



Presentation

on

Maharashtra Environmental Infrastructure Development Corporation

(पर्यावरणाच्या मुलभूत सोयीच्या विकासासाठी कार्यान्वित)

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महाराष्ट्र प्रदूषण नियंत्रण मंडळ



Presentation Structure

Part A: Environment and Natural Resources in

Maharashtra – Situation Analyses and

Challenges

(महाराष्ट्रातील पर्यावरण व नैसर्गिक संपत्तीचे विश्लेषण व भविष्यातील आव्हाने)

Part B: Rationale for Promoting Common

Environmental Infrastructure (CEI)

(संयुक्त पर्यावरण विषयक मुलभूत सोयीच्या विकासासाठी स्पष्टीकरण)

Part C: Pipeline of Priority CEI Projects

(प्राधान्याने करावयाचे प्रकल्प)

Part D: Modalities of Implementation

(अंमलबजावणीची साहित्यी)



PART 'A'

Environment and Natural Resources in Maharashtra

Situation Analyses and Challenges

(महाराष्ट्रातील पर्यावरण व नैसर्गिक संपत्तीचे विश्लेषण
व भविष्यातील आव्हाने)



Overview

- Population of 96 million with 43 % of this population living in urban area (लोकसंख्या ९६ लाख - ४३ टक्के शहरी)
- Highly industrialized with 224+ industrial estates developed and promoted by MIDC (अत्याधुनिक २२४ औद्योगिक वसाहति)
- Leadership in IT sector with 32% of the software professionals, 25% of the top 500 IT companies in the country are in the State (IT विभागातील आघाडी)
- 25% of the State GDP is contributed by Agriculture sector including cash crops of sugarcane and cotton (राज्याचे २५ टक्के GDP हे कृषिक्षेत्रातून)



Issues of Concern – Land & Water Resources (जमिन व पाणी विषयक प्रश्न)

- 136 lakh ha land suffers from degradation.
- 10 lakh ha land is water logged. (पाण्याच्या निच-याच्या समस्या)
- 94 per cent of land area suffers from water induces soil erosion
- 70.6 percent land of the State today is waste land (अपत्याज जमीनीची समस्या)
- Drought prone blocks increased from 95 to 220 (दुष्काळग्रस्त विभागाच्या संख्येत दुप्पट वाढ)
- Post harvest losses in agriculture are as high as 25 to 30 % (शेतीमधील कापणी नंतरच्या नुक्सानाचे प्रमाण २५ ते ३० टक्के)



Issues of Concern – Problem of Compliance (अंशकवर्गीयता समस्या)

- Small ULBs (लहान नगरपालिका) and SME (लघुउद्योग) clusters are not complying due to lack of environmental infrastructure
- Less margins & competition for SMEs and low revenue base for small ULBs make it unviable for these polluters to invest in the captive infrastructure
- Resource constraint to chase large number of SMEs and ULBs and consideration of loss of employment holds MPCB from taking punitive action



Economic implications of environmental impacts (पर्यावरणाच्या - हान्यांचे आर्थिक परिणाम)

- Annual loss of soil cover 775 million tonnes corresponding to Rs. 3040 crores annually.
- Agri inputs costs increased by 16 % over last two years but the products prices have increased by miniscule 4 % over the last two years.
- Health impacts of poor environment causes average middle class family to spend large portion of monthly income on health. It also results in reduction in productivity



**Cost of inaction is thus high
Something has to be done soon
and**

Time is the Essence

निष्क्रियतेची किंमत खूप जास्त द्यावी लागेल म्हणूनच काहीतरी लागेलच
करायला हवं
त्यासाठी हिच वेळ योग्य

**Solutions need to consider
environmental protection, improved
environmental compliance as well as
improved competitiveness**



PART 'B'

Development of Common Environmental Infrastructure

प्रधान्याने करावयाचे प्रकल्प



What is Common Environmental Infrastructure (CEI)?

(पर्यावरणाच्या सामाईक मुलभूत सुविधा?)

- Conventionally, CEI has focused on residue management projects:
(निरस्सारण विषयक पर्यावरणाच्या सामाईक मुलभूत सुविधा)

Examples include

- Common Effluent Treatment Plants (CETP)
- Solid Waste Management Facility
- Biomedical Waste Management Facility
- Hazardous Waste Management Facility
- Promotion of CEI will thus help in improved environmental compliance and environmental protection



Common Environmental Infrastructure can also include ...

