



# VISION 2025

CHIRAG BHIMANI

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## **VISION 2025**

➤ **Introduce Innovative Technological and Policy Interventions for enhanced and efficient Environmental Governance in Gujarat**

➤ **Make GPCB a leading SPCB in environmental governance and pollution control in the country**

➤ **Make Gujarat an Environmentally Compliant State**



## VISION 2025

- Capacity Building of Board Officials to make it a world class organisation
- Make optimum utilization of the collective experience and knowledge of GPCB through team spirit and give full credit to the team - "Team GPCB"
- Encourage and boost the moral of Team GPCB by trying to introduce new policies & welfare measures like FCS, Medical Trust, MoU with Universities / Colleges etc.

A watercolor-style illustration of a landscape. It features a mountain peak in the upper left, a river or stream flowing through a valley in the middle, and a small body of water in the lower left. The colors are soft and blended, with shades of blue, green, and grey. The overall style is artistic and somewhat ethereal.

# CHALLENGES

▶ Six Industrial Areas covered under CEPI and moratorium imposed

▶ Several cities in the state not meeting Ambient Air Quality Standards and few of them included as non-attainment cities by CPCB

▶ Sewage Treatment Plants are not achieving norms while many cities and towns do not have STPs



# CHALLENGES

20 River stretches in Gujarat identified as polluted  
River stretches

About 27 contaminated sites identified by Ministry  
of Environment Forests & Climate Change  
Collection, Segregation, Management and Disposal  
of Wastes

Municipal Solid Waste

Plastic Waste

○ E-Waste

○ Hazardous Waste



# CHALLENGES

## Increase in number of Industrial Units

- Variety of Environmental Issues popping up
  - Increase in litigations in Hon. Supreme Court, Hon. National Green Tribunal and Hon. High Court of Gujarat
- At times affected people have grudges against the governance

## Decrease in Human Resources within GPCB

- Number of Regulations have increased over the past two decades but the required human resources have dwindled
- New recruits lack experience and their skills are under development hence effectiveness not witnessed



## WAY FORWARD

- Move from existing Permit Based Regime to a Compliance Monitoring Regime
- More use of newer technologies like CEMS, innovative governance like BAT and use of ICT like tabs etc.
- More use of Market Based Instruments such as ETS better environmental compliance and punitive actions
- Act as a facilitator and not merely as a regulator



# WAY FORWARD

## Permit Based Regime to Compliance Monitoring Regime

- Remove validity of CTE, CTO (in Orange & Green categories)
  - Merge EC, CTE and CTO
  - Frequency of visit to industry to be based on Environmental Performance Index of the industry
  - More visits for poor performance and the visits to be charged (so poor performance leads to more charges hence polluter pays principal justified)
  - Non-compliances to result into heavy financial penalties
  - Form committees for Red (Large, Medium) EC, CTE, CTO and closure revocation cases
- Will give uniformity in conditions and compliance
  - Will instill confidence in the quasi-judiciary functions of GPCB





# WAY FORWARD

## Use of New Technology and Innovative Methods of Governance

- Use of Continuous Effluent / Emissions Monitoring System (CEMS) so that man power shortage can be managed
- Bring in system for calibration etc. required for use of CEMS in robust way
- Formulate Best Available Techniques (BAT) for all industrial sectors and make it mandatory through permits granted
  - Will bring in resource conservation, energy conservation, better yields over and above to environmental compliance
  - Win – win situation for all stakeholders viz. environment, society, industry, government etc.



# WAY FORWARD

## Use of New Technology and Innovative Methods of Governance

- Use Information and Communication Technology in better way for effective monitoring and surveillance
  - Use of latest gadgets (like tabs) for monitoring of industries
  - Use of mobile apps for location and siting criteria etc.
  - Use of drones and CCTV for better surveillance monitoring
  - Use of Low Cost Monitoring Techniques and Technologies
  - Use of ETP Simulators at time of CTE to ensure proper treatment plants are installed so as to conform to prescribed norms
  - Using enormous database available at GPCB hence can come out with innovative ways to control pollution by using New Age tools such as Artificial Intelligence (AI), Machine Learning (ML) etc.



# WAY FORWARD

## Use of Market Based Instruments

- Gujarat has successfully demonstrated use of ETS for PM emissions in textile units in Surat
- Similarly, a successful pilot was demonstrated for COD discharge into CETP in Textile units in Palsana in Surat
- Similar novel ways can be worked upon to be used for better environmental compliance
- Again polluter pays principle justified here as non-compliance leads to penalties and charges



# WAY FORWARD

**Act as Facilitator and not as mere regulator**

- » Re-implement the successful concept of Help Desk and Open House for resolving industries' administrative problems proactively
- » Restart the concept of Environment Clinics for addressing technical problems of industrial units and guide them by adequate research where required



## WAY FORWARD

- Review and formulate better Action Plans for CEPI, Non- attainment cities, polluted river stretches and engage experts and expert agencies where needed. Include both policy and technological interventions in Action plans
- Re-investigate the contaminated sites and implement remediation plans for clean up of sites. Funds from Environment Damage Compensation can be utilised
- Capacity Building and Training programs for staff for better compliance monitoring



## WAY FORWARD

- Update the GPCB Manuals viz. Technical, Scientific, Legal etc. in current context
- Review and formulate new Siting Criteria for industries considering the current and relevant parameters vis-à-vis the existing criterion which are almost 15 years old now
- Formulate and update the Enforcement Norms so as to streamline and have uniform penalty provisions for industries and thereby avoiding inequalities and dissatisfaction amongst industrial units



# CHIRAG BHIMANI

M. Tech. (Environmental Engineering) and having more than 22 years of experience working in Gujarat Pollution Control Board (GPCB) and currently pursuing doctorate

Worked as Unit Head (Senior Position) at GPCB heading Junagadh, Bhavnagar, Porbandar, Palanpur, Kutch, Ahmedabad (Rural), Emissions Trading Scheme (ETS), IT, CEMS, Ease of Doing Business divisions

On panel of Experts of various International Organisations like Organisation for Economic Co-operation & Development (OECD), University of Chicago, Adelphi (Germany), FAIRMODE (European Commission) & International Solid Waste Association (ISWA)

Participated / presented at various International & National Environmental training programs, seminars, workshops and conferences on innovative policies, technology interventions etc.



# Thanks!

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