

# Policy Integration for Energy Related Issues in Asian Mega-Cities



IGES/APN Workshop  
January 23-24, 2002  
Kitakyushu

Hidefumi IMURA  
Professor, Nagoya University  
Project Leader, IGES

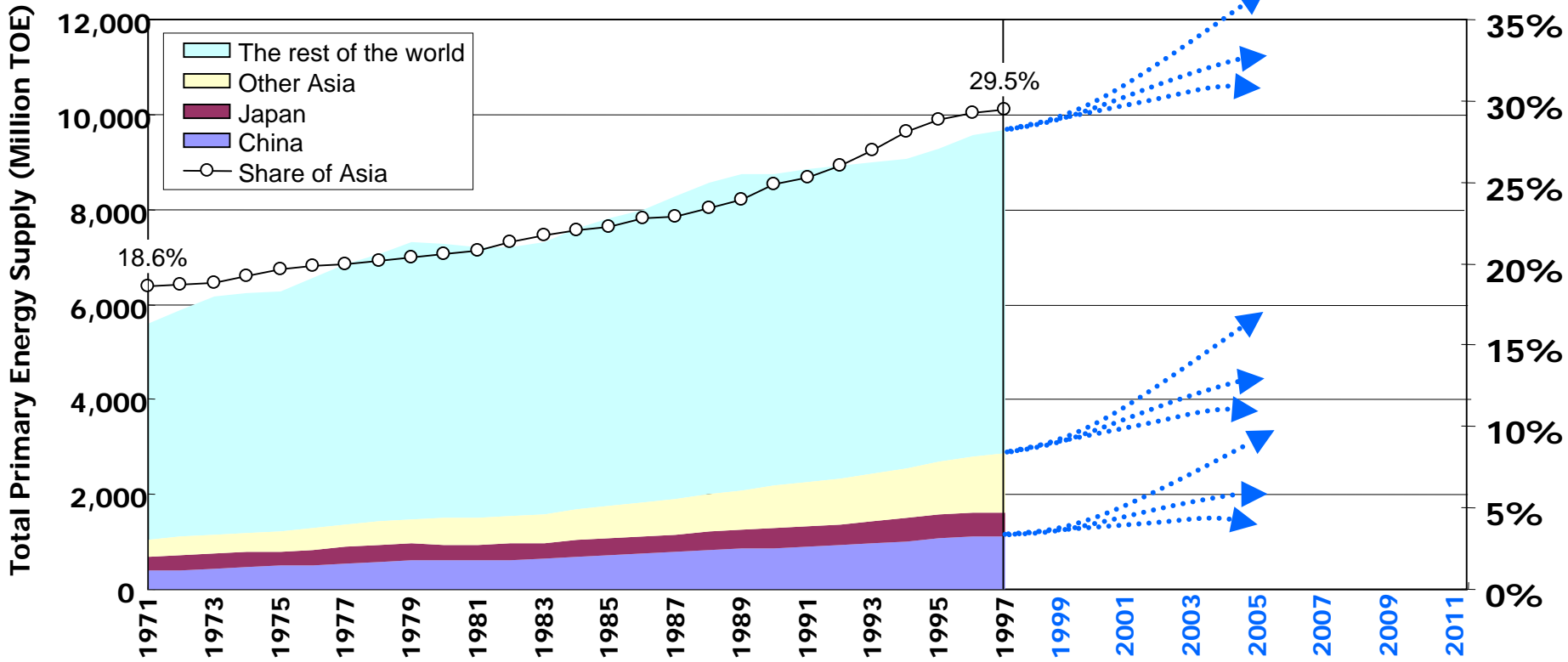
A stylized map of Asia in orange and red tones. A thick yellow brushstroke runs horizontally across the top of the map. Overlaid on the map is a target symbol consisting of three concentric black circles and a central red dot, positioned over the Japanese archipelago.

## Workshop of IGES/APN Mega-City Project

# "Policy Integration for Energy Related Issues in Asian Mega-Cities"

January 23-24, 2002  
Rihga Royal Hotel Kokura,  
Kitakyushu, Japan

# Trend and Scale of Energy Use in Asia



# Mega Trends in Urbanization and IT in Asia

Annual growth rate				
	1960-1970	1970-1980	1980-1990	1990-1998
<b>Population</b>				
World	2.0%	1.9%	1.7%	1.5%
East Asia & Pacific	2.2%	2.0%	1.6%	1.3%
South Asia	2.4%	2.4%	2.2%	1.9%
<b>Urban Population</b>				
World	2.9%	2.6%	2.7%	2.1%
East Asia & Pacific	3.5%	3.5%	4.6%	3.0%
South Asia	3.6%	4.2%	3.4%	3.2%
<b>GDP</b>				
World	5.5%	3.8%	2.9%	2.4%
East Asia & Pacific	5.0%	6.6%	7.7%	7.2%
South Asia	4.3%	3.1%	5.8%	5.3%
<b>Industry, value added</b>				
World				3.4% (1987-1997)
East Asia & Pacific	5.7%	10.0%	8.9%	9.6%
South Asia	6.1%	3.9%	6.8%	5.6%
<b>Service, etc., value added</b>				
World				2.7% (1987-1997)
East Asia & Pacific		7.0%	8.5%	6.3%
South Asia	4.7%	4.5%	6.5%	6.8%

