

The 8th AIM International Workshop

March 13-15, 2003
NIES, Tsukuba, Japan

Activities in the Fiscal Year 2002 in Korea

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Climate Policy in Korea (Energy)

○ Comprehensive Energy Saving Programs

- **Energy Diagnosis: Industrial Sector; 1239, Commercial Buildings; 377 ⇒ 1,784 Th. TOE Energy Savings per Year (1980-2001)**
- **Early Reduction Registration; Registration of GHG Reductions/Certificates/... (2002-2004)**
- **Energy Efficiency Certificate: To give the Certificate to the company who meets certain criteria on energy saving programs**
- **Expansion of ESCO Activities; 100 Bil. Won Market (2001) will be expanded.**

Climate Policy in Korea (Energy)

○Energy Efficiency Improvement Programs

- **Voluntary Agreement: 376 Unit Participation (2001)**
in 2000, energy consumption of VA participating companies is **49.5%** of total energy consumption.
In 2003, 600 more will participate into VA; **5,087 Th.**
T-C of GHG Reduction
- **Expansion of District Heating; DH covered **8.9%** of**
total households. (2001), **1,108 Th.** TOE Energy Savings
are expected by 2004

Climate Policy in Korea (Energy)

○Renewable/Clean Energy

- Renewable Energy: Target; 2% of total primary energy supply (2003) ⇒ 3,930 Th. Th. T-C of GHG Reduction
- Natural Gas: Town Gas; 58.7% (2000) ⇒ 73.0% (2010) ⇒ 14.5 Mil. T-C of GHG Reduction (2002-2010)

○Nuclear Energy

- 12 New Plants (2002 – 2015); ⇒ 44,100 Th. Th. T-C of GHG Reduction per Year (vs. Coal-fired power plant) ⇒ 28,740 Th. Th. T-C of GHG Reduction per Year (vs. Gas-fired power plant)

Climate Policy in Korea (Transportation)

○ Infra/Demand Management

- **Transport Modes ⇒ More Mass-Transportation System; Train (Share) 7.6% (1997) ⇒ 14.7% (2004) Subway; Total 401.4Km (12 lines) ⇒ 144Km More (2007)**
- **Demand Side Management; Carpool/Bus Only Lane/Bicycle Lane/....**

Climate Policy in Korea (Transportation)

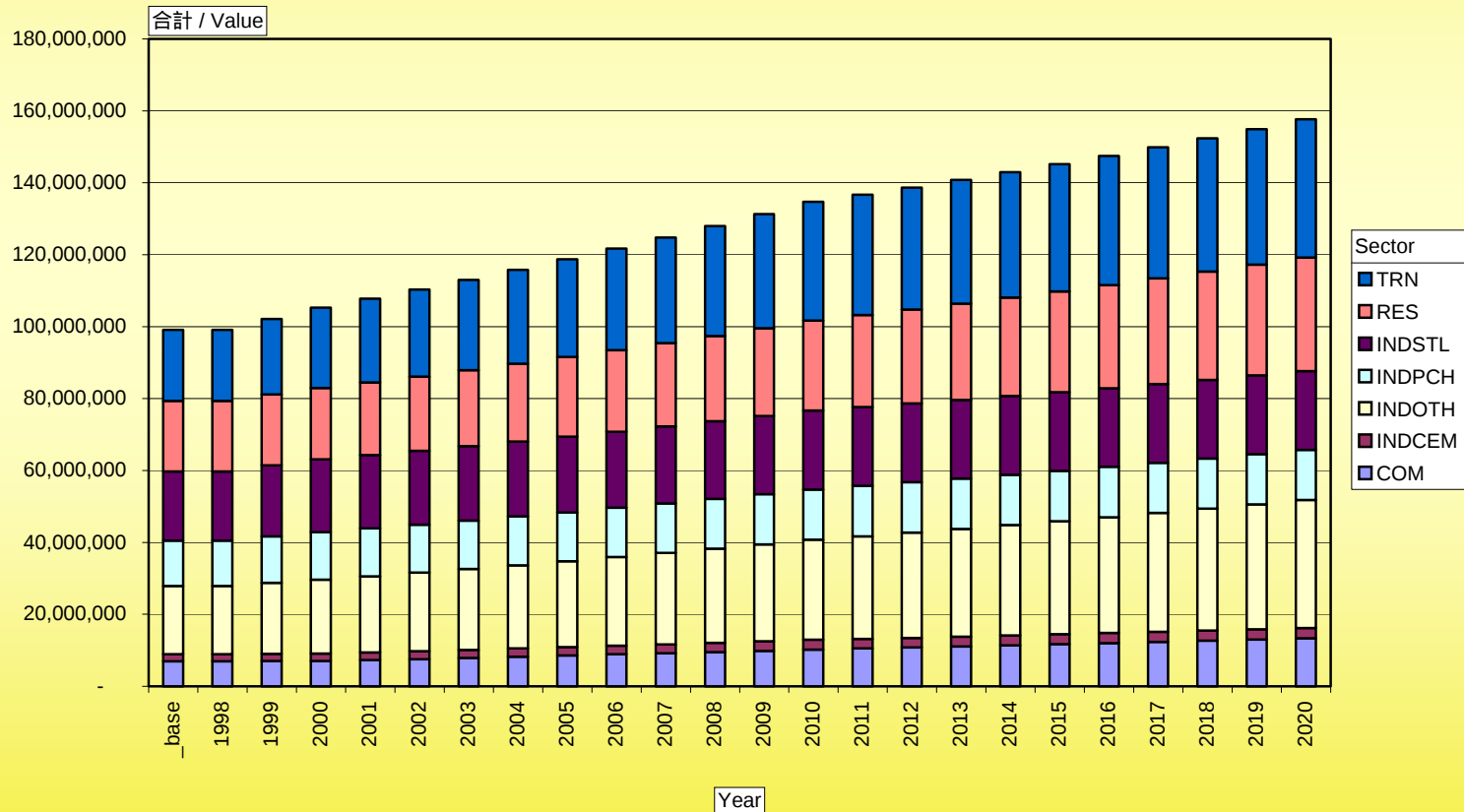
○ Transportation Mode Change

- CNG Bus; **1,124** Units (2002) $\Rightarrow$ **1,059** Units More
- Small Car (Less than 800cc); **713** Th. Units (**8%**) (2001) $\Rightarrow$ **10%** (2003) ; **215** Th. TOE Energy Saving
- Diesel Passenger Car; by 2002 (Engine Size 1,200/2000cc; meet Euro-III), Euro-IV (by 2005)

BAU Simulation Results (1)

