



# WASH Sector Cox's Bazar Bangladesh

**Solid Waste Management Strategy** 

Part 1 (of 2): Illustrations

**July 2021** 





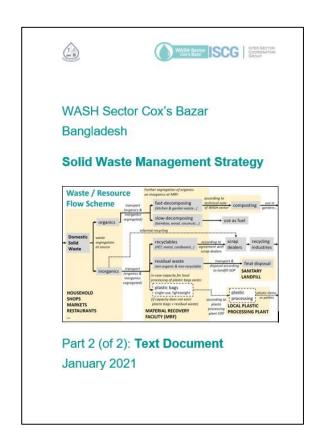
### The SWM Strategy of the WASH Sector

**Part 1: Illustrations** 

(this file)



**Part 2: Text Document** 



brief graphic summary of the strategy...

in case more detail is needed...

https://www.humanitarianresponse.info/en/operations/bangladesh/water-sanitation-hygiene



# Why is Solid Waste Management (SWM) important?



SWM is <u>not</u> about the perception or acceptance of solid waste pollution!

Unsafely managed solid waste can lead to...

...the emission of toxic fumes from uncontrolled waste burning

...breeding grounds for disease vectors such as rodents, insects...

...the pollution of **drinking water sources** and **food sources** 

...marine plastic pollution

...the emission of greenhouse gases



## **Objectives of the SWM Strategy**

**Overall objectives** 

Minimization of hazardous impact of domestic solid waste on human health and environment

**Specific objectives** 

Reduction of waste generation

Minimization of need for safe disposal (through waste avoidance, reuse & recycling)

Safe disposal of residual waste in sanitary landfill

Awareness raising and behaviour change towards adequate waste handling

## **Working Principles of the SWM Strategy**

#### Working principles (in order of priority)

- 1) Avoidance of waste generation (especially inorganic and non-recyclable waste)
- 2) **Establishment of a complete SWM system** (for waste which cannot be avoided, as proposed under 1.): waste segregation > collection > transport > value recovery > safe disposal
- 3) Ensuring adequate waste handling (through awareness raising and behaviour change)
- 4) Source segregation of waste (and maintaining of segregation throughout SWM system)
- 5) **Reuse** of segregated waste
- 6) **Recycling** of segregated waste
- 7) Safe disposal of residual waste (which cannot be avoided, reused or recycled)





**TYPES of Waste:** 

**LOCATION:** 

**CATEGORIES of Waste:** 

Domestic Solid Waste households, restaurants, shops, markets... organic material (from kitchen & garden), recyclables, residual waste (inorganic & non-recyclable)...

**Medical Waste** 

hospitals, medical wards, practices... sharps, infectious waste, pharmaceuticals, general waste...

Construction Waste

construction sites, demolition sites...

bricks, concrete, metal, wood, plastics...

**Electronic Waste** 

...

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**Industrial waste** 

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NOT PART OF SWM STRATEGY

**FOCUS OF** 

**STRATEGY** 

**OF WASH** 

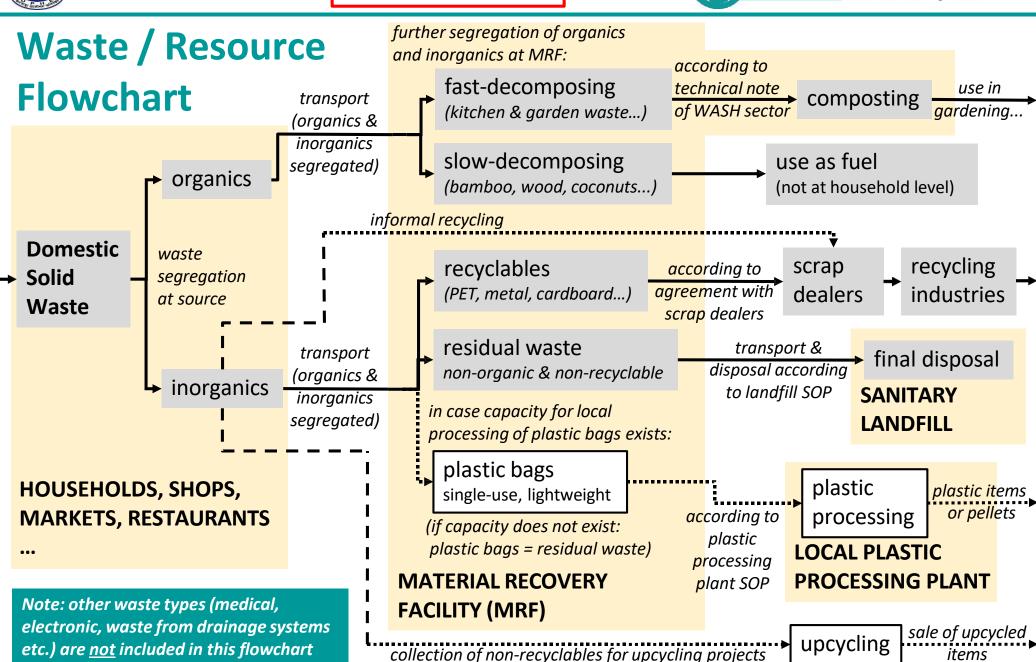
**SECTOR** 

**SWM** 

•••











# Importance of Waste Segregation

If waste is segregated...

...waste becomes a valuables resource!

