

F. No. 21-49/2010-IA-III
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment-III (Infra-1) Division

Indira Paryavaran Bhawan,
Jor Bagh Road, Ali Ganj
New Delhi - 110 003

Dated: 14th September, 2017

To

The Vice Chairman & Managing Director
Gujarat Industrial Development Corporation
Udyog Bhawan, Block No. 3, 4 & 5, Sector - 11
Gandhinagar - 382 017 (Gujarat)

Sub: 'Development of Petroleum, Chemical and Petro-chemical Investment Region (PCPIR)' at Dahej, Vagra, District Bharuch (Gujarat) by M/s Gujarat Industrial Development Corporation - Environmental and CRZ Clearance for an area of 44445.18 ha after excluding forest land (45298.59 ha of total proposed land - 853.41 ha of forest land) reg.

Sir,

This has reference to your online Proposal No. IA/GJ/MIS/30729/2013 dated 13th June, 2016, submitting the above proposal to this Ministry for grant of Environmental and CRZ Clearance in term of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 and Coastal Regulation Zone (CRZ) Notification, 2011 under the Environment (Protection) Act, 1986.

2. The proposal for '**Development of Petroleum, Chemical and Petro-chemical Investment Region (PCPIR)**' at Dahej, Vagra, District Bharuch (Gujarat) promoted by M/s Gujarat Industrial Development Corporation, was considered by the Expert Appraisal Committee (EAC) in the Ministry for Infrastructure Development, Coastal Regulation Zone, Building/ Construction and Miscellaneous projects, in its meetings held on 28-29 June, 2016, 1st December, 2016, 22nd February, 2017 and 6-7 April, 2017.

3. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said EAC meetings, are reported to be as under:-

- (i) The proposal involves development of Petroleum, Chemical and Petrochemical Investment Region (PCPIR) at Dahej, Vagra, District Bharuch (Gujarat) promoted by M/s Gujarat Industrial Development Corporation (GIDC).

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- (ii) The proposed PCPIR spreads over 33 villages of Taluka Vagra and 11 villages of Taluka: Bharuch District Bharuch an area of 453 sq km. The total area under development will be 45298.59 ha, which includes 853.41 ha of forestland. The same has been notified as the '*Gujarat Petroleum, Chemical & Petrochemical Special Investment Region (GPCPSIR)*' by the Industries and Mines Department, Government of Gujarat vide Notification dated 9th June, 2009.
- (iii) More than 60% of land is under cultivation with crops like millet, wheat, jowar, bajra and paddy etc. Other crops such as sugarcane, groundnut, pulses and cotton are also grown in the study area. The study area is covered with 7% irrigated land whereas forest land is only about 1% of the total land area.
- (iv) Out of 45298 ha area of PCPIR, 50.79% area i.e. 23005.97 ha area of land shall be developed as processing area which includes GIDC estates, medium and large scale PCP industries, engineering industries, port/ship building, salt pans, warehousing, oil terminals, logistics etc. Further 49.21 % area i.e. 22292.05 ha area of land shall be developed as a non-processing area which includes residential, commercial, institutional, recreational, specific mix zone, Eco-park, Eco-zone, Forest, agriculture, gamtal including gamtal buffer, Roads (30-150 m Row), proposed Kalpasar canal and water bodies like (pond, lake, developing pond, bhukhi khadi, bhukhi khadi nala).
- (v) **Justification for selection of the site:** The State Government has identified Dahej region as the focal point for the development of India's pilot global investment region. The choice for Dahej came naturally due to its numerous locational advantages and its potential for competing at Global levels in infrastructure and industrial production.
- (vi) The land acquisition is only for about 11812 ha. Whereas, the area under TP scheme is 12364 ha, and the remaining area of 21122 ha will be developed by the individuals. There is no rehabilitation involved.
- (vii) Presently, there are 5 GIDC industrial estates namely, Dahej-I, Dahej-II, Dahej- III, Vilayat and Saykha in the proposed PCPIR. The role of GIDC is limited to providing the necessary infrastructure in these industrial estates, and the individual industrial units are responsible to comply with the statutory requirements.
- (viii) There are a total of 94 no. of industrial units/activities having obtained environmental and/or CRZ clearance from the concerned regulatory authority (66 from SEIAA and 28 from MoEF&CC), as per the details provided. In addition, this Ministry has granted EC for the Dahej SEZ in Dahej-I industrial estate on 17th March, 2010 in the name of M/s Dahej SEZ Ltd (SPV of GIDC & ONGC). These units/SPV are individually responsible for compliance with the EC/CRZ clearance conditions.
- (ix) **Forest land:** Total of 853.41 ha area is reserved forest in PCPIR. This environmental clearance is subject to exclusion of this forest land from total proposed area.
- (x) **Water requirement:** Major source of raw water is Intake well at Narmada River and Narmada canal. Present utilization of water in GIDC estates of

