

Environmental Engineering – Module 7: Government Authorities and Their Roles

1. Introduction

Environmental management in India—including water supply, sewerage disposal, solid waste management, and pollution control—is handled by a network of central, state, and local government authorities. Their responsibilities are defined by the Constitution, various statutory acts, and central government schemes. This module summarizes key authorities and their core functions.

2. Water Supply

National-Level Bodies

- **Ministry of Jal Shakti**
 - Oversees national water resource management, drinking water supply, and sanitation schemes.
- **Department of Drinking Water & Sanitation (DDWS)**
 - Provides policy support, technical guidance, and funding to states for rural water supply and sanitation.
 - Implements flagship programs like the Jal Jeevan Mission for rural water access^{[1] [2]}.

State-Level Authorities

- **State Governments**
 - Responsible for planning, sanctioning, and implementing water supply projects in both rural and urban areas^{[1] [3] [4]}.
- **Public Health Engineering Departments (PHED)**
 - Principal agencies for water supply planning and execution at state level.
- **State Water Supply and Sanitation Boards**
 - Specialized agencies for water supply and sanitation infrastructure^[5].

Local-Level Bodies

- **Urban Local Bodies (ULBs) and Panchayati Raj Institutions (PRIs)**
 - ULBs (municipalities, corporations): Manage urban water supply and distribution.
 - PRIs: Entrusted with rural water supply under decentralization mandates^{[3] [6]}.

- **Parastatal Agencies**

- In some states (e.g., Kerala Water Authority), dedicated agencies manage water supply for both rural and urban zones.

3. Sewerage Disposal

Central Authority

- **Ministry of Housing and Urban Affairs (MoHUA)**

- Facilitates urban sanitation policy, technical guidance, and funding.
- Coordinates programs like Swachh Bharat Mission–Urban (SBM-U) and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) to enhance sanitation and sewerage coverage^[7].

State and Local Bodies

- **State Governments**

- Oversee planning, design, and operation of sewerage and sewage treatment systems in urban areas^[7] ^[5].

- **ULBs/Municipal Authorities**

- Responsible for implementing, operating, and maintaining urban sewerage systems.

- **State Water Supply and Drainage Boards/PHED**

- May also manage large-scale sewerage network creation, especially in some states.

4. Solid Waste Management

Central Government

- **Ministry of Environment, Forest and Climate Change (MoEFCC)**

- Issues national regulations, such as Solid Waste Management (SWM) Rules, 2016^[8] ^[9].

- **Central Pollution Control Board (CPCB)**

- Monitors compliance with SWM rules.
- Provides technical guidance, standards, and coordinates with State Pollution Control Boards (SPCBs) ^[10] ^[11].

State and Local Governments

Level	Key Roles
State	Formulate and implement policies, provide financial resources, supervise programs ^[12]
Local (ULBs)	Daily collection, transport, processing, and disposal of solid waste; enforce segregation ^[12] ^[9]

Special Focus

- **Municipal Authorities**

- Implement local SWM, own and operate waste treatment and landfill sites.

- **Urban Development Departments**

- Often designated to oversee solid waste management at the city scale^[9].

5. Monitoring and Control of Environmental Pollution

Central Pollution Control Board (CPCB)

- Apex technical body under MoEFCC for air and water pollution control^{[10] [11]}.
- Standards: Sets national air, water, and environmental quality standards.
- Monitoring: Coordinates national environmental monitoring (e.g., NAMP for air, NWMP for water)^{[10] [11]}.
- Enforcement: Directs and supports SPCBs, recommends action to national/state governments.

State Pollution Control Boards (SPCBs)

- Implement and enforce pollution control acts at state level (e.g., Water Act, Air Act, Environmental Protection Act)^{[10] [13]}.
- Issue consents/permits to industries, monitor compliance, respond to pollution incidents.

Other Agencies

- **National River Conservation Directorate (NRCD)**

- Executes river cleaning plans (e.g., Namami Gange).

- **National Green Tribunal (NGT)**

- Judicial body adjudicating environmental violations and ensuring compliance^[5].

6. Summary Table: Key Authorities and Functions

Sector	Central Authority	State Authority	Local Authority	Core Functions
Water Supply	Ministry of Jal Shakti, DDWS	PHED, State WSSB	ULBs, PRIs	Plan, finance, monitor & execute water supply
Sewerage Disposal	MoHUA, CPCB	State Boards, PHED	ULBs	Build, operate, maintain sewers and sewage treatment
Solid Waste Management	MoEFCC, CPCB	State Dept., Urban Dev. Dept.	ULBs, Municipalities	Enforce SWM rules, local collection, treatment & disposal

Sector	Central Authority	State Authority	Local Authority	Core Functions
Pollution Monitoring	CPCB, MoEFCC	SPCBs	ULBs	Monitor, enforce, advise, prosecute under relevant laws

7. Key Points

- Responsibilities are shared and nested: central for regulations and finance, state for planning and execution, local for day-to-day operations.
- Pollution monitoring and control are performed through an integrated structure of central, state, and local agencies.
- National missions (e.g., Swachh Bharat Mission, AMRUT, Jal Jeevan Mission, Namami Gange) provide funding, standards, and coordination for effective environmental management.

These structures collectively ensure the provision of safe water, proper sewage and solid waste management, and environmental quality control in India ^{[1] [3] [7] [12] [10] [5] [8] [11] [9]}.



1. https://labour.gov.in/sites/default/files/rti_subclause1_0_0.pdf
2. <https://www.jalshakti-ddws.gov.in>
3. https://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_India
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8. https://en.wikipedia.org/wiki/Waste_management_in_India
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12. <https://www.nextias.com/blog/solid-waste-management-in-india/>
13. <https://environment.rajasthan.gov.in/content/environment/en/rajasthan-state-pollution-control-board.html>