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**FRAMEWORK ON NATIONAL ENVIRONMENTAL
TRAINING PROGRAM FOR
STATE POLLUTION CONTROL BOARDS &
POLLUTION CONTROL COMMITTEES**



CENTRAL POLLUTION CONTROL BOARD
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
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PREFACE

One of the important functions entrusted to Central Pollution Control Board (CPCB) is to plan training of persons engaged or to be engaged in programmes for the prevention, control or abatement of pollution. While, CPCB has been conducting annual trainings on range of themes for officials from CPCB, State Pollution Control Board (SPCB) and Pollution Control Committees (PCC) through dedicated Environmental Training Unit, need was felt for a systematic training calendar which could be referred by SPCBs & PCCs for planning training at State & Union Territory (UT) level.

This framework has methodologically categorized country in nine zones identifying executive technical partners & administrative training partners in each zone. Each zone covers one to eight States/UTs based on geographic location and ease of conducting training. This document suggests training modules on ten theme, namely, municipal solid waste management, plastic waste management, bio-medical management, hazardous waste management, construction & demolition waste, e-waste management, noise pollution control, rejuvenation of polluted river stretches (including treatment and utilization of sewage and conservation of water bodies), maintenance of ambient air quality in non-attainment cities, restoration of environmental quality in critically polluted industrial clusters, regulatory compliance for industries & common environmental facilities, noise pollution control, regulating sand mining activities and strengthening of SPCBs & PCCs. For each module and sub-module, target learners, learning needs, resource institutes, duration & frequency of training has been identified. This document is especially useful in meeting training needs of officials entrusted with the enforcement of environment regulations. In addition, resident's welfare associations, NGOs, industry associations, etc.

In pursuant of the directions of Hon'ble National Green Tribunal order dated April 24, 2019 in O.A. 606/2018, this document was authored by Shri B. Vinod Babu, Divisional Head IT, CPCB and co-authored by Smt. Garima Sharma, AS, CPCB with editing support from Shri Sameer Arora, Consultant (Engineering), CPCB and technical inputs from concerned Divisional Heads, CPCB. This document was circulated to all SPCBs, PCCs and State Environmental Departments on September 12, 2019 for State & UT level execution.

Member Secretary
Central Pollution Control Board

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FRAMEWORK ON NATIONAL ENVIRONMENTAL TRAINING PROGRAM

1.0 Introduction

Training is an essential component for enhancing an institution's capabilities to perform and effectively discharge duties assigned to the public interest. The environment has various interdisciplinary & inter-departmental components requiring coordination among different stakeholders to implement policies and statutory norms effectively. Different stakeholders need to work in harmony, ensuring that their operations do not have any deleterious effect on the environment and community with state-of-the-art environmental management practices. There is a stringent need for understanding and implementation of policies on the ground. The industries need to play an active role in managing sound environmental practices both inside and outside their facility and to communicate the same to different stakeholders through regular interaction. Thus, recognizing the need for a comprehensive institutional environmental training mechanism for different levels of officials of implementation agencies, CPCB has developed this training document focusing on technical, social and environmental issues to train officers entrusted with the enforcement of environment regulations.

The structure of the training program is based on following broad identified issues,

- Municipal solid waste management
- Plastic waste management
- Bio-medical management
- Hazardous waste management
- Construction and Demolition waste
- E-Waste management
- Noise Pollution Control
- Rejuvenation of polluted river stretches including treatment and utilization of sewage and conservation of water bodies.
- Maintenance of ambient air quality in non-attainment cities
- Restoration of environmental quality in critically polluted industrial clusters
- Regulatory compliance in industries & common environmental facilities
- Regulating Sand Mining activities
- Strengthening of Pollution Control Boards & Pollution Control Committees

2.0 Objectives

- Understanding practical aspects of the implementation of Rules notified under Environmental (Protection) Act, 1986, NGT orders, regulatory directions, and relevant laws.
- Promotion & implementation of Information, Education & Communication (IEC)
- Creating awareness about State of the environment and need for conservation
- Facilitating access to Best Available Technologies (BAT) and environmentally sound practices
- To comprehend financing options, revenue models, and project management strategies for effective ground-level implementation
- Sharing community awareness strategies and providing a platform to share success stories & discussion on causes of failure

3.0 Methodology

- The identification of different target learner's training needs and development of a training program for identified environmental segments (henceforth referred to as 'module'). Based on the target learner group's expanse, each module contains 1 to 11 sub-modules detailing training topics, objectives & content to be covered, target learners' group, duration, and training frequency.
- Target learners comprise executive, senior and middle-level officers at various levels, including District Collector, Mayors, elected representatives of local bodies, State Government Officials, SPCB officials, Officials of State Urban and Rural Development, Officials of Environment Department, middle level and junior level engineers of Municipality, SPCB and Town Planners, Officials from Nagar Panchayat & Village Panchayat, Transport Department and Transport Agencies, Officials from public health departments, water supply & sanitation departments, etc. The officers' training concerned with enforcement will help comprehend technical & regulatory requirements, compliance management, and understanding mitigation tools.
- A number of modules are also dedicated towards the training of field level staff, NGOs, institutions, RWAs, and associations such as waste facility operators, rag pickers, housing societies, market associations, community representatives, universities, school

children, infrastructure companies, hospitals, industries, state industrial development corporations, importers, recyclers, etc.

- The training exercise will include theoretical sessions, audiovisual media, site visits, group discussions, introduction to best available technologies, advanced & upcoming pollution control technologies, and sharing success stories. The training may also include on-job training for executing schemes at ground level. The infrastructure requirements and resource institute have been suggested for preliminary reference and need to be deliberated in detail prior implementation stage.

4.0 Nodal & Partner Agencies

Environment management is a multi-sectoral issue and requires coordination among different implementing & regulatory agencies. Hence, to ensure effective implementation of proposed training modules at the state level, the Office of Principal Secretary, Department of Environment shall be the Nodal Agency for supervising the training program's execution in respective states. State Pollution Control Boards/ Pollution Control Committees (SPCB/PCC) shall be executive agencies and act as Technical Partners. Administrative Training Institutes shall act as administrative partners for conducting training programs to engage Training institutions.