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PCPIR is approximately 28 MGD for which the approval has been taken from State Irrigation department. The said PCPIR will be developed phase wise up to 2040 and a total of 175 MGD water demand has been forecast and will be met by River Narmada and Bhadbhut barrage.

- (xi) **Waste water generation:** At present generation of waste water is approximately 24 MLD from different large scale industries in PCPIR. The same is treated by individual industries and is being disposed into the deep sea in the Gulf of Cambay in keeping with the GPCB standards into the effluent disposal conveyance laid by GIDC in 2005. The future wastewater generation is forecast at 300 MLD up to 2040 out of which approximately 100 MLD shall be treated in Proposed CETPs in PCPIR from small and medium scale industries and remaining 200 MLD treated effluent (from large scale individual industries) shall be disposed-off by effluent disposal conveyance.
- (xii) **Municipal solid waste:** As per the report of final development plan 378 TPD solid waste (other than the inert and recyclable waste) has been forecast in PCPIR area which shall be composted and disposed to the nearby landfill site.
- (xiii) **Power requirement:** In the industrial utility projection, a total power requirement of around 1800 MW for industrial and around 200 MW for residential set up has been envisaged for all phases. The power supply will be made available from Gujarat UrjaVikas Nigam and a 1500 MW gas based power station and a 2640 MW coal based power station are under construction.
- (xiv) Concept of energy efficient system using energy saver panel/ (APFC-automatic power factor correction) envisaged in proposed street light and pumping machinery.
- (xv) **Components in CRZ:** The said PCPIR is having around 3477 ha area under CRZ out of total 45298 ha. Remote sensing study was conducted by Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG), Dept. of Science and Technology, Govt. of Gujarat, Gandhinagar. M/s. Anna University, Chennai has done HTL, LTL and CRZ mapping (1:4000 scale) in the coastal area of PCPIR.
- (xvi) **SCZMA Recommendations:** The Gujarat Coastal Zone Management Authority (GCZMA) has recommended the project vide their letter No.ENV-10-2015-271-E dated 7th June, 2016.
- (xvii) **Details of Marine disposal:** 90 MLD effluent disposal line has been laid from Vilayat Industrial Estate to the Village Luvara into the deep sea for disposal of treated effluent from different Industries in the PCPIR.
- (xviii) **Location of intake/outfall:** 90 MLD capacity pumping station is located at Dahej Industrial estate for treated effluent disposal (from Dahej and Vilayat Industrial estate) through which the treated effluent is being disposed-off in to the deep sea, Gulf of Cambay at village Luvara in Dahej PCPIR.
- (xix) The rapid marine EIA due to release of GIDC treated effluent in coastal water off Dahej had been conducted by NIO, GOA in August, 2000 to finalize the location of diffuser to achieve dilution of 100 to 200 times.

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- (xx) **Rain water harvesting:** Rain water harvesting has been provided in GDCR of PCPIR for non-processing area in PCPIR.
- (xxi) **Water bodies:** Bhukhi khadi, Lakes/ponds near villages under PCPIR. No impact on drainage is envisaged.
- (xxii) **Parking facility:** Parking regulations have been provided in GDCR of PCPIR.
- (xxiii) **Investment/Cost:** The cost of the project is Rs.15,297.02 crores.
- (xxiv) The proposal falls under 7 (c) category: 'Industrial estates of area > 500 ha. and not housing any industry belonging to Category A or B.'
- (xxv) **ToR details:** The project was accorded ToR vide letter No.21-49/2010-IA-III dated 03.12.2013.
- (xxvi) **Public Hearing:** Public Hearing was held on 30th July, 2014 in District Bharuch, Gujarat.
- (xxvii) **Employment potential:** Actual direct employment is 30,000 and indirect employment is 90,000 as on May, 2016. The Final Development Plan of GPCPSIR envisages 6,08,751 employment up to 2040.
- (xxviii) **Benefits of the project:** The major benefits of the project are:
- It is expected that additional people will get employment and hence job opportunities for the local people as well as migrants from nearby areas would increase
 - Employment in tertiary sector is expected to be improved in the region
 - There would be increase in the commercial, business and shopping centers due to influx of population in the region to cater to the needs of existing population as well as the migrants
 - There will be development of infrastructural facilities in the region. It would also result in the appreciation of land values around these areas
 - It will fulfil demands for additional manufacture and production, essential for the progress of the nation. Indirect benefit to the local people by providing opportunities for starting small/medium scale business in trade and commerce
 - More opportunity in the field of education
 - Augmentation in the areas of medical facilities
 - Improvement in banking and postal services
 - Overall improvement of the peripheral human habitat
 - Most of the environmental pollution problems will be mitigated through implementation of recommendations given in EMP
 - Increase in infrastructural activities with respect to the development of the region will definitely increase the livelihood of people of the region

