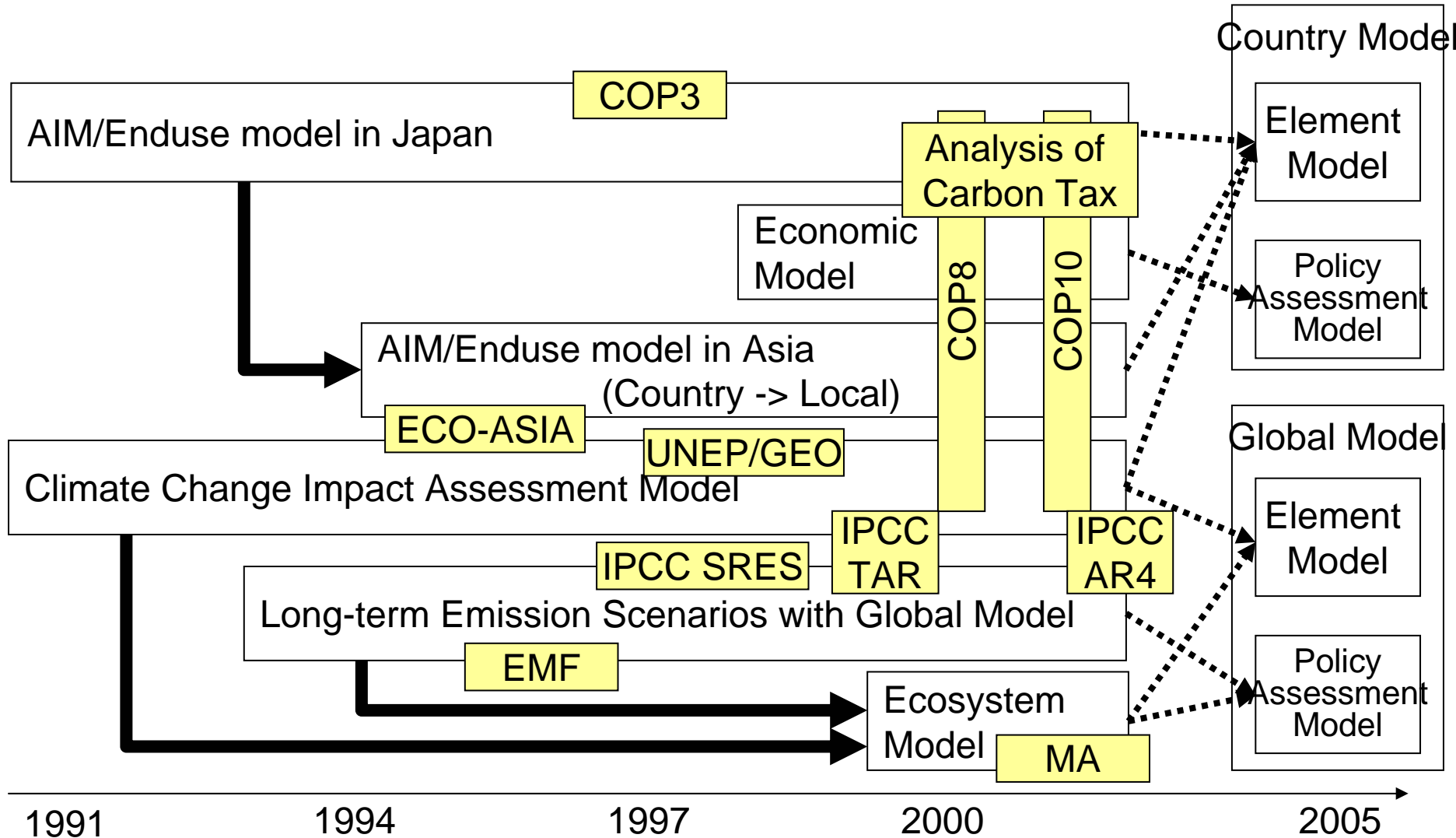
The 10th AIM International Workshop
10-12 March 2005
NIES, Tsukuba, Japan

