

# Population Change and Environmental Issues in Malaysia



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*National Population Conference on the Inter-Relationship Between Population Dynamics and Development, 26 June 2014, Putrajaya*

# Presentation/Paper Outline

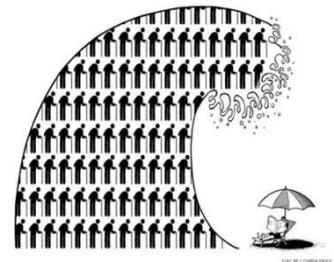
1. The Science of Population-Environment
2. The Politics of Population-Environment
3. Environmental Impacts of Development in Malaysia
  - 3.1. GHGs emissions and energy usage
  - 3.2. Water resources
  - 3.3. Minerals
  - 3.4. Pollution
  - 3.5. Biodiversity
  - 3.6. Solid waste
4. The Interplay of Population-Environment Nexus
  - 4.1. Forest loss in natural resources frontier
  - 4.2. Displacement of forest-dwelling population
  - 4.3. Urbanization and high-density living
5. Concluding Remarks

# The Science

- Mono-causal Malthusian thesis
  - population growth causes environment depletion
- Multiplicative approach
  - $\text{Impact} = \text{Population} \times \text{Affluence} \times \text{Technology identity}$
- The mediating perspective
  - policy context, institutions, market, science and culture link population factors with environmental outcomes

# The Politics

- Brundtland SD definition
  - development that meets the needs of the present without compromising the ability of future generations to meet their own needs
- UN International Conference on Population and Development , Cairo 1994
  - removal of the population subject from the global policy discourse
  - population issues were not considered in formulation of the Kyoto Protocol and have also been largely excluded from the Intergovernmental Panel on Climate Change (IPCC) assessment reports



# Environmental Impacts of Development

The state-of-the environment is altered from a pristine nature to a modified human landscape in just one century

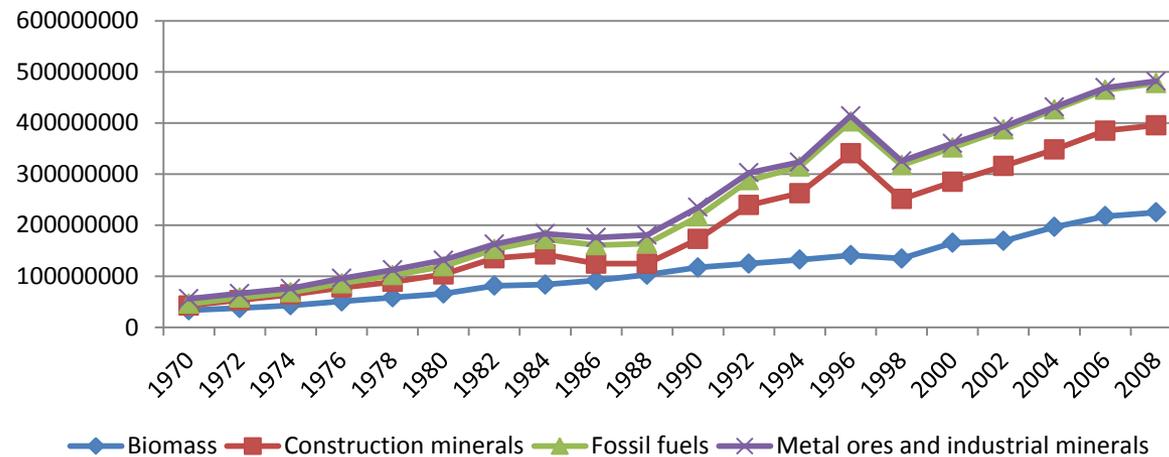


Figure 1: Material Flow Malaysia, 1970-2008

Population and consumption as two elephants in the room

# Environmental Impacts of Development

- GHGs emissions and energy use
  - Malaysia appeared in the bottom-ranked group of countries alongside Canada, Australia, the USA and Saudi Arabia in the Climate Change Performance Index
  - 91% growth in metric tons of CO<sub>2</sub> emissions from 1994-2004 (c.f. 36% South Korea, 69% Thailand, 275% Vietnam)
- Water resources
  - Malaysians use an average of 226 litres of water a day, compared with 155 litres and 90 litres in neighbouring countries Singapore and Thailand respectively
- Minerals
  - Resurgence of minerals extraction e.g. iron ore causing public anxiety

