

**<Digest>**

# **Towards a Sustainable Asia and the Pacific**

**Report of ECO ASIA  
Long-term Perspective Project  
Phase II**



**October 2001**

# ECO ASIA, LTPP and Related Initiatives

## ECO ASIA Long-term Perspective Project

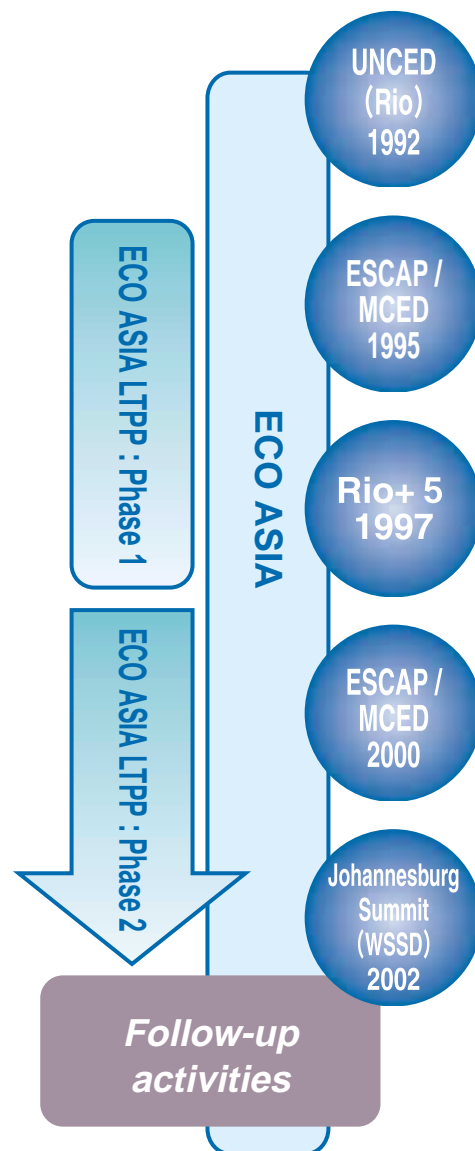
(LTPP / 1<sup>st</sup> phase : 1993~1997 ; 2<sup>nd</sup> phase : 1998~2001)

- The ECO ASIA Long-term Perspective Project (LTPP) was proposed by the Environment Agency (now Ministry of the Environment), Government of Japan, at the second meeting of ECO ASIA (1993). LTPP aims to provide decision makers in Asia-Pacific with a scientific basis for policy formulation to achieve sustainable development. International workshops were held on eight occasions to promote international research collaboration with the participation of countries, regions, and relevant international organizations in Asia-Pacific.

## ECO ASIA

(Environment Congress for Asia and the Pacific : 1991~)

- Objective: Provide a forum for informal exchange of information, policy dialogue and mutual understanding amongst participants
- Participants: High-level government officials, including Environment Ministers, and representatives from international organizations



## Follow-up activities (towards WSSD and beyond)

The following initiatives will be carried out to build upon the achievements of LTPP.

### Asia-Pacific Environmental Innovation Strategy Project (APEIS)

Aim: To provide a basis for innovative policies for sustainable development in the region by combining satellite and ground based monitoring, assessments using environment-economy models, and research on innovative strategy options. (Project will be implemented under the guidance of ECO ASIA.)

### Asia-Pacific Forum for Environment and Development (APFED)

Aim: To create a new vision of a more balanced sustainable development for the Asia-Pacific region and present it to international policy dialogues on environment and development issues, such as ESCAP/MCED (Ministerial Conference on Environment and Development in Asia and the Pacific) scheduled for 2005. (The establishment of the Forum was endorsed at ECO ASIA 2001.)

### Kitakyushu Initiative for a Clean Environment

Aim: To achieve improvements in the urban environment in Asia and the Pacific through the establishment of networks of local initiatives. (Initiative adopted at ESCAP/MCED 2000.)

## Analysis in the 2<sup>nd</sup> Phase of LTPP

LTPP Phase I developed and examined 4 key concepts for sustainable development in the region ('Eco-Consciousness' as a conceptual tool for building partnerships, and 'Eco-Partnership', 'Eco-Technology/Eco-Investment' and 'Eco-Policy Linkage' as 3 concepts that guide future regional action). LTPP Phase II further developed these concepts and used them to draft policy recommendations aimed at tackling six of the region's critical environmental issues.

1<sup>st</sup> Phase

### 4 Key Concepts

- Eco-Consciousness
- Eco-Partnership
- Eco-Technology / Eco-Investment
- Eco-Policy Linkage

**Driving Forces**  
of environmental  
changes in the region

**Current Status and  
Future Perspectives**

### 6 Critical Environmental Issues

- Climate Change
- Urban Environment
- Freshwater
- Forest Conservation
- Biodiversity
- Education for Sustainability

**Recommendations**

### **Eco-Consciousness :**

Eco-consciousness encompasses structures of the environmental knowledge, beliefs, values and concepts (including local, traditional and indigenous ones) that facilitate or motivate positive human behavior toward the environment.