Data Source: WDI 2000

# Urbanization in Asia

- Rapid urbanization
- Average annual growth rate of urban population in 1990's:
  - 3.0% in East Asia and the Pacific; and 3.2% in South Asia
  - (>>2.1% the world average)
- Potential of urban growth (Habitat, 2001).
- Population of developing countries living in cities
  - 40% today → 52% by 2020
  - (75% already in Latin America and the Caribbean)
- The scale of urbanization of Asia (Report of ECO-ASIA, 2001):
  - 2,605 million by 2030, exceeding twice the size of current Chinese population (53% of the world's urban population)
- Mega-cities in Asia (by 2015; Habitat, 2001).
- Cities with more than one million inhabitants: 153 in Asia; 358 in the world.
- "megacities" with more than 10 million inhabitants, 15 in Asia; 27 in the world

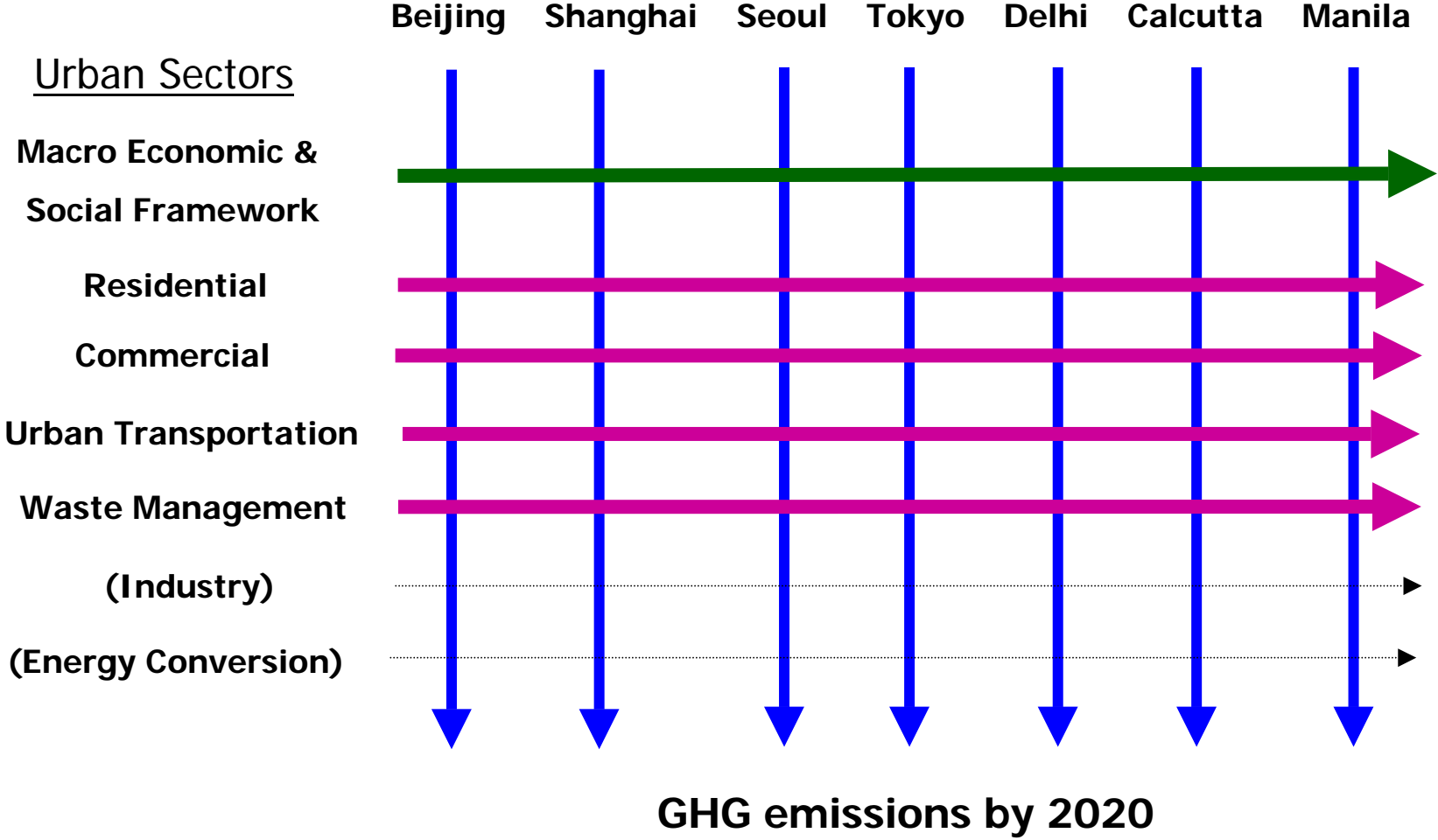
# Why Mega-Cities?