# Environmental Impacts of Development

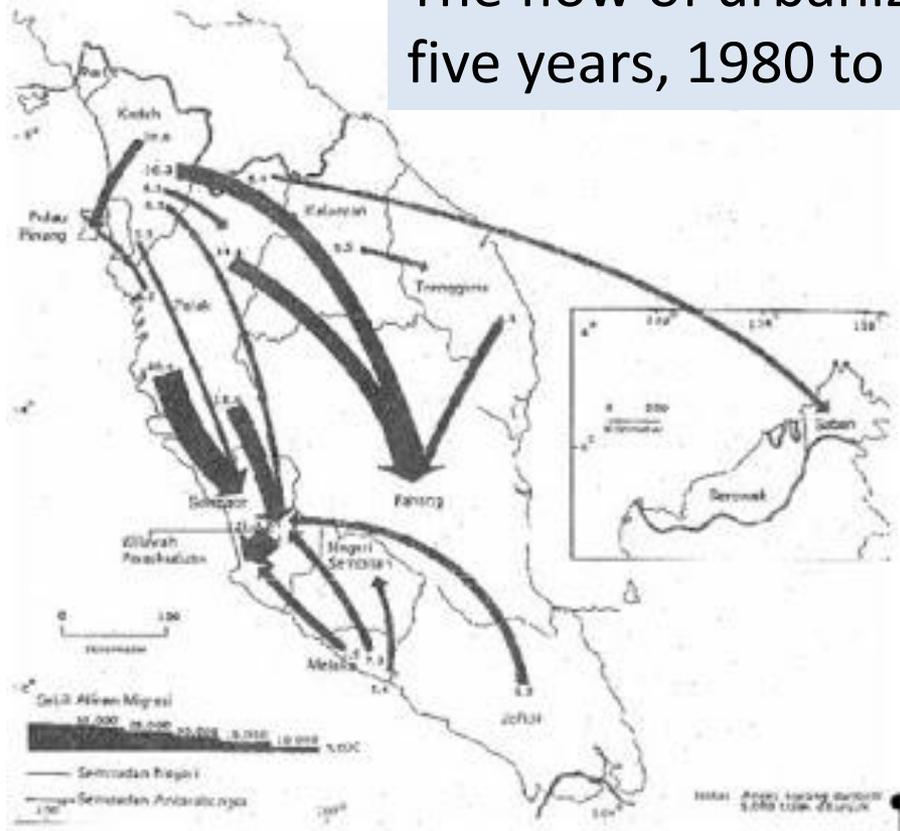
- **Pollution**
  - In 2011, the Department of Environment reported that 39 rivers were polluted, 3,177 open burning cases were lodged, and about 12 illegal disposals of scheduled wastes were still practiced by unscrupulous offenders
- **Biodiversity**
  - IUCN Threatened Species List : Malaysia ranked as the country with the third-highest number of endangered species
  - Since 1960s, backed by powerful economic forces, a number of key wildlife protected areas have been rescinded to give way to agricultural land use in Peninsular Malaysia
- **Solid waste**
  - Generation of municipal solid waste in Malaysia has increased more than 91% over the past 10 years

# Interplay of Population-Environment Nexus

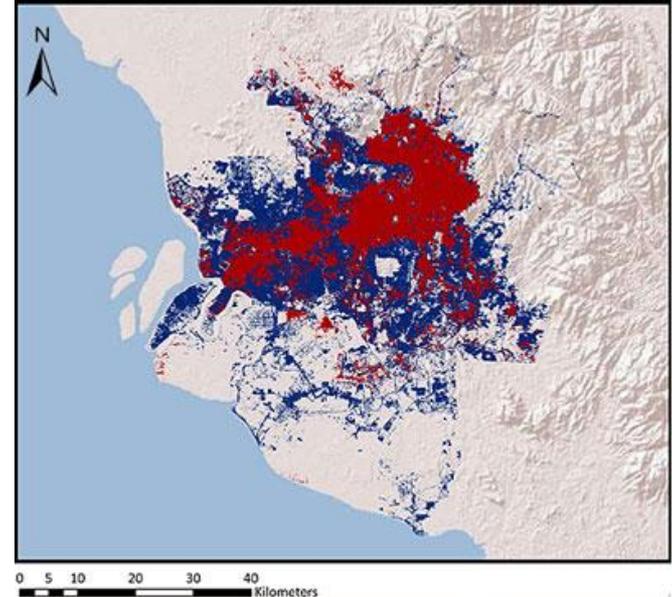
1. Forest loss in natural resources frontier
  - Land cover dynamics. Large scale agriculture in the 20<sup>th</sup> century. Recently, Cameron Highlands
2. Displacement of forest-dwelling population
  - Land alienation and other forms of socio-economic marginalization have undermined the population and identity of Malaysia's indigenous tribes
3. Urbanization and high-density living
  - Pathology of high-density living or the impact of crowding on social behavior

