



Eco-restructuring of Industrializing Asia: Relevance of EIC to Asia

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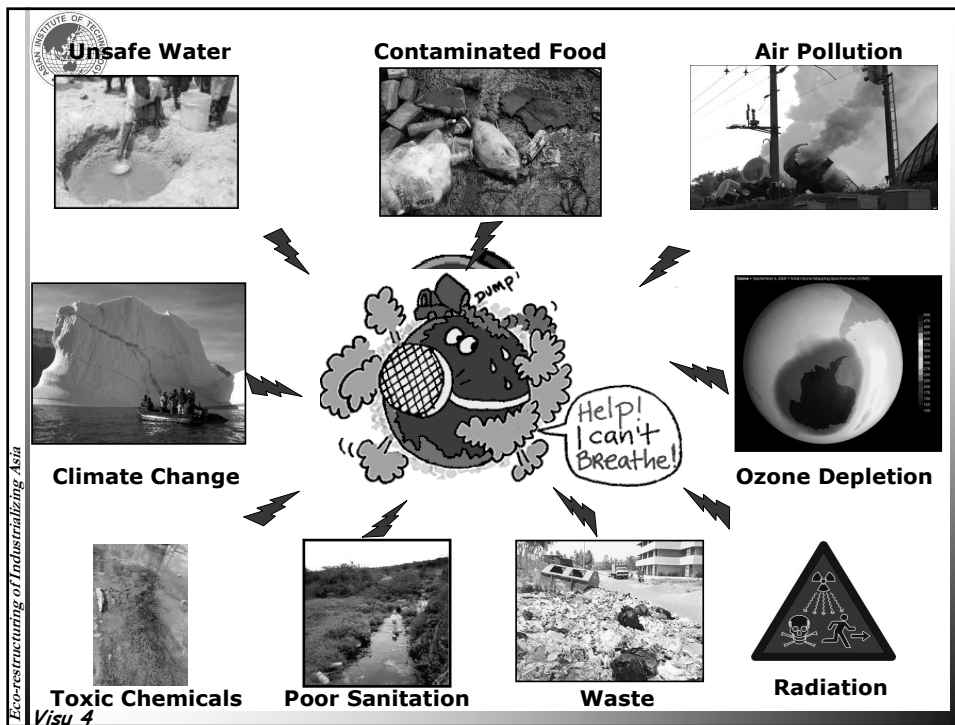
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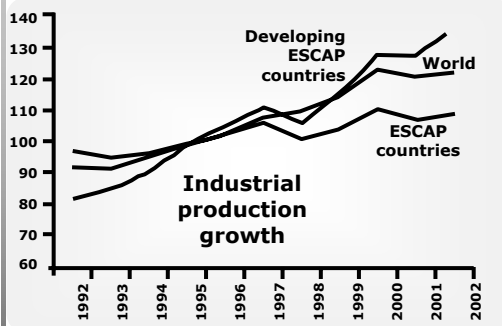
- **Asian Scenario**
- **Major environmental issues**
- **Causes of issues**
- **Eco-restructuring**
- **IGES research in EIC**
- **Take home message**

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Industrialization and growth in Asia

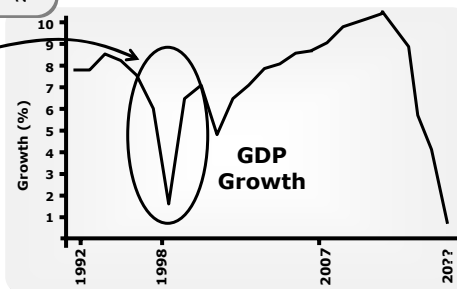


Developing Asia recorded the highest growth in almost two decades in 2007—averaging 8.7%

Growth was accompanied by environmental and resource issues as well

This dip was due to various fiscal reasons...

Are we prepared for another due to environmental and resource related reasons?