Recent Development of AIM Models and Activities

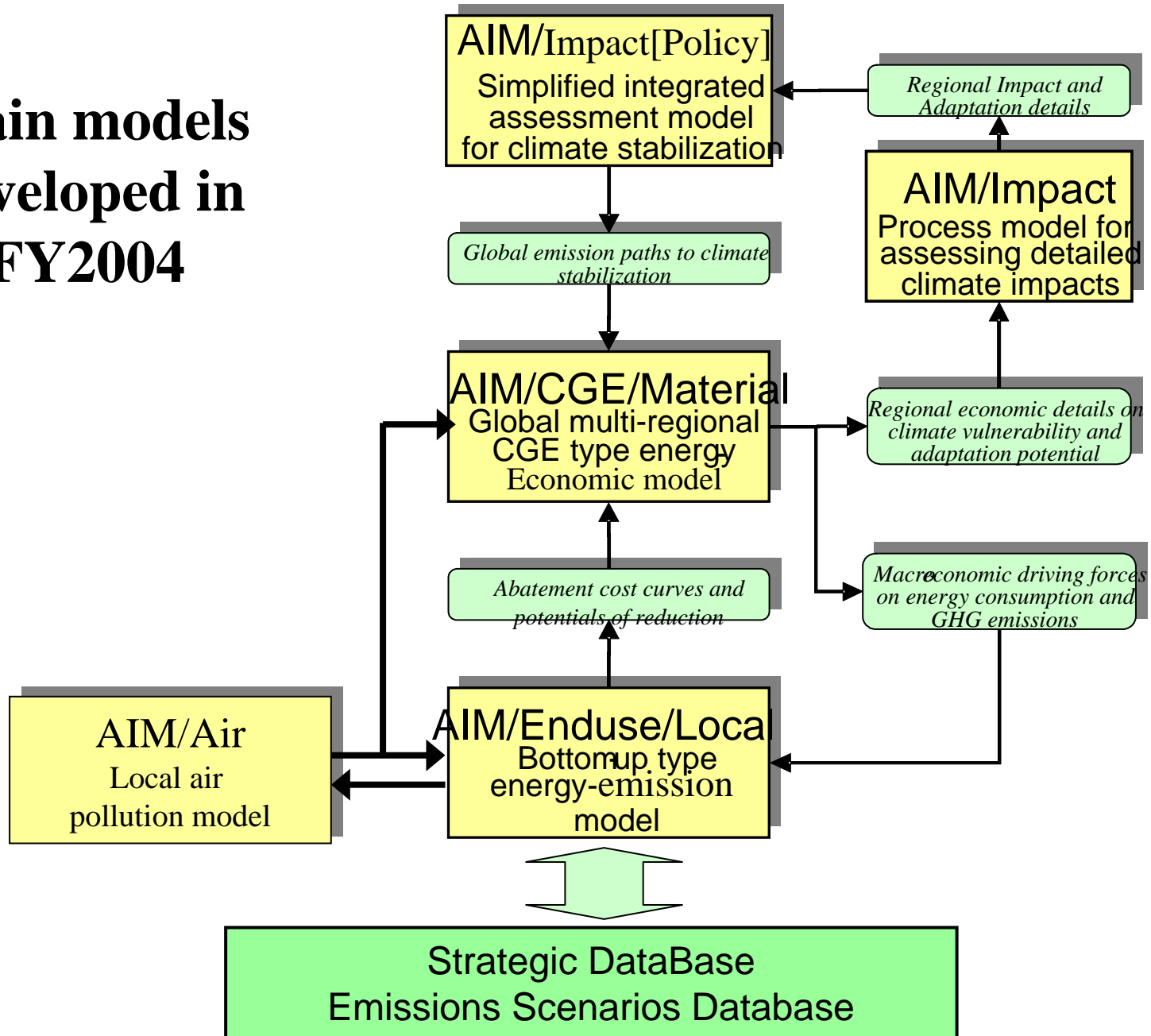
Mikiko Kainuma

National Institute for Environmental Studies

AIM model building and its contribution



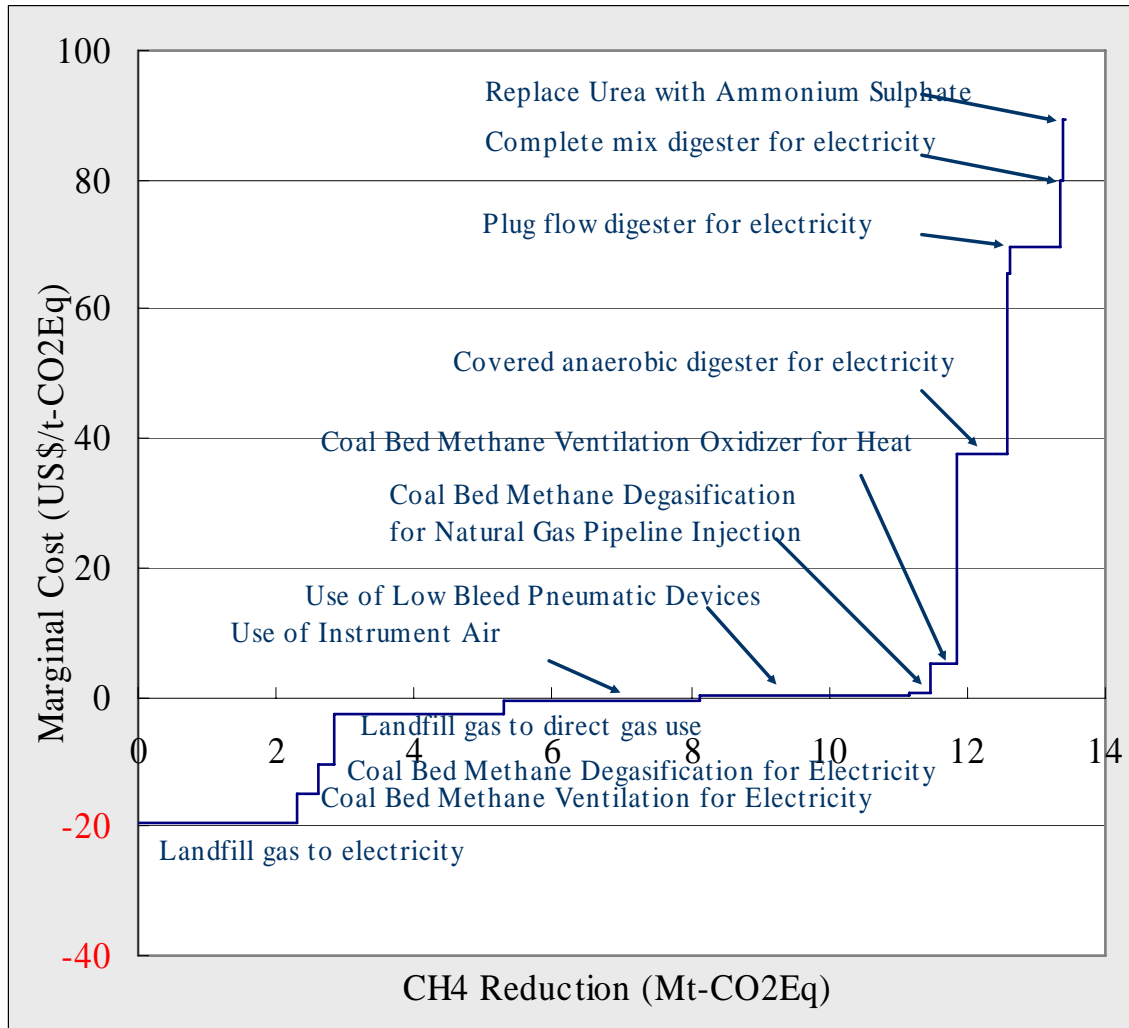