...SWM becomes a business opportunity!

If waste is <u>not</u> segregated...

...waste remains waste, and needs to be disposed

...unsafe waste disposal is the easiest and cheapest approach!

...very likely, waste becomes a threat to human health and environment!

## Waste Segregation at Source

Waste segregation at source is the most effective approach...

...recyclables are not soiled, and can easily be recovered

...organic material is not contaminated with plastics etc.

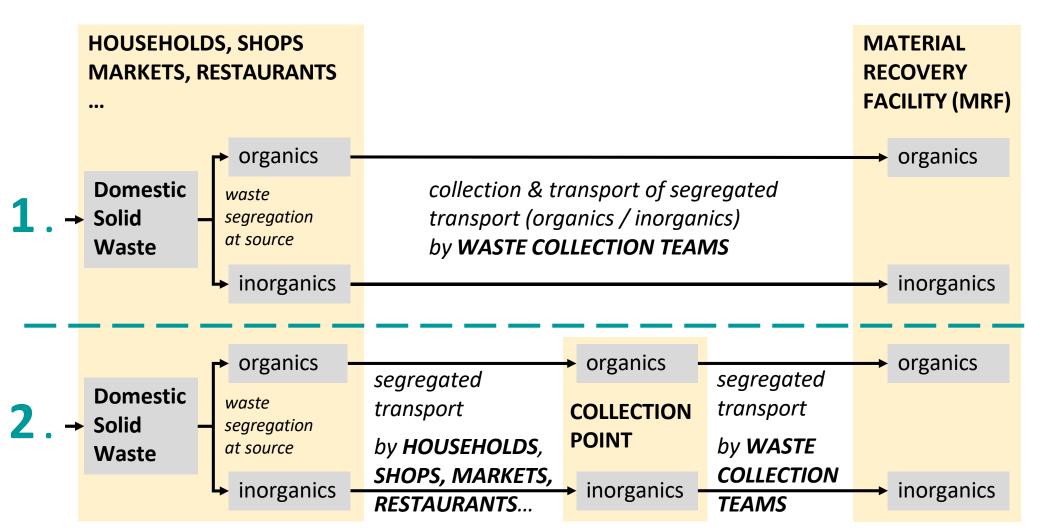




# Types of Waste Collection:

(choice for collection is with the responsible organization)

- **1.** <u>Household collection</u> (or collection at shops, markets, restaurants...) is labour-intense, but facilitates waste segregation at source!
- 2. <u>Collection points</u> are ideally supervised (for waste segregation)





Camps: Setup for Waste Sorting, Processing and Disposal

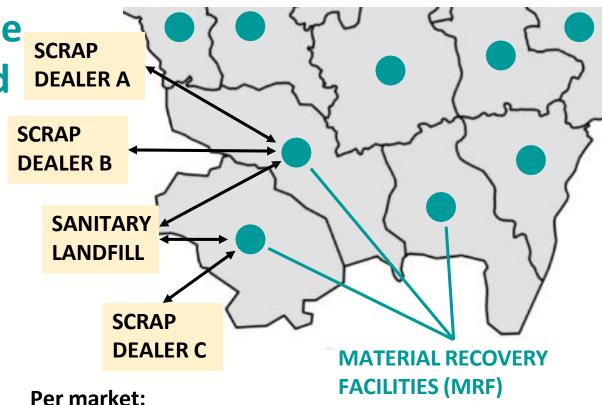
#### Per camp:

Material Recovery Facility (MRF):

- At least one <u>MRF</u> per camp
- MRF is in contact with <u>sanitary landfill</u> and <u>scrap dealers</u>: Several MRFs per landfill, and several scrap dealers per MRF is possible.
- Only residual waste from MRF is brought to sanitary landfill
- MRF should be located close to bigger roads to facilitate logistics

#### Per household, restaurant, shop:

(at least) two <u>colour-coded bins</u> (ca. 15
L): one for organics, one for inorganics



 (at least) two <u>colour-coded bins</u> per market stall (if necessary, use container)

#### **Waste collection points:**

- Number of points depends on storage volume, collection interval & type of collection
- Suitable accessibility for waste disposal & collection
- Protected again climate & animals





### Camps: Tasks, Responsibilities and Roles within SWM

**SWM** 

# **Department of Environment DoE**

 Provision of clearance certificates for SWM infrastructure...

# WASH Sector Coordination

 Provision of coordination & guidance: technical notes, SWM TWiG...

# Households, shops, markets, restaurants

- Waste segregation at source
- Correct disposal at collection points (or)
- handing over of waste to collection teams...

#### **Area Focal Agency**

- Monitoring of SWM implementation
- Ensure accountability of CFA & BFA...

Other humanitarian

campaigns, SWM-

related livelihood

activities, land use...

Coordination: cleaning

Sectors

# Department of Public Health Engineering DPHE

• Technical support and coordination...

#### Majhees & Camp Block Leaders

• Support SWM initiatives...

#### **Recycling Industry**

• Take over of recovered recyclables...

#### **Camp in Charge CiC**

• Support SWM initiatives and provision of land...

# Camp Focal Agency (CFA)

- accountable for SWM
- Operation of MRF...

# Block Focal Agency (BFA)

- accountable for SWM
- Collection of waste
- Transport to MRF...

#### **RRRC**

 Ensuring that SWM receives necessary attention and land...