Source: SOEAP, UNESCAP, 2005

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Some Interesting Asian Facts

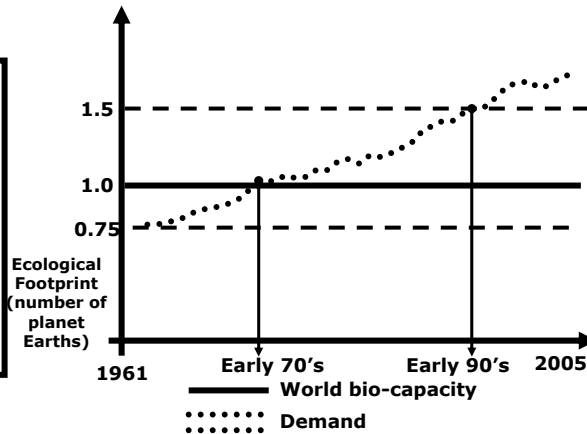
Regional population density = 1.5 X global average

Biologically productive area per capita < 60 % of global average

Arable land per capita < 80 % of global average

Freshwater available per capita is the lowest of global regions

Overall, Asia and the Pacific is less generously endowed with natural resources than some other parts of the world. At the same time, these resources must be shared among a much higher number of people.

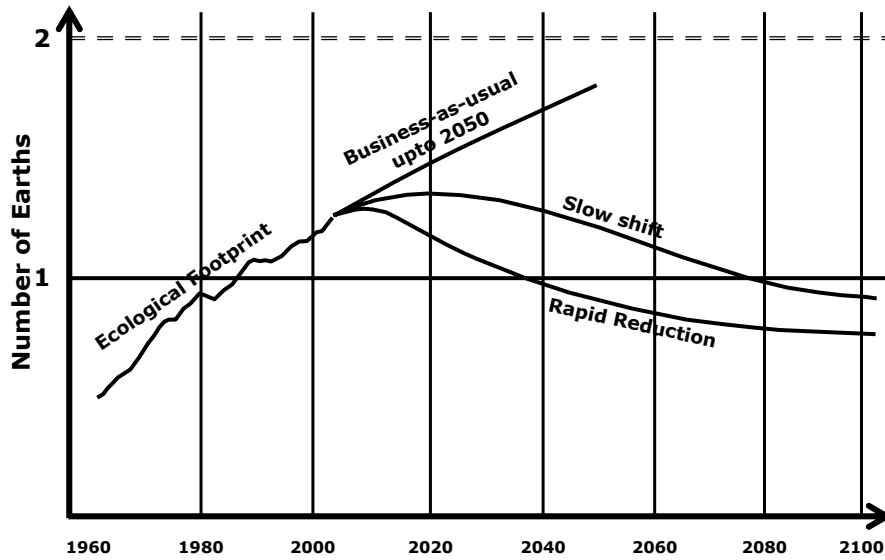


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Alternative Footprint Scenarios



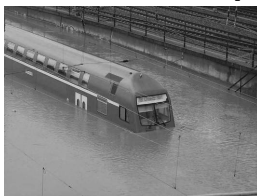
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Climate Change

- Emissions of the greenhouse gases covered by the Kyoto Protocol increased by about 70% from 1970–2004
- 2000: East Asia alone contributed 18.7% of global emissions
- 2005: concentration of CO₂ exceeded by far the natural range over the last 650,000 years
- 2007: USA contributed 28% of global emissions, China ranked second with 20%
- 2025: China alone expected to increase its emissions by 118%



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Solid Waste and 3R

- Largest waterway in West Java – over 300 km
- More than 500 factories, many of them producing textiles which require chemical treatment, line the banks discharge waste into the water
- Local communities no longer try to fish - More profitable to forage for rubbish they can salvage and trade
- Demise began with rapid industrialisation in late 1980s.
- Now Citarum is a giant garbage bin
- One of the two major rivers feeding Lake Saguling: French built the largest power generator in West Java
- Installed capacity of 700 MW, upgradeable to 1400 MW???

Link between solid waste, water resources and energy!!!