Main models developed in FY2004



Activities/Contribution

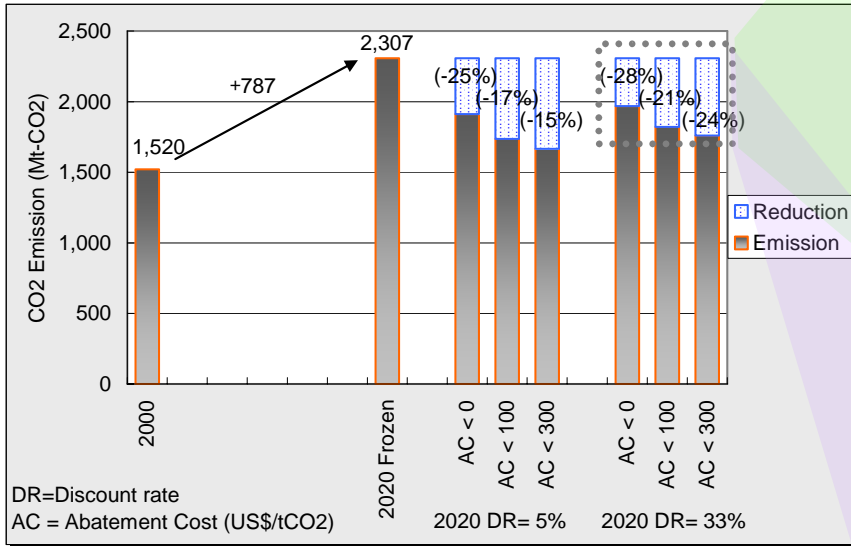
- APEIS Workshop
August 2004, Bangkok
- Informal Modeling Meeting by MoFA
- AIM Training Workshop
November-December 2004, NIES
