

# Solid Waste Management

## Monitoring Indicators

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# Strategic Approaches

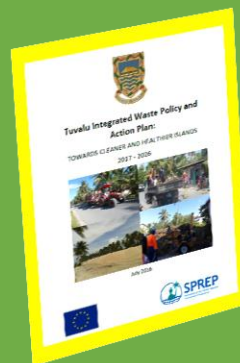


## CLEANER PACIFIC 2025

## Strategic Actions



Regular WCP data collection and management



Develop and enforce national policies, strategies, plans and legislation and strengthen institutional arrangements

Strengthen institutional capacity

## Performance Indicators and Targets for Cleaner Pacific 2025

Strategic Goals	Performance	2014 baseline	2020 Target	2025 Target
Prevent generation of waste and pollution	(1) Per capita generation of MSW (kg/person/day)	1.3	1.3	1.3
	(2) No. of marine pollution incidents	6	0	0
	(3) No. of port waste reception facilities	5	10	20
Recover resources from waste and pollutants	(4) Waste recycling rate (= amount recycled, reused, returned/ amount recyclable) (%)	47%	60%	75%
	(5) No. of natl. or munic. composting programmes	18	30	40
	(6) No. of natl. or state container deposit programmes	4	7	10
	(7) No. of natl. EPR programmes for used oil	2	3	5
	(8) No. of natl. EPR programmes for e-waste	1	5	8



Strategic Goals	Performance	2014 baseline	2020 Target	2025 Target
Improve management of residuals	(9) No. of natl. state user-pays systems for waste collection	9	14	21
	(10) Waste collection coverage (% of population)	88% urban 35% national	100% urban 40% national	60% national
	(11) Waste capture rate (= amount collected/ amount generated) (%)	Insufficient data	Establish bl. & targets	
	(12) No. of temporary, unregulated and open dumps	Over 333	316 (-5%)	300 (-10%)
	(13) Quantity of asbestos stockpiles (m <sup>3</sup> )	>187,891	159,700	131,500
	(14) Quantity of healthcare waste stockpiles (tonnes)	>76	<20	0
	(15) Quantity of e-waste stockpiles (tonnes)	Insufficient data	Establish bl. & targets	
	(16) Quantity of used oil stockpiles (m <sup>3</sup> )	2,960	1,480	0
	(17) Qt. of pharmaceutical and chemical stockpiles (tonnes)	Insufficient data	Establish bl. & targets	
	(18) Urban sewage treated to secondary standards (%)		65%	Establish bl. & targets

Strategic Goals	Performance	2014 baseline	2020 Target	2025 Target
Improve monitoring of the receiving environment	(19) No. of water and environmental quality monitoring programmes	3	5	7
	(20) No. of national chemicals and pollution inventories	2	3	6



## Criteria to consider in determining indicators

Criteria	Brief Description
Temporal scale	The time period this indicator will be effective, e.g. within the project time period or beyond?
Spatial scale	The geographical coverage
Applicability to target audience	Within the regional and national priorities
Measurable	Something which can easily be measured
Comparability	Able to achieve the greatest basis for comparison as possible (common indicators and datasets)
Accuracy	The degree to which the information conveyed correctly estimates the outcome it intends to measure; credibility as the underlying data from which it is based

## Criteria to consider in determining indicators

Criteria	Brief Description
Flexibility	Allow for possible changes or updates in conjunction with advances in science, data availability or thinking; allows for proxy if can't be directly measured
Transparency	The indicator and the collection method are credible for users and target audiences
Completeness	Comprehensiveness to help guarantee that it covers all relevant issues
Impact	It will contribute to the attainment of goals in the waste sector
Linkage to SDG	
Linkage to CP 2025	



- Categories for the indicators:
  - By material flow, e.g. generation, collection, processing, disposal, monitoring
  - Institutional, Technical, Financial
  - Services, Facilities, Institutional, Financial, Recycling
  - Any other suggestion?
  - Municipal solid waste vs household waste

## Financial Indicators

Proportion of people who pay for collection services

Proportion of population who use and pay for collection services

Proportion of user pay income allocated to waste collection

Unit Cost of waste collection service

Unit Cost of disposal site operation

Tipping Fee Revenue at disposal site

MSWM Cost (USD/ton)

Unit Cost of recycling operation

Private and government investment (in financial terms) in sustainable waste management technologies

No. of national or state user-pays systems for waste collection

Status of User-Pay system

Endorsed national waste strategies

Adopted national Waste Management Act/Law

No. of national extended producer responsibility (EPR) programmes for E-waste and others

No. of government staff and waste management workers successfully completing waste and pollution management training (disaggregated by sex)