For the implementation of the training program across the country, 09 zones have been identified. Each zone covers one to eight states/UTs based on geographic location and ease of conducting training. Each zone is assigned an Administrative Training Institute as an administrative training partner. Their expertise in conducting training and infrastructure may be utilized in their zones. The concerned State Pollution Control Boards (SPCBs) / Pollution Control Committees (PCCs) will act as executive agencies and technical partners for providing technical inputs on target learners, resource persons, inputs for a tool kit, etc. The agencies identified in table 1 may engage other agencies for conducting activities related to the same.

Table 1: Zone wise agencies for providing technical inputs

S. no	Zone	Administrative partner for training programs	Executive agency & Technical Partner
1.	North – I (Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Chandigarh, Delhi)	Mahatma Gandhi State Institute of Public Administration, Chandigarh	State Pollution Control Board & Pollution Control Committee of: Punjab Haryana Himachal Pradesh Jammu & Kashmir Chandigarh Delhi
2.	North – II (Uttar Pradesh, Uttarakhand)	UP Academy of Administration and Management, Lucknow	State Pollution Control Board of: Uttar Pradesh Uttarakhand
3.	North East (Assam, Arunachal Sikkim, Manipur Meghalaya, Mizoram, Nagaland)	Assam Administrative Staff College, Guwahati	State Pollution Control Board of: Assam Arunachal Sikkim Manipur Meghalaya Mizoram Nagaland Tripura
4.	Central (Madhya Pradesh, Rajasthan, Chhattisgarh)	RCVP Noronha Academy of Administration and Management, Bhopal	State Pollution Control Board of: Madhya Pradesh Rajasthan Chhattisgarh

S. no	Zone	Administrative partner for training programs	Executive agency & Technical Partner
5.	East (Bihar, Jharkhand Orissa, West Bengal, A & N)	Administrative Training Institute, Kolkata	State Pollution Control Board & Pollution Control Committee of: Bihar Jharkhand Orissa West Bengal A & N
6.	West –I (Gujrat, Daman Diu, Dadar Nagar Haveli)	Sardar Patel Institute of Public Administration, Ahmedabad	State Pollution Control Board & Pollution Control Committee of: Gujrat Daman Diu Dadar Nagar Haveli
7.	West – II (Maharashtra, Goa)	Yashwantrao Chavan Academy of Development Administration, Pune	State Pollution Control Board, Maharashtra
8.	South –I (Karnataka Kerala, Lakshadweep)	Administrative Training Institute, Mysore	State Pollution Control Board & Pollution Control Committee of: Karnataka Kerala Lakshadweep
9.	South –II (Andhra Pradesh, Telengana, Tamil Nadu, Puducherry)	Administrative Staff College of India, Hyderabad	State Pollution Control Board & Pollution Control Committee of: Andhra Pradesh Telangana Tamil Nadu Puducherry

5.0 Agencies identified for imparting training

The academic and research institutions have been identified to impart training on selected training modules (Table 2). The Nodal Agency and Executive Agency may modify the same and add resource persons, resource institutions, in-house experts, etc., as desired through the

respective administrative partner for training programs. The administrative partner for training programs may choose suitable resource institutions according to the institutions' capabilities in consultation with respective executing agencies in the State, and they may also organize few training programs on their own.

The executing agencies, in consultation with local agencies, shall identify the target audience for imparting training. They shall also provide training requirements such as the number of training programs in each subject area, expected number of the target audience, training location, etc., along with sanction funds for an administrative partner for organizing training programs. The administrative partner's responsibility is to follow-up with the target audience/agency and ensures the training's entire logistics. The administrative partner may coordinate with executing agencies in case of difficulties in organizing training programs. The executing agencies may consult with CPCB about course content and training requirements.

The training and capacity building programs are a continual activity; States may identify specific institutions in the State to conduct the programs regularly.

Table 2: Academic and research institute for imparting training

S.No	Training Modules	Resource Institution
1.	Municipal Solid Waste Management	<ul style="list-style-type: none"> • IITs / NEERI / National Productivity Council (NPC) • Prominent NGOs having expertise in the field • Institutions working in this field
2.	Bio-medical Waste Management	<ul style="list-style-type: none"> • National Productivity Council • Prominent NGOs having expertise in the field • Institutions working in this field
3.	Hazardous Waste Management	<ul style="list-style-type: none"> • National Productivity Council • Prominent NGOs having expertise in the field • Institutions working in this field
4.	Construction and Demolition waste	<ul style="list-style-type: none"> • TERI • NEERI • Prominent NGOs having expertise in the field • Institutions working in this field

5.	E-Waste Management	<ul style="list-style-type: none"> • International Institute of Waste Management • Prominent NGOs having expertise in the field • Institutions working in this field
6.	Rejuvenation of polluted river stretches including treatment and utilization of sewage	<ul style="list-style-type: none"> • IITs • NIH Roorkee • Prominent NGOs having expertise in the field • Institutions working in this field
7.	Plastic Waste Management	<ul style="list-style-type: none"> • Central Institute of Plastic Engineering & Technology • Prominent NGOs having expertise in the field • Institutions working in this field
8.	Maintenance of ambient air quality in non-attainment cities	<ul style="list-style-type: none"> • IIT Delhi • IIT Kanpur • IIT Mumbai • NEERI • TERI • ARAI
9.	Restoration of environmental quality in critically/ severely polluted industrial areas	<ul style="list-style-type: none"> • IIT Delhi • NEERI
10.	Regulatory compliance in industries & common environmental facilities	<ul style="list-style-type: none"> • NEERI • Central Leather Research Institute
11.	Regulating Sand Mining activities	<ul style="list-style-type: none"> • NEERI • Prominent NGOs having expertise in the field • Institutions working in this field
12.	Noise Pollution control	<ul style="list-style-type: none"> • NEERI • IIT Delhi
13.	Strengthening of Pollution Control Boards	<ul style="list-style-type: none"> • National Law School of India University, Bangalore • ASCI

		<ul style="list-style-type: none">• IIPA
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6.0 Budget provisions

Central and State corpus funds may be utilized for conducting the training. The Central funds may be released from Central Monitoring Committee to state governments. The release of funds to administrative partners may be either through the nodal agency or the executing agency. The budget for the same shall depend on the number of training programs in each subject area, the expected number of the target audience, location of training, etc., for the State. States are also required to arrange necessary funds for organizing training programs. The environmental compensation accrued with States and UTs may be one of the sources of funding.

