SEURECA VEOLIA

ADB

Digitalization of the Plastic Value Chain in Southeast Asia

Session 3 Track 3

PROMOTING ACTION ON PLASTICS POLLUTION FROM SOURCE TO SEA IN SOUTHEAST ASIA AND PACIFIC
SUBPROJECT 2: PRIORITIZING AND IMPLEMENTING ACTIONS TO REDUCE MARINE PLASTIC POLLUTION

TA-6669 REG

18th June 2025

In Consortium with

DT Global

CONSULTING ENGINEERS

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Table Discussion 1

Discussion Prompt
Bridging the Gaps – Building Interoperable and Inclusive Data Systems

What are the biggest barriers to harmonizing plastic waste data across countries and sectors—and how can we overcome them?

Some guiding questions

- How do fragmented data systems and inconsistent standards affect your work?

- What role can regional platforms (e.g., GPML Data Hub) play in improving cross-border data sharing?

- What are examples of successful data harmonization or standardization efforts in your context?

- How can we ensure that informal sector data is captured and trusted?

Data Governance Framework for Plastic Waste Management
Session 3 – Track 3

1

The Concept of Governance

2

Data Governance Framework

3

Governance Operating Model – Practical Example

1. The Concept of Governance

Governance
What is it ?

Governance is a means to achieving your objectives

Governance is not an end in itself, but a means to enable better decision-making, compliance, and operational efficiency.

- Governance is a **framework** of **policies**, **processes**, **and roles** that guide the **management**, **use**, and **protection** of **data** within an industry, country, or ecosystem.

- It **establishes oversight and accountability** for data-related activities, ensuring data is **accurate**, **secure**, and **used** effectively to achieve strategic objectives.

- Without it, **data** becomes **fragmented**, **inconsistent**, **and unreliable** that leads to **inefficiencies** and **missed opportunities**.
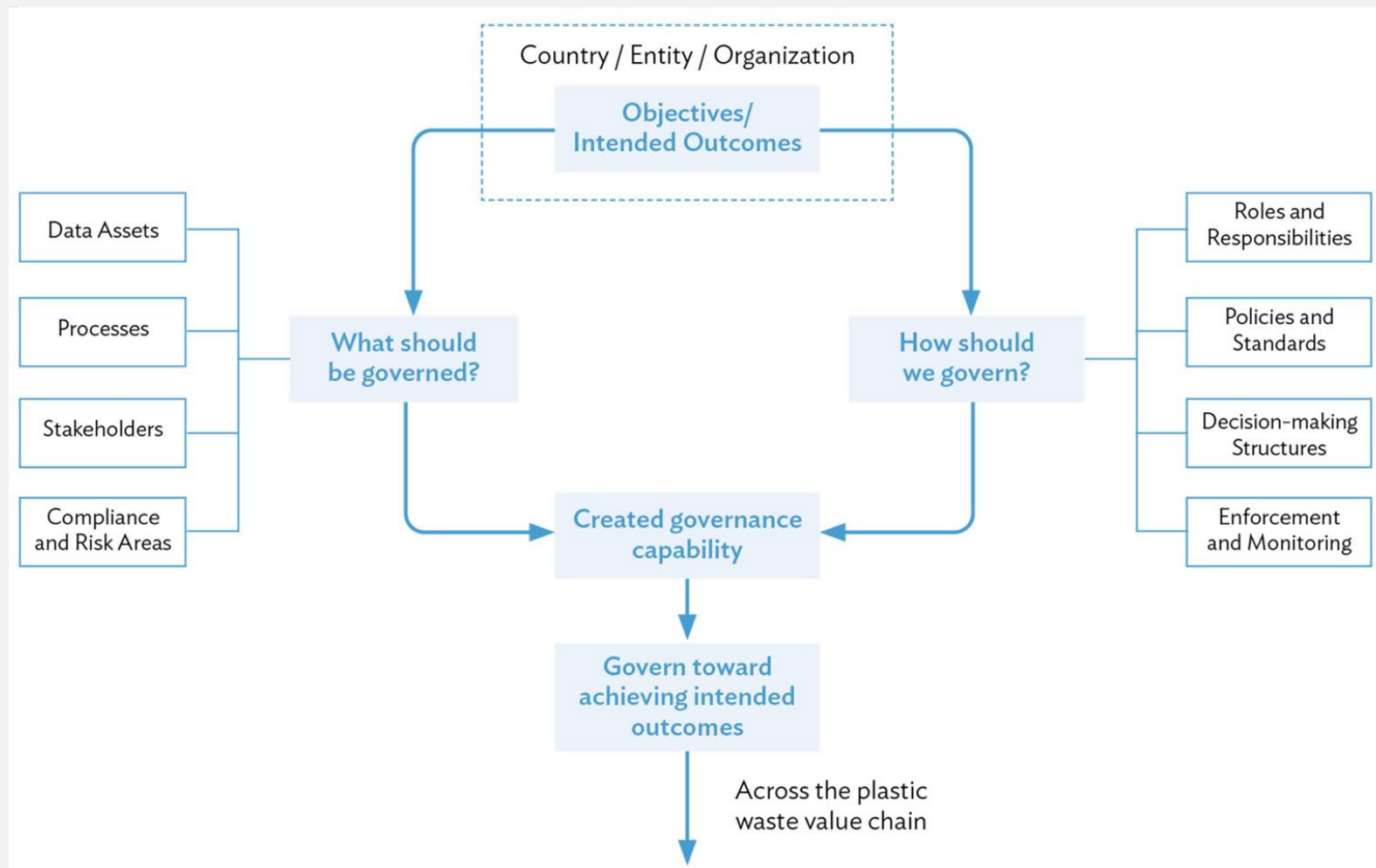
2 Data Governance Framework