CO2 Emissions

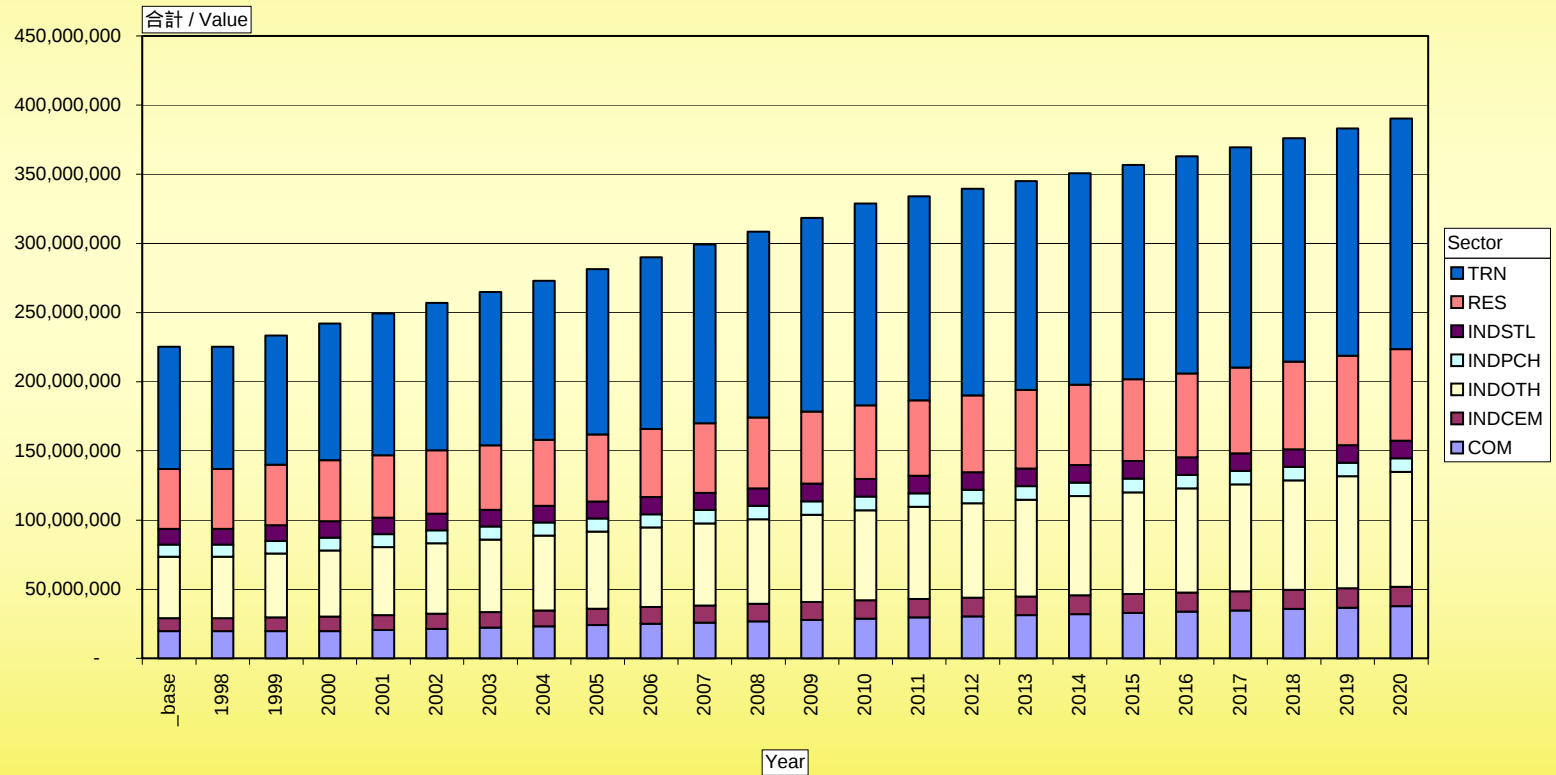
LPS_Area() LPS() Region() Removal() Kind EMS Item CO2 Energy_Device()



BAU Simulation Results (2)

NO2 Emissions

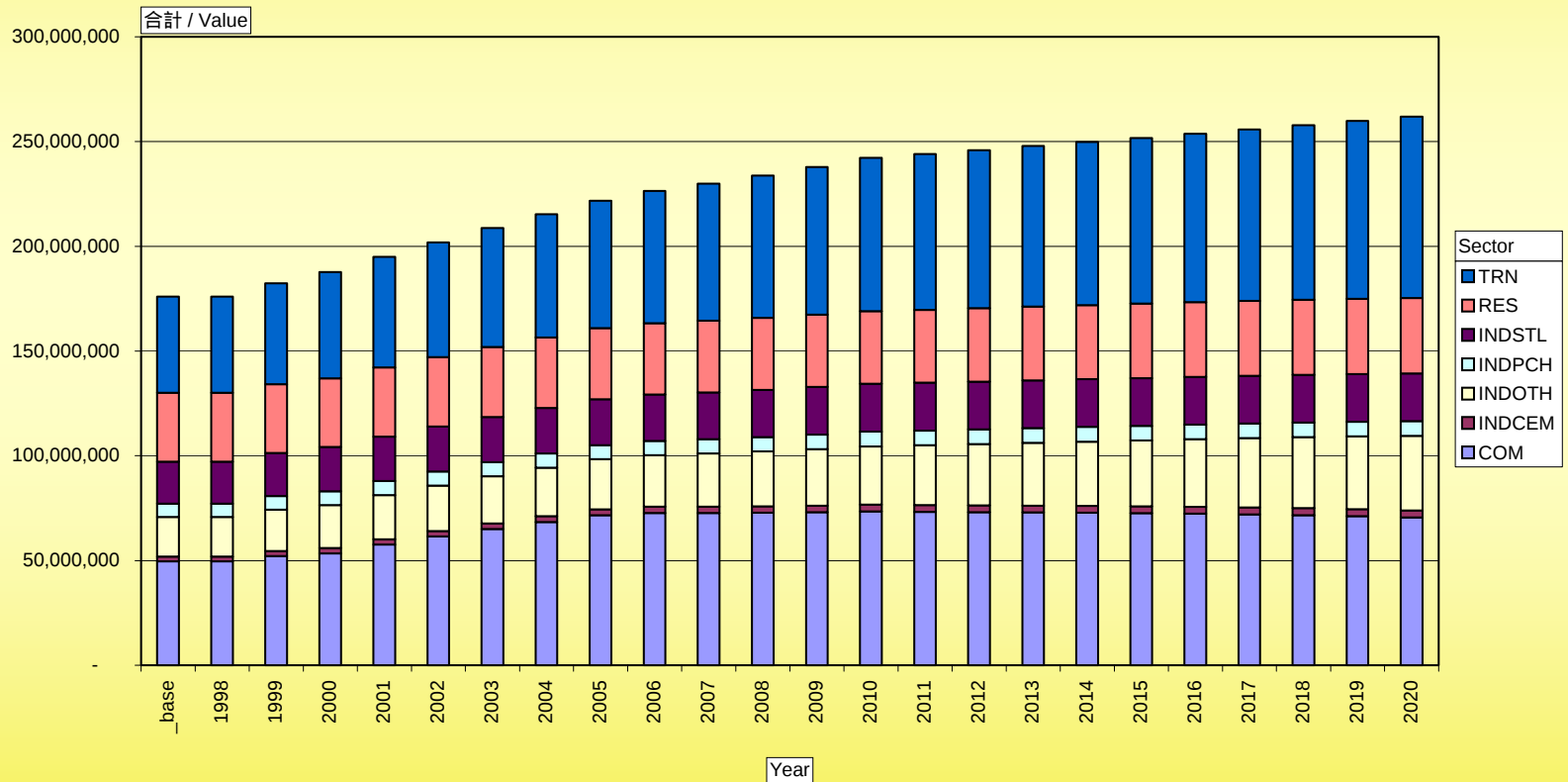
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BAU Simulation Results (3)