4. The EAC, in its 169th meeting held on 6-7 April, 2017, has recommended the project for grant of Environmental and CRZ Clearance. Project proponent has submitted an undertaking that Forest land shall not be diverted for any project and shall be preserved as forest land. As per recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Environmental and CRZ Clearance for an area of 44445.18 ha after excluding the forest land (45298.59 ha of total proposed land- 853.41 ha of forest land) to the project 'Development of Petroleum, Chemical and Petro-chemical

Investment Region (PCPIR)' at Dahej, Vagra, District Bharuch (Gujarat) promoted by M/s Gujarat Industrial Development Corporation, under the provisions of the EIA Notification, 2006 and CRZ Notification, 2011 and amendments/circulars issued thereon, and subject to the specific and general conditions as under:

PART A - SPECIFIC CONDITIONS

I. Construction Phase

- (i) The Ministry has considered granting environmental clearance for an area of **44,445.18 ha only**. This excludes 853.41 ha of forestland from total notified area of 45298.59 ha. The copy of forest area excluded from PCIPR complex is annexed. However, in future, if for any reason, forest land is proposed to be used, no activity will be taken up in the forest area without forest clearance under the provisions of the Forest (Conservation) Act, 1980.
- (ii) Project proponent is advised to start the process of denotifying the forest area from PCPIR complex and complete it within one year and also submit the copy of the same to MoEF&CC and its concerned regional office.
- (iii) 'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (iv) The project proponent shall report to the State Pollution Control Board about the compliance of the prescribed standards for all discharges from the PCPIR into the sea, including the present system through 90 MLD disposal line.
- (v) All the terms and conditions stipulated by the Gujarat Coastal Zone Management Authority (GCZMA) vide their letter dated 7th June, 2016 shall be complied with in letter and spirit.
- (vi) All the provisions of the CRZ Notification, 2011 shall be strictly complied with, and in case of any change in scope of work, necessary recommendations from the GCZMA shall be obtained for further consideration by the concerned regulatory authority.
- (vii) A firm and time bound action plan for conservation of mangroves and mudflats in CRZ area, as a critical component of the EMP, shall be prepared through an identified institute of repute. For its implementation, including conservation of non-vegetated mudflats, adequate funds are to be earmarked. A committee comprising representatives of project proponents, Gujarat State Forest Department and the Gujarat Maritime Board to be formed to oversee implementation of the conservation plan.
- (viii) No plantation of mangroves to be undertaken on non-vegetated mudflats, which need to be maintained as it is. Non vegetated mudflats must be clearly demarcated on the map.

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- (ix) Detailed scientific studies for Coastal Management Plan shall be prepared by an expert institution of repute, and implemented by all the stakeholders.
- (x) In view of the river ecology and dependency for sustenance of fishery in coastal areas, alternate water resources shall be explored to meet the huge water demand for the project, in addition to the best recycling practices for the industrial requirements. Natural flow of River Narmada shall not be altered or tampered with.
- (xi) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- (xii) Air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.
- (xiii) This environmental clearance is only for the said Industrial Area. Any other activity within the Industrial Area would require separate environmental clearance, as applicable under EIA Notification, 2006 as amended from time to time. For all the individual units, environmental clearances, as applicable, shall be obtained from the respective regulatory authorities.
- (xiv) To achieve the Zero Liquid Discharge, waste water generated from different industrial operations shall be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.
- (xv) The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured/recorded to ensure the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six Monthly Monitoring reports.
- (xvi) Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards.
- (xvii) Solid wastes shall be collected, treated disposed in accordance with the Solid Waste Management Rules, 2016. No municipal waste shall be disposed off outside the premises.
- (xviii) All the recommendation of the EMP shall be complied with in letter and spirit.
- (xix) The member units shall provide storage tanks for storage of effluent for monitoring the characteristics of effluent before taking into the CETP for further treatment.

