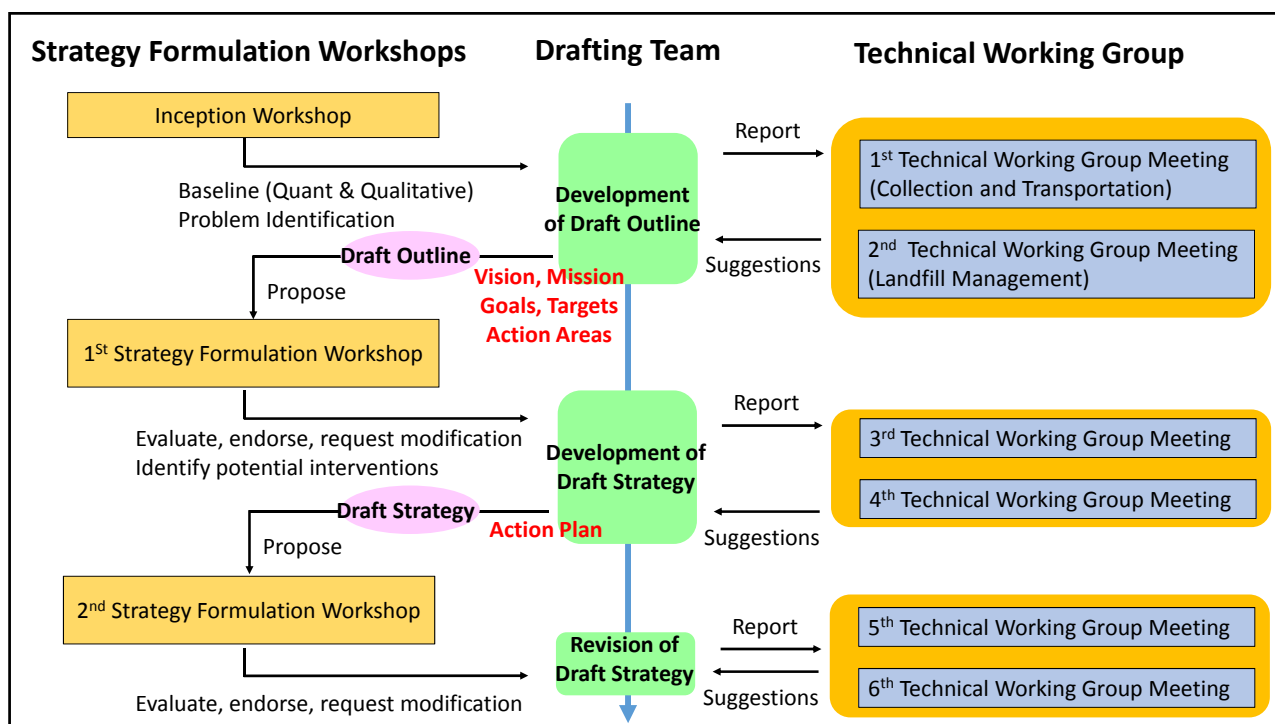


Example 2

Development of Waste Management Strategy and Action Plan of Phnom Penh City, Cambodia

Key Challenges and Policy Responses



Waste Management Challenges of Phnom Penh

1: Solid Waste Disposal in an expanding city

Population increase



Equal increase in Waste Generation

Population: 2,800,000

Waste Generation: 1.0 million T/year (0.98 kg/cap/day)

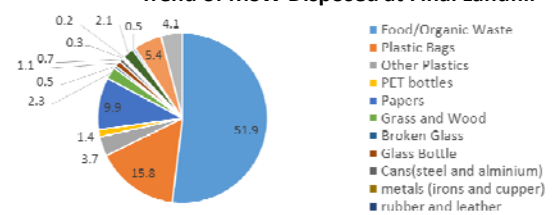
Change in Quality of Waste



Lifestyle change



Trend of MSW Disposed at Final Landfill



Waste Composition at Generation Point in Phnom Penh

Waste Management Challenges of Phnom Penh

2: Unsystematic residential discharge and collection practices

❑ Problems with collection service quality

- Collection time table not widely shared in some area
- Collection service not conducted following the time table