- Resource conservation, recovery and sharing facilities to bring in competitiveness (सातजन संपत्ती विषयक पर्यावरणाच्या सामाईक मुलभूत सुविधा)
- Recycling treated effluents at CETTPs
- Recycling resources like metals for electroplaters
- Rainwater harvesting structures
- Common heat and power units



Common Environmental Infrastructure can also include ...

(अवस्थापन विषयक पर्यावरणाच्या सामाईक मुलभूत सुविधा)

Regional Disaster Management centers

- Capable of handling natural calamities and accidents
- Civil Defense training
- Emergency response infrastructure

Regional Environmental Monitoring networks

- Networking and Sharing of monitoring stations
- Common data base and data management facilities

Common Environmental Training Centers



Characteristics of Individual Environmental Infrastructure Projects (पर्यावरणाच्या साभाईक मुलभूत सुविधांचे गुणधर्म)

- Institutional Complexity
- Technology challenges
- Relatively long project development & implementation cycles
- Long gestation period
- Limited access to long term funding
- Need for innovative structuring

Therefore creation of an enabling framework and programmatic approach is necessary



Why promote Common Environmental Infrastructure? (पर्यावरणाच्या सामाईक मुलभूत सुविधांच्या विकासाची आवश्यकता)

- Lack of adequate environmental infrastructure is a key impediment to improved environmental compliance of SMEs and small ULBs
- Creation of CEI can enhance industrial competitiveness especially in the context of requirements of international trade
- This will lead to protection of environment and conservation of natural resources in the State of Maharashtra



Why Maharashtra should take a lead? (**महाराष्ट्रने पुढाकार का खायाला ह्या**)

1. Maharashtra is one of the leading states with more than 20 Common Effluent Treatment Plants (CETPs) to cater for clusters of SMEs
2. First Common Hazardous Waste Treatment and Disposal Facility on a Public-Private-Partnership model was set up in Maharashtra
3. Maharashtra should retain the leadership by establishing separate company to develop Common environmental infrastructure



Maharashtra Environmental Infrastructure Development Corporation Special Purpose Vehicle

For

Development of Common Environmental Infrastructure Projects in the State of Maharashtra





महाराष्ट्र पर्यावरणाच्या मुलभूत सोयीच्या विकासासाठी

विशेष कंपनीची स्थापना

Maharashtra Environmental Infrastructure Development Corporation



Role of MEIDCL (विशेष कंपनीची भूमिका)

- ✓ Promote develop and implement CEI in the state of Maharashtra
- ✓ In doing so, promote CEI at the regional level that will be cost effective and sustainable. Only a corporation at the Statewide level can take such an approach
- ✓ Regional approach will also facilitate entry of large players and cutting edge technology providers
- ✓ To mobilize required financial resources from the state govt., private sector as well as international investors.
- ✓ To help improve the state of environmental compliance which will lead to protection of Maharashtra's natural resources and reduce cost of remediation/ restoration and health impacts