Source: <http://www.dailymail.co.uk/news/article-460077/Is-worlds-polluted-river.html>

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Solid Waste and 3R



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Solid Waste and 3R



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Biodiversity

- Rapid transformation of the earth from the growing human population → loss of species and ecosystems
- Over-hunting
- Habitat loss/degradation/fragmentation
- Invasion of non-native species
- Overall environmental pollution
- Global Warming and Climate change



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Biodiversity

- **marine debris : 60-80% Plastics - from land-based sources mainly from sewage and storm runoff from landfills, industrial facilities, recreational activities,**
- **20 % of marine debris from merchant and passenger ships, offshore oil and gas platforms, fish farming operations, and other recreational, commercial, and military craft**
- **Impacts of plastics: entanglement and ingestion**
- **More than 13,000 pieces of plastic litter are floating on every square kilometer of ocean today**
- **Worldwide, at least 267 species are affected by marine debris**



Source: <http://www.conservation.org/FMG/Articles/Pages/01180802.aspx>

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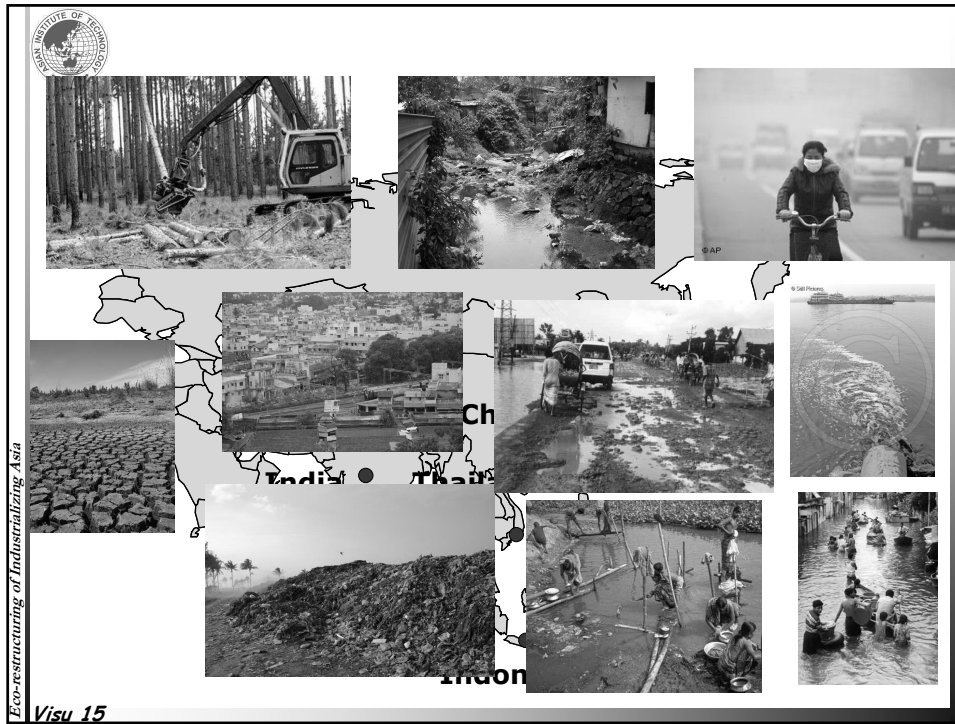


Why are these issues...?