❑ Problems with Waste Discharging behavior

- Residents does not pack their waste
- Time table not followed



Waste are left uncollected



3: Uneven access to solid waste collection

- Outskirts of city still not receiving collection service
- Congested Areas:
- Coverage rate: approx: 80%

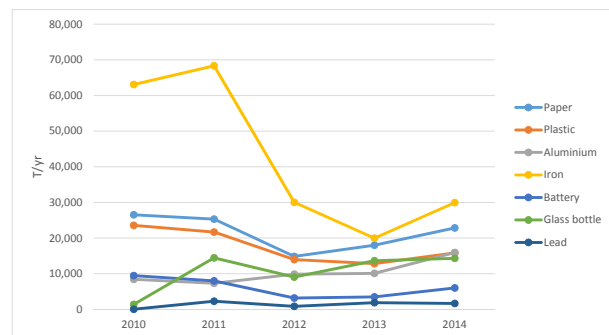
Waste Management Challenges of Phnom Penh

4: Limited Intermediate Treatment Options (for WM & RE)

- ❑ Financial, technical, and HR challenges to introduce capital intensive waste management technologies (such as incinerator)
 - Construction
 - Operation and maintenance
- ❑ Recycling activities are limited
 - Market still small for recycled materials
 - Recycling industries weak
 - Collected recyclables exported



