



Accuracy of municipal solid waste data in Vietnam

The 8th Workshop on GHG Inventories in Asia (WGIA8)

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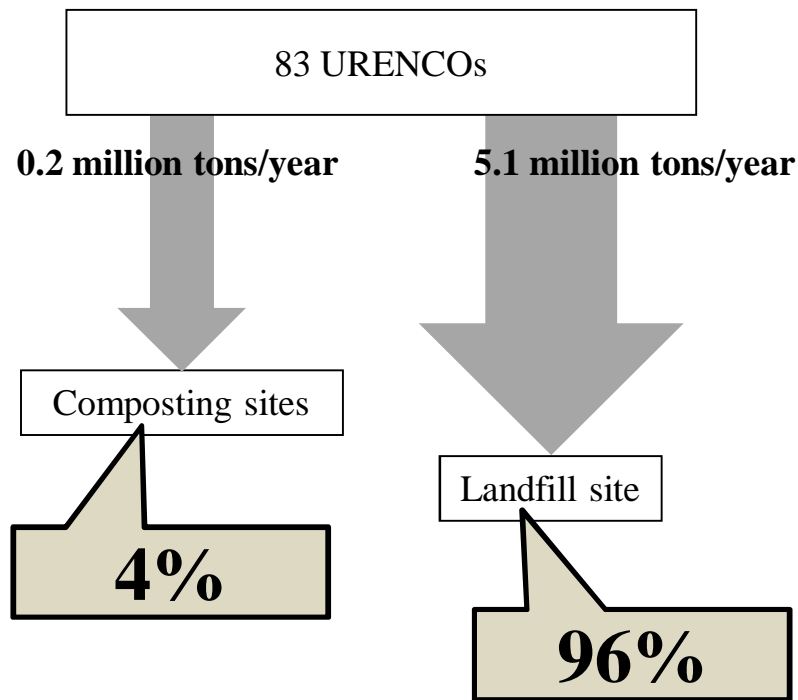
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Total MSW flow of 83 URENCOs in 2008

- We distributed the questionnaire on MSW management to 90 URENCOs on November 2009, and 83 URENCOs answered (**92%**).
- The 83 URENCOs collected MSW from 18.9 million or **21.9%** of total population of Vietnam (86.2 million).



Questionnaire

This form is to be completed if information on your organization's activities related to MSW is available.

1. Personal information

Name of contact person: _____
 Affiliation/Job title: _____
 E-mail address: _____
 Tel & Fax: _____

2. Organization information

Organization name: _____
 Address: _____
 Number of Employees: Total: _____ Administration: _____ Engineer: _____
 Established year: _____
 Budget in 2008: _____ VND

3. Please fill out the information on MSW collection service of your organization

Year	Contracted business service (No.)	Contracted service (No.)	Contracted capacity (ton/day)
2008	1	1	12,500
2007	1	1	41,447

4. Please fill out the information on the facilities related to MSW which you have any documents which introduce the facilities, please attach it to the answer sheet.

4.1. ONGOING landfill and/or open dumping site

Location	Type of facility (Sanitary Landfill or Open dumping)	Total area (ha)	Dumping area (ha)	Height/depth (m)
1	Sanitary Landfill	32.1	32.1	10
2				
3				

4.2. CLOSED landfill and/or open dumping site (1999-2008)

Location	Type of facility (Sanitary Landfill or Open dumping)	Total area (ha)	Dumping area (ha)	Height/depth (m)
1	Open dumping	32.1	32.1	10
2				
3				

4.3. ONGOING composting plant

Location	Type of facility	Capacity (ton/day)	Height/depth (m)	Treatment in 2008 (ton/year)	Production in 2008 (ton/year)
1	Compost	200	10	55,388	12,390
2					
3					

4.4. ONGOING other facilities

Location	Type of facility	Capacity (ton/day)	Height/depth (m)	Treatment in 2008 (ton/year)	Production in 2008 (ton/year)	Excess in 2008 (ton/year)	Number of operators	Investment Date
1	Incineration	20	10	1,242	None	590	100	1999
2								
3								

5. Has your organization ever conducted an analysis on physical composition of MSW (food waste, paper, plastic, etc.)? Please tick and if you answered "Yes," please attach the related report to the answer sheet.

6. If you have inventory of MSW other than industrial, medical or hazardous waste in which your organization is engaged, please fill out the following information in 2008 by reference to Fig. 1.

