

Plastic Waste Management Strategy and Action Plan: Implement, Monitor and Enhance

Module VB



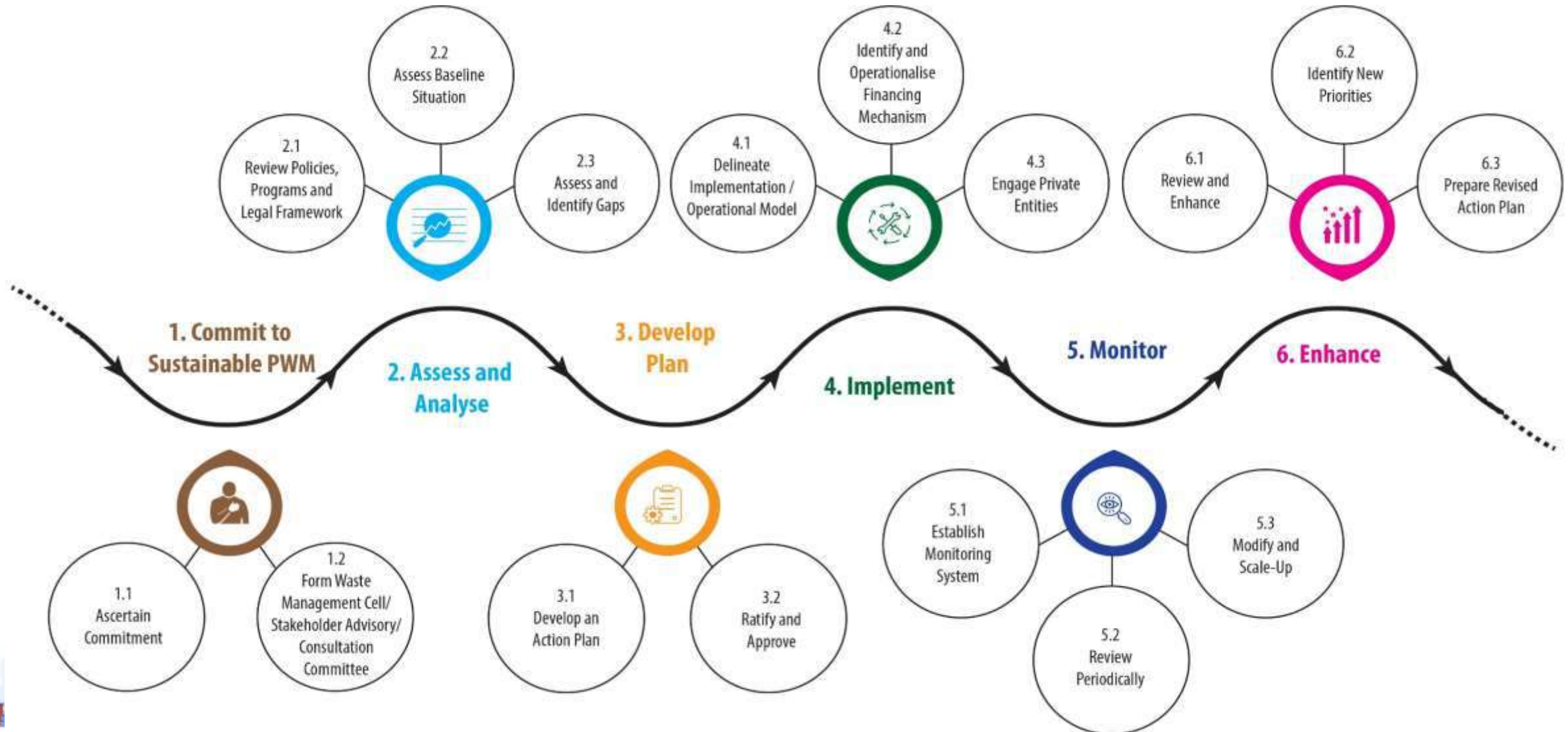
Session Overview

Sources of Finance

Engagement of Private Entities



Overall process to develop plastic waste management action plan



4.2 Financing mechanism



Description

- Secure required finances for action plan implementation

Key Actions

- Identify sources of finances/define financing mechanisms (such as PPP, equity financing, bonds etc.)
- Mobilise finance