SO2 Emissions

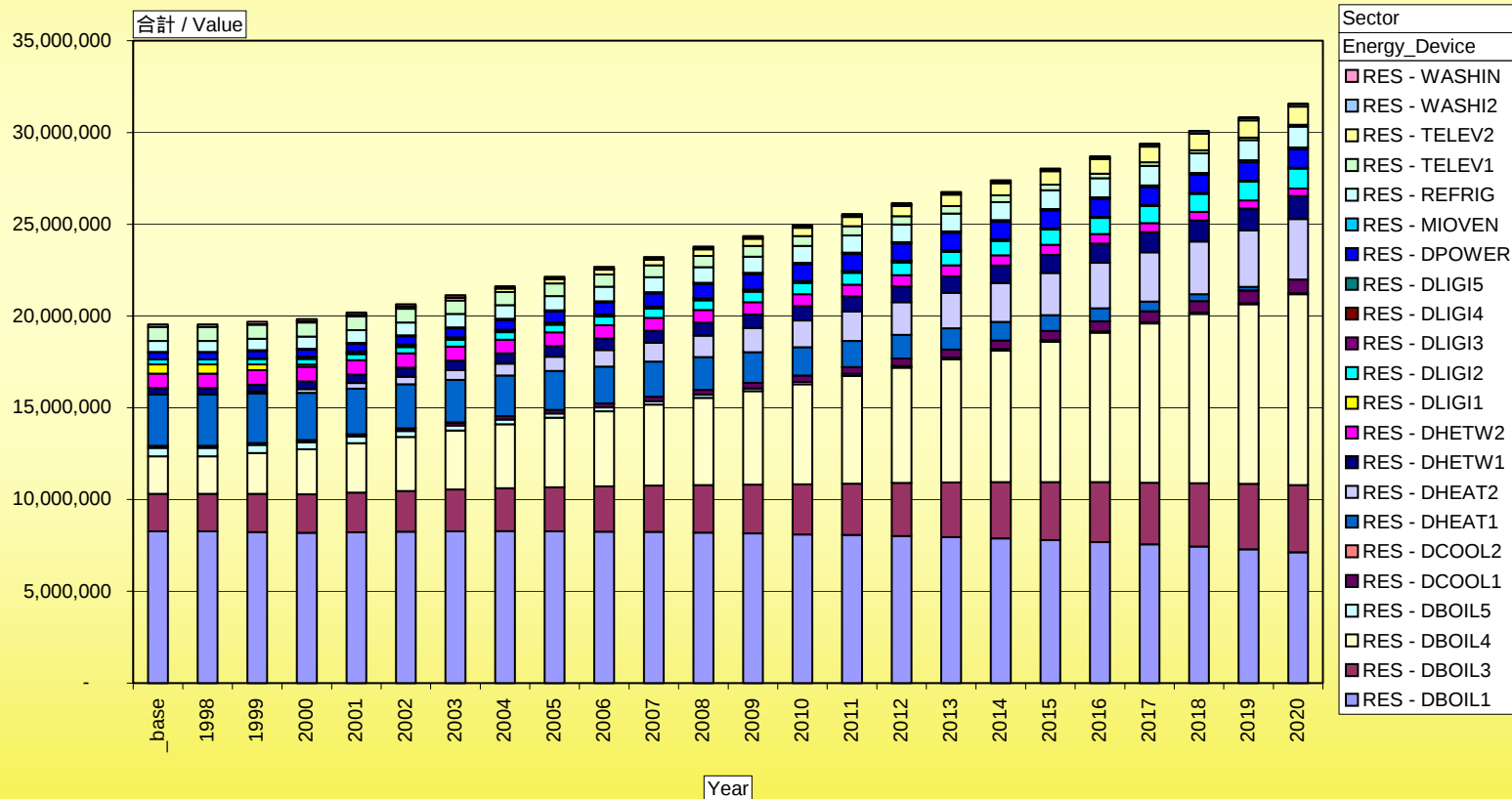
LPS_Area() LPS() Region() Removal() Kind EMS Item SO2 Energy_Device()



BAU Simulation Results (4)

CO2 Emissions (Residential Sector)

