

Delhi Mumbai Industrial Corridor

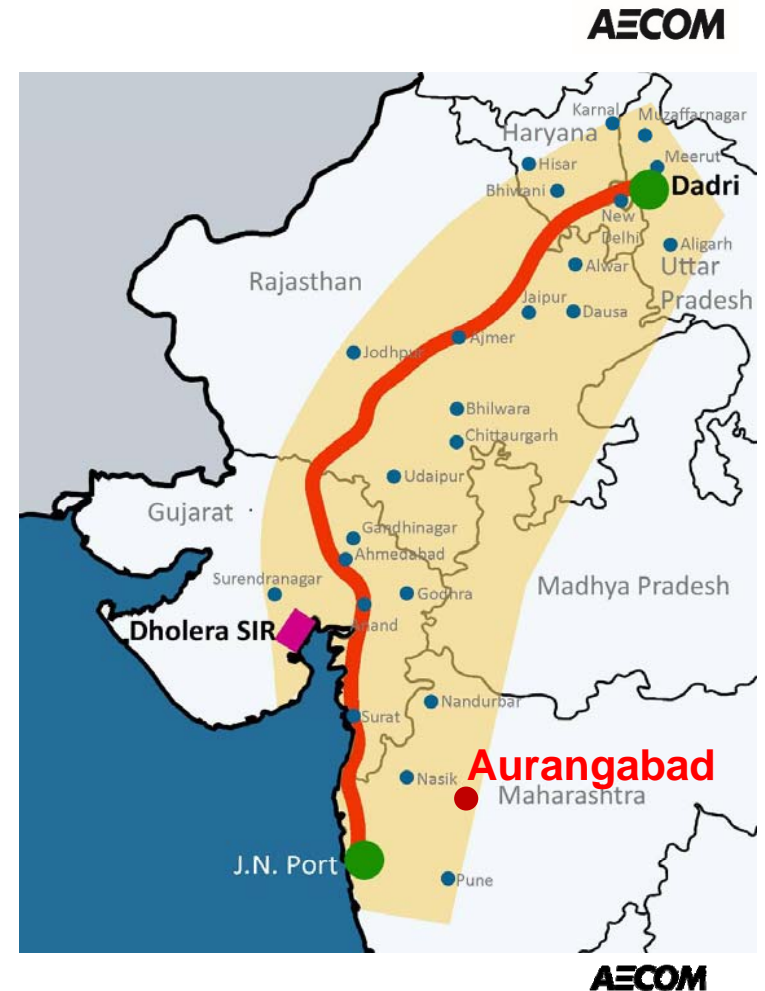
Environmental Impact Assessment & Management Plan

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About DMIC Projects

- Government of India is developing a Dedicated Freight Corridor between Dadri in Uttar Pradesh and JN Port in Mumbai over a length of 1483 km, to augment the freight movement in the country.
- DMIC Influence region: 150-200 km on both sides of DFC alignment ; passing through 7 Indian states.
- Several industrial nodes comprising of Investment Regions (IR) and Industrial Areas (IA) have been identified along the length of the corridor.
- In line with this development strategy, Delhi Mumbai Industrial Corridor Development Corporation (DMICDC) has been created under Ministry of Commerce, GoI for planned and coordinated development of DMIC region



DMIC Projects

- **Dholera, Special Investment Region** : The DSIR has been planned over an extensive area of land measuring approximately **920 sq. km**. This node is strategically located near the industrial cities of Vadodara, Ahmedabad, Rajkot, Surat and Bhavnagar urban agglomerations.
- **Manesar Bawal Investment Region** :The designed site covers an area of about **402sq km** includes existing Bawal Industrial Town and borders Rajasthan.
- **Pithampur – Dhar - Mhow Region in Madhya Pradesh** : The Proposed (**372 sq. km**) Investment Region would be located towards east of the alignment of Dedicated Freight Corridor and in the Malwa plateau of west central region of Madhya Pradesh . Aimed to create a vibrant regional economic center in an underutilized area planned for industrial and commercial development.