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- (xx) Proper meters with recording facilities shall be provided to monitor the effluent quality and quantity sent from member industries to CETP and from CETP to the final disposal/re-use on a continuous basis.
- (xxi) Member industries shall treat the effluent to meet the prescribed CETP inlet norms.
- (xxii) The project proponent shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.
- (xxiii) Internal Road widths within the industrial area shall be minimum 18 m ROW.
- (xxiv) Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms.
- (xxv) Any hazardous waste generated during development/ construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
- (xxvi) The D.G. sets to be used during development/ construction phase shall be low sulphur diesel type and shall conform to Environment (Protection) Rules prescribed for air and noise emission standards.
- (xxvii) Vehicles hired for bringing construction material to the site shall be in good condition and should have a pollution check certificate and shall conform to applicable air and noise emission standards and shall be operated only during non-peak hours.
- (xxviii) Ambient noise levels shall conform to the prescribed standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.
- (xxix) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016.
- (xxx) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxxi) Water demand during development/construction shall be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxxii) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxxiii) Fixtures for showers, toilet flushing and drinking shall be of low flow either by use of aerators or pressure reducing devices or sensor based control.

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- (xxxiv) Regular supervision of the above and other measures for monitoring shall be in place all through the development/ construction phase, so as to avoid disturbance to the surroundings.
- (xxxv) The responses/commitments made to the issues raised during public hearing shall be complied with in letter and spirit. A hard copy of the action taken shall be submitted to the Ministry.
- (xxxvi) 2% of the project cost shall be earmarked for Corporate Environment Responsibility activities.
- (xxxvii) Necessary provision to develop facilities for disabled people shall be made under Corporate Environment Responsibility.
- (xxxviii) Corporate Environment Responsibility:
- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/ violation of the environmental or forest norms/ conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

II. Operation Phase

- (i) All the topsoil excavated during development/construction activities should be stored for use in horticulture/landscape development within the project site.
- (ii) Disposal of muck during development/construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- (iii) The solid waste generated shall be properly collected and segregated in accordance with the Solid Waste Management Rules, 2016. Wet garbage shall be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
- (iv) The height of stack of DG sets shall be equal to the height needed for the combined capacity of all proposed DG sets. The location of the DG sets may be decided with in consultation with State Pollution Control Board.

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- (v) Noise shall be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- (vi) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.
- (vii) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
- (viii) Rain water harvesting for roof run-off and surface run-off, as plan submitted shall be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The bore well for rainwater recharging shall be kept at least 4 mts above the highest ground water table.
- (ix) The ground water level and its quality shall be monitored regularly in consultation with Central Ground Water Authority.
- (x) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking, loading and unloading shall be fully internalized and no public space shall be utilized.
- (xi) Energy conservation measures like installation of LEDs for the lighting the areas outside the building shall be integral part of the project design and shall be in place before project commissioning. Used LEDs shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.
- (xii) The buildings shall have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

PART – B: GENERAL CONDITIONS

- i) The environmental safeguards contained in the EIA Report shall be implemented in letter and spirit.
- ii) Provision shall be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.
- iii) Six monthly monitoring reports shall be submitted to the Ministry and its concerned Regional Office.
- iv) A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.

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v) The project proponent shall set up a separate Environmental Management Cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.

vi) The funds earmarked for Environment Management Plan shall be included in the budget and this shall not be diverted for any other purpose.

5. The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

6. Officials from the concerned Regional Office of MoEF&CC who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the CCF, concerned Regional Office of MoEF&CC.

7. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

8. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

9. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

10. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest and Climate Change at <http://www.envfor.nic.in>. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional office of this Ministry at Bhopal.

11. This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

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12. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

13. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

14. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM₁₀, PM_{2.5}, SO₂, NO₂ (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

15. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.