### **Eco-Partnership :**

The cooperation and the exchange of experiences both domestically and internationally, between national governments, local authorities, private sector, and NGOs.

### **Eco-Technology / Eco-Investment :**

The promotion of the development and diffusion of environmentally sound technology and investment that reconciles economic growth and environmental protection.

### **Eco-Policy Linkage :**

The development of linkages among domestic, regional, and global environmental policies as well as policies in other areas.

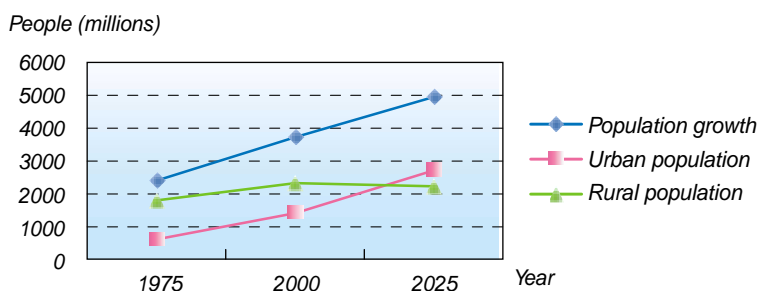


# Environmental Trends in Asia-Pacific : Driving Forces and Current Status

## Population...

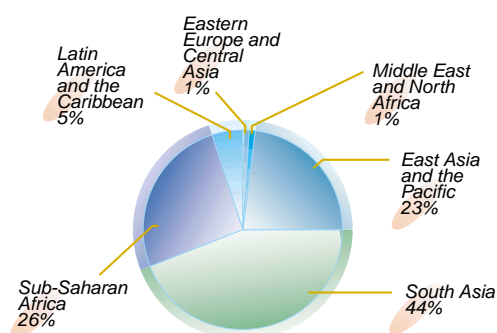
Rapid population growth concentrated in urban areas adds strain to the environment.  
 The population ( 60% of the world's population) has doubled in the past 40 years.  
 Rapid urbanization / Creation of slums in many cities / Depopulation in rural areas  
 Approximately 2/3 of the world's poor live in Asia and the Pacific

Size and Growth of Urban and Rural Population in Asia



Source : HABITAT 1996

Number of people living on less than US \$ 1 a day



Source : World Bank 2001

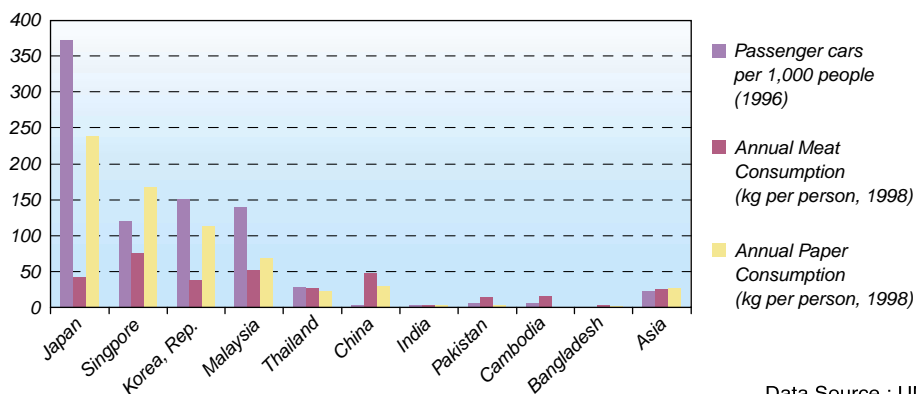
## Economic Trends...

Economic trends and Globalization affect the environment in various ways.  
 Rapid economic growth in Asian countries to mid-1990s  
 The share of GDP: 25% in 1995 29~40% in 2030  
 Changes in Economic Structure...Rise in service sector / decline in agricultural sector

## Lifestyle changes...

Population growth, industrialization & economic development have led to lifestyle changes.  
 Shift in consumption patterns / increased production of goods and services

