

**Current situation and orientation  
of solid waste management  
in Danang city**

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# Danang city

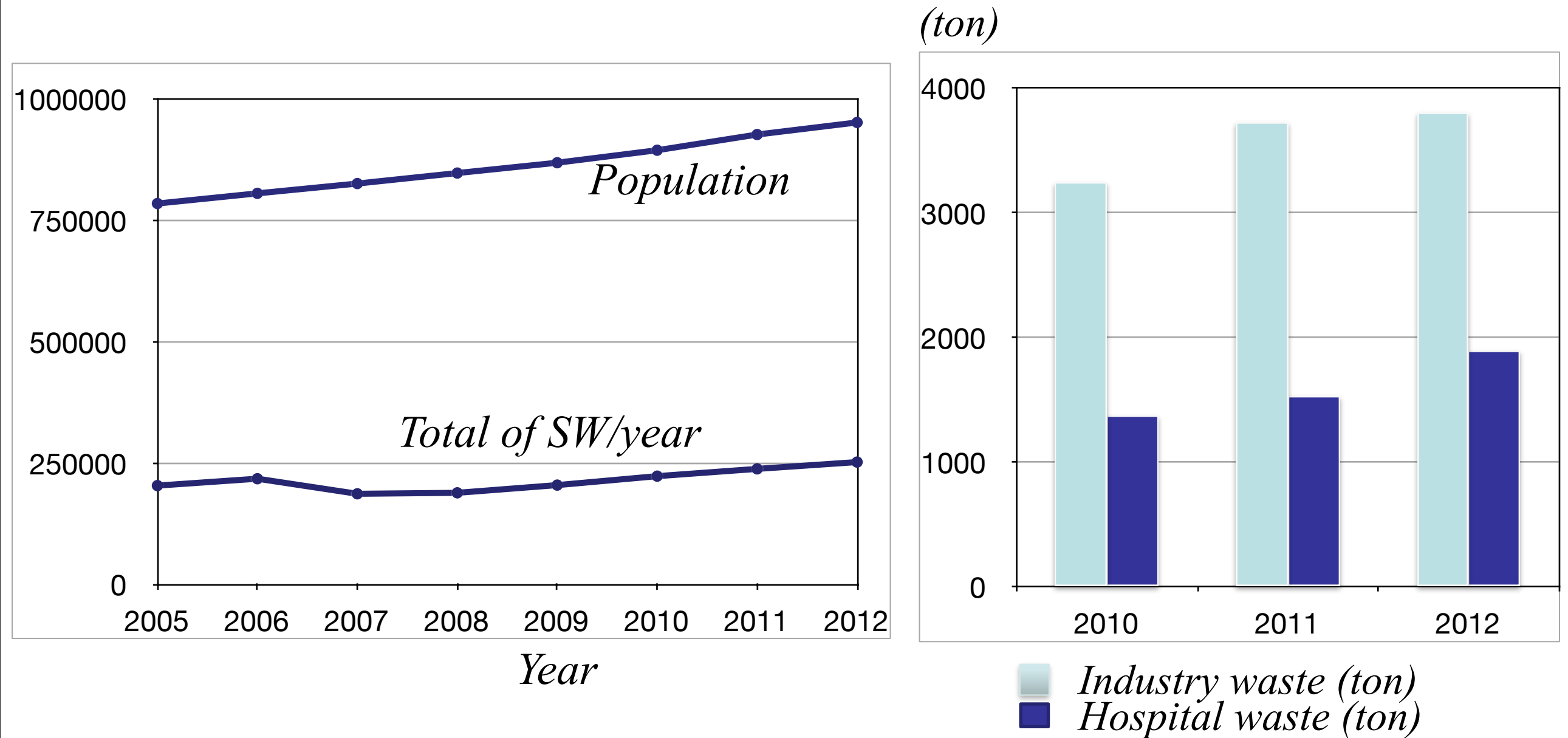
Danang is the dynamic city of the Central area in Vietnam

- *6 districts and 2 suburban-districts*
- *Natural area: 1,256.2 km<sup>2</sup>*
- *Population: 950.000 people*

Danang has made great progress on economic-social development, especially in the urban infrastructure renovation.