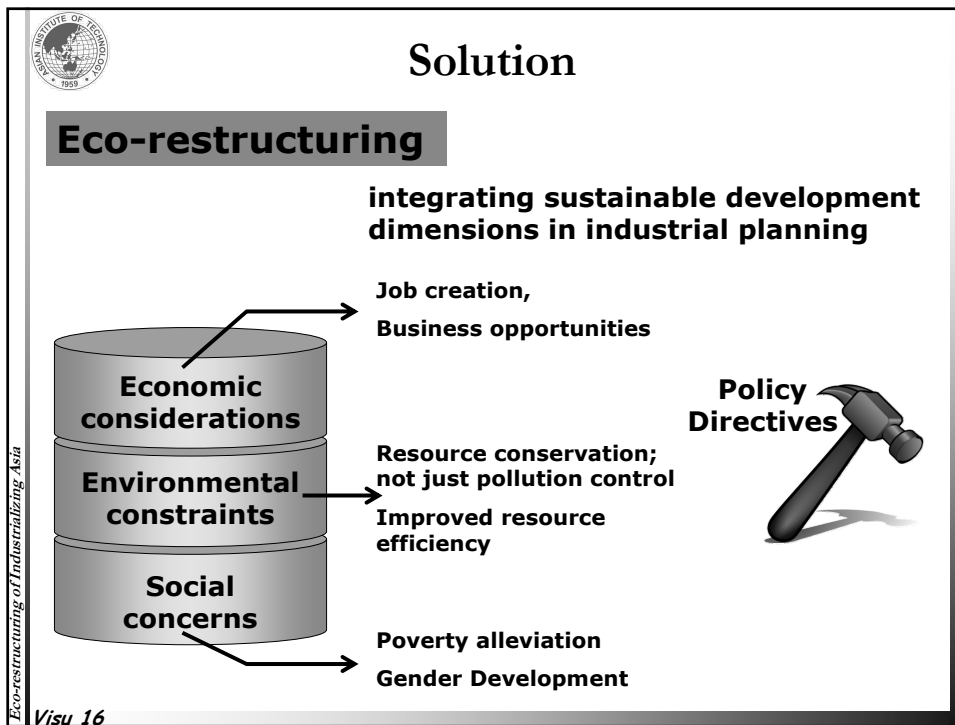
- **We think, the earth is a source of infinite resources**
- **We think, the earth has an excellent digestion system**
- **We think, the earth can assimilate anything and everything that we throw**
- **But, we need to look at the environment as an exhaustible resource and at the earth as a self-organizing system**
- **The solution lies in**
 - **Better positioning ourselves in nature's supply chain**
 - **Transforming our systems and processes towards sustainable industrial patterns**
 - **Shifting our cultures and values towards sustainable development**

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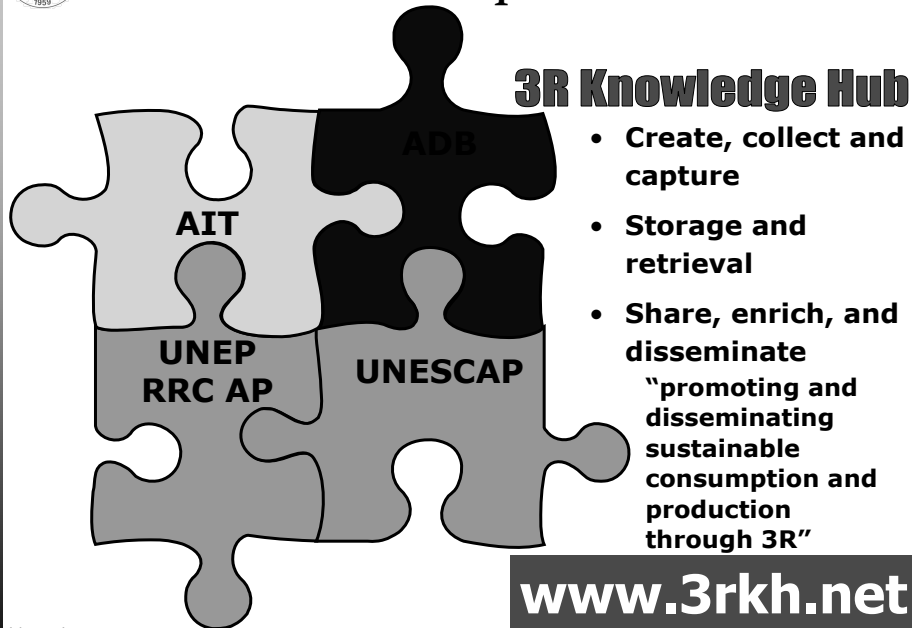
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Example