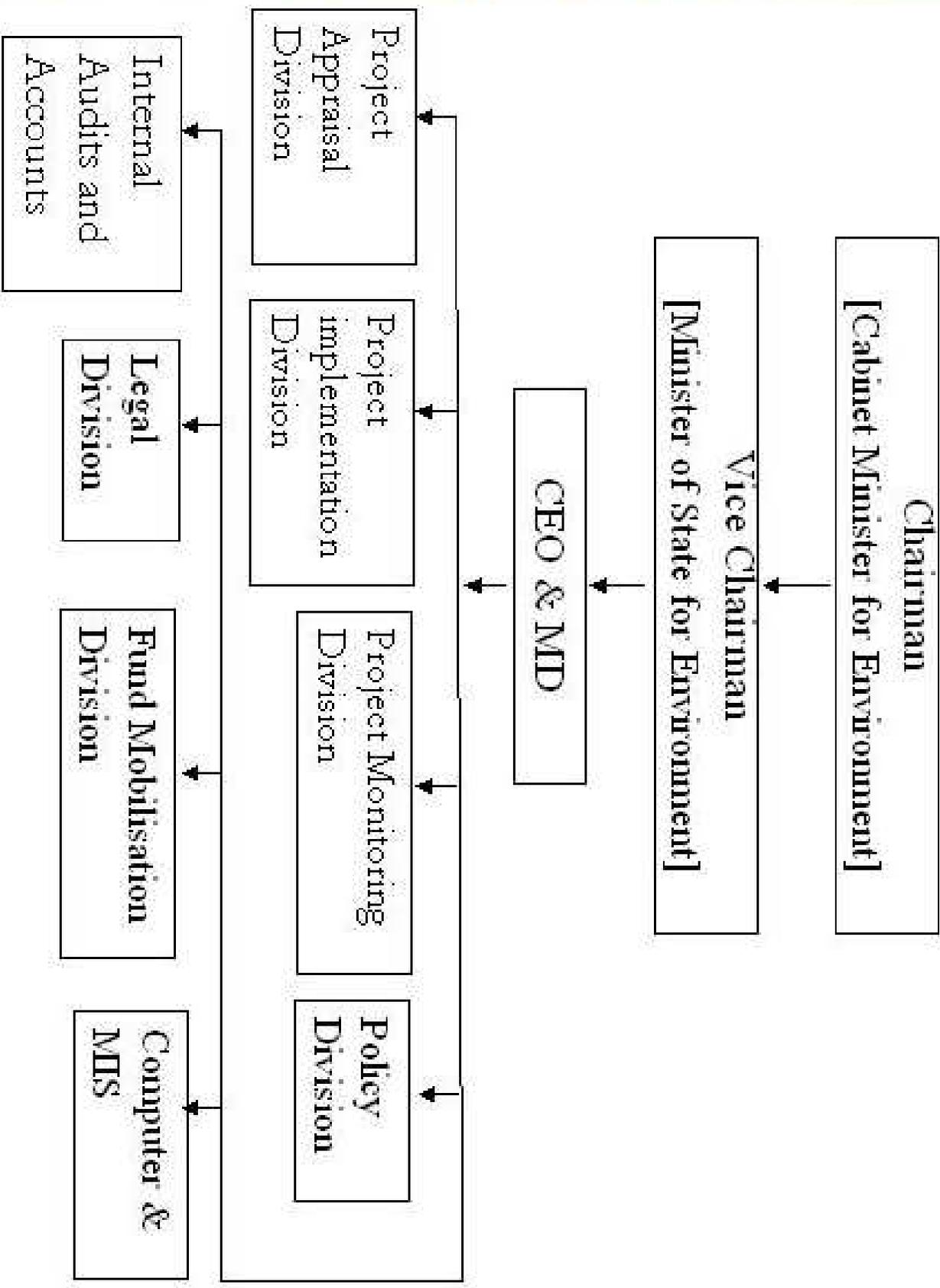


Role of MEIDCL

- ✓ This will improve competitiveness that will lead to conservation of natural resources and assist in meeting the requirements of international trade
- ✓ It will enhance the environmental market, bring in competition, foster technology development and transfer and also lead to institutional building
- ✓ It will act as a price regulator for user fees for CEI
- ✓ It will implement CEI on a priority basis, in timely & cost effective manner
- ✓ Enable the State take advantage of provisions under various Multilateral Environmental Agreements and Mechanisms such as Clean Development Mechanism



Organization Structure (अव्ययपत्रा आराखडा)





Proposed Board of Directors of MEIDCL

Description	Position on Board of MEIDCL
Sectoral Cabinet Minister for Environment, GoM	Ex-Officio Chairman
Sectoral Minister of State for Environment, GoM	Ex-Officio Vice Chairman
Person possessing qualifications, knowledge and experience in scientific, engineering and management aspects of pollution control, environment protection and similar organization leadership	Chief Executive Officer and MID
Person possessing degree in engineering or post graduate/ doctorate in the field of natural sciences/technology with special knowledge, practical experience and administrative experience in promotion, development and managing environmental infrastructure projects	Executive Director – Project
Person possessing qualifications, knowledge and experience in raising finances for infrastructure projects	Executive Director – Finance
Principal Secretary, Environment	Director
Principal Secretary, Urban Development	Director
Principal Secretary, Water Supply and Sanitation	Director
Chief Executive Officer, MIDC	Director
Member Secretary, MPCB	Director
Eminent person from environmental field (independent director)	Director
An eminent industrialist or economist or finance specialist	Director



PART 'C'

Project Pipeline

प्राधान्याने करावयाचे प्रकल्प



Common Environmental Infrastructure

- Conventionally, Common Environmental Infrastructure (CEI) includes residue management projects:
 - Common Effluent Treatment Plants (CETP)
 - Solid Waste Management Facility
 - Biomedical Waste Management Facility
 - Sectors of highly polluting industries (17 categories):
 - Effluent treatment/Waste Minimization/Cleaner Technology Applications
 - Hazardous Waste Management Facility
 - Electronic waste management



Common Environmental Infrastructure

- Additionally CEI can also include resource recovery and competency projects:
 - Treated effluent water recovery
 - Rainwater harvesting structures
 - Common heat and power units
 - Facilities for training on Operation and Management of CEI
 - CDM
 - Multilateral Environmental Agreements