# Current waste management situation



The increase rate of SW/year: 2.51 - 2.96%

The rate of collected waste 2012: 90%

The increase rate of industrial and hospital waste/year: 2.2 - 2.5%

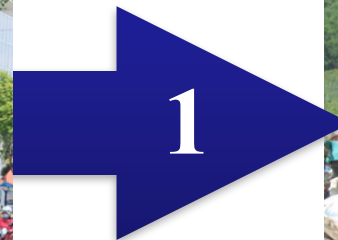
The increase rate of hazardous waste/year: 0.24%

*(Source: Danang URENCO, 2013)*



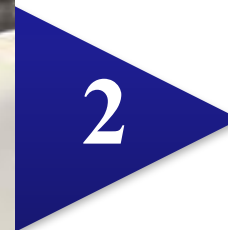
# Current waste management situation

## 4 methods of solid waste collection



*Khanh Son Landfill*

1. Waste collection along the roads



*Transfer station*

2. Waste collection inside the residential areas



# Current waste management situation



3



3. Waste collection along the beaches

*Khanh Son Landfill*



4



4. Waste collection in the industrial zone

*Khanh Son Landfill*



# Current waste management situation

## Integrated solid waste management plan for Da Nang city



*National workshop in Hanoi*



*Training in Danang*

**INTEGRATED SOLID WASTE MANAGEMENT  
(ISWM) BASED ON 3R**

**INTEGRATED SOLID WASTE  
MANAGEMENT  
TO 2015 AND VISION  
TOWARDS 2020**

**DA NANG, VIETNAM**

Mushtaq Ahmed Memon, Programme Officer  
International Environmental Technology Centre (IETC)

# Current waste management situation

To access the current situation of SW management

## **Advantages:**

- *The rate of collected waste is high (92%)*
- *It contributes to clean streets in Danang*
- *Create jobs by labor intensive (1200 people)*
- *Low cost by the state to cover losses*

## **Disadvantages:**

- *Separation at source, reuse and recycle of wastes are not feasible due to the lack of dustbins, transportation and no market for waste*
- *Waste was not recognized as resources*
- *Lack of the suitable policies at city level*



# Challenges of solid waste management

In order to enhance our effectiveness of SW management, we have to answer some questions below.

- 1. It needs to have suitable collection methods because most of solid waste are from the residential areas. What are they?*
- 2. What are the feasible methods for reusing, recycling and reducing the domestic waste?*
- 3. What are the policies that city government have to issue?*
- 4. What are the best-practice of community-based waste separation at source?*

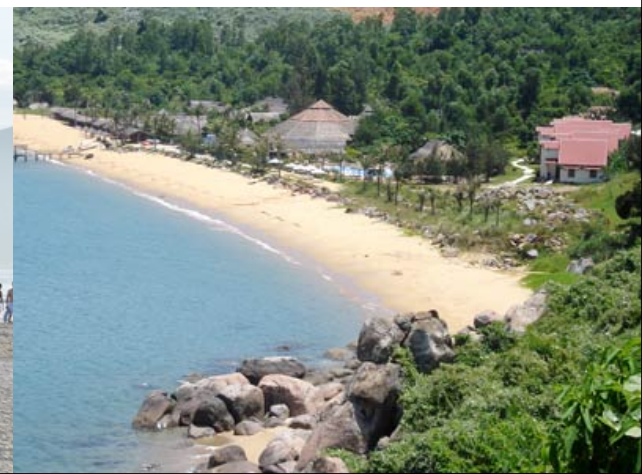
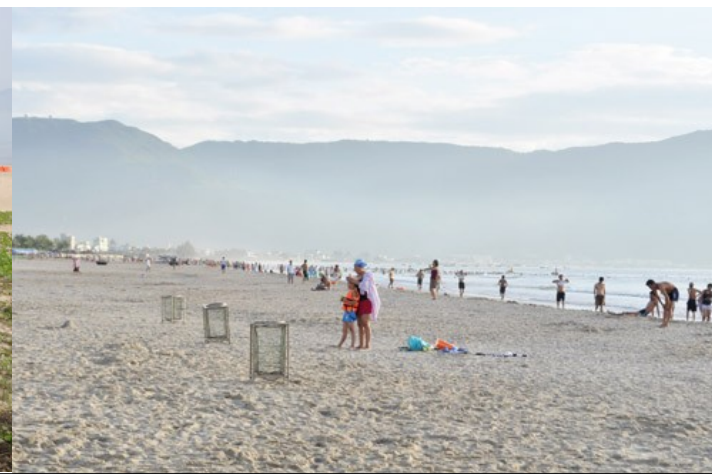
# Eco-city project of Danang city