7.0 Role of organizations in conducting a training program

The role of various agencies involved in implementing the proposed training program is presented in subsequent paras, as per the following structure (Figure 1).

Nodal Agency – Office of Principal Secretary, Department of Environment

- Approving budget and year ahead training calendar,
- Providing overall guidance and directions,
- Regular monitoring of the training program, and
- Release of funds

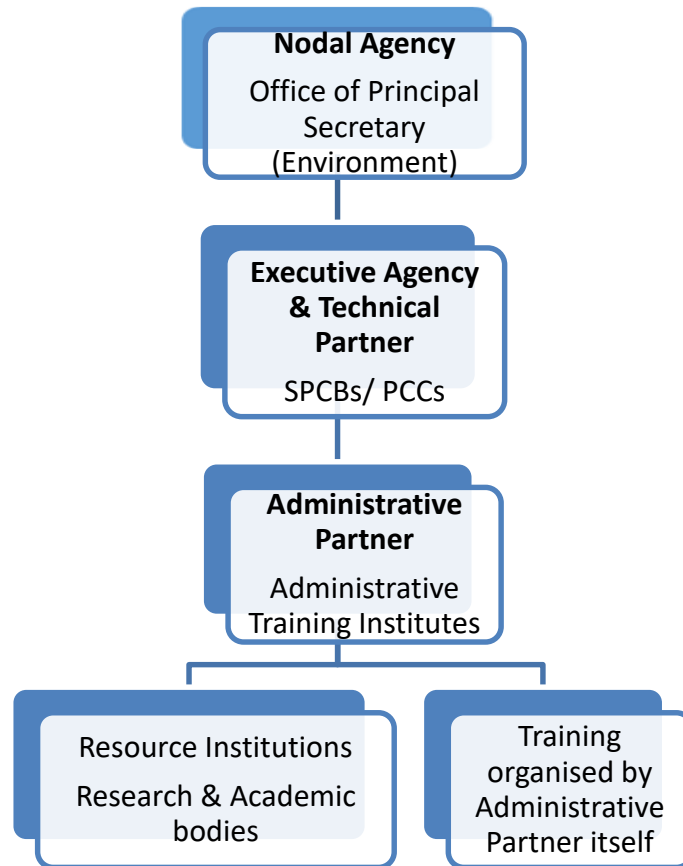


Figure 1: Hierarchical structure of agencies involved in the training program

Executive Agency & Technical Partner – Concerned SPCBs/PCCs

- Preparing training requirement in consultation with local agencies, including CPCB if necessary, and allocation of training to administrative partners of the zone,
- Providing technical inputs in the preparation of toolkits and training needs (in addition to issues identified in this report) and may consult CPCB as necessary,
- Preparation of year ahead training plan and submission to the nodal agency for approval by September every year,
- Preparation of annual training report and submission to the nodal agency at the end of the financial year, and
- Any other related work as may be directed by the nodal agency.

Administrative Partner for conducting Training

- Identification of resource institutions, resource persons, and other support agencies within their zone,

- Coordination with SPCBs for finalization of the annual program schedule,
- Follow-up with identified local agencies for the nomination of participants and for ensuring participation. May also guide local agencies in selecting target learners,
- Acceptance of responsibility of arrangements within allotted budget & timeframe, follow-ups, etc.,
- Coordination with resource institutions in finalizing subject experts/ resource persons/ regional institutions for imparting training,
- Sharing of common training tool kits received from executing agencies for sharing with resource institutions,
- Evaluating and approving training toolkits prepared by resource institutions in consultation with executing agencies,
- To assist in firming up the training calendar for the zone,
- To broadly oversee that training sessions are well designed and lead to a smooth and orderly execution of the program, and
- Assessment of training program outcome and submission to executing agency.

Resource Institutions

- Developing training content for sub modules identified in this report and based on training tool kits provided by the administrative partner,
- Finalization of the training program in consultation with the administrative partner,
- To coordinate and oversee dissemination of training material to stakeholder in print or pen drive,
- Invitation to the list of participants selected from local agencies in coordination with the administrative partner,
- Identifying & involving resource persons,
- Collaboration with regional academic and research institutions for resource persons and public engagement,
- Coordinate arrangements at the training venue and provide all logistics support for conducting programs, including payment of honorarium to resource persons,
- Leading training sessions and coordinating technical interactions, and
- Distribution of training material comprising presentations, videos, simulation/group exercises, national & international case studies, list of good practices, details of recent

successful developments, regulatory provisions, roles of various stakeholders, points to remember during training, etc., in graphical format, charts, tabular form, etc.

8.0 Proposed Sector-Wise Training Modules

8.1 Municipal Solid Waste Management

This module provides an understanding & interpretation of Solid Waste Management Rules, 2016, technologies, financial sustainability models, and best SWM practices. It provides a demonstration of proper transportation, treatment, and disposal of waste. A few sub-modules prepared for field staff, commercial establishments, RWAs, etc., explain the need for a 3R waste management approach, extended producer responsibility, requirement of personal protective equipment, and greater community participation for behavioral change, as shown in Table 3.

8.2 Plastic Waste Management

This module provides an understanding of Plastic Waste Management (Amendment) Rules, 2018, and technologies for recycling of plastic waste. The training module aims to build capacities of stakeholders like Municipal Corporation and Urban Development Departments to assess the generation of plastic waste and decision making for efficient management. It has been prepared to provide information on waste management practices, utilization options, proper segregation, collection and storage, transportation, processing, and disposal of waste, and extended producer responsibility to regulatory bodies and generators. This module expects to create community awareness and inform the adverse impacts of littering on public health and the environment, as shown in Table 4.