- 10th AIM International Workshop
10-12 March 2005, NIES
- IPCC 4th Assessment Report
- UNEP/GEO4

Some outputs from Enduse [Global]

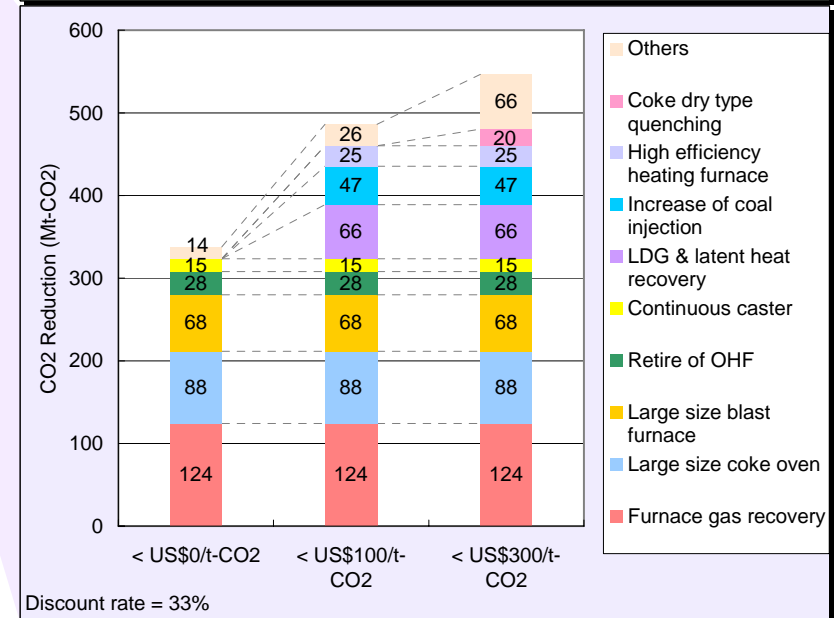
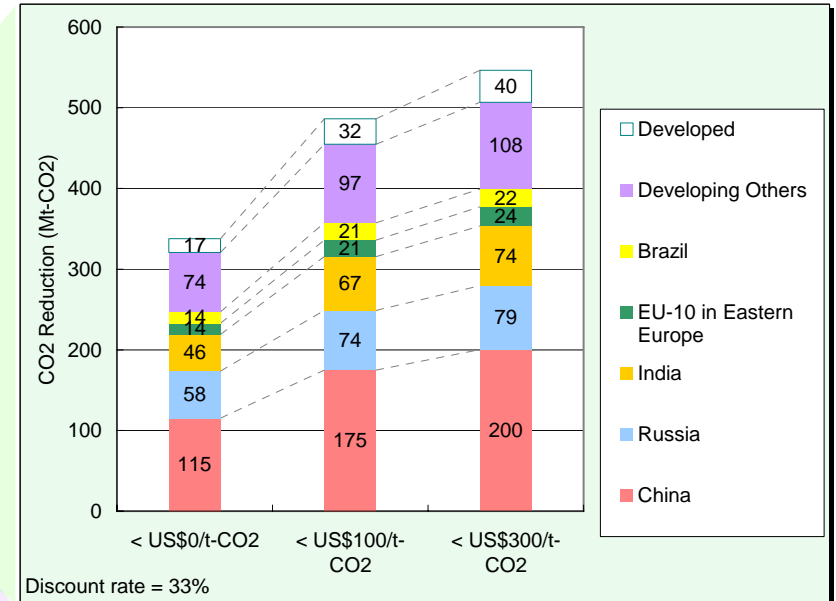