Projected Finance Requirement

[Illustrative]

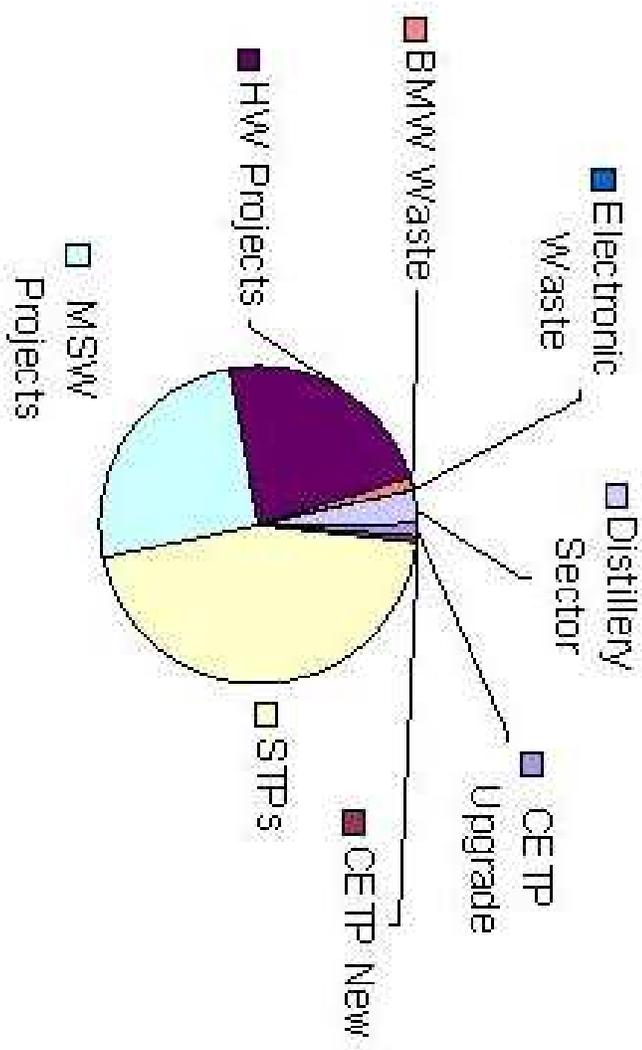
- CETP upgradation (existing) - Rs. 565 Mn (Rs. 56.5 cr))
- CETP construction (new) - Rs. 380 Mn (Rs. 38.0 cr))
- STPs - Rs. 20850 Mn (Rs. 2085 cr)
- MSW projects - Rs. 12000 Mn (Rs. 1200 cr)
- HW projects - Rs. 1090 Mn (Rs. 109 cr)
- BMW projects - Rs. 510 Mn (Rs. 51 cr)
- Electronic waste - Rs. 200 Mn (Rs. 20 cr)
- Distillery sector - Rs. 1500 mn (Rs. 150 cr)
- Total - Rs. 37095 Mn (Rs. 3709.50 cr)





Illustration of Break-up of Project Finance Requirement

CEI Investment Requirements (Project Pipeline)





Project Finance for STPs (सिद्धापी शुद्धीकरण प्रकल्प)

Approximate expenses to be incurred for upgradation of existing STP's and construction of new STP's for Corporations and A- Class ULBs (40 Nos.)

Rs. 20850
mm @ Rs. 5
mm/MLD for
4170 MLD





Projected Finance for MSW Projects

(घनकचरा व्यवस्थापन प्रकल्प)

- Waste generation from all ULBs - 20453 MT/D
- Waste generation from Corporations - 13225 MT/D (64.79%)
- Waste generation from A-Class councils - 5293 MT/D (25.99%)
- Waste generation from B&C Class councils - 1935 MT/D (9.4%)

• Financing requirements for Corporations and A-class councils will be:

