
Capacity Building for Pollution Control Boards
with brief introduction to the Environment.



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The Discussion

- ❖ **Interactive Session**
- ❖ **Open Discussion on Capacity and Capacity Building**
- ❖ **Concept of Environment**
- ❖ **Environmental parameters w.r.t. Madhya Pradesh, India.**
- ❖ **Areas of co-operation with SEPA for Capacity Building**

The Capacity

- ❖ **Capacity** is defined as – the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainably.
- ❖ **Capacity building** is an evidence-driven process of strengthening the abilities of individuals, organizations, and systems to perform its core functions effectively.

Assessment of the Capacity

- ❖ We all are meant for the society.
- ❖ Capacity building enables the organizations and their leaders to develop competencies and skills that can make them more effective and sustainable, thus increasing the potential to enrich lives and solve society's problems.
- ❖ Important questions for assessment of the Capacity:
 - ❖ What we have?
 - ❖ What is required?
 - ❖ Where we stand?

The Resources required for Environmental Management

- ❖ **Environmental legislation**
- ❖ **Man Power**
- ❖ **Infrastructure**
- ❖ **Finance**
- ❖ **Technology**
- ❖ **Knowledge**
- ❖ **Understanding : the concept of analysis**

Understanding : The Environment

It is very difficult to define the Environment in general; however it can be defined as “our surroundings” consisting of living and non-living creatures in **co-existence** with each other.

The components of the Environment

Vedic concept: The nature (Five components- HkXkokvUk)

(Source: From the religious books)

- **Hk** μ **HkwfEk** (The earth)
- **Xk** μ **XkXkUk** (The sky including the celestial bodies of our Galaxy)
- **ok** μ **ok, kq** (The air)
- **v** μ **vUkYk** (The fire or the heat)
- **Uk** μ **Ukhj** (The Water).

The western Concept: Three components – GOD (Source: Self interpretation)

- **G** μ **Ground**
- **O** μ **Over &**
- **D** μ **Down**

Modern Concept- Three components:

- **The Water**
- **The Air &**
- **The Soil**

The Environment Protection: Constitutional Provisions

ARTICLE 51 – G: Fundamental Duties of Citizens

“It shall be the duty of every citizen of India to protect & improve the natural environment including forests, lakes, rivers & to have compassion for living creatures”

ARTICLE 48 – A: Directive Principles of State Policy

Protection & improvement of environment and safeguarding of forests and wildlife. The State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country.

The Legislation

THE Central Acts:

- **The Water [Prevention & Control of Pollution] Act, 1974.**
- **The Air [Prevention & Control of Pollution] Act, 1981**
- **Different rules under the Environment [Protection] Act, 1986**

The State Acts:

- **Madhya Pradesh Jaiv Anaashya Apashistha (Niyantaran) Adhinyam, 2004**
- **Madhya Pradesh Jaiv Anaashya Apashistha (Niyantaran) Niyam, 2006**

Environment Governing Parameters : Madhya Pradesh

Bio-Physical Background of the State:

- **Geographical Area: 308000 Sq Kms (9.38 % of the nation).**
- **Forest area is 95,221 km² (31% of the geographical area)**
- **Population: 73 Millions (6% of the nation): Rural - 72%, Urban - 28%**
- **Tribal population : 20.27%**

Development Indicators:

- **Industries = 16450 & Hospitals = 5278**
 - **[R=10583 : O=3081 : G=2786]**
 - **[S=14480 : M=1387 : L=583]**
- **Length of Roads : 64380 KM (Including 12129 Km NH)**
- **Registered Vehicles: 13 Million**

Status of Urbanization of the State

❖ **Urban Local Bodies**

- ❖ 2009 - 342
- ❖ 2017- 383
- ❖ 12% increase

#	Type	2009	2017
1	Municipal Corporations	14	16
2	Municipal committees	86	98
3	Nagar Parishads	237	264
4	Cantt Boards	05	05
	Total	342	383