Additional function to estimate marginal abatement cost curve

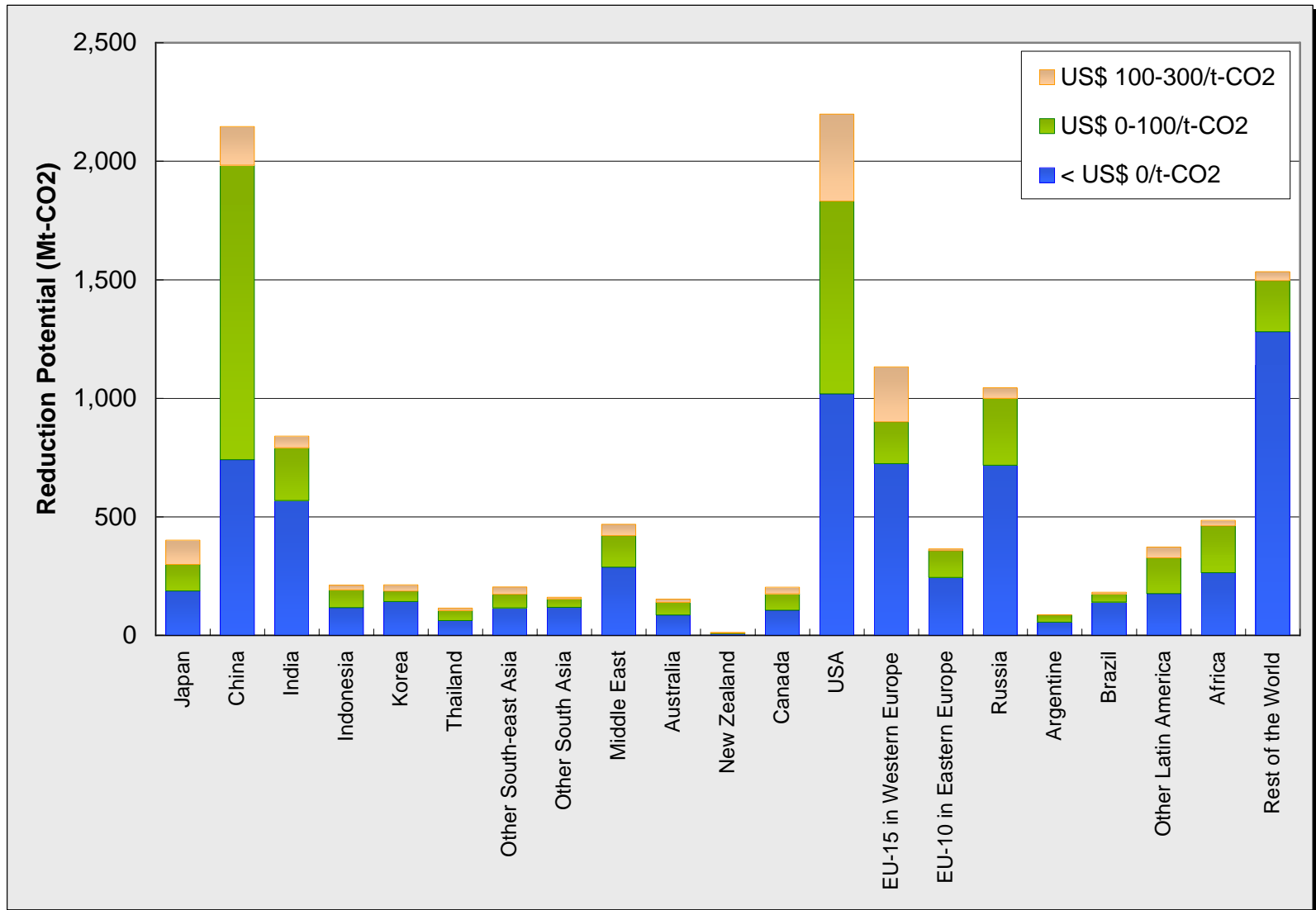
Reduction potential from steel sector in 2020