Fig. 1 Inventory of MSW

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graph TD
    A[Sources: Households, offices, markets, restaurants, hotels, etc.] --> B[Product distribution (1)]
    A --> C[Composting (2)]
    A --> D[Landfill or open dumping (3)]
    A --> E[Other (4)]
    A --> F[Product distribution (5)]
    B --> G[Composting (6)]
    C --> G
    D --> G
    E --> G
    F --> G
    G --> H[Product distribution (7)]
  
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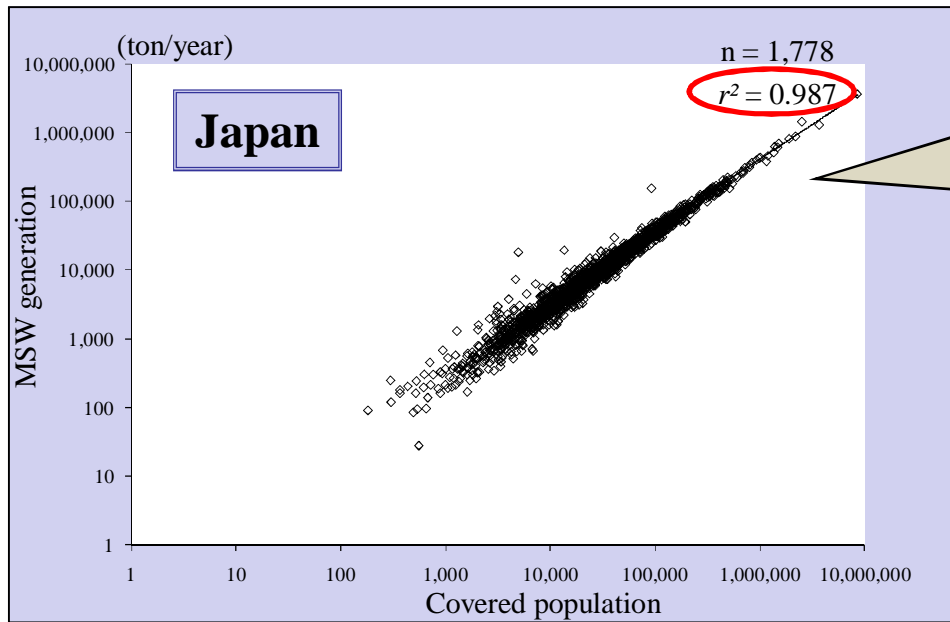
General information	Year of data	Unit	Amount	Number of facilities
Total Population of the coverage area	Year: 2008	people	-	-
Inventory of MSW		ton/year		
Direct disposal on landfill or open dumping site (1)		ton/year	-	-
Composting (2)		ton/year	-	-
Production from composting process (3)		ton/year	-	-
Residue from composting process (4)		ton/year	-	-
Other (5)		ton/year	-	-
Production from Other (6) process (6)		ton/year	-	-
Residue from other (7) process (7)		ton/year	-	-

7. Please describe freely major issues / concerns of solid waste management in the area where your organization provide the management service.