4.2.1 Sources of finance



- Local taxes, e.g., property tax, water tax etc.
- User charges especially for Bulk Generators
- Rents from properties, license fees, and other non-tax revenues;
- Grants from state and central government, e.g., Swachh Bharat Mission, state finance commission grants
- Subsidies (financial incentives) to proponents of initiatives such as WtE or RDF facility



Specific user charges, penalties, tax regarding PWM/SWM need to be ring-fenced in order to secure finance for PWM/SWM expenditure

Property tax to be proportioned to the percentage of waste segregation for incentivising generators



4.2.1 Financing mechanism (Contd.)



- Loans from capital market, government, and financial institutions, e.g., Housing and Urban Development Corporation (HUDCO)
- Loans from international agencies, e.g., Asian Development Bank (ADB)
- Public Private Partnerships
- Municipal bonds or debentures
- Revenue from sale of products from waste processing plants (if owned by the local authority)
- Tipping fees from the private operator



4.3 Engagement of private entities



Description

- Establish contracts with private entities (where applicable)

Key Actions

- Prepare bidding documents and undertake procurement process for actions where an external entity is to be responsible for implementation



4.3.1 Scope to engage private entities

Need assessment
(Covered in
Module 3
and 4)

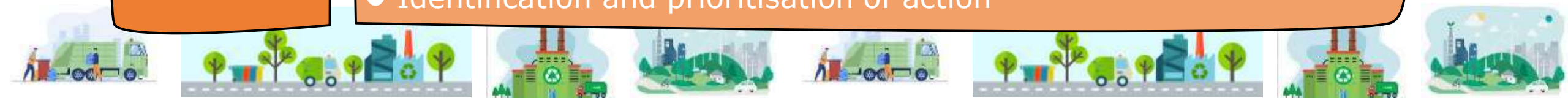
- Baseline assessment
- Gap analysis
- Evaluation of technical option
- Identification and prioritisation of action

Feasibility
evaluation

- Determine Financial Sources (project revenues & capital funds) (covered in previous slides)
- Determine Project Costs (capital & revenues expenditures)
- Evaluate Project Viability
- Determine Financial Support Requirement

Scoping and
structuring

- Baseline assessment
- Gap analysis
- Evaluation of technical option
- Identification and prioritisation of action



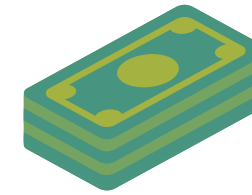
4.3.2 Engagement of private entities: Stages of procurement

- Formation of tender committee comprising officials of local authority for ensuring transparency
- Preparation of the Notice Inviting Tenders (NIT) /RfQ documents
- Publish NIT in leading dailies (at least 2 national dailies) and Upload RfQ on the website of local authority
- Pre-Application Meeting to resolve queries on RfQ document
- Technical bid opening and evaluation based on short-listing criteria as per RfQ document
- Preparation of the Bid Documents - RfP & draft contract document
- Issue of RFP document to the short-listed applicants
- Pre-Bid meeting to resolve queries on RfP document
- Financial Bid opening and evaluation
- Certification from the Tender Committee on process transparency & acceptance by the local authority
- Issuance of the Letter of Intent and Signing of Contract

(Source: Ministry of Finance (2011). Toolkit for Public Private Partnership frameworks in Municipal Solid Waste, Volume I- Overview and Process)



Engagement of private entities



Determine project costs

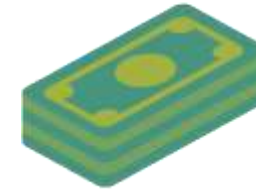
CAPEX	OPEX
<ul style="list-style-type: none">● Land acquisition cost for Project Facilities* (for TS, DRCC, Recycling and processing facility)● Construction & Installation cost for plant & machinery, equipment● Installation of environmental control mechanism (gaseous and liquid)● Potential future expenditure due to newly developed regulation● Transport vehicle costs	<ul style="list-style-type: none">● Manpower costs (salary plus employee benefits as per applicable laws)● Utility charges including power, water etc.● Operating charges including fuel for vehicles, chemicals for treatment etc.● Air and water quality investigation charges at specific interval● Charges for reject disposal● Consumables for daily operations usage● Administrative expenses including insurance costs etc.