Discount Rate	Abatement Cost US\$/tCO2	CO2 Reduction	
		Mt-CO2	vs frozen
33%	less than 0	338	15%
	less than 100	486	21%
	less than 300	546	24%
5%	less than 0	395	17%
	less than 100	571	25%
	less than 300	642	28%



Region-wise reduction potential in 2020



Discount rate = 5%

Technology with large reduction potential

under 100 US\$ marginal abatement costs in 2020

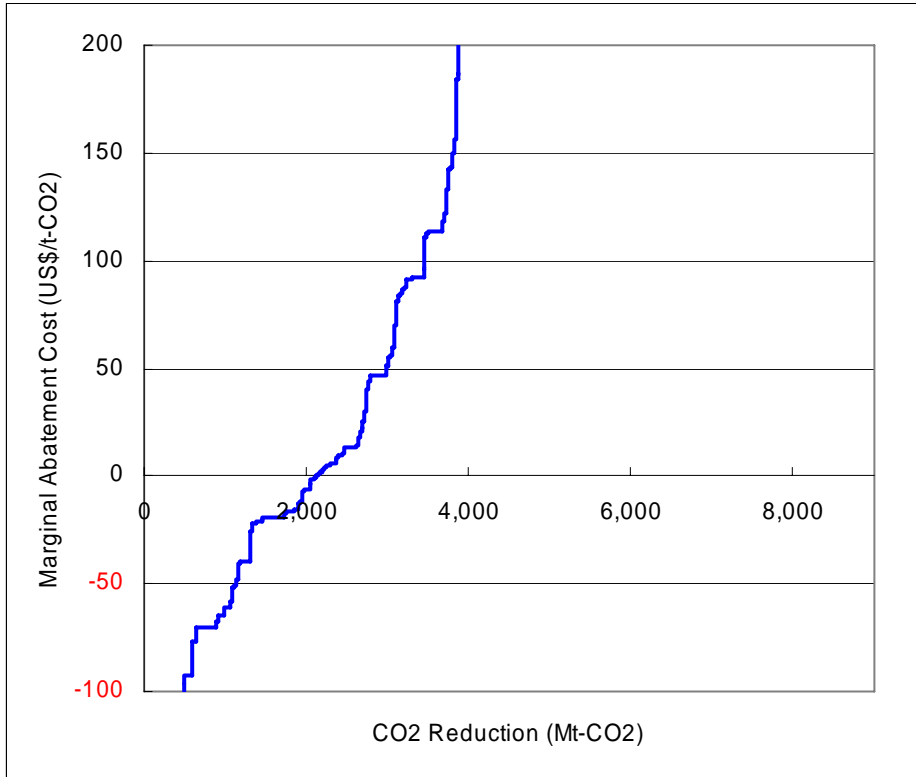
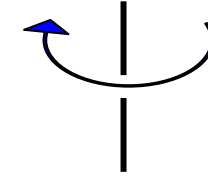
Developed	(MtCO ₂)	Developing/Transition	(MtCO ₂)
High efficiency gasoline engine (VVLVT, GDI etc)	632	Existing type of power plant (coal ,gas)	2,462
Existing type of power plant (coal ,gas)	546	Use of instrument air, low bleed pneumatic devices*	676
Inverter control for motor	216	Gas high efficiency industrial furnace	449
Fluorescent of incandescent type	143	Inverter control for motor	431
Domestic refrigeration: recovery	129	Coal bed methane ventilation oxidizer for heat**	232

