



# Urban environmental challenges toward sustainable development in Hochiminh City, Vietnam



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Ho Chi Minh City, Vietnam

## Introduction

Ho Chi Minh City is currently in the rapid urbanization and the populous city in Vietnam. In 2010, Ho Chi Minh City numbered 7.39 million inhabitants which is twice that of Yokohama City, Japan (Approximately 3.67 million). This high population growth rate and the steady urbanization have lead Ho Chi Minh City into crisis of urban environmental problems.

The three main environmental aspects, which need to be in a state of emergency:

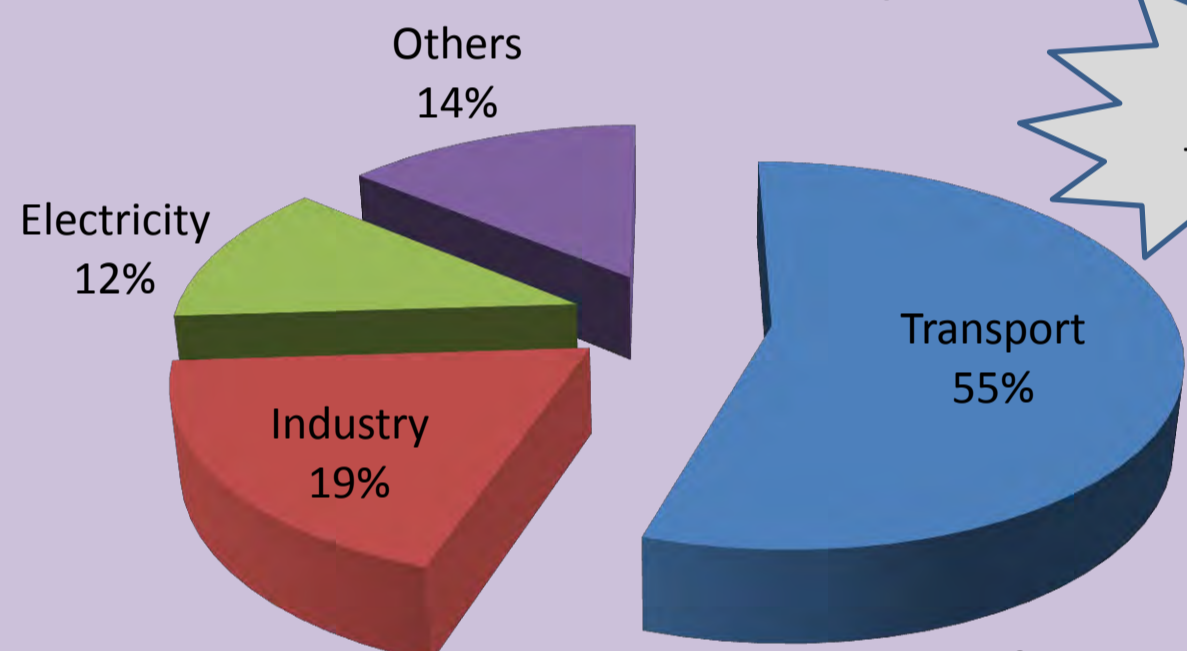
- Air pollution caused by traffic transportation
- Water shortage damaged by manufactures
- Solid waste scattered by domestic facilities.

Those problems are challenged Hochiminh City in a new trend of sustainable development.