Resource Consumption in Selected Countries in Asia

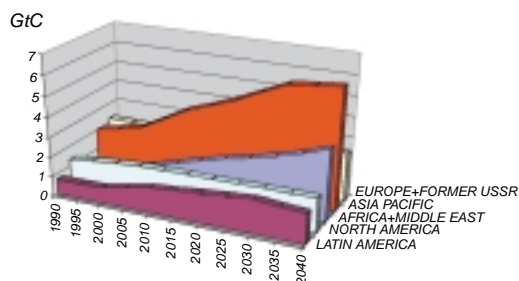


Data Source : UNDP et al. 2000



# Environmental Trends in Asia-Pacific : Future Perspectives

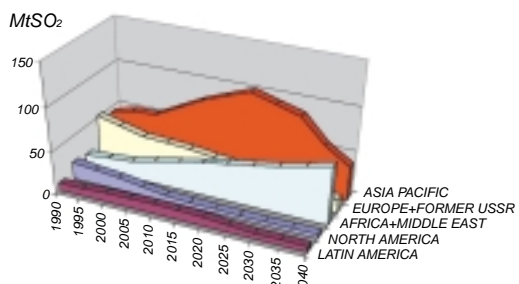
## CO<sub>2</sub> Emissions Projection under the Conventional Development Scenario



CO<sub>2</sub> emissions in Asia-Pacific are projected to increase rapidly. Emissions peak around 2050 at a level 2.7 times that of 1990 (AIM Model\*: The Conventional Development Scenario)

Source : AIM Model

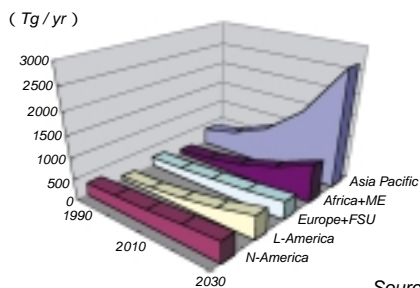
## SO<sub>2</sub> Emissions Projection under the Conventional Development Scenario



A rapid increase in SO<sub>2</sub> emissions in Asia-Pacific is also projected. Increases in SO<sub>2</sub> emissions will continue until the economic level permits the allocation of more resources for desulfurization. In the case of high economic growth, sulphur emissions peak around 2020.

Source : AIM Model

## Municipal Waste Projection under the Conventional Development Scenario

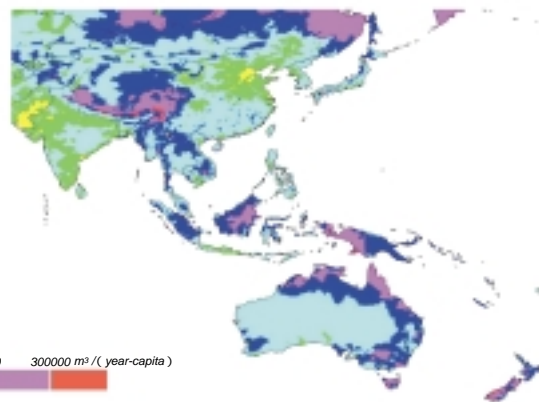


Population and economic growth increase municipal wastes. In the high economic growth scenario, the generation potential becomes very high, especially in Asia-Pacific.

Source : AIM Model

## Water availability per capita (2050)

A severe water shortage is projected in Asia-Pacific. Yellow and green-colored cells show areas suffering from freshwater restriction.



\* Asian-Pacific Integrated Model

Source : AIM Model

### References :

- HABITAT (United Nations Centre for Human Settlements). 1996. *An Urbanizing World : Global Report on Human Settlements*. Oxford : Oxford University Press.
- UNDP, UNEP, World Bank, and World Resources Institute. 2000. *World Resources 2000-2001*. Washington D.C : World Resources Institute.
- World Bank 2001. *Poverty Trends and Voices of the Poor*, < <http://www.worldbank.org/poverty/data/trends/income.htm#table1>> (25 September 2001).

## Recommendations and Examples of Successful Practices

**Climate change...** (1) Raise public awareness of environmental issues, especially those in the transport sector  
(2) Use easily understandable policy instruments such as taxation to rapidly increase public awareness

**Urban environment...** (1) Raise public involvement in environmental policymaking  
(2) Institute environmental reporting and monitoring for business and government  
(3) Institute mechanisms for environmental dispute resolution and compensation  
(4) Set up mechanisms for public disclosure of environmental information

**Freshwater.....** (1) Recognize the social, environmental and economic value of water  
(2) Change the perception of water as an infinite bounty or limitless resource

**Forest conservation...** (1) Re-evaluate the value of Traditional Forest Related Knowledge (TFRK) for forest conservation and sustainable forest management  
(2) Ensure that consumers get accurate product environmental information by using mechanisms such as forest certificate schemes

**Biodiversity.....** (1) Raise public awareness of biodiversity issues  
(2) Set regulatory controls over access to, and exploitation of, resources under serious threat of complete elimination  
(3) Establish legally designated protected areas (e.g. national parks)

**Education for Sustainability...** Adopt examples of best practice such as:

- (1) Hand in Hand with Earth Village (China)
- (2) Environment Study Centres (Indonesia)
- (3) Junior Eco-Club (Japan)