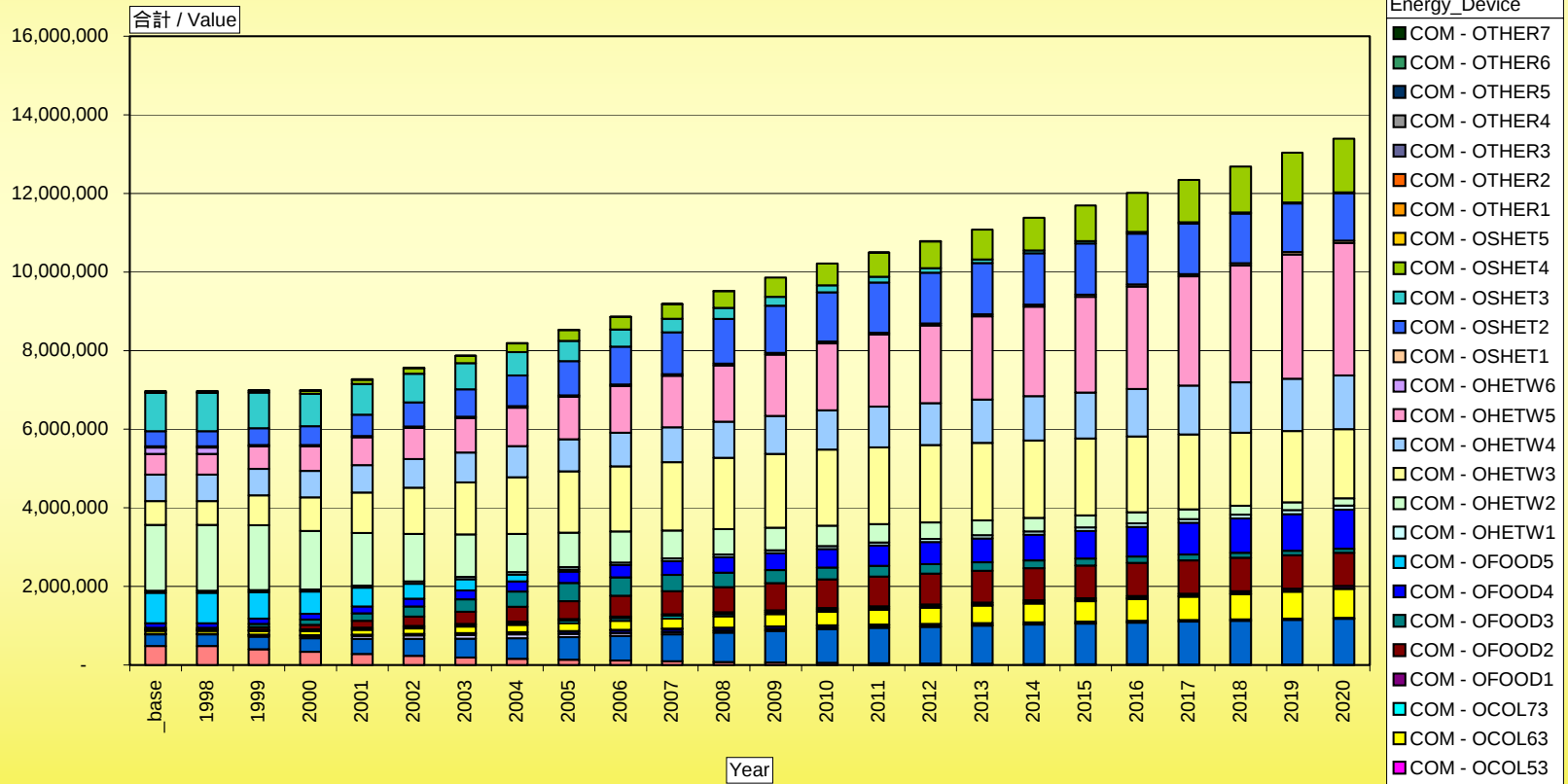
LPS_Area() LPS() Region() Removal() Kind EMS Item CO2



BAU Simulation Results (5)

CO2 Emissions (Commercial Sector)

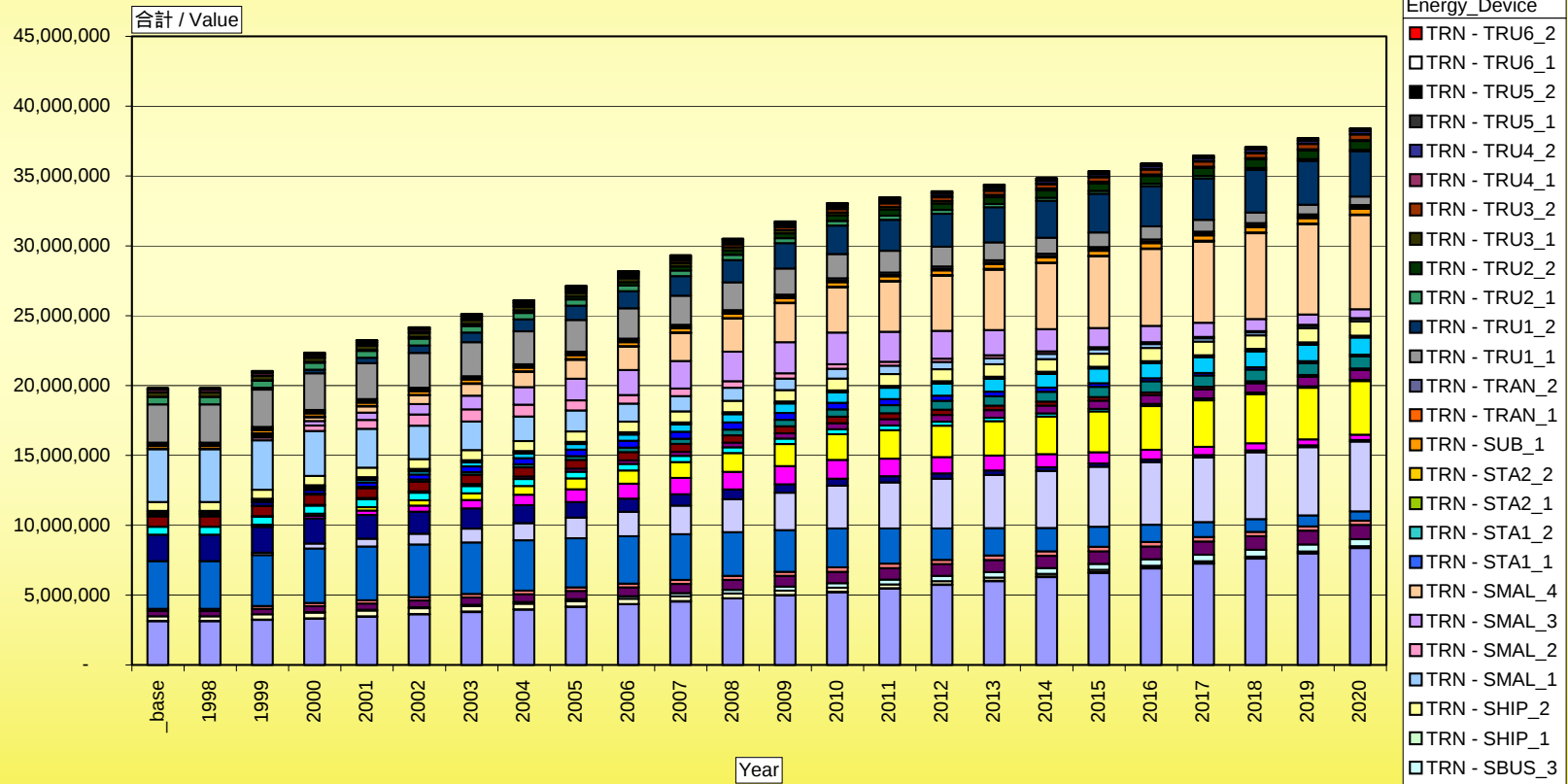
LPS_Area() LPS() Region() Removal() Kind EMS Item CO2



BAU Simulation Results (6)

CO2 Emissions (Transportation Sector)