- Mega-cities:
  - ✧ Front-runners in the country and the region in terms of urban development, economic growth, industrial transformation, lifestyle change and policy implementation
  - ✧ Intensive consumption in energy and materials.
  - ✧ Critical environmental experiences and pioneering approaches
  - ✧ Good models to other small and medium-sized cities.
  - ✧ Data availability
- Crucial Role of smaller cities, especially those with 1- 5 million population

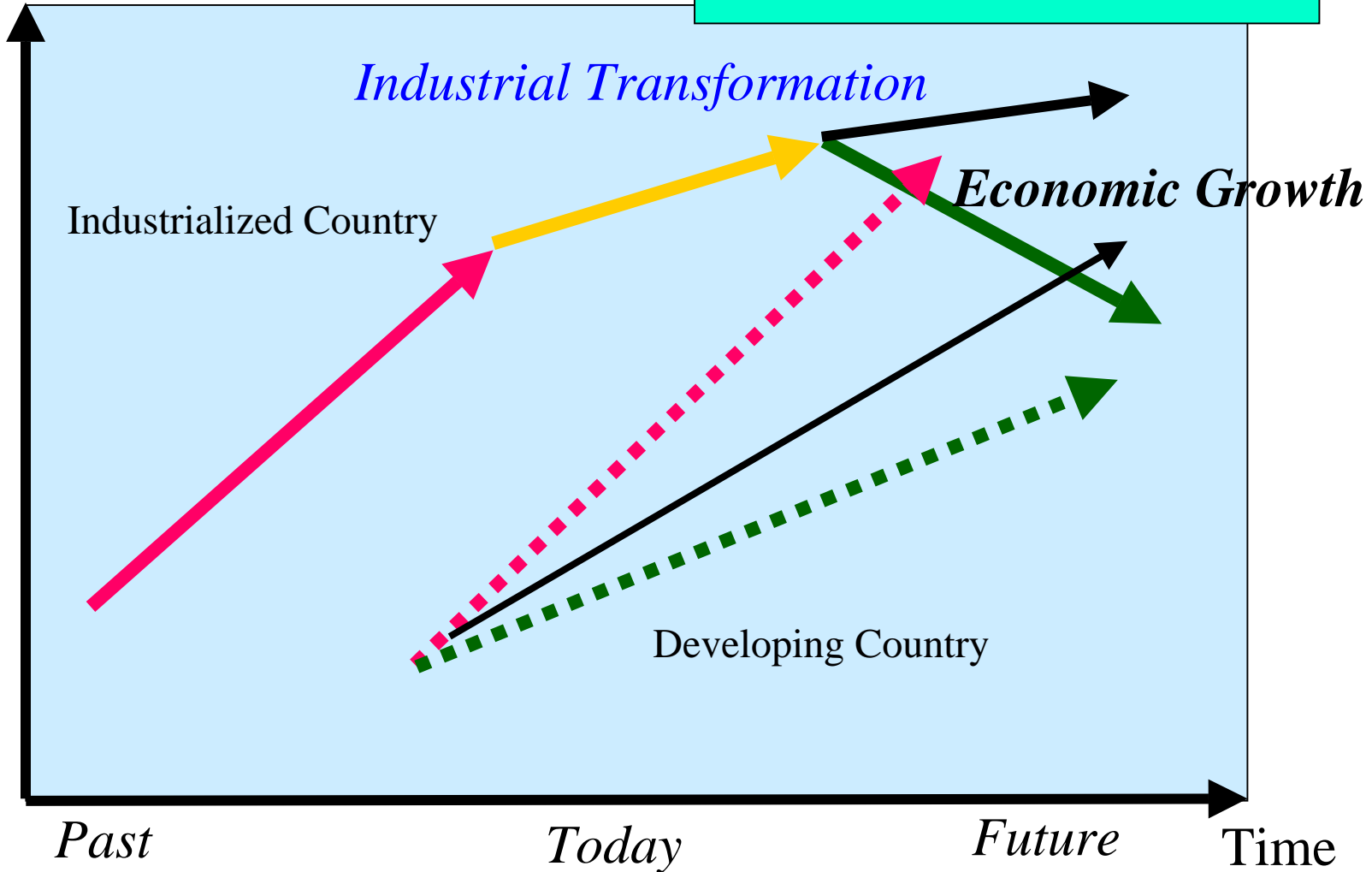
# Outline of the Project

## Mega-Cities in Asia



Income per Capita  
Energy & Resource Input / Welfare

- *Technological Innovation*
- *Social Innovation*
- *Technology Transfer*
- *Learning Process*



# Objectives

## Workshop of IGES/APN Mega-City Project

(January 23, 2002)

IGES UE Project  
&  
APN Mega-City Project

(January 24, 2002)

Other Related  
Research Projects and  
Research Initiatives

## Symposium on Sustainable Urban Development in Asia

(January 25, 2002)

(1) Researchers in the  
field of urban  
environmental Studies

(2) Local Government  
Officers in the field of  
energy & environment  
management

(3) Experts of  
international organizations  
in the field of city  
cooperation

Suggestions and  
Recommendations  
for ...

- Action Programme
- New Forum for  
enhancing  
cooperation among  
various stakeholders
- Possible clients  
and funding sources  
for further research