8.3 Bio-Medical Waste Management

This module will include the legal framework, knowledge, and practices of Biomedical Waste (BMW) Management Rules, 2016. Stakeholders will be informed about pre-treatment, segregation, packaging, transportation, storage, collection, treatment, processing & disposal of waste. Biomedical waste generators and policymakers will be informed about regulatory provisions, including risks to the environment and human health caused due to mismanagement and the importance of its proper management, as shown in Table 5.

8.4 Hazardous Waste Management

This module will include the knowledge and understanding of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Regulatory provisions, including import and export of hazardous waste, packaging, labelling and transport of hazardous and other waste, as shown in Table 6 will be informed.

8.5 Construction and Demolition Waste Management

This module educates on the gravity of haphazard disposal of Construction and Demolition (C&D) waste on the environment and provides information on environmentally sustainable management of C&D waste. It is intended that this module will be useful for training various stakeholders involved in the management of C&D waste in cities and towns. It provides necessary information that stakeholders will require to effectively discharge duties for implementing C & D waste management rules, 2016. A sub-module is focused on C & D waste management's business aspects, as shown in Table 7.

8.6 E-Waste Management

This module will include the understanding of E-Waste (Management) Rules, 2016. Stakeholders will be informed about their responsibilities on collection, channelization, treatment, storage and disposal facilities of waste. The manufacturer, producers, collection centres, dealers, refurbisher, dismantler and recycler will be informed about regulatory provisions, environmental risks and authorization process, as shown in Table 8.

8.7 Noise Pollution Control

This module is to ensure the understanding and the implementation of Noise Pollution (Regulation and Control) Rules, 2000. A submodule is designed on the categorization of different areas/zones for noise standards and enforcement of noise control measures, as shown in Table 9. This module is relevant to officials from industrial units exposed to high noise and traffic police.

8.8 Rejuvenation of polluted river stretches including treatment and utilization of sewage

This training module is focused on the knowledge enhancement of officials on the restoration of polluted river stretches, identification & containment of non-point sources, and sewage treatment. A submodule is dedicated to identifying polluted river stretches, monitoring, and river cleaning program (concepts, tools, and techniques). The participants will be updated on existing regulations, policies, and guidelines and aware of the benefits of conservation, restoration, and water bodies management, as shown in Table 10.

8.9 Maintenance of ambient air quality in non-attainment cities

This module is designed for regulatory personnel involved in monitoring, analysis & review of air quality. It also covers implementing officials involved in inspection and enforcement of regulatory provisions. It presents updated information on ambient air quality standards and data analysis of non-attainment towns, as shown in Table 11.

8.10 Restoration of environmental quality in critically/severely Polluted Industrial Areas (PIAs)

This module will discuss pollution control in industrial areas/estates/clusters, including strategies to address issues, technical interventions, target areas & groups for restoring environmental quality in Polluted Industrial Areas/Clusters, as shown in Table 12.

8.11 Regulatory compliance in industries & common infrastructure facilities

This module is focused on ensuring proper disposal of treated wastewater & sludge, including practical experience of participatory training, understanding planning aspects, treatment processes, and regulatory provisions, as shown in Table 13.

8.12 Regulating Sand Mining Activities

This module will help regulatory bodies understand the adverse effects of illegal sand mining on groundwater recharge, river equilibrium, and biodiversity. It will help estimate reserves,

assess mining permissions, and promote alternative materials such as engineered sand and recycled sand from C&D waste, as shown in Table 14.

8.13 Strengthening of pollution control boards/pollution control committees

This module is proposed to be taken up for strengthening the technical, research, analytical, and program implementation capacity of state pollution control boards/ pollution control committees for ensuring effective governance, as shown in Table 15.

Table 3: Training module of Solid Waste Management

Topic	Content	Target Learner	Duration	Frequency
SWM Rules, enforcement, and compliance	<ul style="list-style-type: none"> • Decoding SWM Rules, 2016, enforcement and reporting requirement • Compliance monitoring of SWM notification • Siting of treatment and disposal sites • Technologies in SWM • Enforcement and monitoring, including environmental standards • Closure and rehabilitation of old dumps – including reclamation of legacy waste dump sites as per MSW rules. • Integration of informal sector into SWM • Decentralized SWM systems • Environmental compensation and restitution of environmental damages 	SPCB officials, Officials of State Urban and Rural Development, Officials of the Environment Department & District Collector office	2 days	Annual
Integrated SWM	<ul style="list-style-type: none"> • Understanding SWM notification, institutional and legal aspects • Obligations and compliance requirement for various stakeholders 	Mayors, Elected representatives of local bodies, MC, CE, SE, EE, Committee members, Senior State Government	1 day	Annual

	<ul style="list-style-type: none"> • Value chain in SWM, infrastructure, and service requirement • Best practices of integrated SWM • Implementation models in SWM • Cluster approach in SWM • Reforms and Governance requirement in local bodies for SWM • Methods to enhance community participation 	Officials, Senior officials of SPCB, etc.		
PPP and financing in SWM	<ul style="list-style-type: none"> • PPP Concept and Models • Integrated and Unbundled approach for private sector participation • Revenue models in SWM • Carbon financing in SWM • Structuring of projects • Tendering • Negotiations • Case Studies 	MC, CE, SE, State Govt Officials Separate training program for local bodies based on their size Tier 1 Cities Tier 2 Cities Tier 3 Cities Village Panchayats	1 day 2 day	Annual Semi-Annual
Project and Contract Management	<ul style="list-style-type: none"> • Policy and Regulations in SWM • Project planning, monitoring, and control 	Middle level and Junior level Engineers of	3 day	Annual

