

PI Centre of Excellence for Industrial Safety and Risk Management

**An Initiative in Collaboration
with GIDM**

BACKGROUND

The state of Gujarat, known as the "Growth Engine of India," has experienced substantial industrial development in recent years, contributing significantly to the nation's economic progress. However, this robust industrial landscape comes with inherent risks, particularly concerning industrial accidents and disasters. These risks have the potential to disrupt economic growth, jeopardize worker safety, and impact the well-being of the communities in the region.

GUJARAT'S CHEMICAL & PETROCHEMICAL SECTOR: A BEACON OF EXCELLENCE

Gujarat's Chemical & Petrochemical sector stands as a formidable force in India's industrial landscape, boasting a range of noteworthy achievements. Gujarat leads India's Chemical & Petrochemical exports, showcasing global competitiveness. It is home to India's first operational Petroleum, Chemicals & Petrochemicals Investment Region (PCPIR), fostering an environment for industrial growth and innovation. India's first Chemical Port resides in Dahej, Gujarat, facilitating efficient chemical product imports and exports. According to data from the Directorate of Industrial Safety & Health (DISH), Gujarat, the number of registered factories surged from 35,338 in 2019 to 47,762 in 2024, with Chemicals & Chemical products leading the growth. The state also hosts industrial clusters and downstream companies specializing in derivatives, plastics, polymers manufacturing, and dyes and pigments, creating a thriving ecosystem. This underlines the state's industrial prowess in the Chemical & Petrochemical sector.

ABOUT GIDM

Gujarat Institute of Disaster Management (GIDM) is an apex institute, established by the Government of Gujarat, entrusted with the responsibility of capacity development in the field of Disaster Risk Management (DRM).

Right from its foundation, GIDM has been consistently focusing upon imparting and enhancing the capacities of stakeholders, which includes state and district administrations, urban local bodies, autonomous institutions, academia and civil society organizations in specific areas of climate and disaster risk management and sustainable development. GIDM, in all its endeavors in the field of DRM, climate change, and sustainable development strives to realize the guiding agendas and frameworks such as the Sendai Framework for Disaster Risk Reduction (SFDRR), Sustainable Development Goals (SDGs), Paris Agreement (COP21), and the Hon. Prime Minister's 10 Point Agenda for Disaster Risk Reduction.

ABOUT PI FOUNDATION

PI Foundation Trust, a Charitable Trust set up on 4th July 2012 has been working consistently with a philosophy to create equity in society through values of Caring, Sharing and Growing at its core. With a goal to ensure that our economic growth is socially and environmentally sustainable, we strive to create a positive impact in the lives of less-privileged communities and for the environmental sustainability. We are committed to align impact of our programs towards Sustainable Development Goals and contribute in the process of Nation Building.

The key focus areas of PI Industries' CSR activities are:

- Environment Sustainability through conservation of natural resources & Sustainable Farming Practices
- Education, Skill Development and Livelihood Enhancement Program
- Health, Hygiene and Sanitation
- Women Empowerment
- Rural Development

RISK PROFILE OF GUJARAT

Gujarat, strategically located in western India, presents a complex risk profile due to its diverse industrial terrain, geographical characteristics, and demographic diversity. The state grapples with a spectrum of natural and human-induced hazards, directly impacting its robust industrial sector.

The Kachchh region, classified as Zone V, is highly susceptible to earthquakes, including potential magnitude 8 tremors. Surrounding areas in Zone IV also contend with seismic activity. In broader Gujarat (Zone III), intensity VII earthquakes are anticipated, demanding stringent industrial safety measures.

Gujarat's extensive 1600 km coastline exposes it to cyclones, coastal flooding, heavy winds, and storm surges. Recent years have seen a concerning surge in cyclonic activity within the Arabian Sea, necessitating enhanced industrial resilience. The extended coastline heightens Gujarat's exposure to tsunami risks, primarily stemming from submarine earthquakes in the Arabian Sea, particularly the Makran Subduction Zone. Coastal industrial facilities must integrate tsunami preparedness into disaster management strategies.