LPS_Area() LPS() Region() Removal() Kind EMS Item CO2



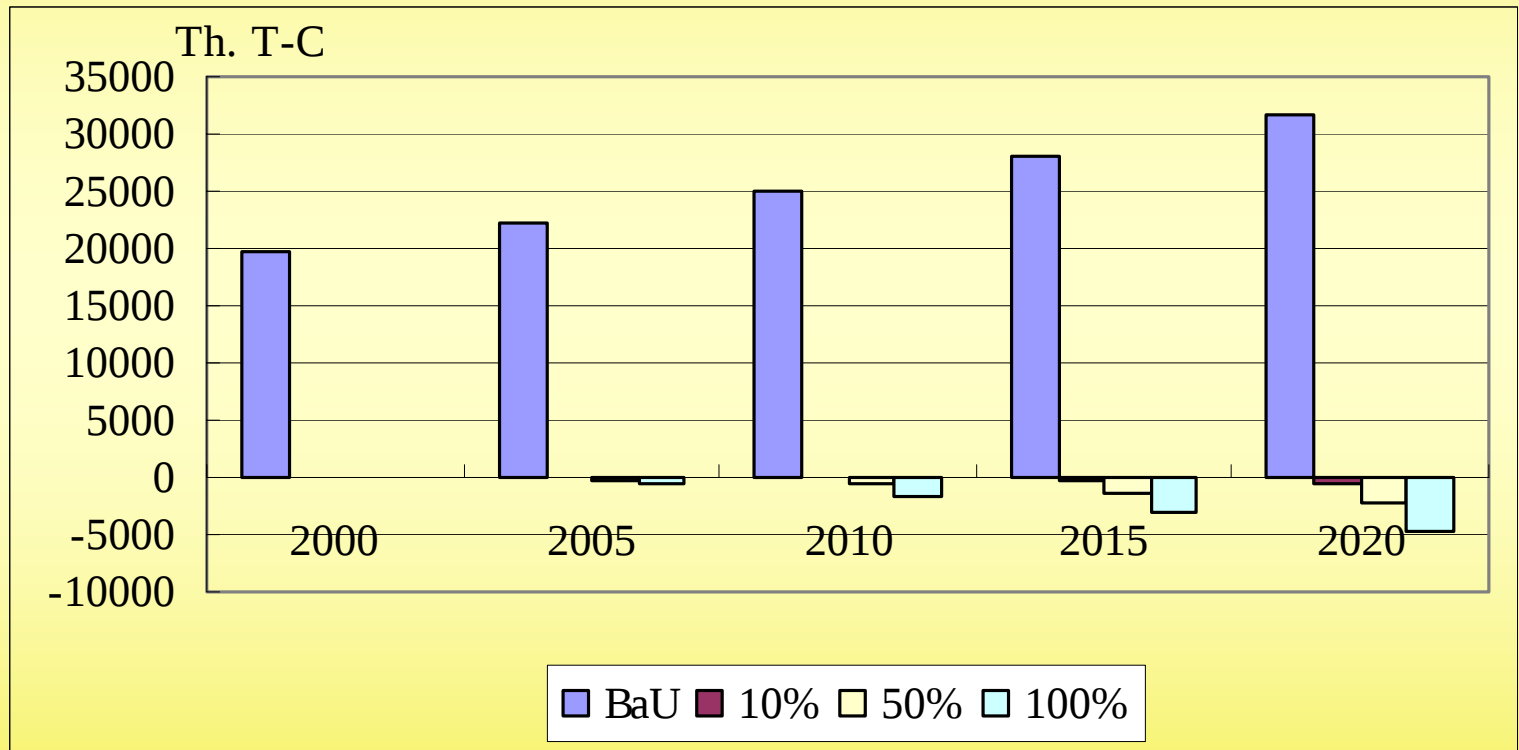
Action Simulation List

(Residential Sector)

RTCOLR	Raise the temperature of a Air Conditioner at 1degree(cool)
RUHCOR	Air Conditioner: One hour Save
RUHBTS	Watching TV: One hour Save
TOSWTV	Turn off the TV switch when we don't watch it.
CUCFLD	Clean up Cleaner's filter
CUCOLD	Clean up air Conditioner's filter
CHILMP	Change Incandescent Lamp into compact Fluorescent Lamp
CUBOD1	Clean up boiler diligentiy1
UHDEC1	Use a high efficient cooker

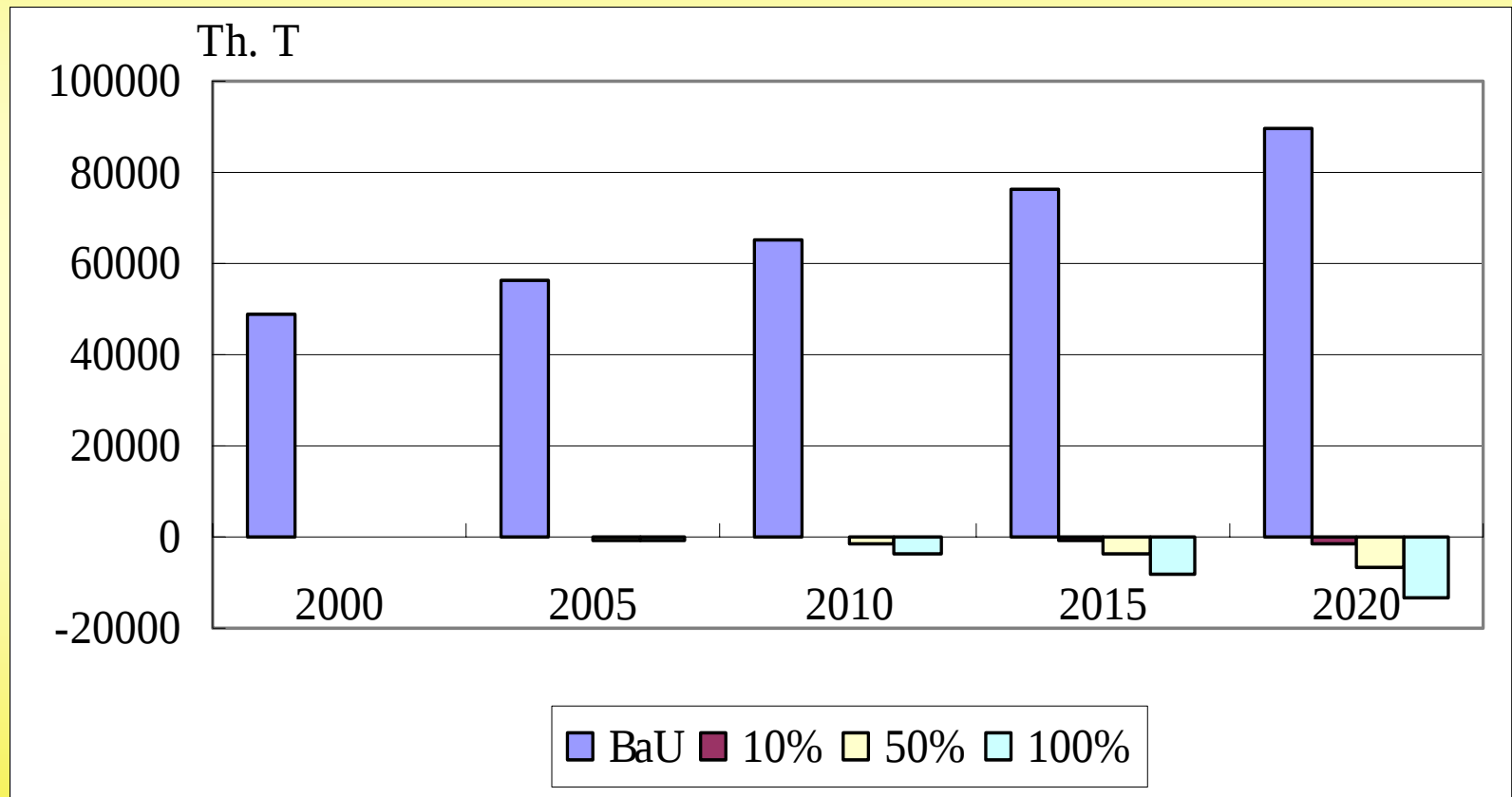
Action Simulation Results (1)