* Recovery of CH₄ leakage from natural gas pipeline and well

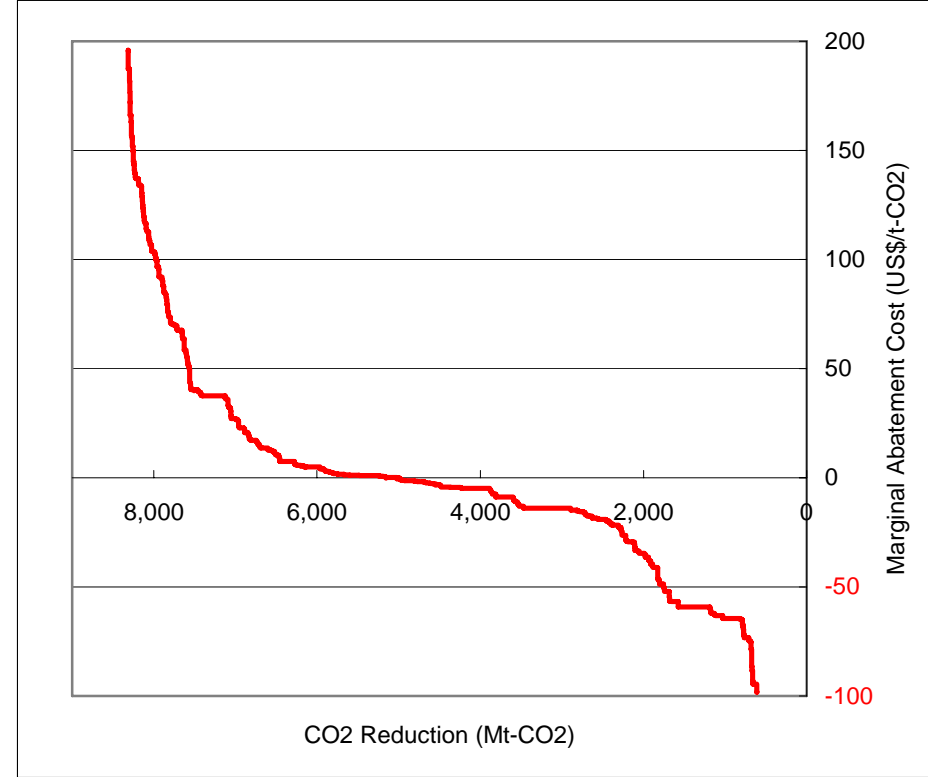
** Recovery of CH₄ in coal mine

Discount rate = 5%

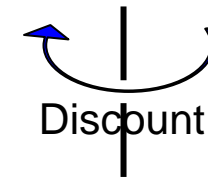
Marginal abatement cost of developed and developing/transition economies