Data Governance for Plastic Waste Management
Data Governance Framework

Governance, whether applied to data, organizations, or systems, always revolves around two **fundamental questions**:

What should be governed? – Identifying the scope, assets, or domains that require oversight.

How should it be governed? – Establishing the mechanisms, policies, and structures for oversight and control.

Country / Entity / Organization

Objectives/ Intended Outcomes

Data Assets
Processes
Stakeholders
Compliance and Risk Areas

What should be governed?

How should we govern?

Roles and Responsibilities
Policies and Standards
Decision-making Structures
Enforcement and Monitoring

Created governance capability

Govern toward achieving intended outcomes

Across the plastic waste value chain

Data Governance Framework
Core Components of the Data Governance Framework

- **Key Governance Principles**
  - Consistency, Accountability, Transparency, Security
  - Compliance, Data Quality, Interoperability, Sustainability

- **Operating Model: Multi-tiered structure**
  - **Strategic**: National policy alignment (National Execution/Accountability Entities, International Partners, Regional Entities)
  - **Tactical**: Regional coordination (Provincial Structures, Data Steering Committee)
  - **Operational**: Local data collection (Operational entities i.e. municipalities, waste collectors, informal sector)

- **Key Focus Areas**
  - Standardizing data collection processes and practices
  - Ensuring data security and regulatory compliance,
  - Enabling data integration and sharing

Data Governance Framework
Key Governance Principles

The Data Governance Framework is underpinned by eight core governance principles that are aligned with COBIT (Control Objectives for Information and Related Technologies) and DAMA (Data Management Cent Body of Knowledge) frameworks, integrating global best practices with country-specific requirements.

- **Consistency:** Establish standardized data collection, processing, and reporting protocols across all stakeholders, promoting uniformity and enabling integrated data analysis
- **Accountability:** Clearly define roles and responsibilities for data governance, ensuring that each organization has designated personnel accountable for data quality, security, and regulatory compliance.
- **Transparency:** Enable accessible, reliable data sharing among authorized stakeholders, promoting collaborative action, public trust, and informed decision-making.
- **Security:** Protect the integrity, confidentiality, and accessibility of data through rigorous security measures, especially when handling sensitive operational and environmental data.
- **Compliance:** Ensure adherence to local and international regulatory standards, including data privacy laws and environmental reporting requirements.
- **Data Quality:** Uphold data quality standards across all systems, ensuring that data is accurate, complete, and reliable for decision-making.
- **Interoperability:** Enable seamless data sharing among systems and stakeholders, supporting a cohesive approach to plastic waste management.
- **Sustainability:** Ensure the long-term viability and adaptability of data governance practices, creating a sustainable framework that can evolve with changing technologies and regulatory landscapes.