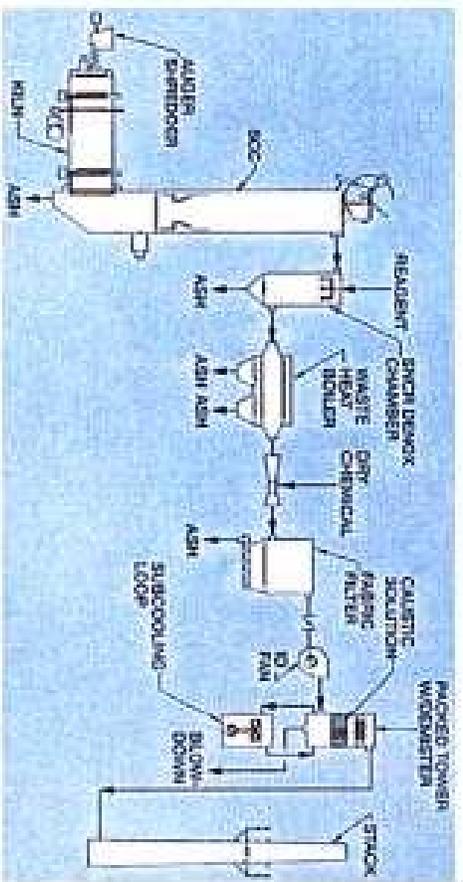
Infrastructure (one time) cost	-	Rs. 4510 mn
Recurring cost (O&M for 5 years)	-	Rs. 7590 mn
Total cost	-	Rs. 12000 mn
Total cost	-	Rs. 1200 cr





Projected Finance for Hazardous Waste Projects (विषारी कचरा व्यवस्थापन प्रकल्प)

• Butibori, Nagpur	-	Rs. 320 mm
• Ranjangaon, Pune	-	Rs. 320 mm
• Shendre, Aurangabad	-	Rs. 200 mm
• Mahad, Raigad	-	Rs. 250 mm
Total	-	Rs. 1090 mm
	-	Rs. 109 cr





Projected Finance for Bio Medical Waste Projects (वेदक कचरा व्यवस्थापन प्रकल्प)

• For Corporations	-	RS. 330 mm
• For A- Class councils	-	RS. 180 mm
Total	-	RS. 510 mm
Total	-	RS. 51 cr





Projected finance for Distilleries (दिल्लिलरी मलनिरस्धारण प्रकल्प)



- Distilleries: Important component of economy of the State
- Non Compliance due to limitations of technology
- Water recovery from spent wash through RO plants and Aerobic composting of RO reject + Press mud is a technologically viable option
- Cost at average Rs. 3.0 cr per distillery
- Inability by cooperatives to meet such a high cost
- Need third party to invest for 50 existing co-operative distilleries total investment : Rs.1500 mn (Rs.150 cr)



Projected finance for e - Waste (इलेक्ट्रॉनिक कचरा व्यवस्थापन प्रकल्प)

PC base likely to reach 11 million units and mobile phone base to 20 million units by end of 2005

High obsolescence rate due to fast pace of technology development

High rate of discard due use & throw attitude of young generation

Estimated investment Rs.
20 crore





PART 'D'

Modalities of Implementation



Approach: Public Private Partnership

- ✓ It is proposed that MEIDCL operates under a PPP framework
- ✓ PPP framework offers advantages of:
 - ✓ Efficiency in operations
 - ✓ Transparency and accountability
 - ✓ Professional management
 - ✓ Facilitates resource raising
- ✓ MEIDCL would be promoted by MPCB with provisions for inducting private sector partner
- ✓ MPCB has approached IL&FS to assist in the above



About IL&FS

- IL&FS is an All India Investment Bank with specialization in commercialization of infrastructure and an array of financial services
- Over the years, IL&FS has developed:
 - Several State level SPVs in various States
 - Unique technical and implementation skills in difficult sectors such as Roads, Water Supply, Power, Education and Environmental Services
 - Unique financial engineering and management capabilities to support programs and investments
 - Infrastructure projects using the public-private format
- IL&FS has in-house environmental expertise domiciled in Ecosmart India Ltd. a company promoted by IL&FS



Role of IL&FS

1. Advise on Appropriate Institutional Structure for MEIDCL
2. Assistance in Establishment of MEIDCL
 - Finalise Concept Note
 - Preparation of Memorandum and Articles of Association
 - Incorporation of MEIDCL
3. Preparation of Draft Maharashtra Environmental Infrastructure Bill
4. Preparation of Operational Framework for MEIDCL
5. Preparation of Fund Raising Strategy for MEIDCL
6. Development of Business Plan
7. Fund Mobilization
8. Management of MEIDCL Funds



IL&FS had already discussed the Concept with following Multi lateral and Bilateral institutions

- **World Bank**
- **Asian Development Bank**
- **Swedish International Development Agency**

All these institutions have shown interest in participation



Operational Modalities

IL&FS to mobilize all funding after GoM agencies agrees to put in seed funding

Representatives of the State Government, private sector investors and national and international financial institutions will constitute Board of Directors

Project development, implementation and disbursement to be as per protocols to be developed





Thank You...