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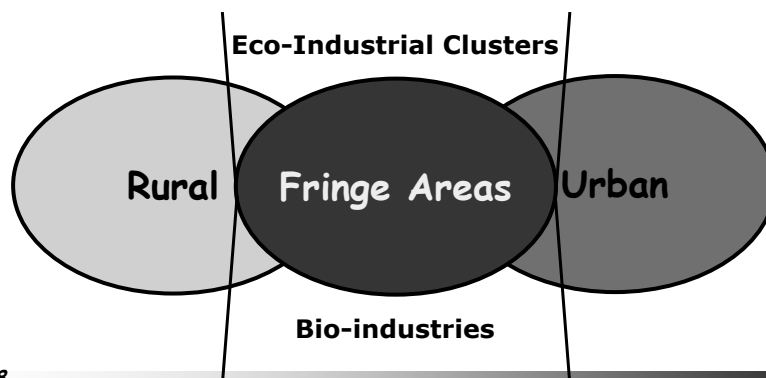
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EIC and Rural Urban Fringe

Environmental impacts of industries depend on:

- scale of industrial activity
- types of industries making up the industrial sector (intensiveness...energy, water or pollution load)
- location of the industry (carrying capacity and local sensitivity)
- eco-efficiencies of individual companies

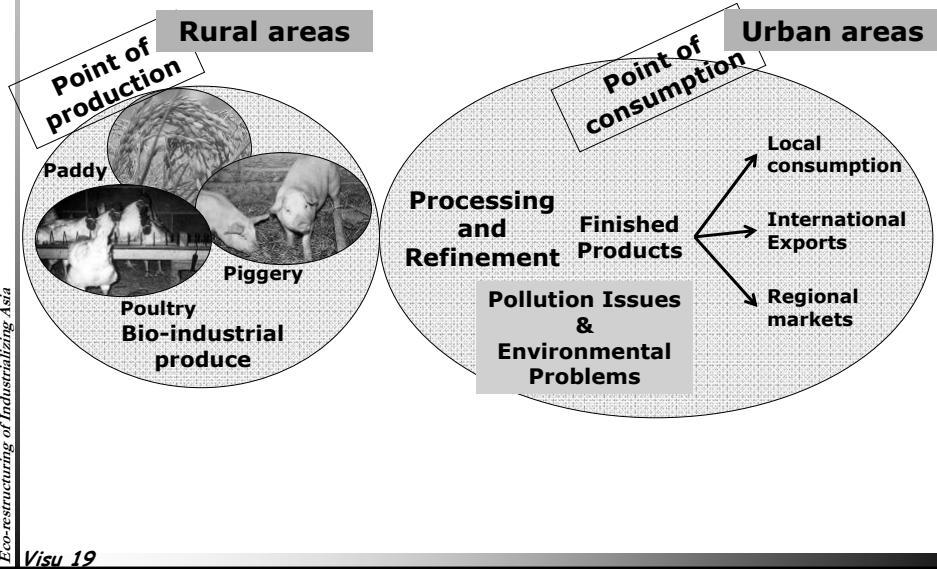


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Bio-industries' product flow