## Main objectives

- City gain the environmental standards by 2020.
- Capable of protecting the environment, ensure the health and safety of the residences and investors, and also preservation of the natural landscape

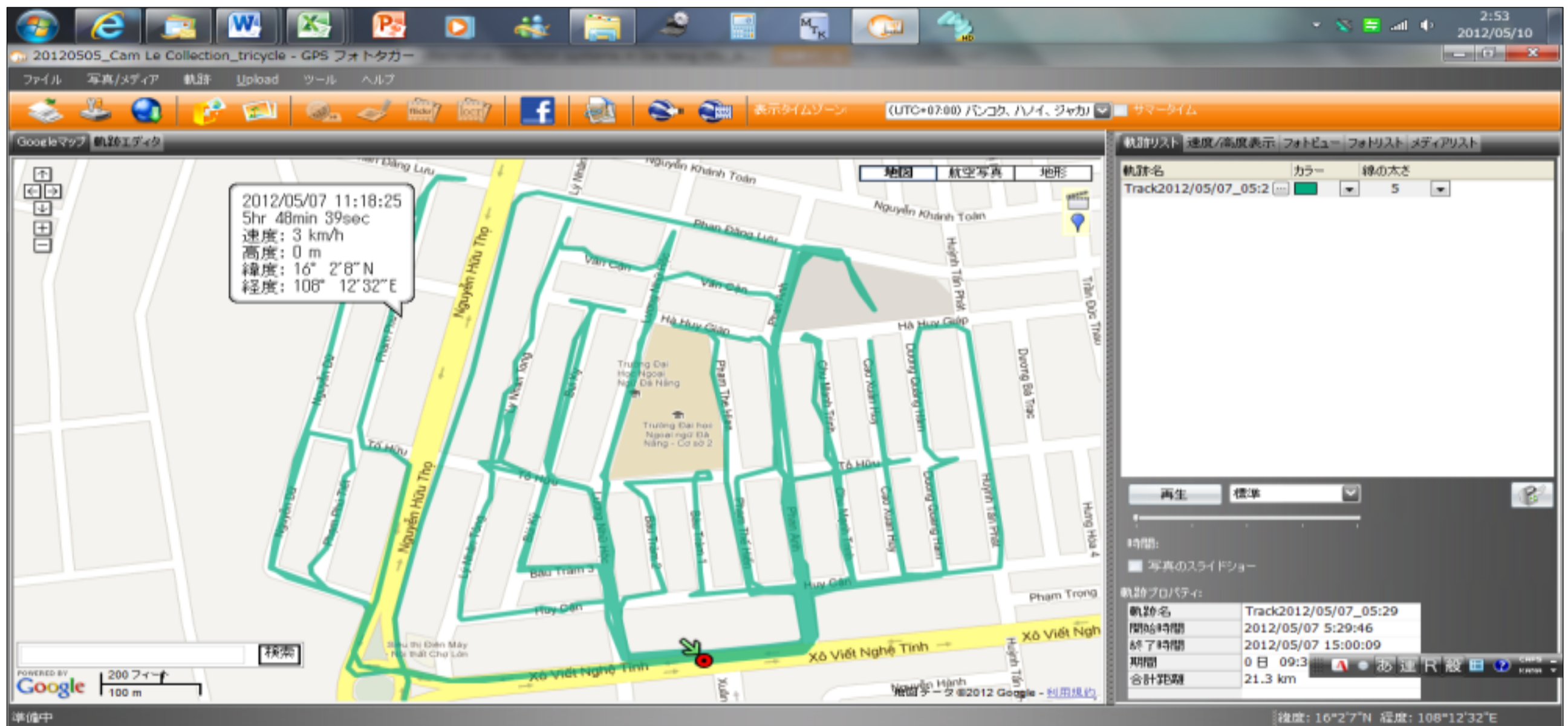
## Some environmental criteria

- Air Pollution Index less than 100
- 25% of wastewater reused
- 70% solid wastes recycled and reused
- 100% of households using clean water