DMIC Projects

- **Shendra Bidkin Industrial Area (SBIA), Maharashtra** : SBIA is located at a distance of approximately 15 km from downtown Aurangabad. It is planned as a new industrial corridor extending from the existing (MIDC) Shendra Industrial Park to the town of Bidkin (**84.17 sq. km**)
- The **Khushkhhera- Bhiwadi-Neemrana Investment Region** :(KBNIR) is located in the State of Rajasthan. The Investment Region is to be developed in an identified area of around **165.6 sq km.**
- The **Dighi Port Industrial Area (DPIA)** is one of the another major nodes being developed as self sustained, futuristic investment destinations along the DMIC Corridor in the State of Maharashtra. The total land available for development in the DPIA is around **253 sq. km** (after excluding forest and undulating terrain).
- **Jodhpur – Pali- Marwar Industrial Area (IA)** lies in the western part of the state and mainly covering the area of Pali and Jodhpur district. The Industrial Area covers an area of **154 sq km.**



Initial Issues

- Category for Clearance
 - Fall under Area Development or Industrial Estate
 - Ambiguity over Category of Industry
- Details available for evaluation
 - Conceptual Master Plan
 - Potential Type of Industries
- Basis of Assessing Market
 - Long term plans in terms of Industries
 - Futuristic Technologies
 - Linkages to existing infrastructure
- Management
 - Ownership of Clearance
 - Periodic Evaluation



Impact Assessment

- Quantification of Impacts
 - Air Emissions
 - Waste Generation
- Quantification of resource requirement
 - Water
 - Electricity
 - Natural Resources
- Cumulative Impacts
 - Existing Industrial Areas
 - Scheme of Proposed Industries
 - Possible Synergies
- Social Issues
 - Land
 - Villages with the Investment Region
 - Employment
 - Facilities



International Practices

- **Thailand**
- Map Tha Phut
- The Industrial Estate Authority of Thailand (IEAT) was established in 1972, to support the systematic and orderly development of industries.
- The authority is also concerned with the orchestration and evolution of environmental management involved with new industry within the estates.
- The Pollution loads (air emission) are given in terms of **kg/ha/day** for each Industry as “allowable emission loading”.
- For each industrial estate, the stack emission standard set for different stack height has been established (15m to 60m)
- Monitoring is undertaken to ensure compliance.

International Practices

- **Thailand**
- Amata Industrial Estate
- AMATA has set up the environmental management system to prevent, correct, and reduce environmental impact and set up the system to continuously monitor the environmental quality in order to watch the change in air quality, sound quality, water quality, and other impacts.
- AMATA, has established the Air Monitoring Project by Air Quality Monitoring Station (AQMS).
- An Emission Inventory database is maintained to record all possible sources of emission, which enables in decision making during change in emission loads.
- The quantity and characteristics of pollution and emission emitted from each type of emission source leads to suitable guidelines and measures to manage and reduce air pollution in the studied area.
- The emission factors developed are in association with the government agency and control measure recommended based on assessment.

International Practices

- **Denmark**
- Kalundborg Eco-industrial Park
- Kalundborg Eco-Industrial Park is an industrial symbiosis where in companies in the region collaborate to use each other's by-products and otherwise share resources.
- At the center of the exchange network is the a Power Station, a 1500MW coal-fired power plant, which has material and energy links with the community and several other companies.
- Surplus heat from this power plant is used to heat 3500 local homes in addition to a nearby fish farm, whose sludge is then sold as a fertilizer.
- Steam from the power plant is sold to, a pharmaceutical and enzyme manufacturer, in addition to Statoil power plant. This reuse of heat reduces the amount thermal pollution discharged river
- Additionally, a by-product from the power plant's sulfur dioxide scrubber contains gypsum, which is sold to a wallboard manufacturer. Almost all of the manufacturer's gypsum needs are met this way, which reduces the amount of open-pit mining needed. Furthermore, fly ash and clinker from the power plant is used for road building and cement production.
- These exchanges of waste, water and materials have greatly increased environmental and economic efficiency, as well as created other less tangible benefits for these actors, including sharing of personnel, equipment, and information.

Management

- All Industries to obtain separate Environmental Clearance as per the requirement of MoEF, overall clearance was given to lay all the trunk infrastructure.
- Separate SPVs were formed for each Industrial Node, which had DMIC and State Industrial Development Board to monitor and take forward the conditions of the EC.
- The environmental cell proposed will continuously monitor the air quality , water, soil and Noise quality
- Several Conditions were added to the EC, which included:
 - Green belts along road, around the IR, as buffer between Industry and residence
 - Recycling, Reuses
 - Identified waste disposal facilities
 - Identified Industry Types.

Thanks

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