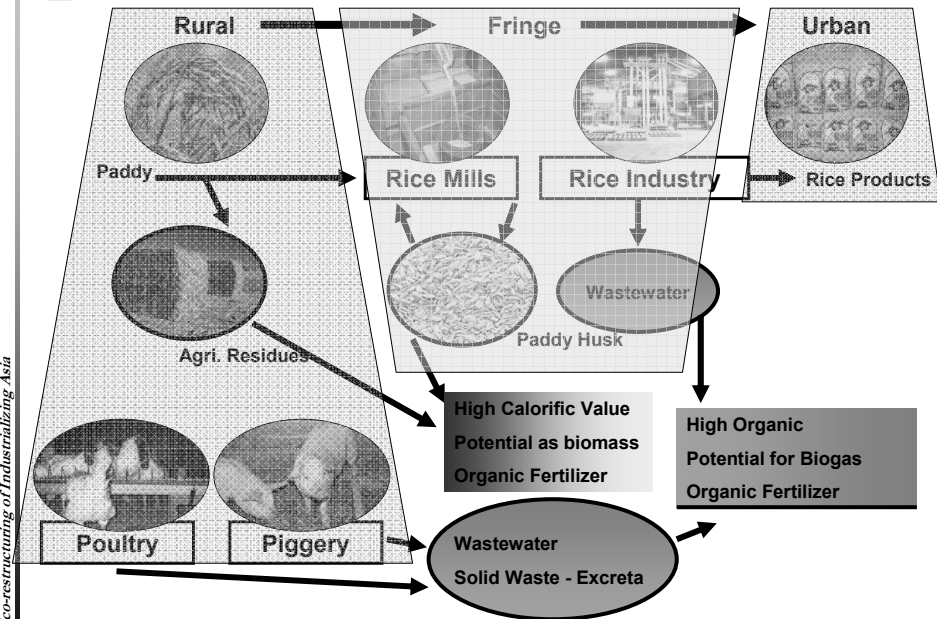


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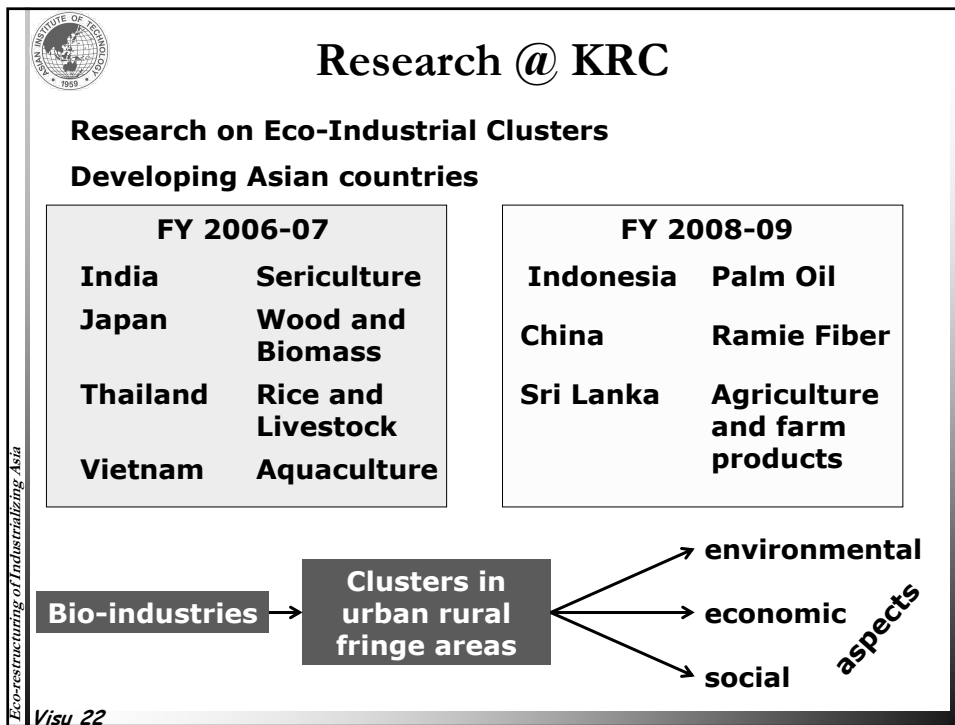
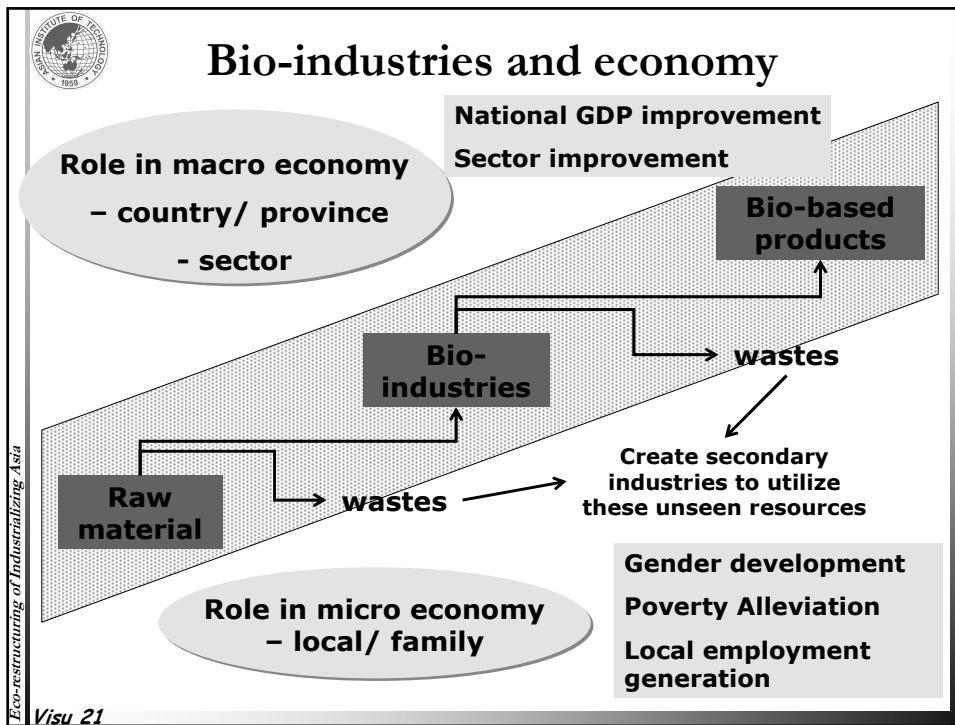