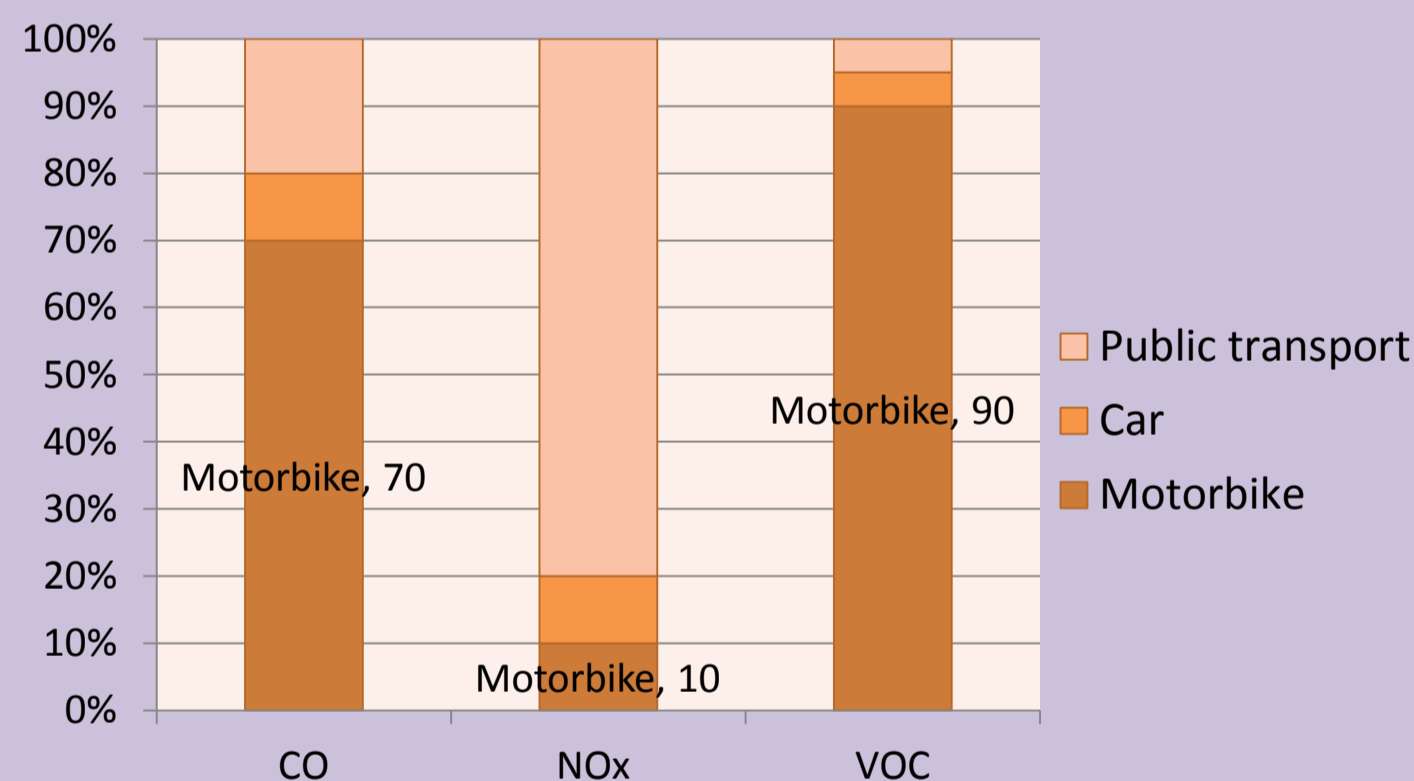
## Air pollution



### Fuel consumption



Source: Ministry of Industry and trade – Annual Report 2007.



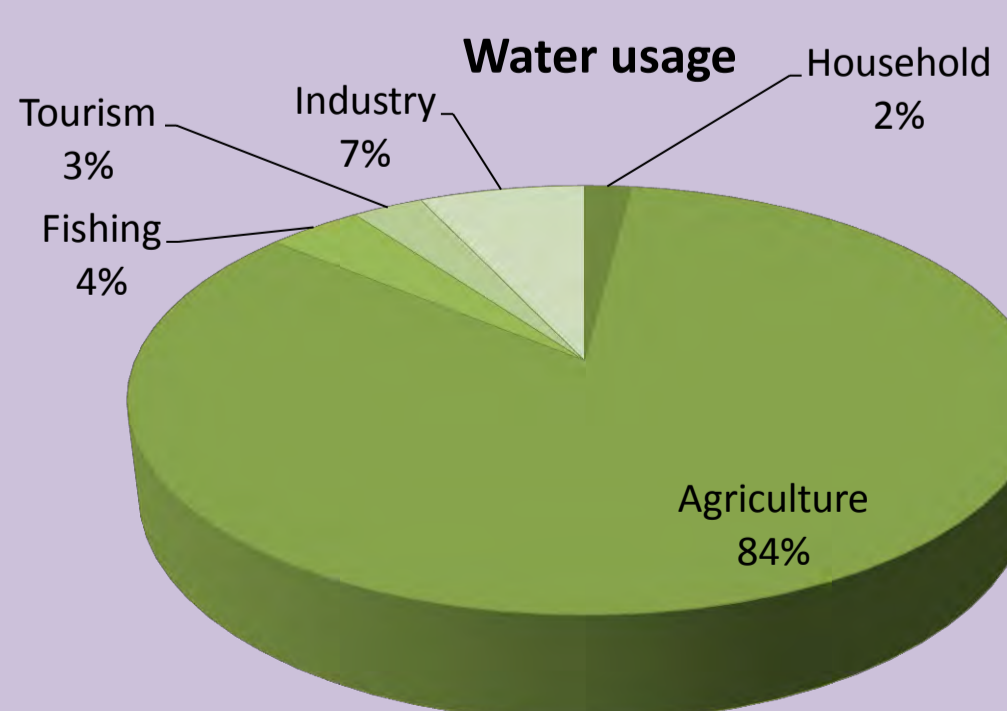
Source: Vietnam Environment Administration - Report 2009