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14/09/2017
(Raghu Kumar Kodali)
Director/Scientist F

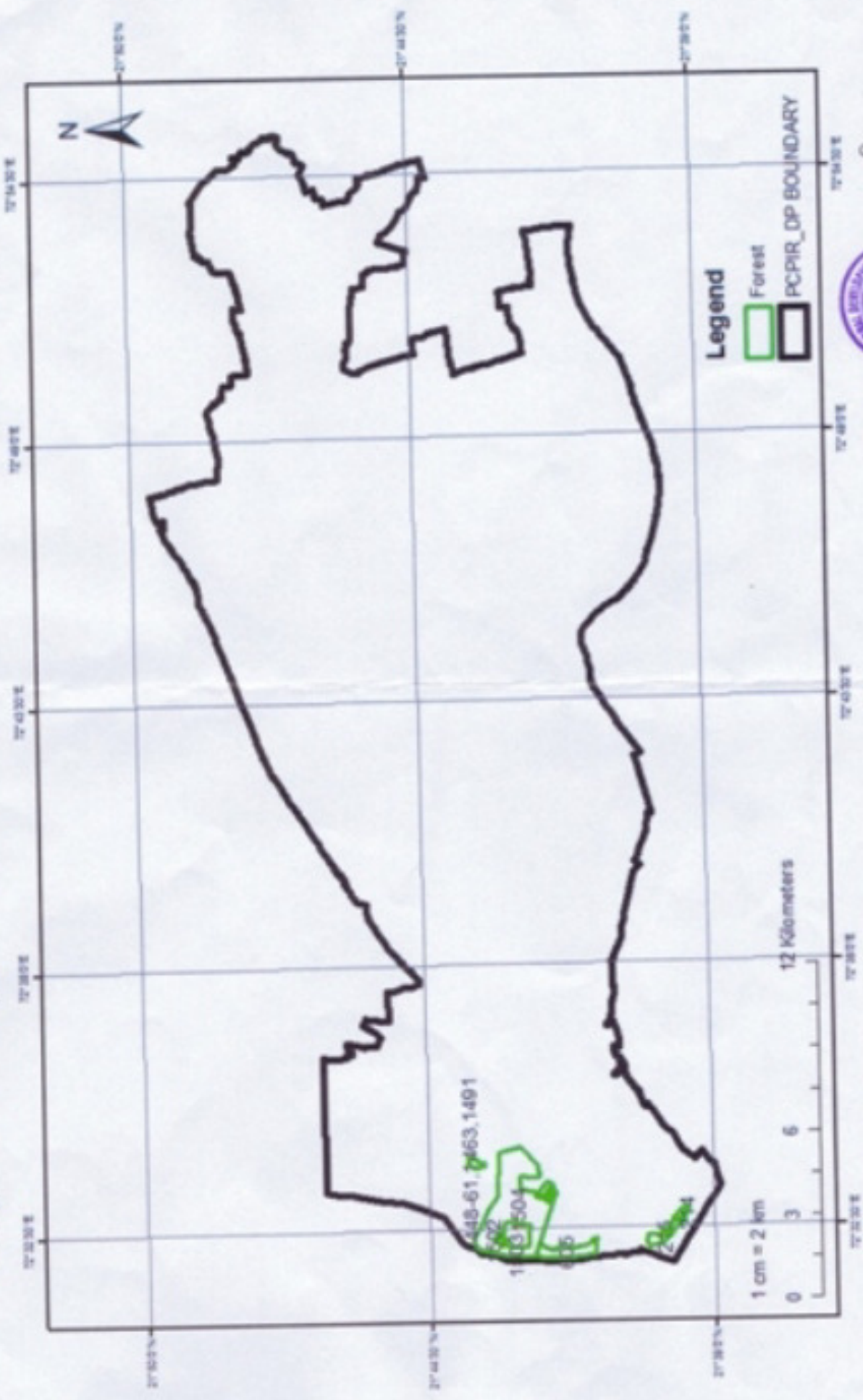
Copy to: -

- 1) The Principal Secretary, Department of Forests & Environment and Chairman, GCZMA, Govt. of Gujarat, Sachivalaya, Gandhinagar
- 2) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
- 3) The Member Secretary, Gujarat Pollution Control Board, Sector 10-A, Gandhi Nagar - 382 043
- 4) The APCCF (C), MoEF& CC, RO (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Link Road No.3, Ravishankar Nagar, Bhopal -16
- 5) IA - Division, Monitoring Cell, MoEFCC, New Delhi - 3
- 6) Guard file

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14/09/2017
(Raghu Kumar Kodali)
Director/Scientist F

Map showing Forest Land within Gujarat PCPIR

Annexure



Town Planner
G.P.C.P.S.I.R.D.A.
Gandhinagar