CO2 Emissions (Residential Sector)



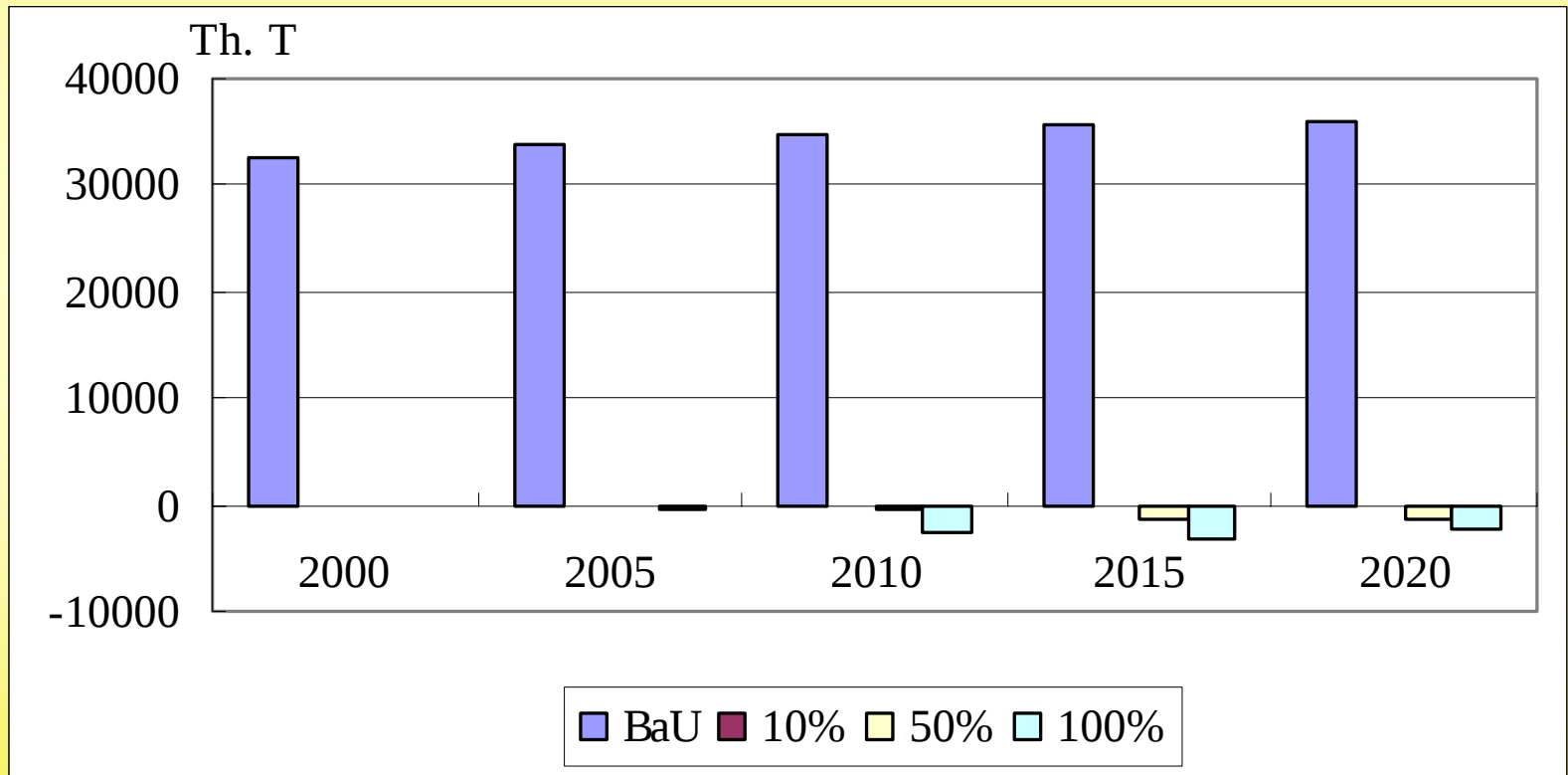
Action Simulation Results (2)

NO2 Emissions (Residential Sector)



Action Simulation Results (3)

SO2 Emissions (Residential Sector)



Action Simulation List

(Commercial Sector)

RTCOC1	Raise the temperature of a air Conditioner at 1degree(1)
CISE01	Change to Energy efficient devices for cooling
CISEH2	Change to Energy efficient devices for heating
RUHAC1	Air Conditioner: One hour Save
TOSWCO	Turn off the computer switch during the lunch break
ITRC01	Introduce a high degree efficient machine(cool1)

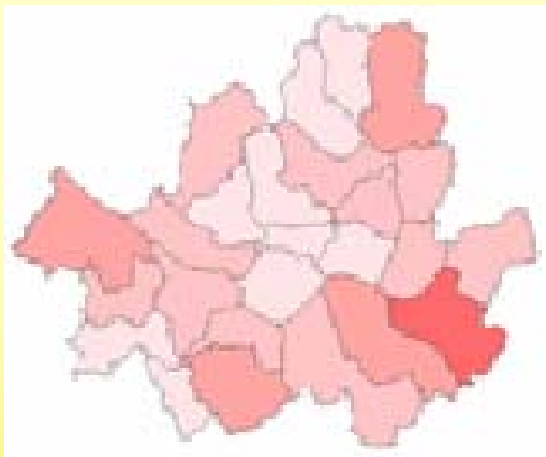
Action Simulation List (Transportation Sector)

APRE01	Proper Tire Air pressure
SSTR01	Maintain Economic Speed
IDLS01	Stop idling
ACLE01	Proper accelerator operation
RINS01	Regular Inspection