### Main reasons:

- Inadequate infrastructure
- Lack of public transport system
- Weak of urban planning

## Water pollution

- Vietnam has 13 rivers which cover about 10,000km<sup>2</sup>
- Water usage mainly for agriculture facilities but industry is the main source of water pollution.



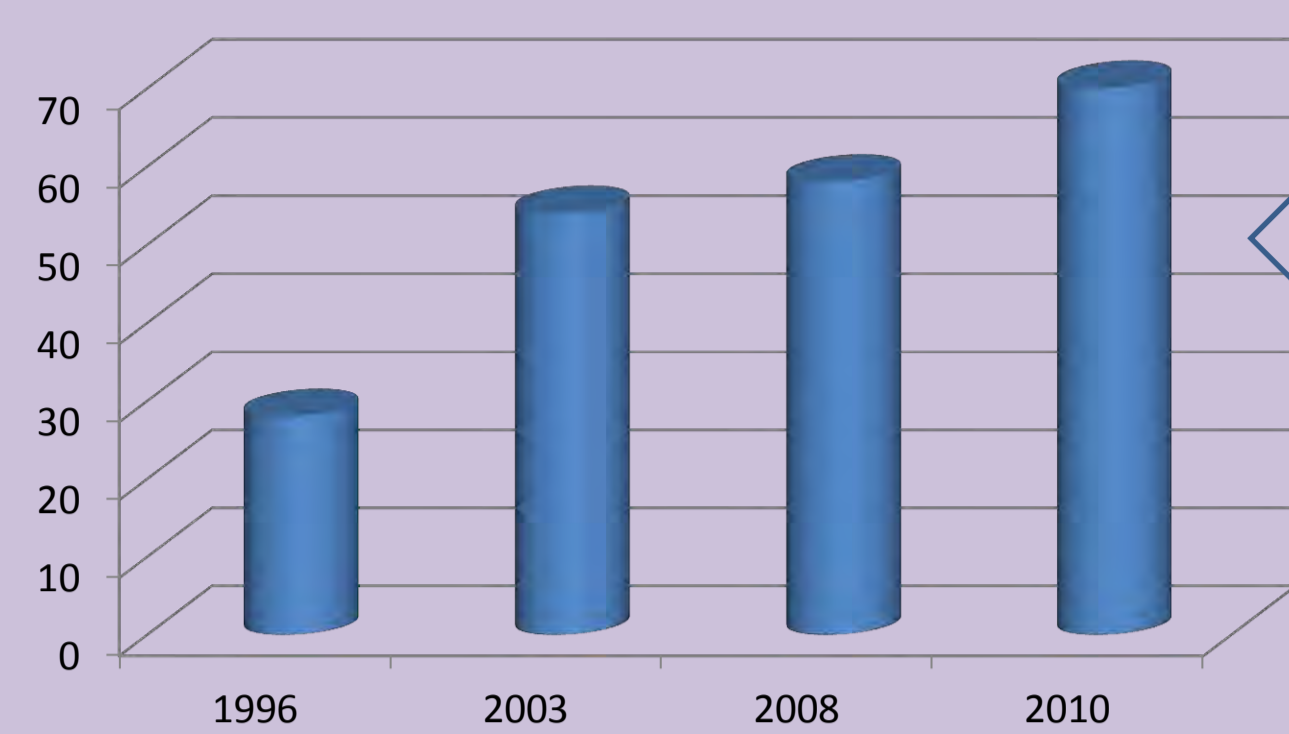
Rural area and suburban have shortage of clean water.