(Source: Ministry of Finance (2011). Toolkit for Public Private Partnership Frameworks in Municipal Solid Waste, Volume I- Overview and Process)



Engagement of private entities

Determine project costs (Contd.)



CAPEX	OPEX
<ul style="list-style-type: none">Contingency reservesPreliminary and pre-operative expensesInterest during construction	<ul style="list-style-type: none">Maintenance cost for equipment, vehicles (preventive & break-down)Annual land Lease rentals as per applicable lease agreement, if anyAny other miscellaneous expenditure

If a project is not considered viable given cost structure and expected revenues inflows, viability gap can be supported under **Viability Gap Fund** scheme of GoI

The VGF support is capped at 20% of the project cost.



Engagement of private entities

Identify areas of intervention vis-à-vis relevant PPP model

PWM/MSWM Component	Characteristics	Relevant Model	Implementing Local Authority
Collection and Transport	<ul style="list-style-type: none">• Large and diverse workforce, vehicles and equipment• Intensive logistics• Citizen interface• Investment ranges widely depending on scope of work	Service contracts; Management contracts; Concession contracts	Bangalore, Surat, Chennai, Ahmedabad, etc.
Transport	<ul style="list-style-type: none">• Capital intensive• Fleet management skills	Concession contracts	Bangalore, Delhi, Chennai, Surat, Ahmedabad, etc



Engagement of private entities

Identify areas of intervention vis-à-vis relevant PPP model (Contd.)

PWM/MSWM Component	Characteristics	Relevant Model	Implementing Local Authority
DRCCs	<ul style="list-style-type: none"> • Capital intensive 	Operation and Management Contract	Hyderabad
Processing / disposal	<ul style="list-style-type: none"> • Capital intensive • Technically skilled staffing required • Experience of technology deployed 	Concession contracts- Design Build Operate (DBO), Build Own Operate (BOO), Design Build Own Operate Transfer (DBOOT)	Surat, Pune, Delhi, Hyderabad, Coimbatore, etc.

(Source: CPHEEO Manual on Municipal Solid Waste Management, 2016)



Engagement of private entities

Risk Identification and Allocation



DESIGN RISK

- Proper specification of project outputs to be delivered
- Review of designs
- Commissioning tests, preferably through an independent party
- Linking contracted services to key performance indicators and, in turn, to the payment mechanism

CONSTRUCTION RISK

- Due to inefficient working practice by the Private service provider
- Delay in asset transfer from local authority

OPERATING RISK

- Well defined service standards with clear outputs which can be objectively identified and measured
- Linking contracted services to key performance indicators and, in turn, to the payment mechanism
- Address future service delivery demands
- Inbuilt options for upgrading technology as the contract term proceeds
- Escrow mechanism that prioritise project cash flows to meet O&M requirements



Engagement of private entities

Risk Identification and Allocation (Contd.)

ENVIRONMENTAL RISK

- Non-compliance to the applicable laws (like PWM Rules, MSW Rules etc.), or pre-existing environmental liability.

FINANCIAL RISK

- Financial Close
- Escrow Mechanism
- Substitution rights
- Step in rights to government
- Termination Payments

REVENUE RISK

- Change in tariff rates;
- Inadequate MSW generation;
- Inadequate demand for the processed waste and/or by-product.

SPONSOR RISK

- Performance Guarantee
- Change in ownership provisions
- Step in rights to Government

(Source: Adapted from presentation on Contracting and Tendering for PPPs by Infrastructure Development Corporation (Karnataka) Limited, 2018)



Engagement of private entities

Eligibility conditions for short-listing – Request for Qualification (RfQ Stage)

TECHNICAL CAPACITY

- Have requisite construction or development (PPP) experience in projects in Eligible Sectors (PWM collection, transport, recycling or processing project)
- Have Technical Capacity greater than the Threshold Technical Capacity
- Threshold Technical Capacity (TTC) should be equivalent to twice the Estimated Project Cost of the project for which bids are being invited. The authority may increase/decrease this amount by one half of the Estimated Project Cost.