	<ul style="list-style-type: none"> • Budgeting, costing and financing SWM • Procurement • Contracts – Legal, Technical, and Financial Aspects • Contract management for compliance monitoring • Monitoring of Condition Precedents and Obligations • Monitoring of Performance Standards • Treatment of Non-compliance and deviations 	Municipality, SPCB, and Town Planners		
Treatment and Disposal	<ul style="list-style-type: none"> • Treatment Technologies • Siting of the Treatment site and Landfill site • Compliance in operation and management of Treatment facility • Compliance in operations and management of Landfill • Closure and rehabilitation of old dumps 	State Govt officials (UDD), Concerned officials of Municipalities, Facility operators	1 day	Semi-Annual
Transportation	<ul style="list-style-type: none"> • Route planning • Fleet management • Transfer Station siting and management • Case studies • Exposure Visits 	Municipality Officials, Nagar Panchayat officials/Village Panchyat, Transport Department and Transport Agencies	1 day	Semi-Annual
Sustainability and SWM Operations	<ul style="list-style-type: none"> • Environmental sustainability – segregation, littering, siting of operations, safe disposal 	MC officials, State UDD officials, Nagar	1 day	Annual

	<ul style="list-style-type: none"> • Financial sustainability – User fees, property tax, tipping fees • Absenteeism, Labor productivity 	Panchayats/ Village Panchyat,		
Health and Safety in SWM	<ul style="list-style-type: none"> • Occupational hazards in SWM • Health and safety regulatory and contract requirement • Health and safety Industry best practices • PPEs in SWM • Personal hygiene and cleanliness • Behavior changes communication and practices for health and safety (Tool Box Talks etc.) 	MC Supervisors, Conservancy Supervisors, Health Dept Separate workshop for rag pickers on health and safety risks	1 day	Semi-Annual
Waste segregation and distributed composting at household or Society or Establishment level	<ul style="list-style-type: none"> • Regulatory framework and compliance requirement under SWM Notification for households, society, and establishment level • 3 R – Reduce, Reuse and Recycle • Concept of Zero waste community • Distributed composting- technologies and management • Case studies • Exposure visit 	RWAs, Housing Societies, Market Associations, Restaurants and Hotels, Offices, NGOs, Housekeeping agencies, Railways, Temple Trusts, Port Harbors, SEZ's	1 day	Quarterly

3R- Reduction, Recycle and Reuse	<ul style="list-style-type: none"> • Life cycle of product and waste generation • Integration of 3R into the life cycle of the product • Extended environment responsibility of the producer 	Production companies, SPCB officials, MC officials, Nagar Panchayats, RWA's	1 day	Annual
Community awareness and participation	<ul style="list-style-type: none"> • Awareness campaign on 3R, littering, and waste segregation • Sanitary waste segregation and disposal (diapers and sanitary pads) 	School Children Colleges (Youth) Women, public, RWA's	1 day	Quarterly

Table 4: Training module of Plastic Waste Management

Topic	Content	Target Learner	Duration	Frequency
Ban on Single Use Plastics	<ul style="list-style-type: none"> • Banned Items, enforcement, regulations, compliance, awareness 	RWAs, market associations, NGOs, school children, etc.	1 day	Quarterly
Plastic Waste Management (Amendment) Rules, 2018	<ul style="list-style-type: none"> • Overview of Plastic waste management rules • Roles and responsibilities of the Local Body, Gram panchayats, Producers, Importers, and waste generators • Compliance with the rules and authorization 	Municipal Commissioners, Director of Municipal Administration, Senior officials from the Urban Development Department, Environment Department, District Collector, and Zilla Panchayat	1 day	Annual

Waste management and Extended Producer Responsibility (EPR)	<ul style="list-style-type: none"> • Waste collection and segregation practices • Recycling methods and best available technologies • Challenges, Effective mechanism and operationalization issues of EPR • Visit model recycling facility • Compostable plastics • Options for utilization of plastic wastes <ul style="list-style-type: none"> • Waste to Energy • Roadmaking • Co-processing 	SPCB, UDD, Environment Department, Municipal Corporations, Plastic manufacturing associations, Representatives of Food and Beverage industries, Importers, NGO's and Recyclers, RWA	2 days	Semi-annual
Community awareness and participation	<ul style="list-style-type: none"> • Awareness campaign on 3R, littering, and waste segregation • The impact of plastic waste on public health and the environment • Community Involvement Initiatives • At source collection and segregation and handing over to the Recyclers 	Municipalities/ corporation, NGOs, Recyclers General public	1 day	Quarterly

Table 5: Training module of Bio-Medical Waste Management

Topic	Content	Target Learner	Duration	Frequency
Biomedical Waste Management Rules, 2016, as amended and its enforcement	<ul style="list-style-type: none"> • Understanding provisions under Biomedical Waste Management Rules, 2016, its amendments, enforcement, and reporting requirement • Stakeholders and their roles and responsibilities • Protocol for inspection/monitoring of Common treatment facilities • Gap analysis for allowing new Common treatment facility 	SPCB officials, State Govt Officials	2 days	Annual
Implementation of Biomedical waste Management Rules, 2016 by Healthcare Facilities	<ul style="list-style-type: none"> • Duties and mandates of biomedical waste generators as per BMWM Rules, 2016 • CPCB Guidelines for management of Healthcare Waste by Healthcare Facilities as per BMW Management Rules, 2016, as amended • Overview of biomedical waste management – segregation of BM as per color-coding system, categories of BM, treatment & disposal options • Barcode system by Healthcare Facilities and its significance • Liquid waste management by Healthcare Facilities • Exposure hazards and Occupation Health • Other waste management by Healthcare Facilities • Compliance Reporting 	Hospitals, clinics, Veterinary Hospitals, research institutes (Doctors, nursing staff, ward boys) The staff of Medical Collages	2 days	Semi-annual

	<ul style="list-style-type: none"> • Case studies 			
Implementation of BMWM Rules, 2016 by Common Biomedical Waste Treatment Facilities (CBWTFs)	<ul style="list-style-type: none"> • Duties of Common treatment facilities operators as per BMWM Rules, 2016 • CPCB guidelines for CBWTFs – treatment equipment, compliance reporting, compliance to standards, real-time monitoring data • Adoption of the barcode system & its reporting • Reporting of protocol for performance evaluation of Common Facilities 	CBWTF operators	1 day	Annual

Table 6: Training module of Hazardous and Other Wastes (Management and Transboundary Movement)