# Ongoing activities

A study on



*Door-to-door collection in Area 4 in Cam Le district*

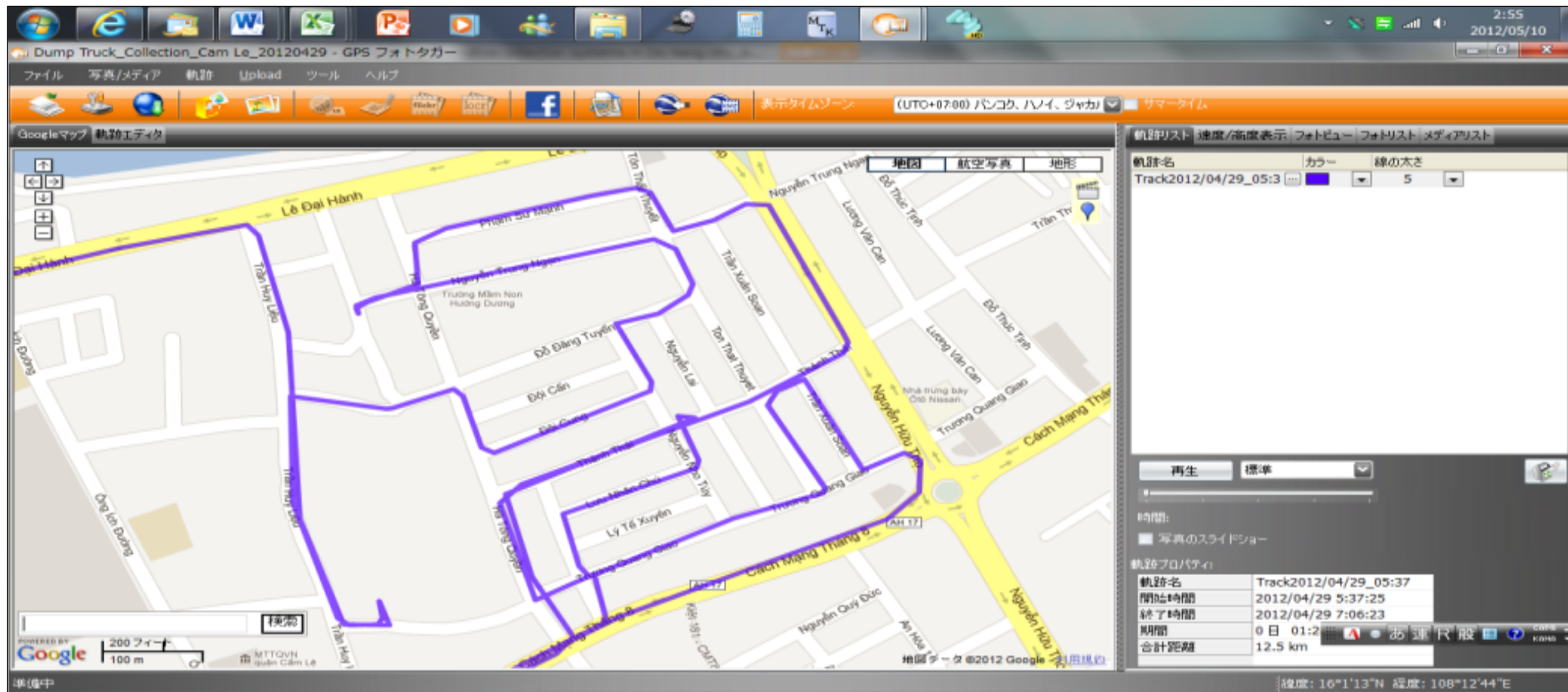
Operation distance:  
6.96km=88% of total road length

MATSUI Yasuhiro

Okayama University, Japan



# Ongoing activities



*Door-to-door collection in Area 3 in Cam Le district*

Operation distance:  
3.46km=46% of total road length

MATSUI Yasuhiro

Okayama University, Japan

# Ongoing activities

- Starting in 2013 on the 27 roads located in 3 districts of Hai Chau, Thanh Khe and Son Tra.
- The dust bins set up from 17:00 - 5:00 next day, then all of them will be cleaned

# Ongoing activities



## Feasible project (Denmark, 2012)

- Project budget: 50 million USD
- Generate energy: 30.000 MWh/year
- Decrease CO2: 16.000 ton/year.