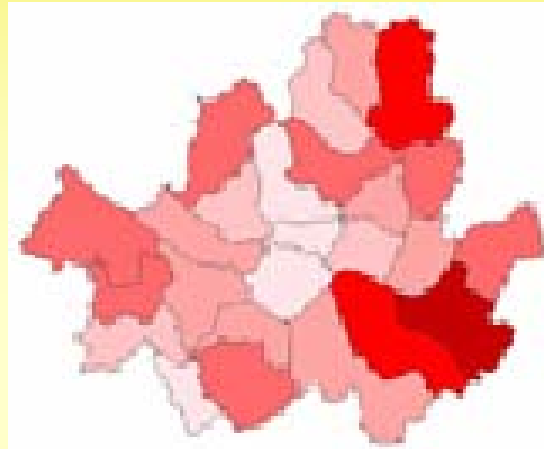
Local Simulation Results (1)

CO2 Emissions (Seoul)

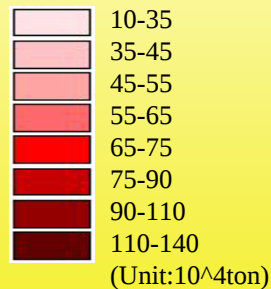
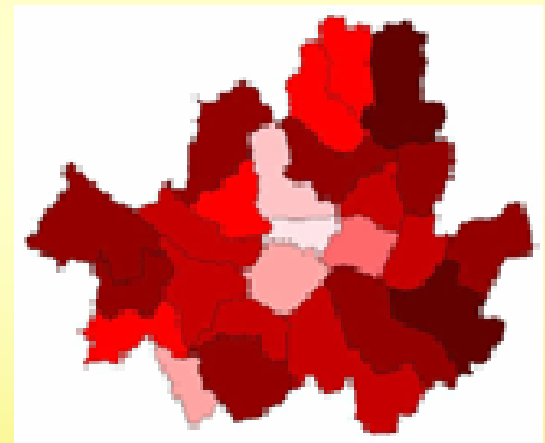
2000



2010



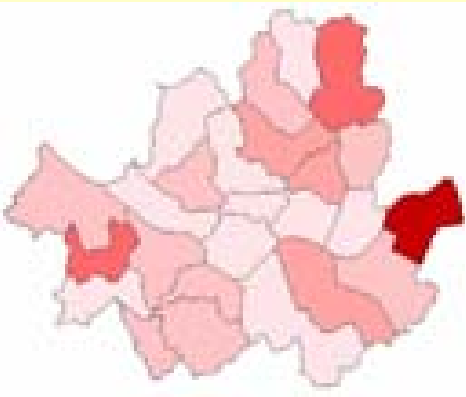
2030



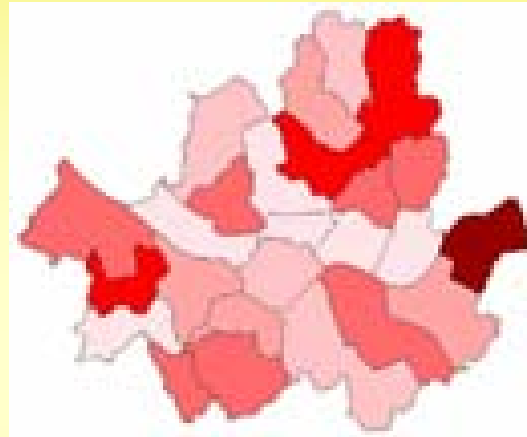
Local Simulation Results (2)

CO2 Emissions (Seoul) (Density)

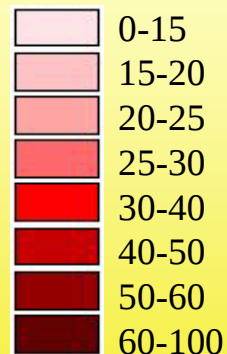
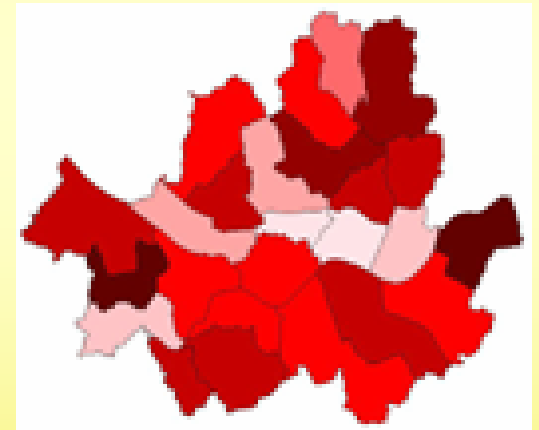
2000



2010



2030



(Unit: 10^3ton/km^2)

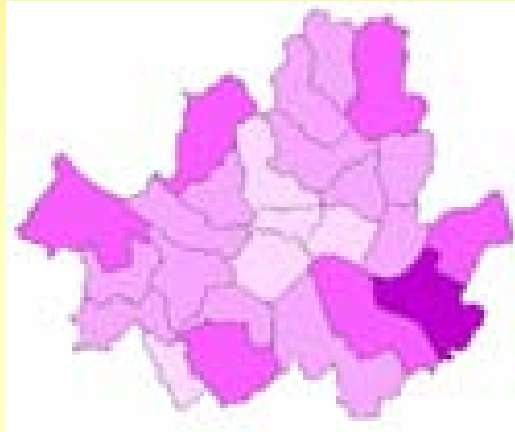
Local Simulation Results (3)

NO2 Emissions (Seoul)

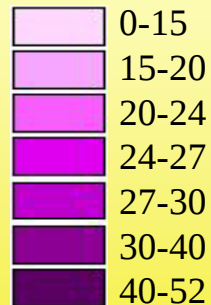
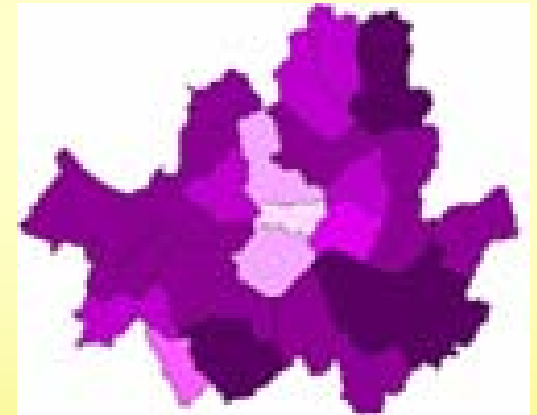
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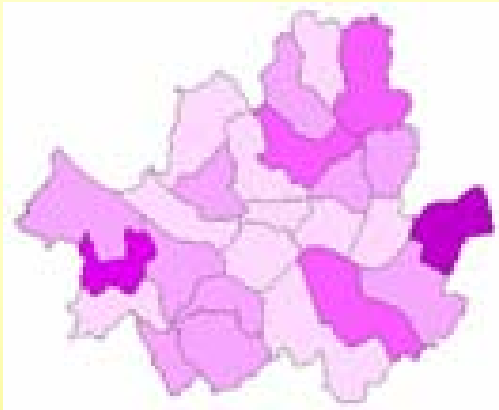