Topic	Content	Target Learner	Duration	Frequency
Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended and its enforcement	<ul style="list-style-type: none"> • Understanding provisions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, its amendments, enforcement, and reporting requirement • Criteria for identification of by-product and wastes • Inventorization of hazardous and other wastes • Sampling, monitoring and analysis of hazardous waste listed under HOWM Rules, 2016 • Recognition, registration of workers, and industrial skill development activities involved in recycling, pre-processing and other utilisation activities 	SPCB officials, State Govt Officials, Custom/Port Officials	3 days	Annual

	<ul style="list-style-type: none"> • Stakeholders and their roles and responsibilities • Authorization for managing Hazardous and other waste • Protocol for inspection/monitoring of common / captive facilities/HW generating units/recycler/utilizer/importer/ exporter • Gap analysis for allowing new common / captive facility • Management of hazardous waste governed under other regulations 			
Implementation of Hazardous and Other Wastes (Management and Transboundary Movement) Rules by Industrial units and other waste occupier	<ul style="list-style-type: none"> • Duties and mandates of hazardous and other wastes generators as per Hazardous and Other Wastes Rules, 2016 • Safe and environmentally sound management of hazardous and other waste as per Hazardous and Other Wastes Rules, 2016 • Overview of hazardous and other waste management – handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the hazardous and other wastes • Procedure of export and import (transboundary movement) of hazardous and other waste • Packaging, labelling, and transport of hazardous and other wastes • Manifest system (Movement Document) for hazardous and other waste • Case studies 	Industrial units, recyclers/utilizers/co-processors/other waste occupier	2 days	Semi-annual

Implementation of hazardous and other waste rules, 2016 by common / captive facilities	<ul style="list-style-type: none"> • Duties of Common treatment facilities operators as per Hazardous and Other Waste, Rules, 2016 • Liability of occupier, importer or exporter and operator of a disposal facility • CPCB guidelines for setting up of common / captive – treatment, storage and disposal facilities • Performance evaluation and monitoring of Common/Captive (including post closure) • Record maintenance of handled hazardous waste its reporting 	Common / captive facility operators	1 day	Annual
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Table 7: Training module of Construction and Demolition Waste Management

Topic	Content	Target Learner	Duration	Frequency
C&D Waste Management Regulations and Enforcement	<ul style="list-style-type: none"> • Understanding C&D Waste Management Rules, enforcement, and reporting requirement • Stakeholders and their roles and responsibilities • Characterization and inventorisation of C&D Waste • Recycling (including Salvaging) and product development • Siting and sizing of the processing plant • Market development of C&D products • Best practices • Compliance reporting 	SPCB officials, State Govt Officials, Municipal Authorities, Real Estate industry associations like NAREDCO, CREDAI, etc., infrastructure companies	2 days	Annual

Options for effective C&D Waste Management	<ul style="list-style-type: none"> • Site Selection • Processing plants on DBOT format • Tendering and Negotiations • Developing common C & D facilities • Implementation of C & D waste management facilities • Case Studies 	SPCB officials, State Govt (UDD and Env. Dept), MC officials, official from District Collector office	1 day	Annual
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Table 8: Training module of E-Waste Management

Topic	Content	Target Learner	Duration	Frequency
Implementation of E-Waste (Management) Rules, 2016	<ul style="list-style-type: none"> • Understanding provisions under E-Waste (Management) Rules, 2016, its amendments, and enforcement • Role and Responsibilities of implementing agencies • Procedure for inspection/monitoring (methodology and checklist) • E-waste management review portal • Annual reporting 	SPCBs/PCCs officials, State Govt Officials	2 days	Annual
Compliance of E-Wastes (Management) Rules by various stakeholders	<ul style="list-style-type: none"> • Overview of E-waste Rules, 2016 • Roles and responsibilities of manufacturers, producers, dismantlers, recyclers, refurbishers, bulk consumer and PRO • CPCB guidelines with respect to implementation of E-waste rules for various stakeholders • Annual reporting 	manufacturers, producers, dismantlers, recyclers, refurbishers, bulk consumer of e-waste	2 days	Semi-annual

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Table 9: Training module on implementation of Noise Pollution (Control & Regulation)

Topic	Content	Target Learner	Duration	Frequency
Noise Pollution (Control and Regulation) Rules, 2000	<ul style="list-style-type: none"> • Status of noise level monitoring in India • Guidelines on noise standards for different areas/zones • Role and Responsibilities of SPCBs/PCCs/ implementing agencies • Best practices of enforcement of noise pollution control measures • Measures devised for effective prevention, control and abatement of noise pollution • Impact of noise regulation violation 	Senior officials of SPCBs, State Environment departments	1 day	Annual
Control Strategies	<ul style="list-style-type: none"> • Identification of causes of noise pollution and challenges in its management • Regional and local noise level analysis – Noise level modeling • Overview of measures taken by the government to control noise pollution in cities • Policy interventions and enforcement • Source apportionment studies 	SPCB, Industry associations, Schools, Universities, Hospitals, Forest Department, Traffic Police Department, Urban Development Department, State Environment Department	2 days	Annual

Awareness of noise level improvement	<ul style="list-style-type: none"> • Government initiatives towards noise level improvement • Data dissemination/ public engagement platforms • Interpretation of noise level data • Precautionary actions • Restrictions on the use of loud speakers/public address system • Restrictions on the use of horns, sound emitting construction equipment and bursting of fire crackers. 	Civil society, NGOs	1 day	Annual
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Table 10: Training module of rejuvenation of polluted river stretches including treatment and utilization of sewage

Topic	Content	Target Learner	Duration	Frequency
Rejuvenation of River Stretches	<ul style="list-style-type: none"> • Water Act: Compliance and Enforcement • River Rejuvenation Action planning and Conservation including goal setting of water quality, source control, treatment and monitoring, and status reporting • Governance structure in implementing the Action Plan • In-situ restoration and rejuvenation, and conservation of river ecology, including case studies • CSR financing in river rejuvenation • Sewage treatment, recycle and reuse – policy, technologies, infrastructure, finance, and PPP 	Municipal Commissioners and senior officials from State Govt (Env. Dept, UDD, Directorate of Municipalities, Agriculture Dept.), Chief of Nagar Panchayats, Chief of State Industrial Development Corporations, Senior officials from SPCBs	2 days	Semi-annual