Clean water shortage  
Source: Tuoitreonline.com

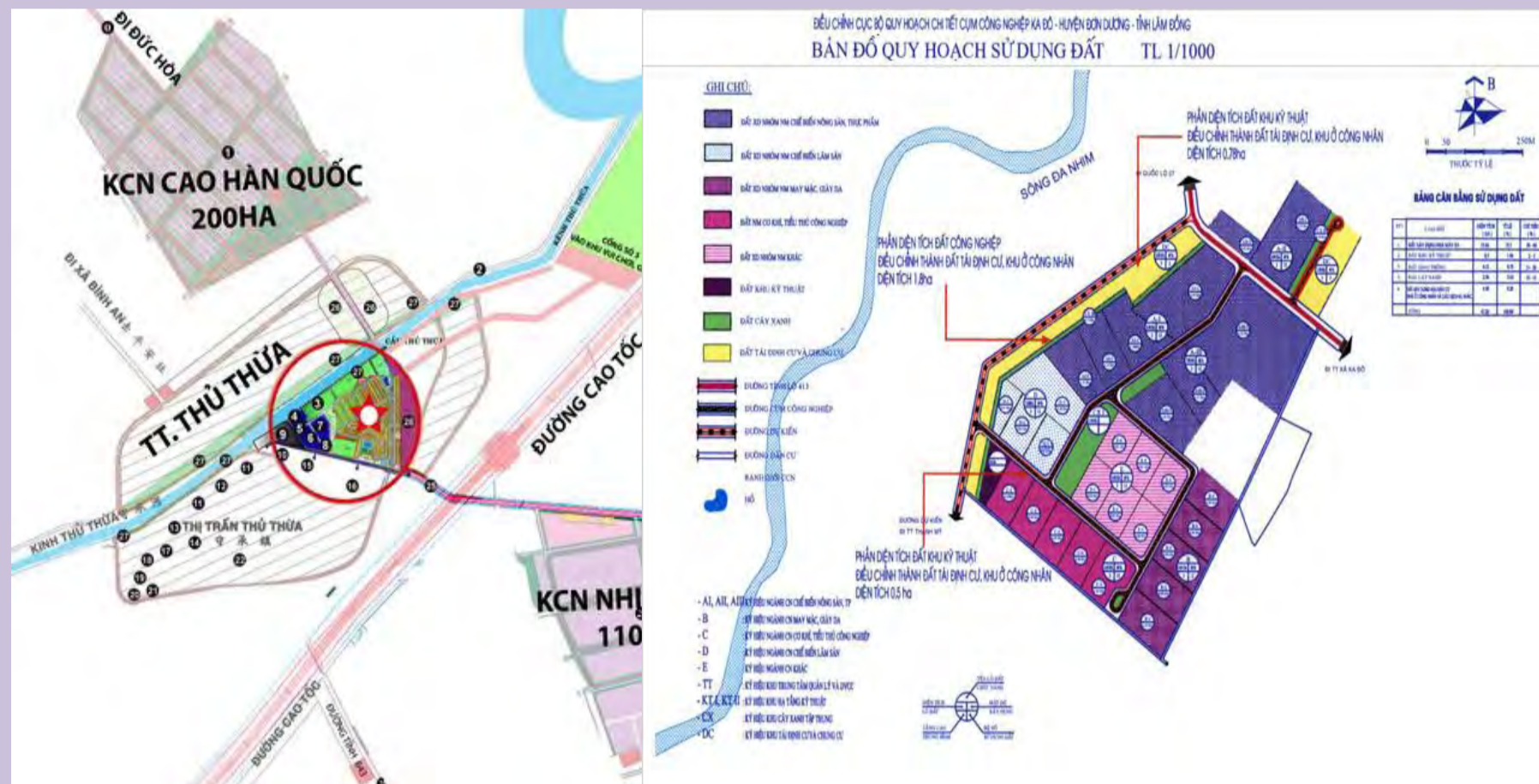
Industrial waste water on Thi Vai river

### Clean water for citizens in Vietnam (%)



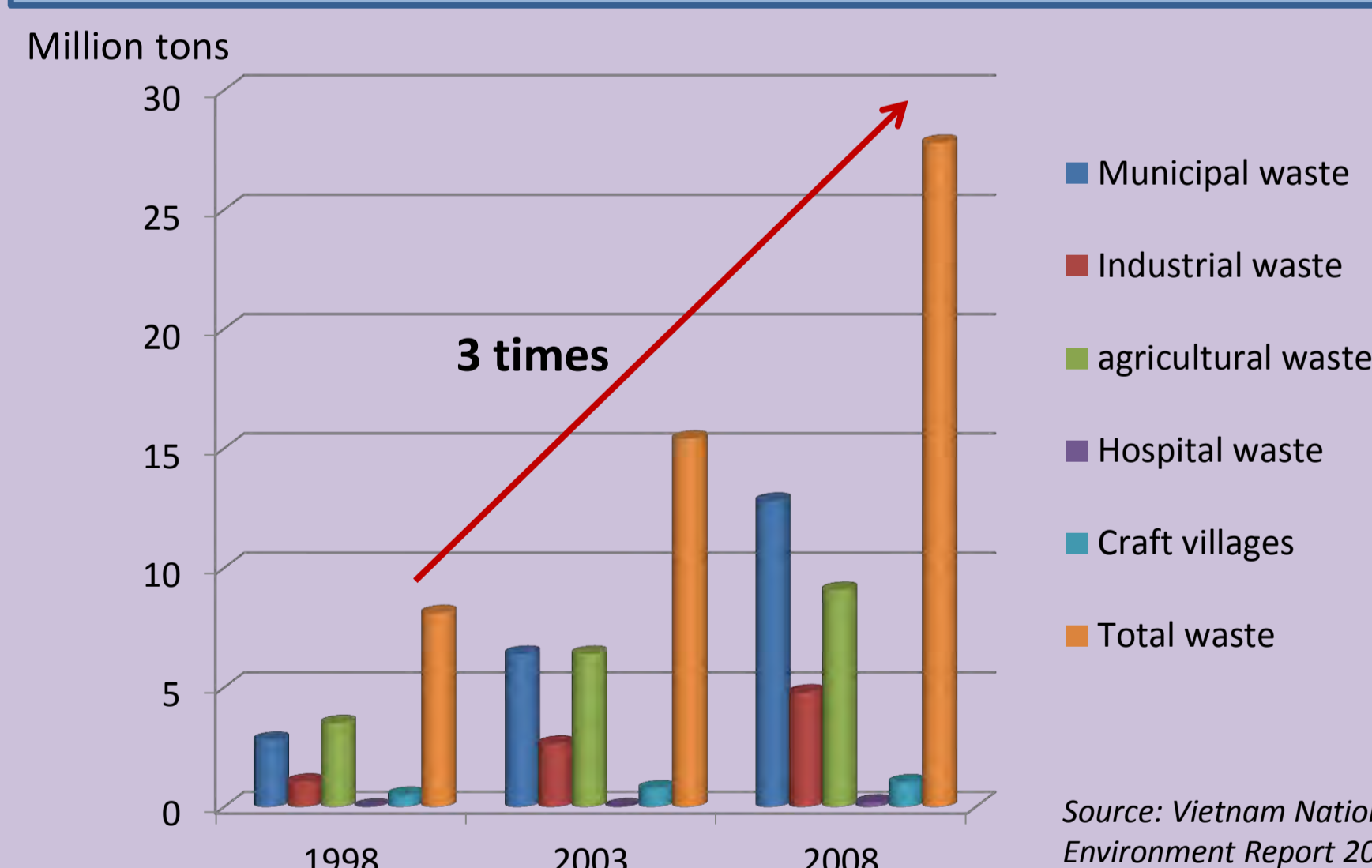
Source: Unilever Vietnam Fund 2010

70% citizens have been supplied clean water



- Most of industry zone or factories locate along the rivers.
- Less 40% of manufactories have waste water treatment system.
- Less 50% of waste water in urban have treated, the rest discharge to rivers or canals.
- ➡ Surface water are harmful
- Clean water treatment plant has relied on ground water.
- ➡ Ground water are also damaged