Data Governance Framework
Key Focus Areas

- **Standardizing data collection processes and practices:**
  - Defining a data taxonomy aligned to plastic waste management
  - Setting data quality standards to ensure reliability, accuracy and completeness
  - Creating a metadata structure to provide additional context to each data entry, data origin, data and ownership ensuring data traceability and compliance
- **Ensuring data security and regulatory compliance**
  - Defining data encryption standards for data at rest and data in transit
  - Inclusion of a data security and privacy framework to ensure robust protection, controlled access and compliance with national and international data protection regulations
- **Ensuring data integration and sharing:**
  - Standardization of data-sharing protocols to outline the formats, frequency and security requirements for data exchange
  - API-driven integration i.e. RESTful APIs, to allow for automated data sharing across waste data systems
  - Defining open data principles in support of an open data platform to aggregate real-time data from different sources and to provide role-based access for key stakeholders and decision-makers

Table Discussion 2

Discussion Prompt
From Principles to Practice – Operationalizing Data Governance for Impact

How can we apply data governance principles like integrity, transparency, and accountability to improve traceability and decision-making in plastic waste management?

Some guiding questions

- Which data governance principles are hardest to implement in your organization or region?

- How can technologies like blockchain, AI, and mobile platforms support these principles?

- What does a successful multi-level governance model look like in practice?

- How do we build trust among stakeholders to encourage data sharing?
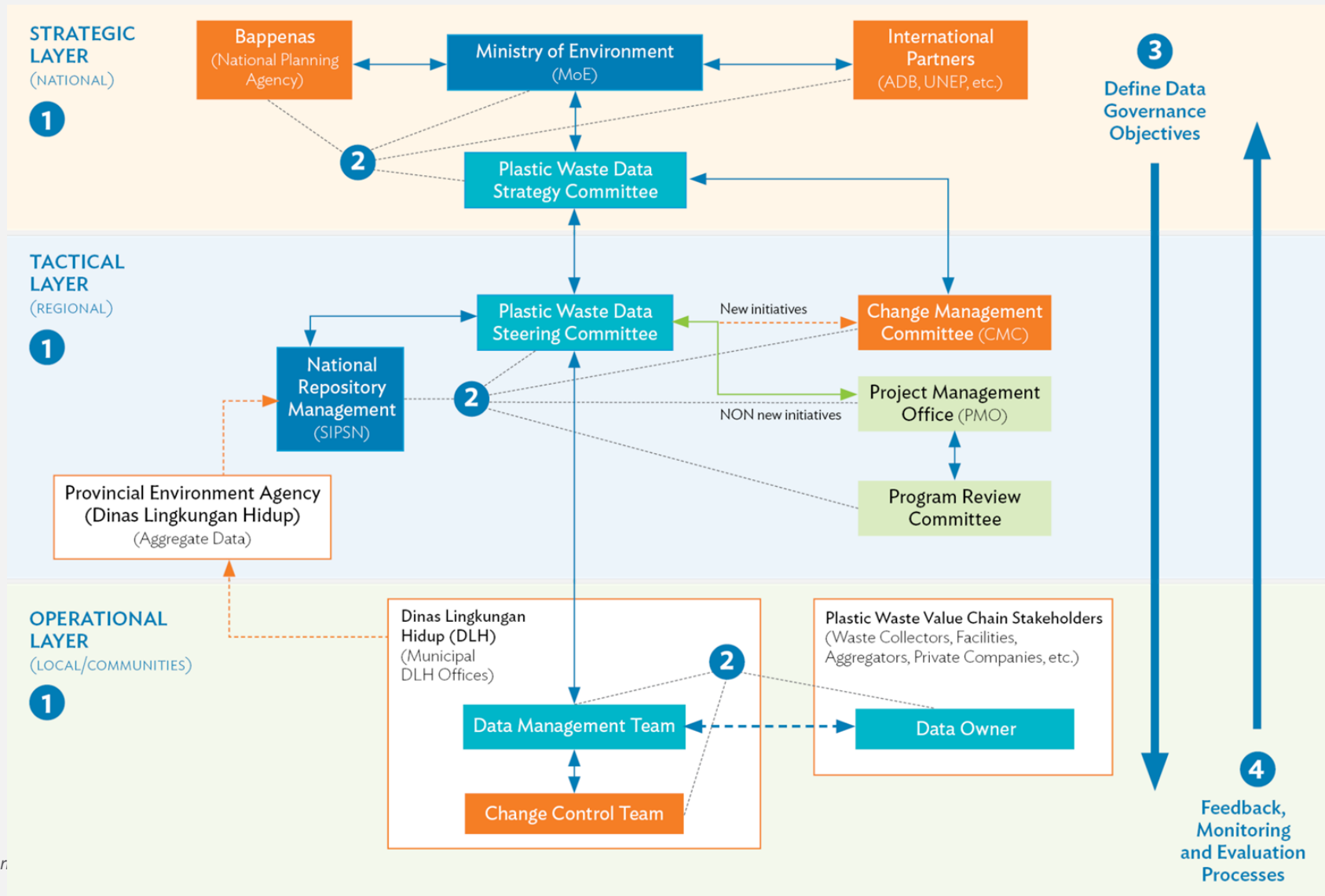
3 Governance Operating Model Practical Example