Engagement of private entities

Eligibility conditions for short-listing – Request for Qualification (RfQ Stage)

FINANCIAL CAPACITY

- Measures financial strength to undertake the project as reflected by the net worth of the applicant

To qualify an applicant must:

- Have net worth equal to or more than 25% of the estimated project cost at the close of the preceding financial year



Engagement of private entities

Eligibility conditions for short-listing – Request for Qualification (RfQ Stage)

O&M Experience

- Measures financial strength to undertake the project as reflected by the net worth of the applicant

To qualify an applicant must:

- Have O&M experience of five years or more in project specific sector. In its absence shall enter into agreement for 5 years from COD or engage experienced & qualified personnel for discharging O&M Obligation



Engagement of private entities

Request for Proposal

Key elements of RFP

- Instructions to bidders (change in ownership or consortium, bid security etc.)
- Bidder selection process: evaluation criteria and dealing with exceptional situations.
- Procedure with respect to Letter of Award or LOA

Pre-requisites for Issuing RFP

- Reasonable number of pre-qualified bidders available
- Assessment of own costs completed viz. land available, infrastructure facilities available, clearances & permits obtained by the Government for the PWM/MSWM Project



Engagement of private entities

Request for Proposal (Contd.)

Pre-requisites for Issuing RFP

- A project information memorandum (to enable prospective bidders to prepare their respective financial bids) is ready, including the following:
 - No. of households, plastic and other municipal solid waste generation quantity, disposal points, land availability etc.
 - Technical Features
 - Soil investigation/ geo-tech reports (if applicable)
 - Revenue sources/Budgetary Resources
 - Includes a feasibility report and Draft Concession Agreement



Engagement of private entities

Request for Proposal (Contd.)

Pre-requisites for Issuing RFP

- Bid security to be submitted – period 180 days unless otherwise specified
- A well-defined selection process including criteria for bid evaluation is in place
- Bid parameter such as – Tipping Fee/Premium/Grant specified.
- Draft Concession agreement/ contract document has been prepared



Engagement of private entities

Request for Proposal (Contd.)

Terms of Reference (ToR)/ Scope of Work

1. Details of specific services/infrastructure to be provided eg. Collection and transport/ setting up DRCCs/ setting up recycling and processing units/integrated PWM facility, setting up CCC etc.
2. Operational details and technical specifications should be provided in as much detail as possible
 - Expected duration of service/infrastructure or operation and maintenance period in case of O&M contract
 - Projected waste generation at that time period
 - Centralised/decentralised units
 - Level of segregation



Engagement of private entities

Request for Proposal (Contd.)

Terms of Reference (ToR)/ Scope of Work

2. Operational details and technical specifications should be provided in as much detail as possible
 - Collection frequency for different types of waste
 - Primary and secondary transport of waste- frequency, level of mechanization, required upgradation of transfer station and DRCCs- infrastructure and monitoring
 - Requirement for upgradation of existing recycling/processing units
3. Define role of concessionaire, local authority, regulatory agency. Define authorities for obtaining applicable permit (water, electricity, road)
4. Define routine maintenance schedule throughout O&M period, if applicable and repair timeline in case of any defect



Engagement of private entities

Evaluation criteria: At Request for Proposal Stage

Parameters	Maximum mark	Criteria
Relevant experience of applicant	40	<ul style="list-style-type: none">➤ 30% for number of assignments in particular component of value chain➤ 70% depending on- PWM generation/ collection and transport/ recycled and processed- quantum to be decided based on capacity of bid project➤ Project handled in similar geographical condition, cities with similar population size
Proposed Methodology, Technology and Work Plan	30	<ul style="list-style-type: none">➤ Quality of submission➤ Environmentally compliant technology➤ Work plan in accordance to achieving SLB/CPHEEO and other existing standards



Engagement of private entities

Evaluation criteria: At Request for Proposal Stage

Parameters	Maximum mark	Criteria
Relevant Experience of Key Personnel	30	<ul style="list-style-type: none">➤ 30% for number of assignments in particular component of value chain➤ 70% for working on projects on PWM generation/ collection and transport/ recycled and processed➤ Project handled in similar geographical condition, cities with similar population size