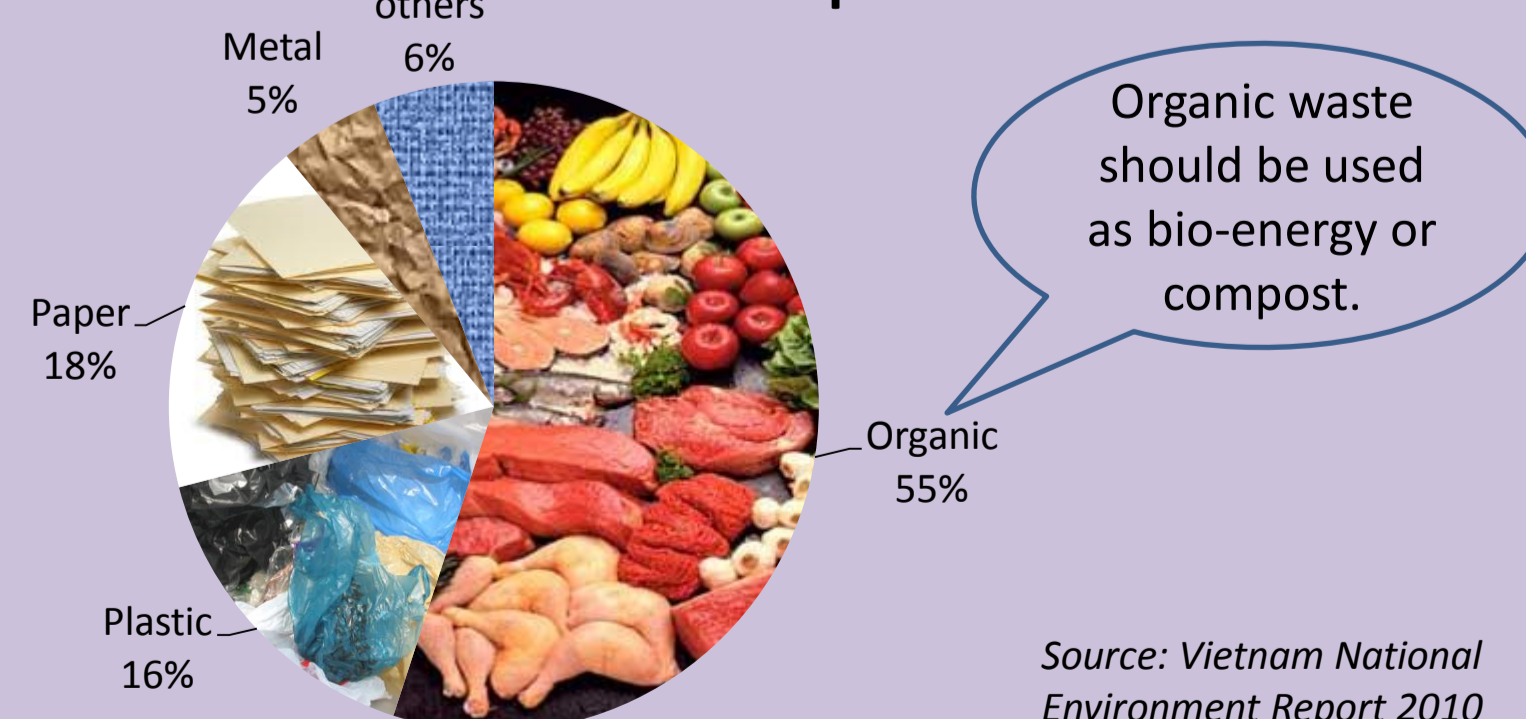
## Municipal solid waste



Source: Vietnam National Environment Report 2010

- Waste generation has been increased for 10 years and continued since today.