	<ul style="list-style-type: none"> • Community participation in rejuvenation and conservation of rivers 			
Collection system and containment of non-point sources	<ul style="list-style-type: none"> • Estimation, collection of sewage, and treatment facility. Types of treatment and discharge standards. • Identification and containment of non-point sources of pollutants finding their way in surface water. • Planning & execution for effective sewerage systems • Stormwater management • A decentralized system of sewage treatment, • Upgradation of old treatment systems • Effective Operation & Maintenance Agency 	Senior officials from Municipal Corporation, Senior officials from DM/DC & State environment Department, SPCB, Chief Engineers of corporations. RWA's, All India Institute of Local Self Government (AIIILSG)	2 days	Semi-annual
The polluted river stretches identification, monitoring, and river cleaning program	<ul style="list-style-type: none"> • Identified polluted river stretches • Action plan for restoration and resource requirement • Interception and diversion work/ laying of sewerage systems and plugging the non - point sources • Identifying the causes of pollution and contribution of main polluting towns/cities • River Front Development works, such as improvement of bathing Ghats. • Catchment Area Treatment to check the flow of silt and nutrients and agricultural runoff 	SPCB, Municipal corporations, Municipal Councils, DM/DC officials State water supply and sanitation department, Directorate of Municipalities, Nagar Panchayats, Universities, NGO's	2 days	Semi-annual

	<ul style="list-style-type: none"> • Biomonitoring of rivers • Setting up of Sewage Treatment Plants (STPs) for treating the diverted sewage • Methods like Bioremediation and Phytoremediation's for in-situ treatment • Study of schemes under NGRBA and Ganga Action Plan • Maintenance of flood plain and desilting of channel • Use of water quality modelling techniques for prediction 			
Awareness strategies for clean rivers	<ul style="list-style-type: none"> • Awareness among the local people to bring behavioral change • Organization of river cleaning campaigns (Swachh Bharat, Namami Gange) • On-field cleaning activities by the NGOs • Public participation & awareness, and capacity building • Know your river quality 	SPCB, Educational Institutes, NGO, Local people, Students from schools and colleges	1 day	Quarterly
Community awareness and participation	<ul style="list-style-type: none"> • Awareness campaign on 3R, littering, and waste segregation • Introduction of "river festival" and "river runs" under the public participation, Information, Education & Communication (IEC) activities 	School Children Colleges (Youth) Sarpanch from villages, chief officer General public	1 day	Quarterly

Table 11: Training module on the maintenance of ambient air quality in non-attainment cities

Topic	Content	Target Learner	Duration	Frequency
Air Quality Management	<ul style="list-style-type: none"> • Status of air quality scenario in the country • Sources of air pollution and Non-attainment areas • Overview of Ambient Air Quality Monitoring Methods • Advanced air quality monitoring techniques • International protocols and treaties • Regulatory framework • Policy interventions and enforcement • Knowledge sharing of best practices • Advancements in control strategies – Technology demonstration • Challenges in air quality improvement 	Senior officials of SPCBs, State Environment departments	2 day	Annual
Monitoring and compliance	<ul style="list-style-type: none"> • Ambient air quality monitoring network • Real-time and manual monitoring methods and accuracy • Operation and calibration methods of air quality instruments/ equipment • Air quality index • Advanced laboratory techniques • Compliance Monitoring of environmental standards • Overview of rules & regulatory provisions against air polluting activities 	SPCB officials, State Industrial Development Corporations, Industry associations, Universities, Police department	2 day	Semi-annual

	<ul style="list-style-type: none"> • Alternate monitoring techniques – Satellite, Sensors, Mobile, etc., • Indoor air quality monitoring methods 			
Data validation and analytics	<ul style="list-style-type: none"> • Data validation protocols • Techniques in air quality data analysis • Forecasting • Advanced analytics 	SPCB officials, State Environment Departments	2 days	Annual
Air Quality Standards and their implementation	<ul style="list-style-type: none"> • Overview of air quality standards and their compliance • Assessing the quality of information to be delivered • Status of air quality in the country • Sources of air pollution in Non-attainment areas • Sector-specific compliance 	SPCB's, State Environment Departments, State Industrial Development Corporations, Industry Associations, CII, FICCI,	1 day	Annual
Control Strategies	<ul style="list-style-type: none"> • Identification of causes of air pollution and challenges in air quality management • Introduction to air quality modelling for regulatory decision support • New technologies and better/cleaner fuels • Source apportionment studies • Regional and local air quality analysis – Air quality modeling 	SPCB, Industry associations, Urban Development Department, State Environment Department	2 days	Semi-annual

	<ul style="list-style-type: none"> • An effective mechanism for real-time data transfer and timely corrective measures • Carrying capacity Assessment • Overview of measures taken by the government to control Air Pollution in cities • Policy interventions and enforcement 			
Approaches for Reduction of air pollution	<ul style="list-style-type: none"> • Advancements in clean technologies - Better fuel quality, Efficient technology • Urban planning - Augmentation of Public Transport, alternate modes of transport and related infrastructure requirements, new greening techniques, siting criteria of air polluting sources • Dissemination of information to the public through bulletins, web updates • Implementation of the city action plan • Provisions for the strengthening of an institutional and regulatory framework • Sharing of sector-specific best practices 	SPCB's Municipal corporation, UDD, State Environment Department, Automobile manufacturers, Oil companies, Transport Department, Industries Department	2 days	Semi-annual
Awareness of air quality management	<ul style="list-style-type: none"> • Government initiatives towards air quality improvement • Data dissemination/ public engagement platforms • Interpretation of air quality data • Precautionary actions 	Civil society, NGOs	1 day	Annual

Table 12: Training module on restoration of environmental quality in critically/severely Polluted Industrial Areas (PIAs)

