

JICA's Approach for Solid Waste Management

(3R Forum @Indore)

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- *Diagnostics and Analytics:*
 - > Identification of challenges/backgrounds for appropriate “*prescription*”
- *Awareness Improvement and Public Participation:*
 - > Involvement of civil society for *social innovation*
 - > Promotion of *environment education*
- *Private Sector Involvement:*
 - > Creation of better *business environment* for efficiency and sustainability
 - > Comprehensive approach (public role)
 - e.g. development of technology, regulation, institution, finance

Current Status and Challenges on SWM

- Increase of solid waste by urbanization, population increase, economic growth, life style change, etc.
- Illegal dumping and burning of wastes without consciousness, etc.



- Adverse effects on *environment and human health*
e.g. infectious diseases
- Adverse effects on *economic activities, tourism, etc.*



Integrated SWM through 3Rs with “Diagnostics” and “Prescription”

Implementation Capacity

- (a) Technology
- (b) Finance
- (c) Administration
- (d) Legislation
- (e) Public Awareness/
Public Participation

Private
sector
involvement



Process-wide Framework

- (1) Production and Consumption
- (2) Generation -> Segregation ->
Emission
- (3) Collection and Transportation
- (4) Intermediate Treatment/
Reuse/ Recycle
- (5) Final Disposal

JICA's Comprehensive Instruments for SWM

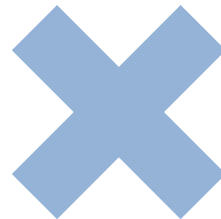
Identification of challenges

Implementation Capacity

- (a) Technology
- (b) Finance
- (c) Administration
- (d) Legislation
- (e) Public Awareness /
Public Participation

Process-wide Framework

- (1) Production and Consumption
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- (3) Collection and Transportation
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Adoption of support instruments

Concessional ODA Loan

Grant Aid

Technical Cooperation

PPP support

Glass roots
(Japanese local Govt/ NGO)

Volunteers

JICA's View for Assistance with Development Stage Concept

1 st stage	Improvement of public hygiene	<ul style="list-style-type: none"> ✓ Segregation/Collection Improvement e.g. Participatory approach ✓ Dumping Control
2 nd stage	Reduction of environmental burden and prevention of pollution	<ul style="list-style-type: none"> ✓ Semi-aerobic landfill "Fukuoka Method" ✓ Leachate treatment ✓ E-waste treatment
3 rd stage	Establishment of material-cycle society with 3R initiative	<ul style="list-style-type: none"> ✓ Public awareness dev. ✓ Legal framework dev. ✓ Recycling industry promotion

Example of cooperation (at the 1st stage)

(c) Administration & (e) Public Participation X (3) Collection and Transportation

Background

- ✓ Rapid urban population increase in Bangladesh (Increase by 5.6%/yr)
- ✓ Serious air pollution, solid waste disposal, etc.

Characteristics

- ✓ Introduction of WARD Based Approach (WBA) (participatory approach) to improve collection and transportation (initially in 15 WARD)
- ✓ Currently, the number of WARD introducing WBA expanded to 25 in 2017.



50% increase

in waste collection rate (44% -> 65%)



Example of cooperation (at the 2nd stage)

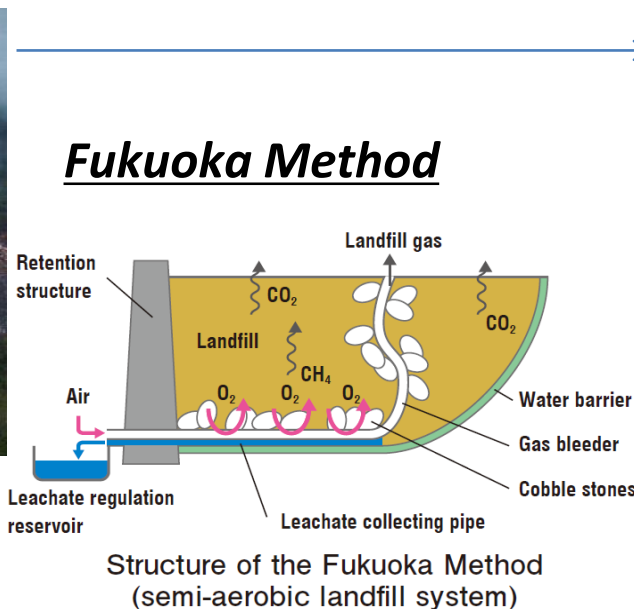
(a) Technology X (5) Final Disposal

Background

- ✓ Difficulties in dumping waste control and disposal site management
- ✓ Necessity of final disposal technology

Characteristics

- ✓ Introduction of Fukuoka method
(Semi-aerobic landfill structure; low-cost, environmentally friendly, and easy to introduce)



Example of cooperation (all stages)

(b) Finance, (e) Public Awareness X

(2) Segregation, (3) Collection and Transportation, (4) Recycle, & (5) Final Disposal, etc

Characteristics

- ✓ Introduction of area-wide solid waste management system first in India
- ✓ Installation of leachate treatment plant
- ✓ Construction of sanitary final disposal site with cover soil
- ✓ Public awareness and environmental education for segregation



C40 Award for Best Solid Waste Project (2016)*

Public Awareness Improvement



Segregation Promotion



*The C40 Cities Climate Leadership Group (C40) connects more than 80 of the world's greatest cities. C40 is focused on tackling climate change and driving urban action.

Example of cooperation (at the 3rd stage)
(e) Public Awareness X (2) Segregation & (4) Recycle

Awareness Improvement!

✓ Kodansha (Tokyo)

Publication of picture-books and “Reading Aloud Campaign”
 for *mind-set change/ Social innovation*

‘Mottainai Grandma’

published in Hindi/English on 13 January 2018