Restructured Product flow



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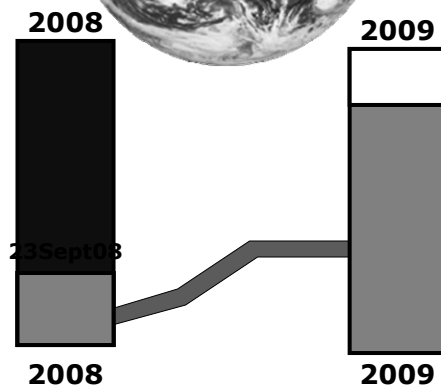
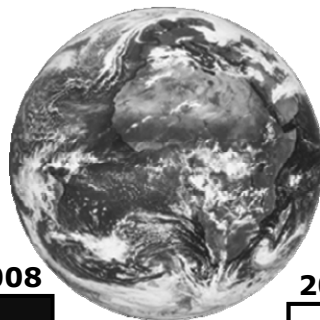


Take-home Message

- **Eco-restructuring – integrating sustainable development dimensions is essential**
- **Social dimensions cannot be missed: poverty alleviation, local employment have to be considered**
- **Micro economy has to be considered as well, not just uplifting macro economy**
- **Directly contributes to MDGs (1) Poverty alleviation, (3) Gender Equality and more importantly, (7) Environmental Sustainability**
- **Spin off on other MDGs through improved economic well being**
- **Push for eco-restructuring should be through targeted policy interventions**
- **IGES-KRC research is much in this direction**

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We exhausted our quota of resources for this year on 23 September 2008
6 October, 2007
means we are in debt...
borrowing from next years quota...

Is debt a good sign of a planned living ???

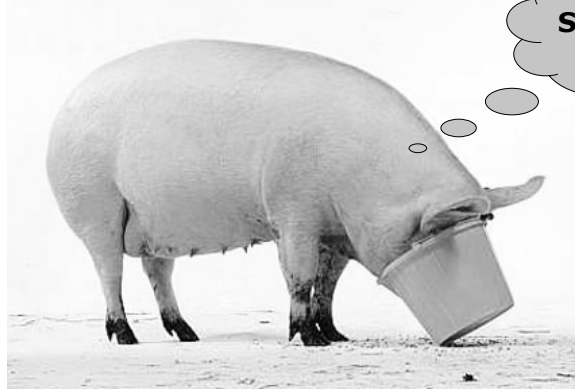
Source: http://www.footprintnetwork.org/gfn_sub.php?content=overshoot

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GREEDY



I'm Full....But
Still Want To
EAT.....



"Earth provides enough to satisfy every man's need, but not every man's greed"

Mahatma Gandhi



Thailand is experiencing a revolution in self-sufficient local economy through various landmark projects initiated by His Majesty The King.

eco-restructuring of industrializing Asia with focus on bio-industries as key components contributes to His Majesty's vision at large.



Thank you.....