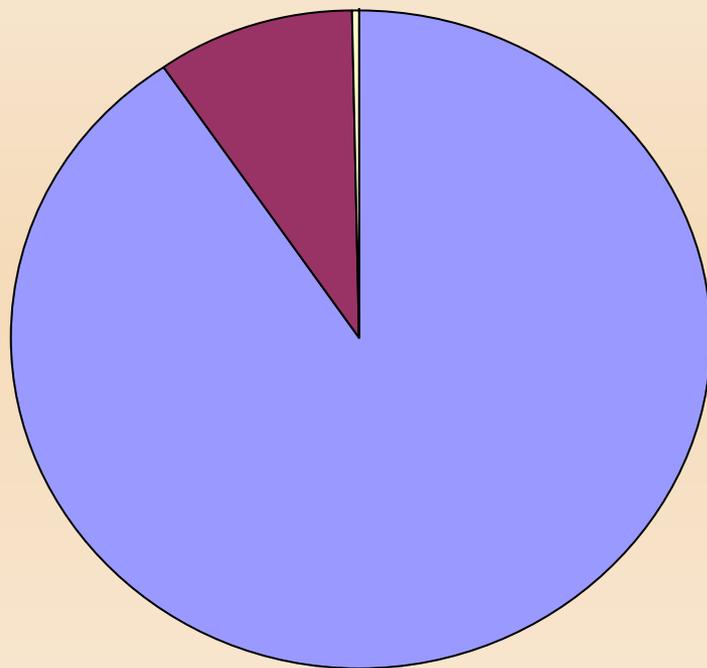
❖ **Trend of Urbanization (Towns):**

- 1901 : 97
- 2001 : 368
- 2009 : 394
- 2017 : 476

❖ **Urban population of the State**

- 2009 – 16 millions (26.5% of total population)
- 2017 – 20 millions (28% of total Population)

Solid Waste Generation in the State



- Municipal Solid Waste (90.5%)
- Industrial Hazardous Waste (9.25%)
- Bio Medical Waste (0.25%)

The Madhya Pradesh Pollution Control Board

- ❖ **Head office : Bhopal**
- ❖ **Regional offices : 17**
- ❖ **Central Laboratory : 01 (EPA & NABL)**
- ❖ **Regional Laboratories : 10 (04 NABL)**
- ❖ **Man Power: Total 510**
 - ❖ **Technical: 42**
 - ❖ **Scientific: 172**
 - ❖ **Support: 296**

The Environment Management

- ❖ **Implementation of Regulations**
 - ❖ Statuary compliances
 - ❖ Technological intervention: Online consent management
- ❖ **Monitoring of Environmental Pollutants**
 - ❖ Technological intervention:
 - ❖ Real Times online monitoring system (CEMS & CWMS)
 - ❖ PT (Z) Web camera
- ❖ **Environmental Monitoring of natural resources**
 - ❖ Technological intervention:
 - ❖ Real Times online monitoring system (CAAQMS & CWMS)
- ❖ **To ensure compliances**
 - ❖ Technological intervention:
 - ❖ Modification of ETPs & APCs

The Capacity Building

- ❖ **The Aim: Create a balance between Environment & Development**
- ❖ **Capacity building is the "process of developing and strengthening the skills, instincts, abilities, processes and resources".**
- ❖ **It is the process to synchronize all the available resources to perform the functions effectively.**
 - ❖ **Fixed Resources:** Legislation, Man Power, Infrastructure & Finance,
 - ❖ **Variable resources:** Technology. Knowledge & Understanding
- ❖ **Counter deficiency to increase efficiency**

Areas of co-operation with SEPA- Technology Support

- ❖ **Best available Technologies for Pollution Control in**
 - ❖ Pulp & paper Industries
 - ❖ Effluent treatment Plants for re-cycling.
 - ❖ Manmade fiber (Viscose fiber) Industries
 - ❖ Tyre Pyrolysis Plants
- ❖ **Innovative approaches for the Municipal Solid Waste Management (switching from mass burning to plasma gasification process in WtE)**
 - ❑ ULBs with Population >20 lakh: 01
 - ❑ ULBs with Population 10 to 20 lakh: 02
 - ❑ ULBs with Population 1.0 to 10 lakh: 27
 - ❑ ULBs with Population 0.20 to 1.0 lakh: 121
 - ❑ ULBs with Population <0.20 lakh: 232 (61%)

Areas of co-operation with SEPA – Knowledge support

To **synchronize** the variable resources i.e. **Knowledge & the Understanding** for:

- ❖ **Monitoring techniques of the Urban Pollution**
- ❖ **Technological intervention to control the Urban Pollution**
- ❖ **Innovative approaches to monitor the non-perennial rivers**
- ❖ **Feasible solutions to Monitor special pollutants like Dioxin, Furan and Mercury**

Open for Discussion



THANK YOU VERY MUCH
