

GE3203

Sustainable Development of Hong Kong



Main objectives of the GE course

- To provide students with a comprehensive, experiential learning of the complex linkages between environmental quality, energy consumption, climate change, industrial competitiveness, and quality of life in Hong Kong and to prepare them to solve local and regional sustainability problems from a global and interdisciplinary perspective.

Course content and activities

- The course assesses water pollution, waste management, air pollution, sustainable energy, building and transportation, climate change, eco-industry and green service, nature and marine conservation, and sustainable campus in Hong Kong by means of such analytical tools as material flow analysis, energy flow analysis, and life-cycle assessment.
- The course includes lectures, case studies, in-class debates, field visits, and semester-long team projects focusing on evaluating and prescribing the sustainability of a Hong Kong-based organization or company.

Urban Metabolism is ...

the sum of “the technical and socioeconomic processes that occur in cities, resulting in growth, production of energy, and elimination of waste” (Kennedy *et al* 2007)



Transform
from:

Raw materials

Fuel

Water

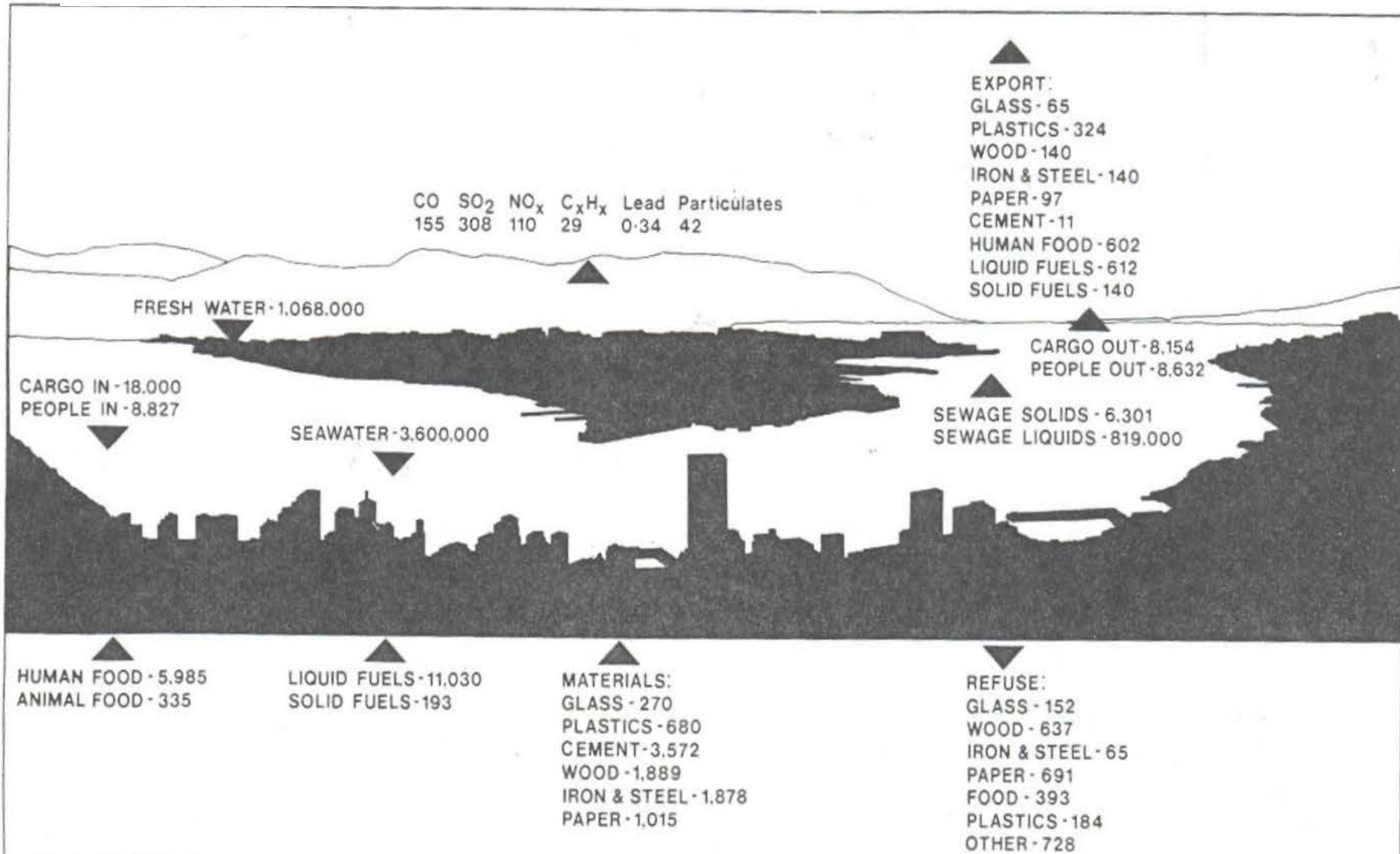
Transform into:

The built
environment

Human biomass

Waste

Urban Metabolism of Hong Kong, 1973



Units: Metric tons/day; Source: K. Newcombe et al., *Ambio*, 7 (1), 3-15, 1978

Case 1: To landfill or to incinerate - waste management challenge facing Hong Kong



Case 2: Go nuclear or go renewable?



Other debates to be conducted in class

- Promotion of electric vehicles in Hong Kong and Shenzhen: government policy vs. business leadership vs. societal acceptance
- Cross-border sources or local origins: which is to blame for Hong Kong's deteriorating air quality?
- Private sector's role in promoting sustainable development: Mal-Wart energy efficiency through its supply chain in China
- Is our campus greener than Yale University's?