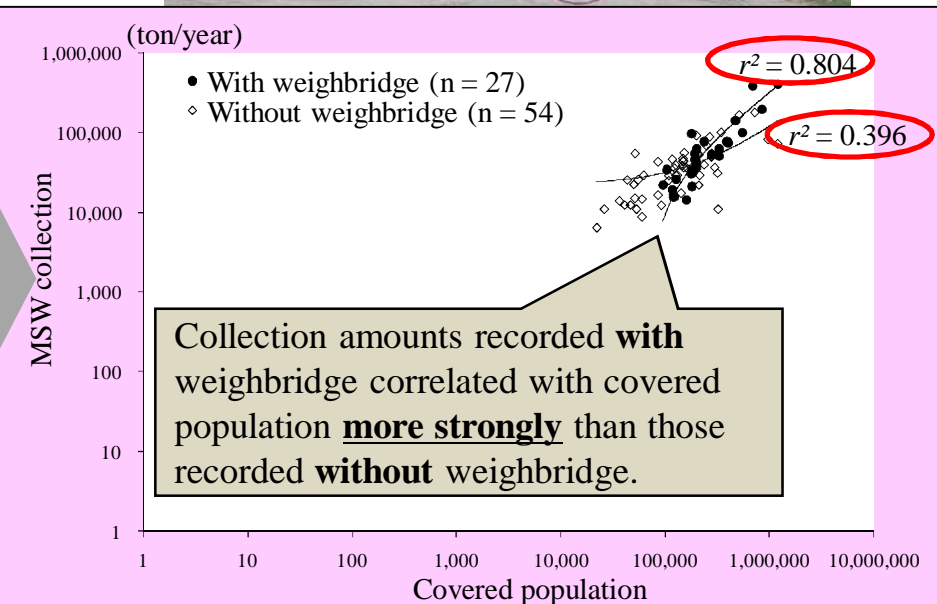
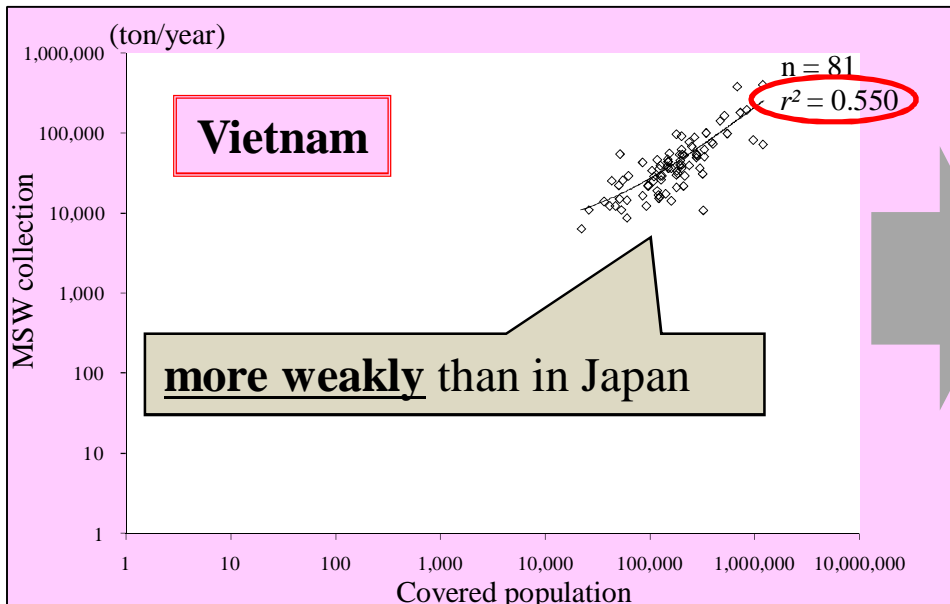
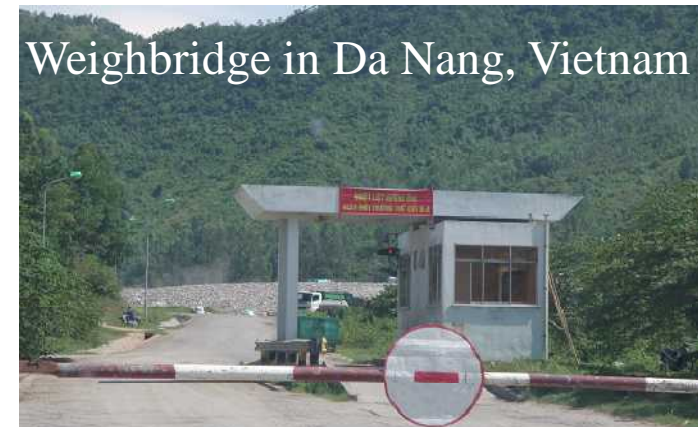
Thank you for your cooperation! END.



Accuracy of MSW data



The data on the generation amount of MSW and the population in Japan is highly reliable. The generation amount correlated with covered population **quite strongly** in Japan.





Discussion on MSW data

1. Data collection

Stages for MSW data collection

Stage 1 Local municipalities collect MSW data for managing MSW

Stage 2 Central governments centralize MSW data from local municipalities

Stage 3 GHG inventory office utilizes MSW data shared with central governments

2. Data quality

It is no wonder that install of weighbridge improves the accuracy of MSW data.

The URENCOs without weighbridge also reported the collection amount of MSW by weight (ton).

It refers that the URENCOs estimated the weight in one way or another.

The way of estimating the collection amount of MSW in the municipalities which can't afford to install the weighbridge should be improved.