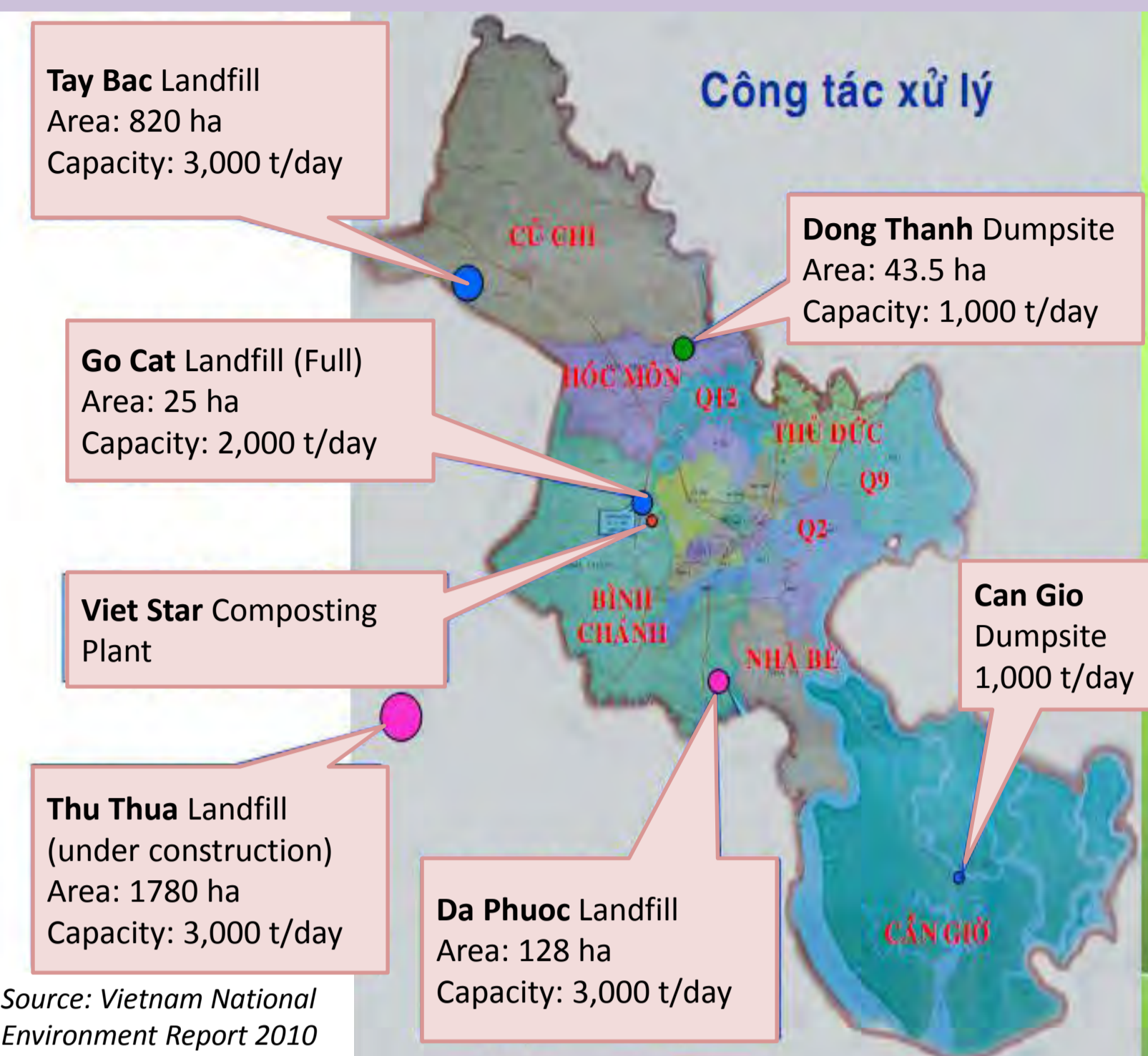
### Waste component



Organic waste should be used as bio-energy or compost.