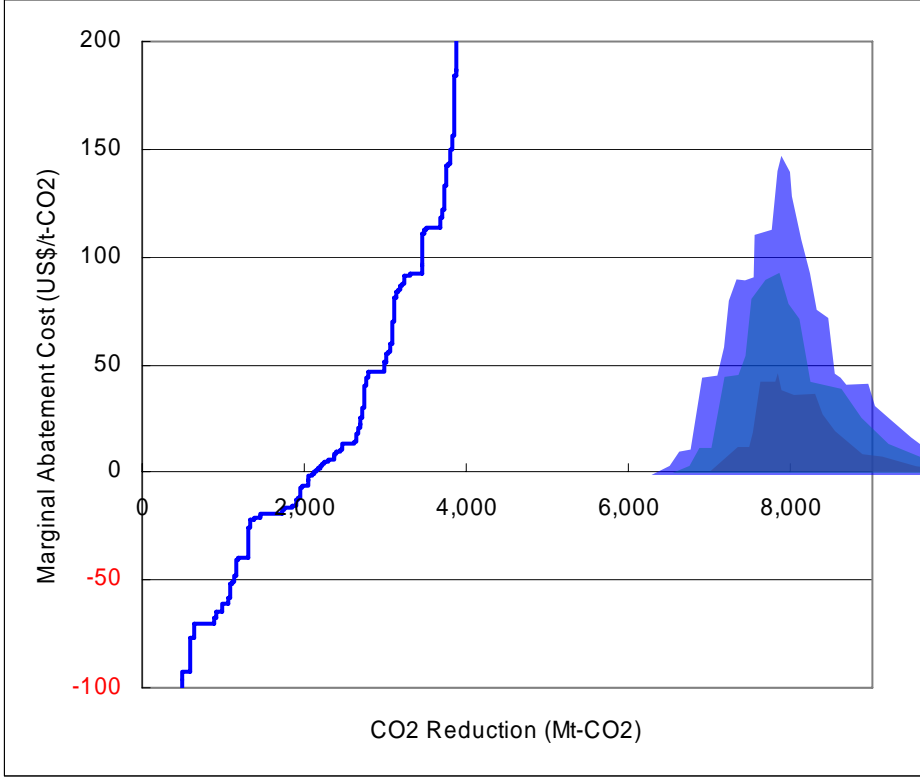
Developed



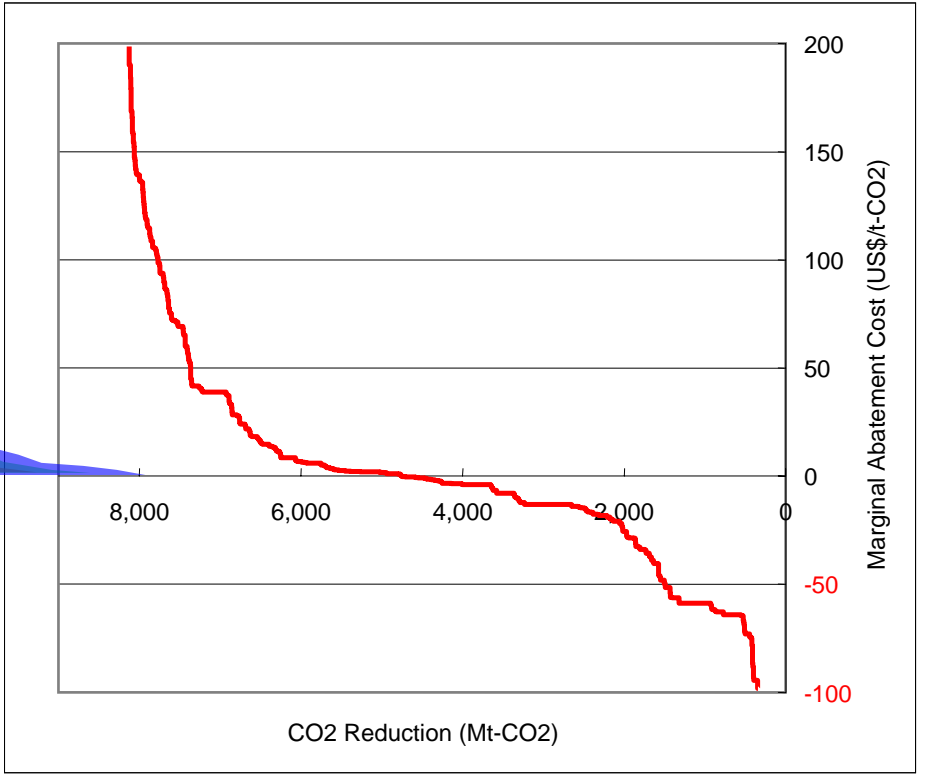
Developing/Transition



Discount rate = 5%, 2020



Developed



Developing/Transition

Discount rate = 5%, 2020

Outputs of AIM presented in the following sessions

- Impact modeling [Session II & III]
- Emission inventory and modeling in China, India, Thailand and Korea [Session IV & V]
- AIM/Air [Session VI]
- Emissions scenarios database for IPCC AR4 [Session VII]
- UNEP/GEO4 Scenarios [Session VII]
- Strategic database [Session VIII]
- CGE modeling for APEIS project [Session VIII]
- Scenarios for low carbon society toward 2050 project [Session IX]

Thank you for your continued
collaboration!