Eco-Consciousness

**Climate change...** (1) Learn from successful examples such as ALGAS (Asia Least-cost Greenhouse Gas Abatement Strategy)  
(2) Investigate CDM (Clean Development Mechanism) to promote environmentally friendly FDI (Foreign Direct Investment)

**Urban environment...** (1) Promote inter-city and inter-regional co-operation such as 'Kitakyushu Initiative for a Clean Environment'  
(2) Enhance public participation in the process of policymaking  
(3) Exchange information and experiences among cities in the region

**Freshwater.....** Achieve greater private participation in the water sector by:  
(1) Combining public responsibility and ownership with private management in water service delivery  
(2) Involving the private sector in water supply and wastewater treatment services in urban areas

**Forest conservation...** (1) Promote "social forestry" that involves local people in forestry activity  
(2) Establish a framework for partnership that protect the rights of the local people  
(3) Provide economic incentives for communities to be involved in forest conservation

**Biodiversity.....** (1) Establish protected areas in partnership with local communities (e.g. The San Salvador Islands Marine Park in the Philippines)  
(2) Share experiences among countries (e.g. 'Asia Pacific Migratory Waterbird Conservation Strategy')

**Education for Sustainability...** Share knowledge and exchange experiences, by encouraging networking of environmental educators and facilitators from different backgrounds

Eco-Partnership

- (1) Promote the monitoring of changing environmental conditions and dissemination of such information among the general public
- (2) Create market systems that attach intangible (non-economic/ social) value as well as tangible (economic) value to environmental assets
- (3) Create institutional mechanisms that allow citizens and businesses to be involved in decision making and also the implementation of environmental policies

Crosscutting  
Recom



- Climate change**... (1) Maximize use of the Kyoto Mechanisms – they have great potential for achieving policy linkage  
 (2) Adopt an integrated approach to forestry, water and biodiversity policies in order to help mitigate climate change  
 (3) Link domestic policies for air pollution control to international policies for addressing climate change

**Urban environment**... Encourage foreign capital to finance urban infrastructural development

- Freshwater**..... Establish the integrated water resources management (IWRM) system:  
 (1) Develop mechanisms for openness and sharing of information (international watercourses)  
 (2) Coordinate policy on inter-basin water management  
 (3) Adopt intersectoral approaches (e.g. with land use) to water management

- Forest conservation**... (1) Provide international assistance for appropriate forest management  
 (2) Make use of existing policy dialogue forums such as regional and sub-regional organizations  
 (3) Develop regional cooperation mechanisms for transboundary problems such as forest fires and the resulting haze problems

- Biodiversity**..... (1) Promote inter-linkages among biodiversity-related international agreements  
 (2) Promote synergies in implementing biodiversity-related programmes, both domestically and internationally  
 (3) In order to promote eco-tourism, link domestic policies for protecting biodiversity and natural environment to regional and global programmes

## Eco-Policy Linkage

- Climate change**... (1) Increase eco-technology oriented ODA to developing countries  
 (2) Introduce emissions trading and carbon tax to increase economic efficiency and promote technology development  
 (3) Promote alternative energy with fewer CO<sub>2</sub> emissions, such as wind, solar and biomass

**Urban environment**... Create special governmental organisations (e.g. the BOT (Build Operate Transfer) centre in the Philippines) to encourage the participation of private sectors in private finance initiatives (PFI)

- Freshwater**..... (1) Adopt water saving technologies in irrigation (e.g. drip irrigation)  
 (2) Increase use of improved and cost-effective methods for the treatment and reuse of wastewater in industrial and domestic systems  
 (3) Encourage adoption of aquifer recharge technologies, human waste disposal systems that require little or no water and also of cheap and effective water purification systems for villages

- Biodiversity**..... (1) Encourage wider use of the Geographic Information System (GIS) to identify crucial habitats for endangered species and ecosystems and appropriate zoning for conservation  
 (2) Promote technologies for species recovery utilized by zoos and botanical gardens  
 (3) Transplant species to augment existing populations or to create new ones with the aim of biodiversity restoration


## Eco-Technology /Eco-Investment

- (4) Adopt a precautionary approach to health and environmental issues where there is the risk of irreversible environmental damage  
 (5) Develop regional cooperation mechanisms to address cross-country environmental issues  
 (6) Promote an inter-sectoral approach for inter-linked issues  
 (7) Selectively apply the best of both traditional knowledge / techniques and modern technology

## Policy -mendations

The ECO ASIA Long-term Perspective Project (LTPP) is sponsored by the Ministry of the Environment, Government of Japan. Since 1999, IGES has been invited to take key roles in the implementation of the ECO ASIA LTPP by coordinating and implementing its research activities, through collaboration with a number of research institutes in the region, and reporting its research outcomes and policy recommendations to the ECO ASIA.



  
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