- Financial bid to include all CAPEX and OPEX as indicated in previous slides
- Lowest total bid price will be given 100, other proposals will be marked as $100 \times \frac{100}{\text{amount of financial bid}}$



Engagement of private entities

Evaluation process: At the Request for Proposal Stage

- Recommended to give more weightage to technical proposal in comparison to financial proposal
- Usually 70:30 or 60:40 weightage suggested

$$S = ST \times Tw + SF \times Fw$$

Where S is the combined score, and Tw and Fw are weights assigned to Technical Proposal and Financial Proposals listed in previous slides

(Source: Niti Ayog (2020), Adapted from Bidding Documents for Public Private Partnership in Integrated Solid Waste Management and Integrated Liquid Waste Management)



Engagement of private entities

Evaluation process: At the Request for Proposal Stage (Contd.)

- Minimum project specifications of critical equipment should be provided ((PPP- BOT, BOTL, BOOT, DBOT)
- Experience in PWM collection, transport, recycling or processing project in last 5 years
- Capital cost of the project should be more than 20% of Estimated Project Cost
- Technical specs should be based on actual designs specific to the site or service provision designed to specifics of the service area
- Design of the system should be made after scanning all appropriate technologies - a separate design assignment should be undertaken in order to equip the local authority with all required information
- Relevant experience of key experts (team leader, civil engineer, environmental engineer, environmental safety specialist, financial expert etc.) to be considered
- Financial bid shall include all the project cost components as listed in previous slides

(Source: Niti Ayog (2020), Adapted from Bidding Documents for Public Private Partnership in Integrated Solid Waste Management and Integrated Liquid Waste Management)



Engagement of private entities

Concession Agreement

- Agreement through which the Local Authority defines and grants specific rights to an entity (usually a private company) to build and operate a facility for a fixed period of time
- The Local Authority may retain the ultimate ownership of the facility and/or right to supply the services
- In concessions, payments can take place both ways: concessionaire pays to Local Authority for the concession rights and the Local Authority may also pay to the concessionaire, under the agreement to meet certain specific conditions (e.g., tipping fee provided by local authority to SLF operator). Usually, such payments by the Local Authority may be necessary to make projects commercially viable and/or reduce the level of commercial risk taken by the private sector, particularly in the initial years of a PPP
- Typical concession periods range between 5 to 50 years

(Source: UN ESCAP. A Primer to Public-Private Partnerships in Infrastructure Development)



Engagement of private entities

Supporting Agreements

- **Financing Agreement:** provides debt for financing the implementation of the project and includes the security documents such as mortgages or charges or liens
- **Escrow Agreement:** refers to the agreement among the Local Authority, the Concessionaire, and the Escrow Bank in relation to the opening and operations of the Escrow Account that is set up . This is set up to hold funds (including project revenues) accrued to the project company.
- **Substitution Agreement:** is executed between the Concessionaire, the Local Authority and the Lenders indicating that in case of default by the Concessionaire including any Financial Default, Lenders (through its nominee) shall be allowed (Local Authority in case of no nomination from Lender) to take charge of the Concessionaire's roles and responsibilities under this Agreement.



Engagement of private entities (Contd.)

Supporting Agreements

- **Interface Agreement:** is concluded between the design-build subcontractor and the O&M subcontractor to reinforce project risk transfer arrangements and limit the potential for damaging claims disputes
- **Shareholders Agreement:** in case of SPV set up, this is the agreement to determine shareholding and roles and responsibilities of party (ies) involved

(Source: Niti Ayog (2020), Adapted from Bidding Documents for Public Private Partnership in Integrated Solid Waste Management and Integrated Liquid Waste Management)



END OF MODULE VB





Disclaimer

The Training Modules on developing 'Plastic Waste Management Strategy and Action Plan for Urban Local Bodies(ULBs)' is prepared by ICLEI-Local Governments for Sustainability, South Asia under the contract- Development of Knowledge, Training and Capacity Building Materials on Plastic Waste Management based on the activities of GHMC, supported by the IGES Centre Collaborating with UNEP on Environmental Technologies (CCET). The views expressed in this document do not necessarily represent the official decision or stated policy of the United Nations Environment Programme. The citing of trade names in this document does not constitute any endorsement.

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