(Unit: 10^4 ton)

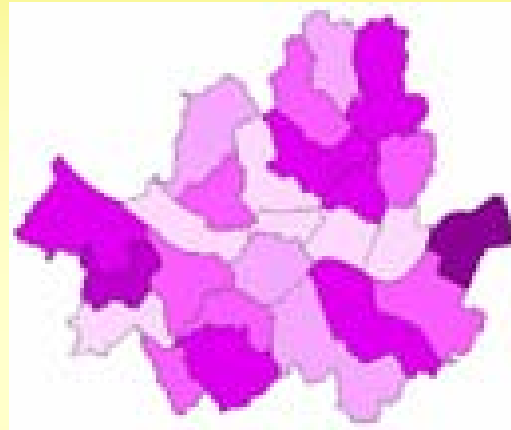
Local Simulation Results (4)

NO2 Emissions (Seoul) (Density)

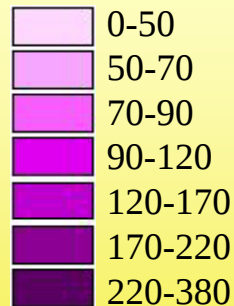
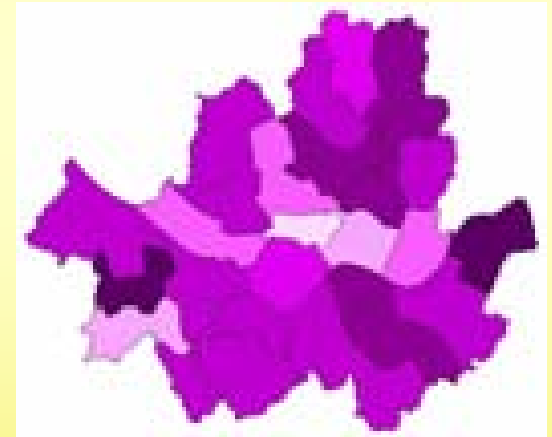
2000



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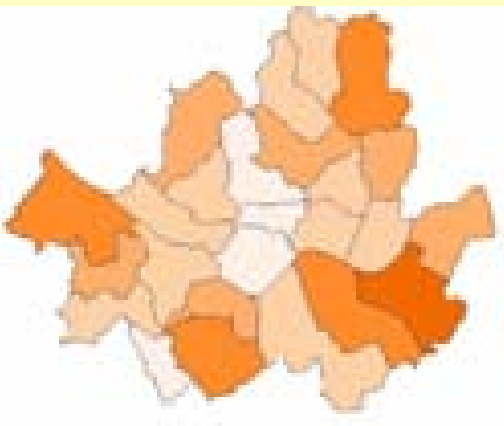
(Unit:

$10^3\text{ton}/\text{km}^2$)

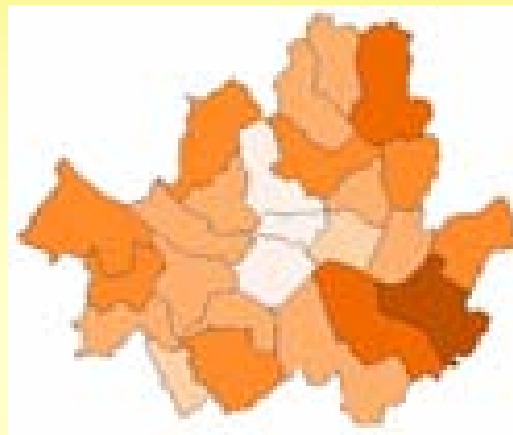
Local Simulation Results (5)

SO2 Emissions (Seoul)

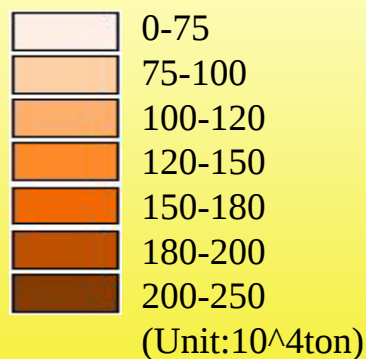
2000



2010



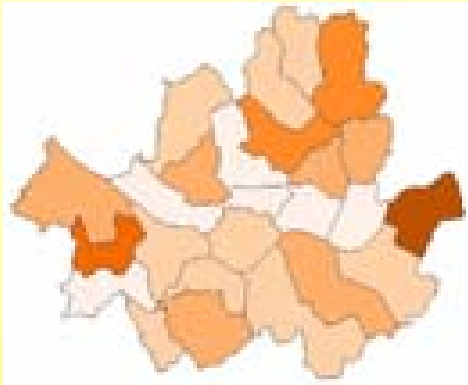
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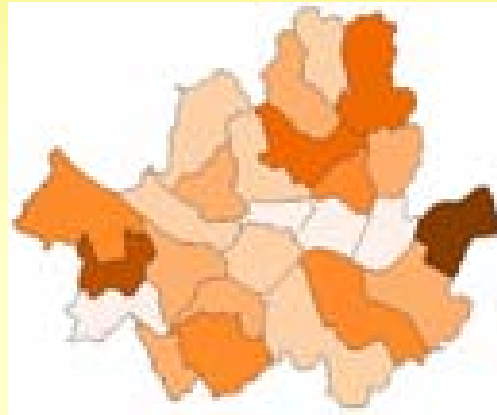
Local Simulation Results (6)

SO₂ Emissions (Seoul) (Density)

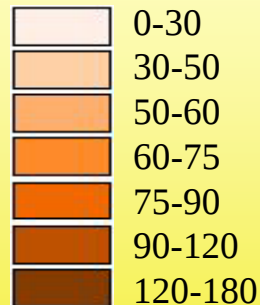
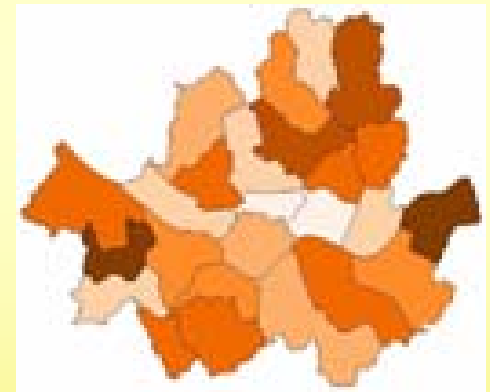
2000



2010



2030



(Unit: 10^3ton/km^2)

Further Studies (2003)

- AIM/Korea Country/Local: Database Updating
- AIM/Korea /Country/Local: Merging
- AIM/Korea Country/Local: Policy Analysis
- AIM/Korea Country/Local: Scenario Development