Outflow of Potential Resources



Transition of the amount of recyclable waste in Cambodia

Waste Management Challenges of Phnom Penh

5: Final Disposal Site

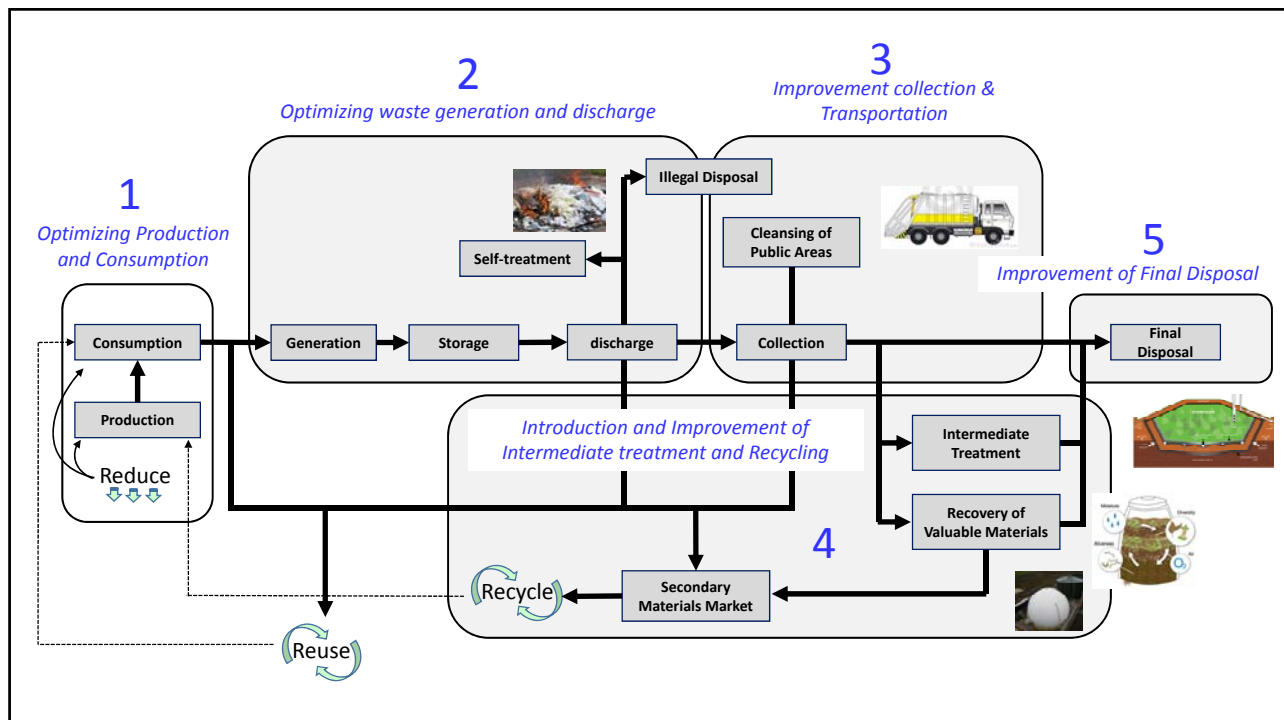
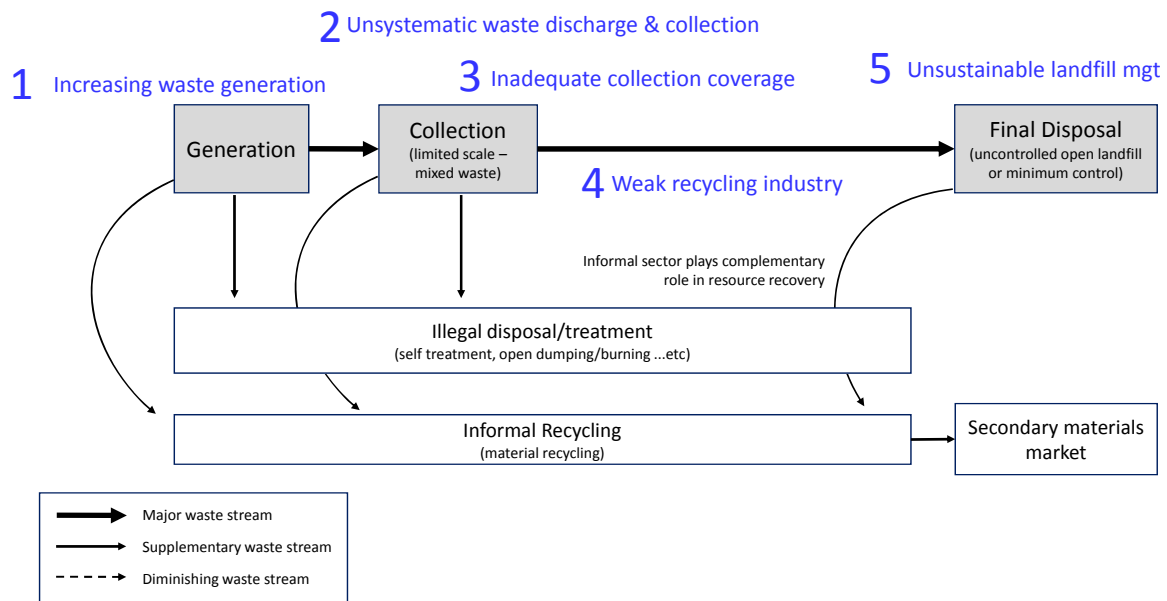
- ❑ Engineered but not maintained properly
 - no soil coverage, no leachate treatment facility
 - Remaining lifetime rapidly decreasing