# Ongoing activities

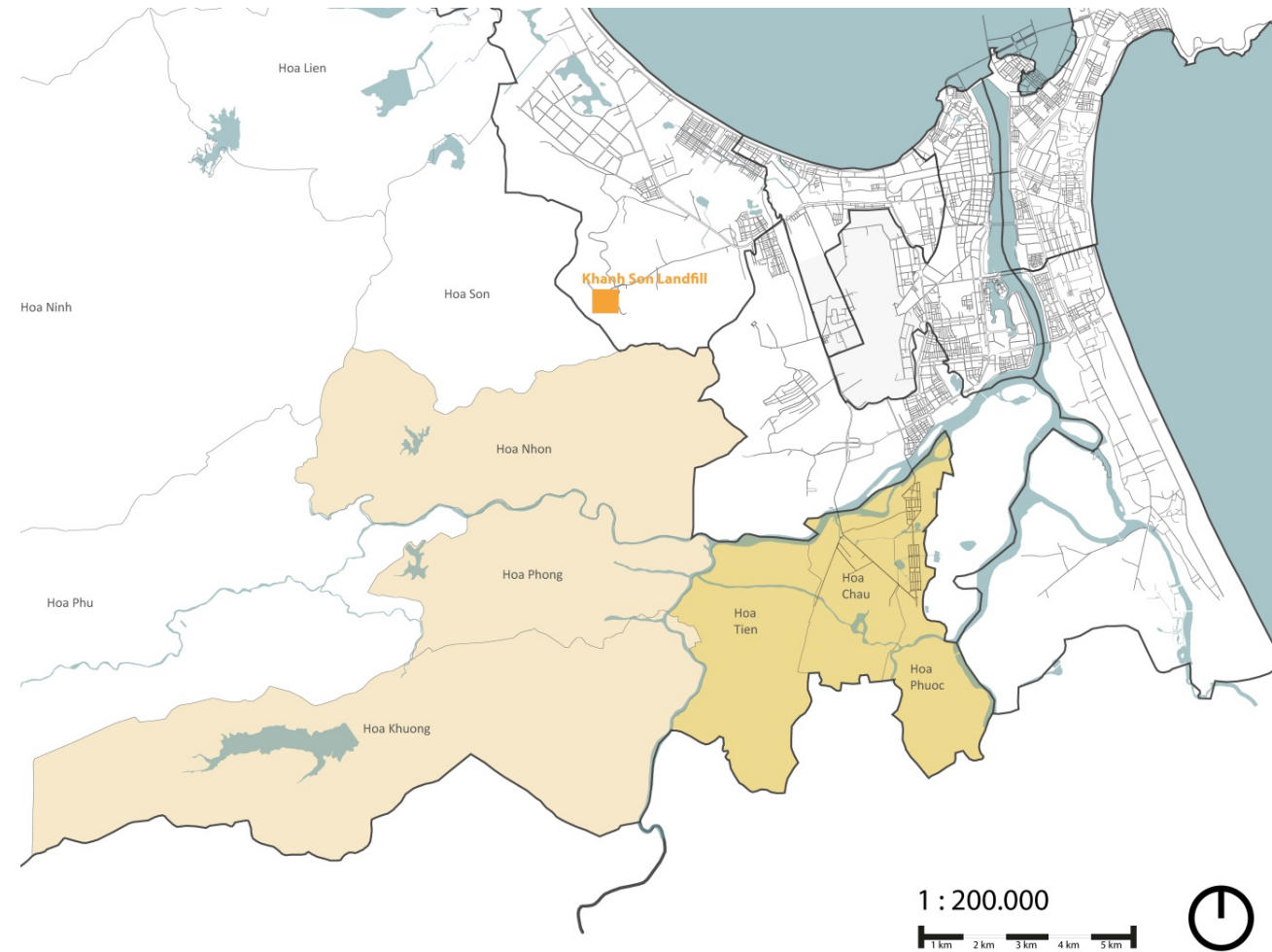


## **PO oil plant**

- project budget: 520 billion VND
- Using plastic waste as materials: 50 tons / day (8% of total waste)
- Create PO 17 tons/day



# Ongoing activities



## Compost plant

- Agricultural wastes at Hoa Vang suburban district
- Amount of wastes: 10 tons/day

# The needs for cooperation

- Support Danang city to arrange policy to call up the participation of private sector according to the orientation of integrated solid waste management and application of 3R
- Support Danang city to set up the Center for waste exchange for implementation 3R and integrated solid waste management
- Study the capacity to use restaurants, hotels, shops wastes for producing high quality compost fertilizer.
- Support a pilot model to produce biogas from sewage sludge



**Thank you for your attention!**

*For further information, please contact:*

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