Governance Operating Model

The model **defines** clear **roles**, **responsibilities**, **and relationships** among key **stakeholders** such as the national and regional government agencies, industry representatives, and communities.

It also establishes **mechanisms**—for setting **objectives**, managing **risks**, and monitoring **performance**—aligned with strategic data management goals.

Governance Operating Model
Multi-tiered Structure

Governance Operating Model
Multi-tiered Structure

Management levels.
Data governance is organized across three levels:

      (i) strategic, for high-level or national decision-making,

      (ii) tactical, for coordination and alignment, and

      (iii) operational, for data management activities.

Each level has a specific scope, roles, and responsibilities to effectively coordinate governance activities.
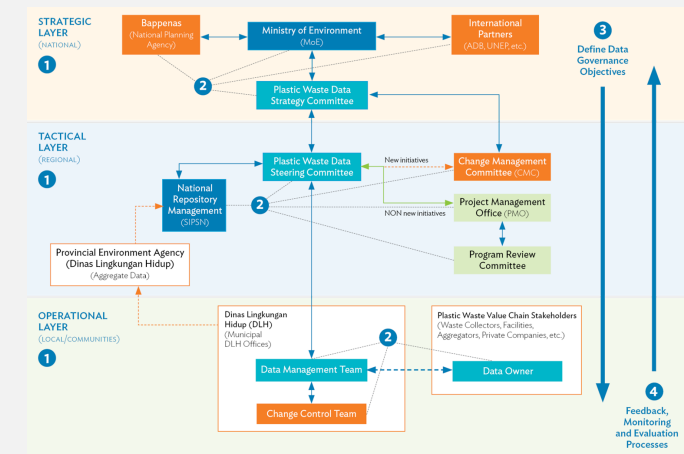
Decision-making structures.
Each level includes representatives from the different stakeholders with clearly defined roles and responsibilities for oversight, conflict resolution, policy enforcement, and monitoring.

Scope of governance.
Governance in plastic waste management involves overseeing a complex ecosystem of data, stakeholders, and regulatory requirements. The strategic-level Plastic Waste Data Strategy Committee defines the scope for data governance within a specific environment, which are distributed to the decision-making structures and management levels and operationalized through policy implementation and enforcement mechanisms.

Feedback, monitoring, and evaluation processes. Effective governance involves bottom-up monitoring and feedback loops. Performance data from operational activities—such as waste collection, segregation and data reporting—enables decision-makers at the strategic level to identify gaps, enforce penalties or corrective actions, and continuously improve the data governance system.

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Thank You