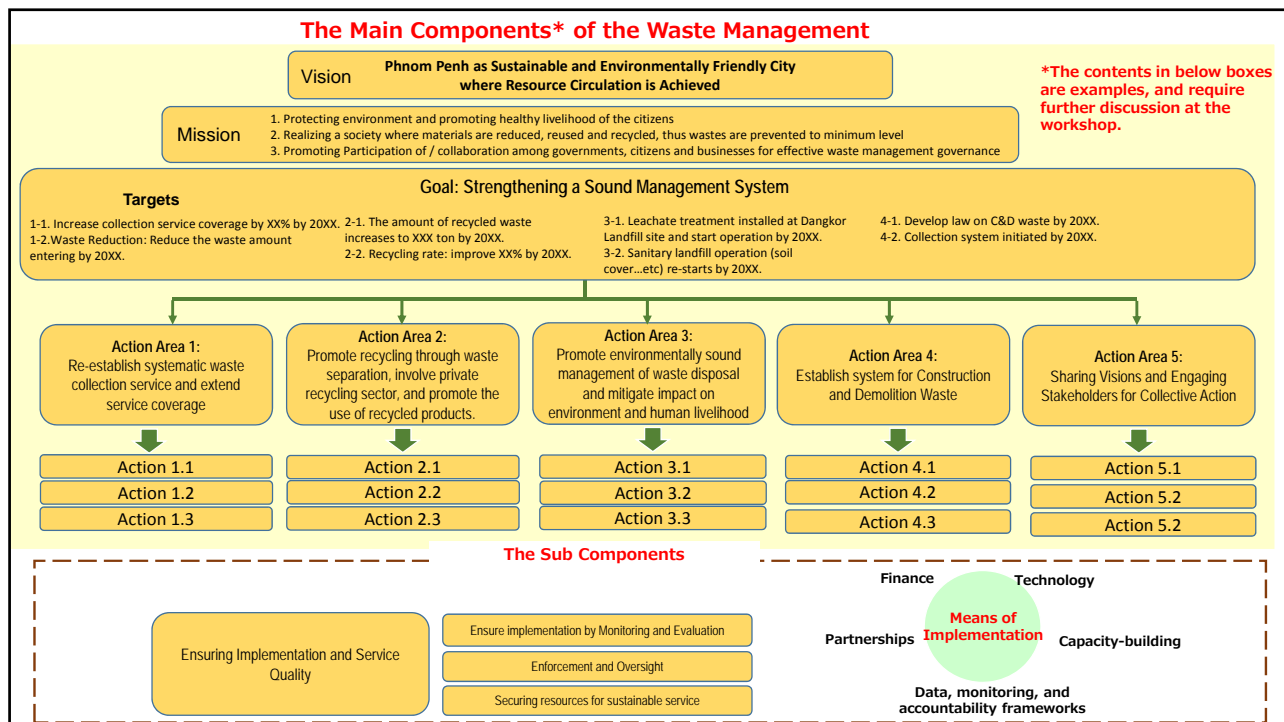


Health and Environmental Risk

**Need for waste reduction measures
& Proper treatment**

Waste Management Process Flow in Phnom Penh





Vision

Phnom Penh as Sustainable and Environmentally Friendly City
where **Resource Circulation** is Achieved

Mission

1. Protecting **environment** and promoting **healthy livelihood** of the citizens
2. Realizing a society where materials are **reduced, reused and recycled**, thus wastes are prevented to minimum level
3. Promoting **Participation of / collaboration** among governments, citizens and businesses for effective waste management governance

Goal

Strengthening Waste Management System

Action Areas

Action Area 1:

Re-establish systematic waste collection service and extend service coverage

Action Area 2:

Promote recycling through waste separation, involve private recycling sector, and promote the use of recycled products.

Action Area 3:

Promote environmentally sound management of waste disposal and mitigate impact on environment and human livelihood

Action Area 4:

Establish system for Construction and Demolition Waste

Action Area 5:

Sharing Visions and Engaging Stakeholders for Collective Action

Examples of Interventions

Action Area 2:

Promote recycling through waste separation, involve private recycling sector, and promote the use of recycled products.

Developing and diversifying intermediate treatment options is one of the most critical actions for promoting resource circulation.

Action 2.1. Promote Waste Separation

- Establishment of Material Recovery Facilities
- Public Awareness for proper waste segregation and management
- Introduction of incentives by government for proper waste segregation and management

Action 2.2. Promote Recycling Industry

- Attract investments for private recyclers

Action Area 2:

Promote recycling through waste separation, involve private recycling sector, and promote the use of recycled products.

Action 2.3. Promote the use of Recycled Products

Consumers, industries as well as public sector all have strong influence on waste generation through our economic activities. Directing consumption to towards recycled products is an effective policy intervention.

- Introduction of Promotion of local products made from recyclables
- Promoting the green purchasing
- Assist citizen organizations in hosting flea market
- Conduct awareness-raising campaigns targeting consumers towards recycled materials

Action Area 5:

Sharing Visions and Engaging Stakeholders for Collective Action

Action 5.1. Share information with stakeholders

Promotion of information disclosure is an effective methodology to initiate/enhance the public participation in waste sector.

- Publish relevant administrative documents including waste management legislations, budget and annual reports online for better communicate the strategy on City's website.
- Share collection schedule, separation/discharging rules online and at collection points for better exposure to the public eyes.

Action 5.2. Promote Environmental Education and Awareness

Action 5.3. Promote Citizen Participation



Thank you very much for your attention!