Chronic droughts, coupled with uneven rainfall, pose water scarcity challenges for agriculture and industry. Additionally, the state contends with flooding risks in specific regions. These water-related challenges directly affect industrial operations and necessitate effective water resource management.

Additionally, Gujarat confronts human-induced hazards, including fires, industrial and chemical accidents, epidemics, and stampedes. These incidents not only pose immediate threats but also require comprehensive industrial safety protocols.

Given these challenges, it becomes evident that while Gujarat's industrial sector serves as a driver of economic growth, it also faces susceptibility to accidents and disasters that can significantly impact both the economy and community well-being. To effectively address these challenges and cultivate a resilient and sustainable industrial ecosystem, there arises an urgent necessity for the establishment of a dedicated PI Centre of Excellence for Industrial Safety and Risk Management. This Centre's overarching goal is to enhance safety, promote sustainability, and fortify disaster preparedness within the state's industrial landscape, safeguarding both the economy and the community's welfare.

PI CENTRE OF EXCELLENCE (COE) FOR INDUSTRIAL SAFETY AND RISK MANAGEMENT (AN INITIATIVE IN COLLABORATION WITH GIDM)

The PI Centre of Excellence for Industrial Safety and Risk Management envisions a future where Gujarat's industrial sector thrives in an environment of enhanced safety, resilience, and sustainability. Its mission is to:

- **Build Capacity and Capability:** Offer comprehensive training and capacity-building programs in Process Safety and Chemical/ Industrial Disaster Risk Management to industry professionals, first responders, and the community.
- **Foster Knowledge Sharing:** Develop cutting-edge course content, Massive Open Online Courses (MOOCs), and research initiatives, ensuring that good practices in Chemical/ Industrial disaster risk management are disseminated widely.
- **Documentation:** Maintain a comprehensive repository of data, case studies, and good practices for knowledge sharing in chemical/ industrial disaster risk management.

- **Enhance Community Resilience:** Raise awareness and encourage community participation in chemical/ industrial Disaster Management, making communities more resilient in the face of disasters.
- **Facilitate Partnerships:** Collaborate with academic institutions, government bodies, and industry experts to create a collaborative ecosystem for knowledge exchange and mutual support.
- **Training and Certification:** Collaborate with academic institutions, government bodies, and industry experts to define, establish Minimum Industry Safety certification programs.
- **Training Centre:** Establish Training and certification process for participants, the faculty members and accreditation.

KEY BENEFITS OF THE COE

- **Enhanced Safety:** The centre provides training and capacity-building programs, disseminates good practices, and conducts research to improve industrial safety standards. This significantly reduces industrial accidents, safeguarding lives and communities.
- **Knowledge Dissemination:** Through research, training, and the development of course content, the centre facilitates the dissemination of knowledge and good practices related to disaster risk management benefiting industries, governmental bodies, academia, and the wider community.
- **Skill Development:** Capacity-building programs and MOOCs equip professionals and first responders with the skills and knowledge needed to manage chemical and industrial disasters effectively, enhancing workforce competence and job security.
- **Economic Stability:** By reducing the occurrence and impact of industrial disasters, Gujarat's industrial sector experiences increased stability. Reduced accidents and disasters lead to stable industrial sectors, ensuring consistent production, lower recovery costs, and sustained economic growth.
- **Collaborative Ecosystem:** Fostering partnerships with academic institutions, government agencies, and industry experts, the centre promotes knowledge exchange and mutual support, improving disaster management.
- **Community Resilience:** The centre engages local communities in disaster preparedness, making them more resilient and reducing human suffering and property damage.
- **Environmental Protection:** Improved disaster management practices minimize the environmental impact of industrial incidents, preserving ecosystems, water bodies, and air quality and contributing to long-term environmental sustainability.
- **Advocacy to Government:** The research and expertise generated by the centre inform government policies and regulations related to industrial safety and disaster management, leading to the development of more effective and stringent regulations that promote safety and accountability.
- **International Recognition:** The Centre of Excellence for Industrial Safety and Risk Management garners international recognition for Gujarat's commitment to safety and sustainability, attracting investments and collaborations, enhancing its industrial stature.



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