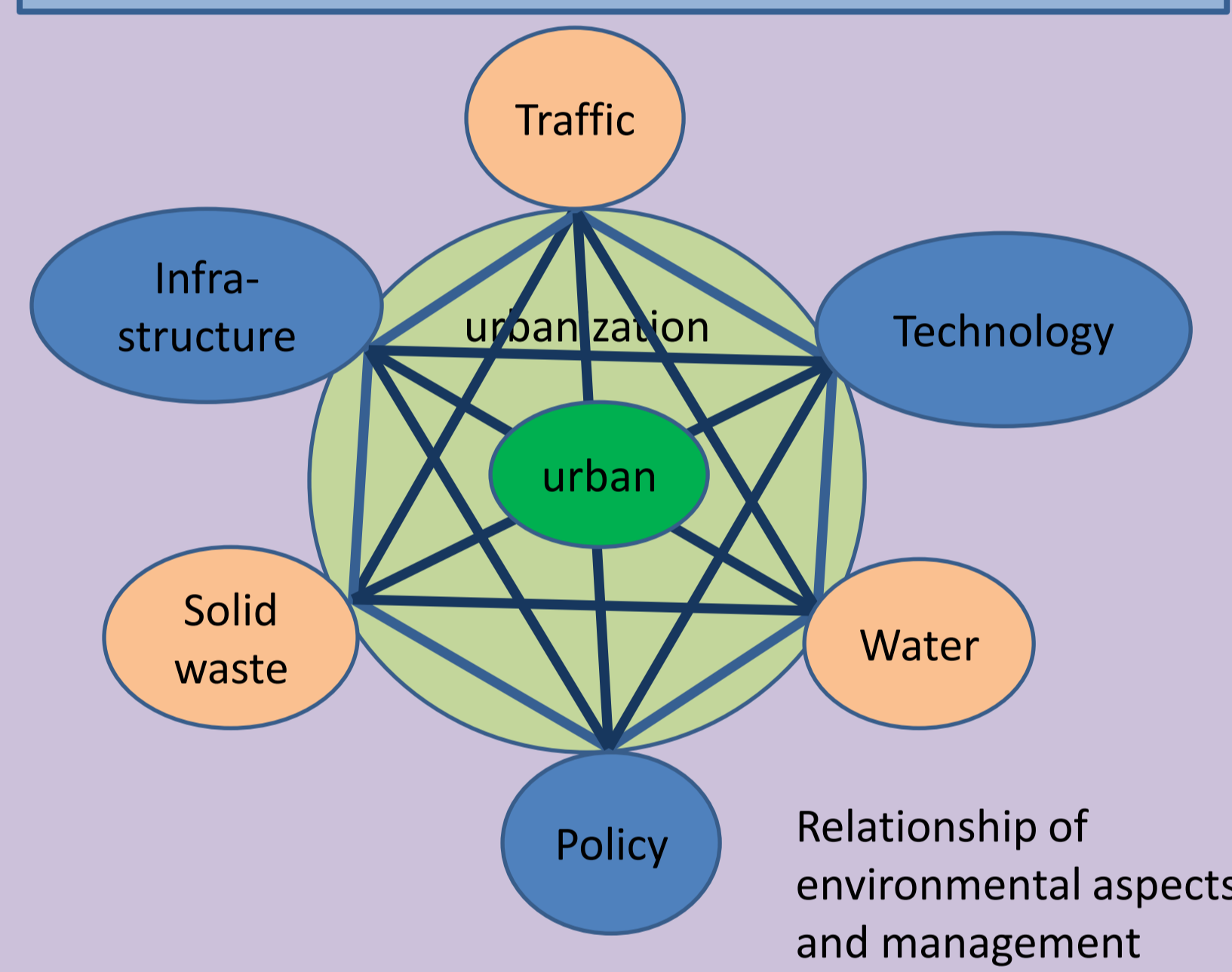
Source: Vietnam National Environment Report 2010

- Domestic waste has been discarded average 35,000 tons/day.
- Hochiminh City discards 10,120 tons waste/day in 2010.
- Waste is not separated at sources and all dispose at the landfills.
- There are 17 engineering sanitary landfills, 91 controlled landfill, 49 open dumpsites across the country.
- Hochiminh City has 4 sanitary landfills (One full capacity and one under construction).
- Recycling rate is low.



- Main reasons:**
- Lack of high technology of recycling
  - Lack of capacity of waste collection
  - Lack of waste policy
  - Lack of integrated solid waste management
  - NIMBY syndromes existence (NIMBY- not in my back yard)

## Solution



Three wheels could change situation

## Conclusion

- The three urban environmental problems cause beyond rapid economic growth and urbanization have a complex relationship with management aspects.
- To solve those problems, need an integrated management system which shows step-by-step process as the main wheel to change citizens' awareness toward using less environmental resources.
- The more we produce the more we discard. If we could control the amount of products, we would manage the amount of waste. Hence, we can toward sustainability.

## Contact

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