Topic	Content	Target Learner	Duration	Frequency
Assessment and Identification of Critically/Severely Polluted areas	<ul style="list-style-type: none"> • Current status of critically/severely polluted industrial areas/clusters • Overview of the revised Comprehensive Environmental Pollution Index (CEPI) • Effective and time-bound action plans to improve environmental quality. • Waste Minimization at Sources • Cleaner Production/technologies in Practices • Safeguards for critically polluted areas for Environmental Clearance • Revisit Compliance and Vigilance mechanisms • Overcoming the Legal Constraints, appropriate policies, and development of databases 	SPCB officials, State Environment Department, Industries Department, State Industrial Development Corporations, District Collector	1 day	Annual
Water quality management in CEPI areas	<ul style="list-style-type: none"> • Water quality parameters for EPI evaluation • Sampling Techniques for Surface water quality monitoring • CETP, STP, Industrial Effluents Standards • Grouping of water pollutants for EPI evaluation • Method of EPI evaluation based on criteria pollutants 	SPCB officials, State Government Officials, CETP Authority, NGO, Local representative	2 days	Semi-annual

	<ul style="list-style-type: none"> • Monitoring/Online Monitoring and Assessment • Water zones & Watershed Management • Awareness and Community Participation • Advanced technologies and their implementation • Case Studies • Exposure Visits 			
Air quality management in CEPI areas	<ul style="list-style-type: none"> • Policy and Framework • Ambient Air Quality Monitoring • Grouping of air pollutants and EPI calculation for air • Notified standards for ambient air quality • Visit NAMP/CAAQMS to demonstrate working of devices • Action plans for improvement of air quality • Source apportionment study for the preparation of effective action plans • Methods to enhance community participation (Industrial association) 	SPCB officials, State Environment Department, State Industrial Development Corporations Industries Associations	2 days	Annual
Land quality management in CEPI areas	<ul style="list-style-type: none"> • Policy and Framework • Hazardous waste disposal and effects on land & groundwater • Groundwater sampling techniques • Advance technologies for pollution control and its implementation • Identification and remediation of contaminated sites 	SPCB officials, State Environment Department, State Industrial Development Corporations Industries	2 days	Annual

	<ul style="list-style-type: none"> • Case Studies • Exposure Visits 	Associations, NGO, Local representative		
Management of CEPI areas – Action Plan, Awareness and Capacity Building	<ul style="list-style-type: none"> • Monitoring of CEPI areas • Environment Data Bank • Polluter Pays Principle • Stringent rules • Inspection and Audits • Mass Awareness • Training Programmes 	State Govt. Officials, Local body representative, Gram panchayat, Auditors, NGO's General public	2 day	Quarterly

Table 13: Training module on regulatory compliance in industries & common environmental facilities

Topic	Content	Target Learner	Duration	Frequency
Effectiveness of Common Treatment facilities and way forward	<ul style="list-style-type: none"> • Analysis of the effectiveness of CETP's in containing pollution of water resources • Segregation and treatment of high and low concentration waste streams • Training on CETP units operations and maintenance • Adoption of Zero Liquid Discharge advantages and disadvantages • Introduction of advanced oxidation technologies for effective removal of COD • Reuse and recycling of treated water 	SPCB officials, CETP associations, Industry Associations, State Industrial Development Corporations, and ETP operations and Laboratory personnel	2 day	Semi- annual

	<ul style="list-style-type: none"> • Regulatory compliance of standards • Exercise for the development of skilled workforce pool • Soil and groundwater monitoring techniques in the vicinity of sludge storage area • O&M manual (vernacular languages) • Cost analysis of CETPs (O&M) to collect a genuine charge from member units • Sludge utilization 			
CETP and ETP Rules and Regulations	<ul style="list-style-type: none"> • Strengthening of existing rules and information about upcoming/new laws or rules. • Mass balance assessment for sludge/solid waste generation/water • Energy balance assessment for the effective operation of CETPs/ETPs • Operation optimization with respect to waste characteristics 	SPCB, State Industrial Development Corporations, Industry Associations	1 day	Annual

Table 14: Training module on regulating sand mining activities

Topic	Content	Target Learner	Duration	Frequency
Sustainable practices of sand mining	<ul style="list-style-type: none"> • Guidelines for sustainable sand mining • Conservation of river equilibrium and its natural environment • Impact of unregulated sand mining • Assessment of impacts on Ground Water 	Department of Geology and Mines DM/DC / District Mining Offices	1 day	Semi-annual

	<ul style="list-style-type: none"> • Aspects of the District Survey Report • Replenishment studies of the region/river stretch • Detailed hydrogeological study for mining • Best environmental practices for extraction of materials • Effective monitoring of mined out mineral • Progressive Mine Closure Plan, Reclamation and rehabilitation of mined-out areas • Use of alternative materials such as the use of engineered sand and recycled sand from C&D waste 	SPCB / State Environment Department Irrigation and Flood Control Department Central Ground Water Board		
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Table 15: Training module on the strengthening of pollution control boards/pollution control committees

Topic	Content	Target Learner	Duration	Frequency
Compliance of Acts and Rules	<ul style="list-style-type: none"> • Training on new trends in the subject, Acts, Rules, Notifications, Update knowledge about the prevailing rules and acts related to PCB's • Legal issues in compliance check/monitoring of industries 	PCB, PCC officers, State Environment Department	3 Day	Once in 2 years
Institutional Strengthening and Capacity building	<ul style="list-style-type: none"> • Updating equipment and strengthening of Laboratory • Skill development of Laboratory staff concerning the recent trends • The online process for all applications • Exposure to training relevant software tools 	PCB, PCC officers, Lab officials.	3-5 Day	Annual

	<ul style="list-style-type: none"> • Online decision support system for effective compliance monitoring and approvals • E-governance tools • Online emission & effluent monitoring systems 			
Public awareness/ Helpline	<ul style="list-style-type: none"> • Updation of public interaction method • Simplifying techniques to deliver results • Dissemination of information to the general public • Use of social media 	SPCB, PCC officers, Environment Department, Industry Associations	1 Day	Annual