No. of water and environmental quality monitoring programmes

No. of leachate water monitoring programmes

Number of national or municipal composting programmes

No. and production amount of national or municipal composting programmes

Number of national or state container deposit programmes

Status of national or state container deposit programmes

Number of active recyclers in the country

Proportion of waste collected by community

Waste collection coverage/Collection service coverage rate

Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities

% Population access to waste collection service

% Waste collected by formal and informal sector

Waste capture rate/Captured (Managed) waste rate

Proportion of Unmanaged Waste

No. of active, temporary, unregulated, and open dumps

Proportion of wastes deposited in an environmentally sound manner

Illegal disposal & open burning rate (%)

Number of disposal sites complying with defined operation standards

Level of landfill (based on a standard list of facilities and operation criteria available)



Waste disposal rate (%)

Proportion of wastes dumped illegally

Status of Weigh-bridge operation or recording system of incoming waste at disposal site

Per capita generation of municipal solid waste/amount of solid waste produced nationally

Per capita discharged waste of MSW or household wastes

Quantity of E-waste stockpiles (tonnes)

CO<sub>2</sub> Emissions

Waste recycling rate

Material Recovery Rate

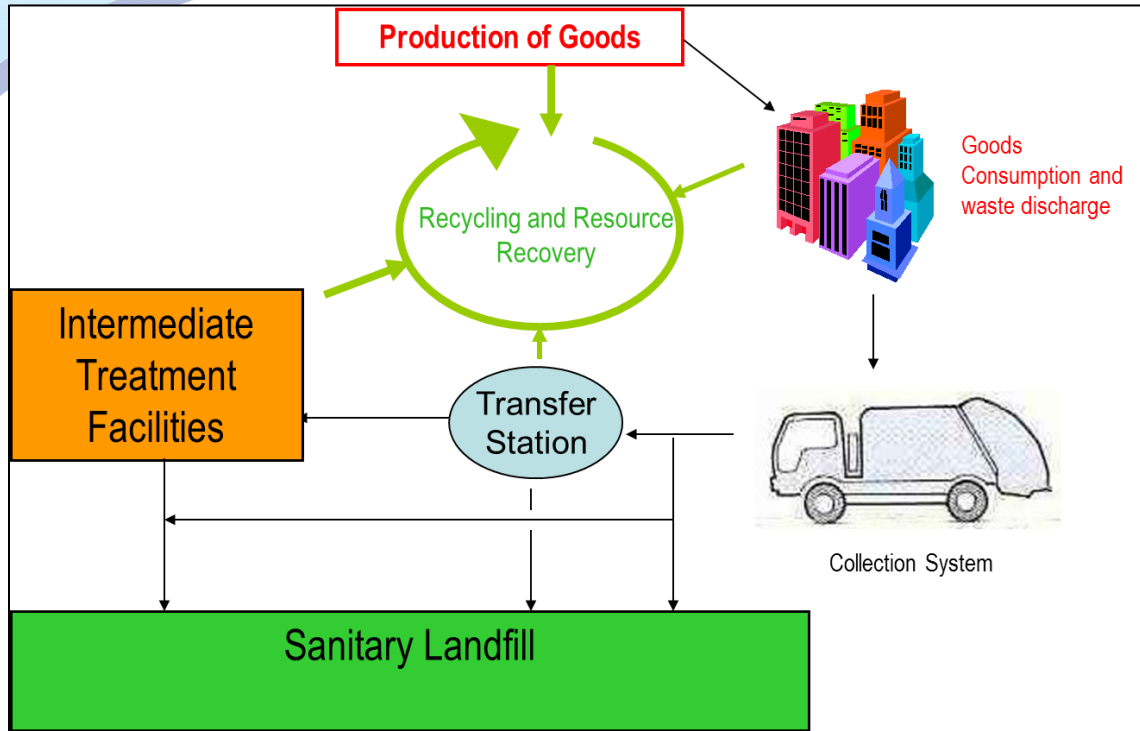
Amount of recyclable wastes exported

Composting Rate

Amount of incoming waste for composting

Rate of greenwaste diversion from the landfill