# Malaysian Peculiarity

The flow of urbanization interstate for five years, 1880 to 1985



**KUALA LUMPUR, MALAYSIA:  
URBAN GROWTH 1990–2009**



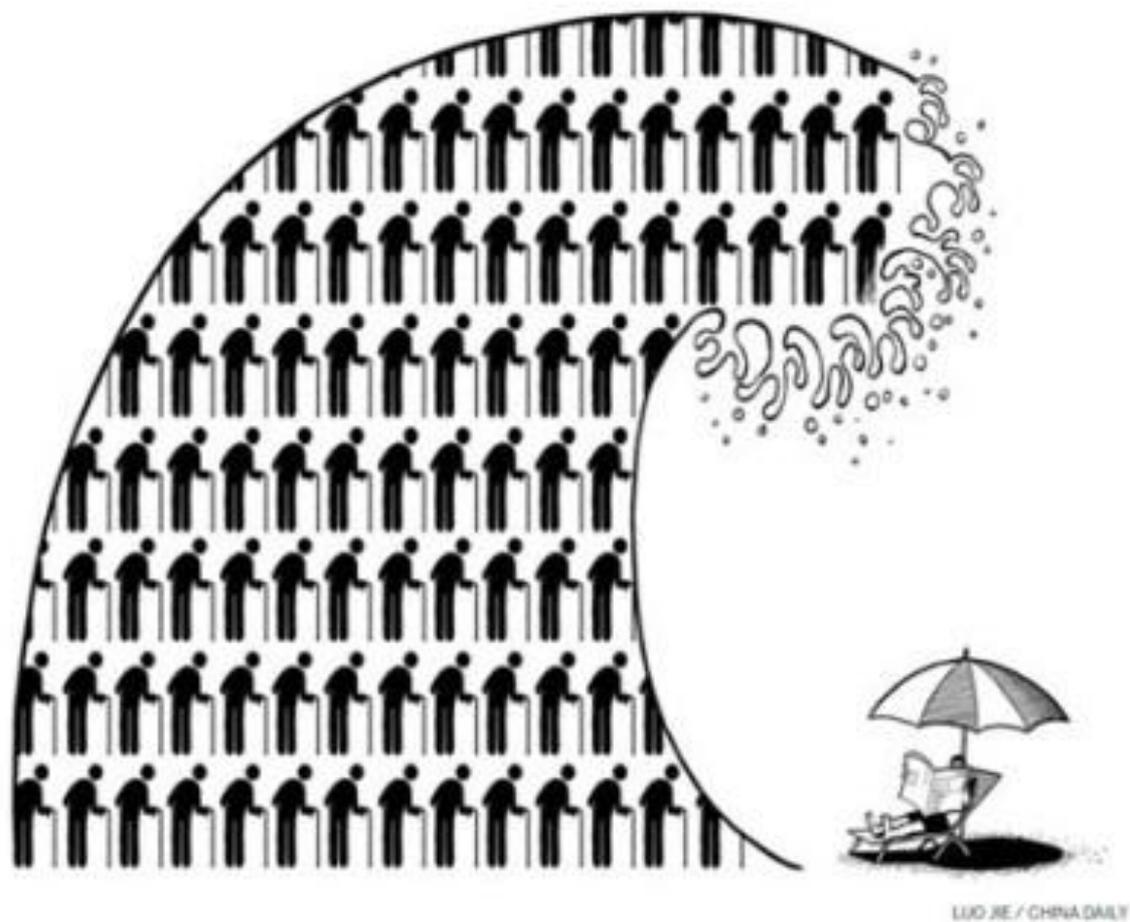
	1990	2009	Compound Annual Growth Rate (%)
Population	3,079,200	5,969,300	3.55
Urban Area (sq km)	621.01	1555.23	4.95
Population Density	4,958	3,838	-1.34

Key	
<span style="color: red;">■</span>	Built-Up Area, 1990
<span style="color: blue;">■</span>	Built-Up Area, 2009

# Concluding Remarks

Population-environment nexus is under-studied in Malaysia. Three proposals:

- i. Rapid appraisal of related research
- ii. Mapping of population-environment hotspots - e.g. demographics of disaster-prone areas
- iii. Regional security analysis of 'environmental or climate refugees' and how Malaysia should deal with this challenge



LIU JIE / CHINA DAILY

Thank You !