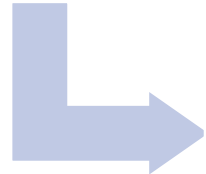




# Monitoring System

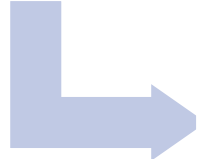
Monitoring of MSWM Services

- Management monitoring
- Management/ Operator monitoring
- Community monitoring



Data collection

- Field observation
- Surveys
- Operator records
- Beneficiaries statements



Data Analysis

- PC Input
- Analysis
- Reporting



Indicators

## MSWM Services Standards

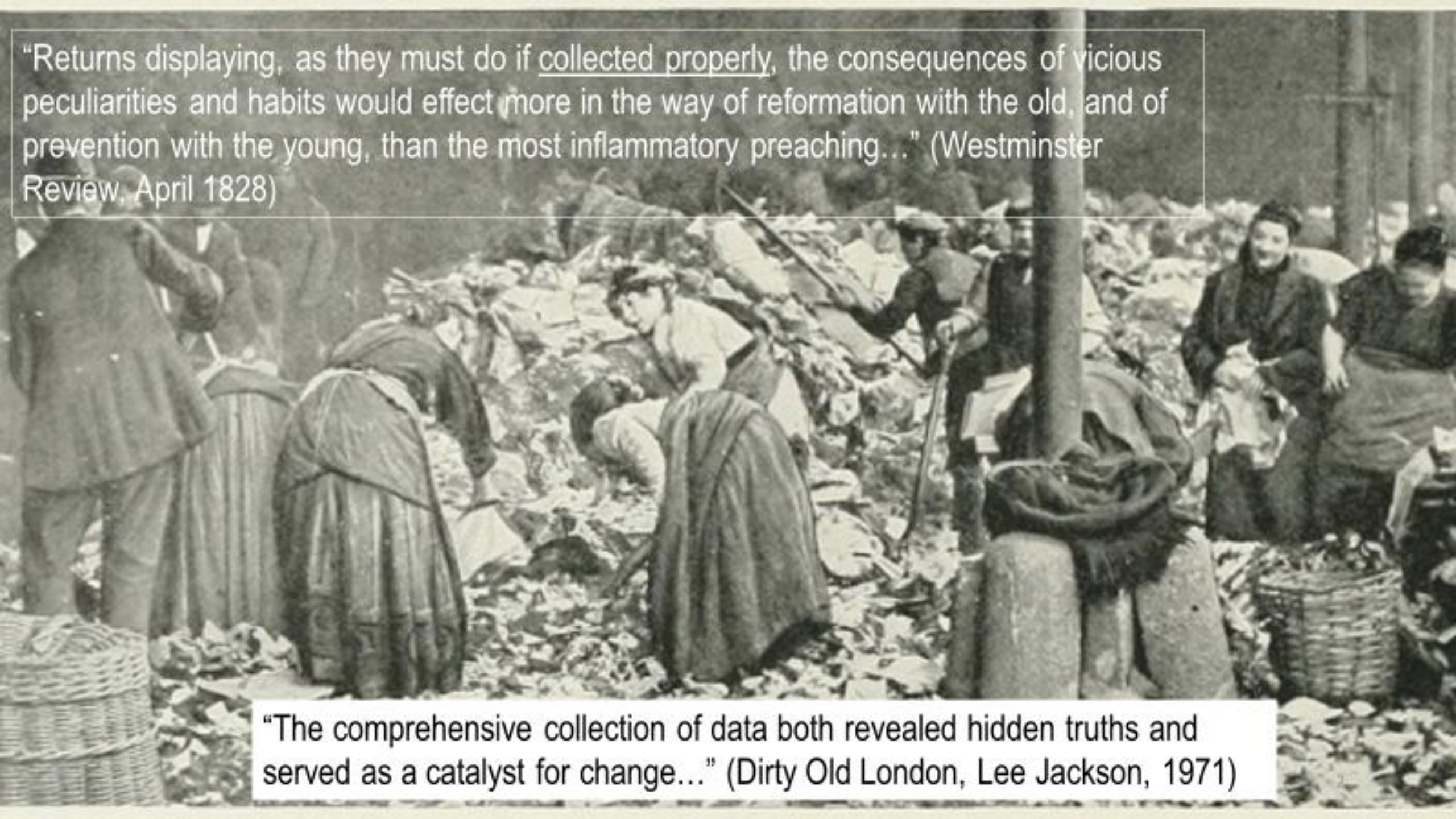
Each PIC should develop its own MSWM service standards based on its resources, and environmental and sanitation priorities.

MSWM Service Level	Grade 1	Grade 2	Grade 3	Grade 4
Population	< 1,000	1,000 – 9,999	10,000 – 14,999	> 15,000
Level name	Household base waste management	Primarily Household with Community base waste management	Primarily Communal with Local Authority base waste management	Municipal waste management service

- Way forward:
  - Selection of indicators based on agreed criteria
  - Consolidate the indicators and expound background information (e.g. Pacific definition, how measured, frequency of measurement, etc.
  - Prepare the monitoring format
  - Alignment with the INFORM project



"Returns displaying, as they must do if collected properly, the consequences of vicious peculiarities and habits would effect more in the way of reformation with the old, and of prevention with the young, than the most inflammatory preaching..." (Westminster Review, April 1828)



"The comprehensive collection of data both revealed hidden truths and served as a catalyst for change..." (Dirty Old London, Lee Jackson, 1971)



**It's time to  
rethink plastic  
and save our  
wildlife and  
our oceans.**

