adani

Ports and Logistics

AHPL/MoEF&CC/2022-23/03 **Date: 29.11.2022**

To
Deputy Director/Scientist C
Integrated Regional Office (IRO) -Gandhinagar
Ministry of Environment Forest & Climate Change
(Govt. of India)
Email: iro.gandhingr-mefcc@gov.in, eccompliance-guj@gov.in

Dear Sir,

Sub.: Six Monthly Compliance Report of conditions stipulated in Environment and CRZ Clearance for the development of Multi Cargo Port with Supporting Utilities and Infrastructure Facilities at Hazira, Surat, Gujarat for the period: **April 2022-September 2022.**

Ref.: 1). Environmental and CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: 11-150/2010-IA.III dated 03rd May, 2013.
2). CRZ Recommendations issued by Forests & Environment Department, Govt. of Gujarat to MoEF & CC, New Delhi vide letter No.: ENV-10-2012-30-E dated 11th May, 2012.

Please find enclosed herewith point wise compliance report of conditions stipulated in the above referred letters regarding Environment Clearance and Coastal Regulation Zone Clearance for the period of **April 2022-September 2022.**

For, **M/s Adani Hazira Port Limited,**

(Anil Kishore Singh)
Authorized Signatory
Encl.: As above

Cc to:

1. Add. Secretory, Ministry of Environment, Forest and Climate Change, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal - 462016 (Madhya Pradesh)
2. The Director (Monitoring - IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110 003.
3. The Director, Forests & Environment Department, Block - 14, 8th Floor, Sachivalaya, Gandhinagar, Gujarat - 382 010.
4. The Zonal Officer, Central Pollution Control Board, Zonal Office Vadodara, Parivesh Bhawan, Opp. VMC Ward Office No.:10, Subhanpura, Vadodra-390 023.
5. The Chairman, Gujarat Pollution Control Board, Parvayaran Bhawan, Sector - 10A, Gandhinagar-382 010 (Gujarat)
6. The Regional Officer, Gujarat Pollution Control Board, Belgium Square, Ring Road, Surat-395003, (Gujarat).

Adani Hazira Port Ltd.
At & Po Hazira
Choryashi
Surat 394 270
Gujarat India
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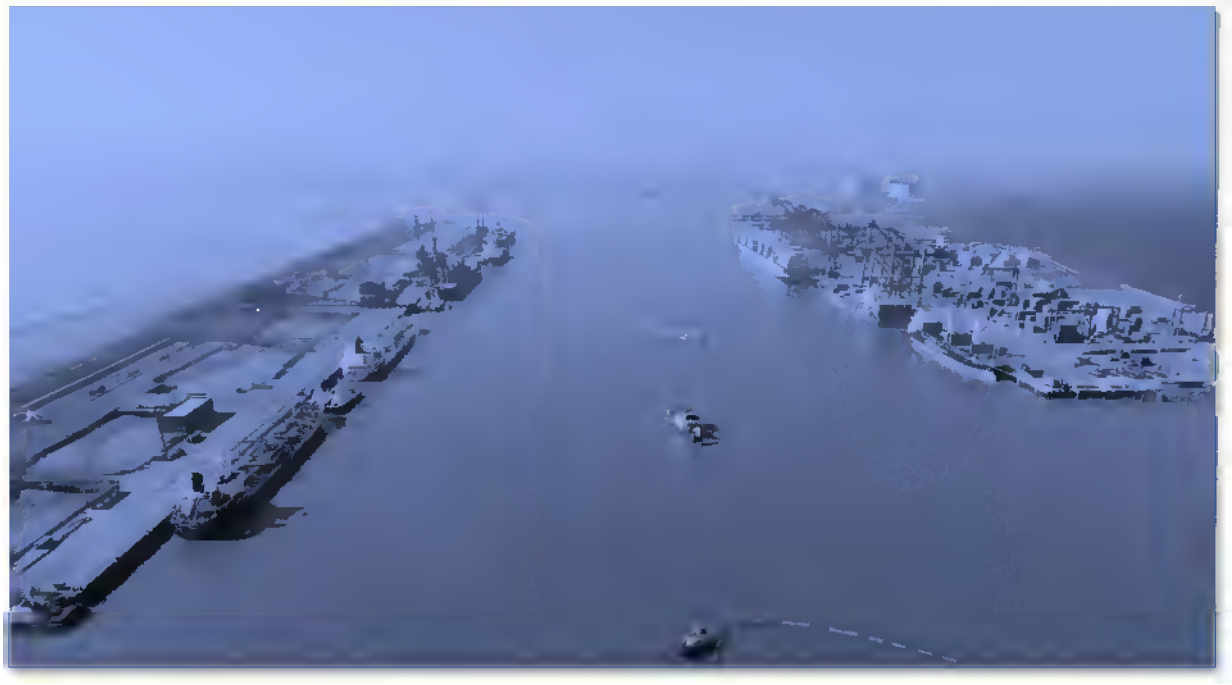
Fax +91 261 220 7777
info@adani.com
www.adani.com
CIN U45309GJ2009PTC058789
Registered office Adani Corporate House Shantigram, Near Vaishno Devi Circle S G Highway Khodiyar Ahmedabad-382421, Gujarat India

adani	ADANI HAZIRA PORT LIMITED	*From: April 2022 to September 2022*



SIX MONTHLY COMPLIANCE REPORT

OF

ENVIRONMENT AND CRZ CLEARANCE ISSUED BY MOEF & CC, NEW DELHI

VIDE LETTER NO.: 11-150/2010-IA.III, DATED 03RD MAY 2013

FOR

THE DEVELOPMENT OF MULTI CARGO PORT WITH SUPPORTING UTILITIES AND INFRASTRUCTURE FACILITIES AT HAZIRA, SURAT, GUJARAT

COMPLIANCE PERIOD- April 2022 to September 2022

SUBMITTED BY

M/s. ADANI HAZIRA PORT. LTD.
HAZIRA, TAL-CHORYASI, DIST-SURAT
GUJARAT

LIST OF APPENDIXES

APPENDIX	DETAILS
1.	Compliance To The Conditions Stipulated In CRZ Recommendations Issued By Forests & Environment Department, Government Of Gujarat To MOEF & CC, New Delhi Vide Letter No.: ENV-10-2012-30-E, Dated 11th May, 2012.

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LIST OF ANNEXURES

ANNEXURE NO.	DETAILS
1	Action Plan And Compliance Status On The Issues Raised During The Public Hearing.
2.	Details Of The CSR Activities Along With Budgetary Provisions And Expenditures For the Compliance Period April 2022 to September 2022
3	Compliance Status of Environmental Management Plan As Per Integrated EIA Report - September, 2012.
4.	Environmental Monitoring / Analysis Results For The Period From April 2022 to September 2022
5	Shore Line Change Assesment Report prepared by GUIDE
6	Photographs of Air Pollution Control Measures and Green Belt area
7	Organogram Of AHPL - Environment Management Cell.
8	Environmental Budget And Expenditure of Compliance Period
9	Copy of renewed CCA
10	Copy of Public Liablity Insurance
11	Copy of Environment Statement of FY 2021-22
12	Details of Liquid/Wastes Collection & Disposed off from Vessels by GPCB Approved Third Party during period April 2022 to September 2022

***

A. Six Monthly Compliance Report for Environmental and CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: **11-150/2010-IA.III dated 03rd May, 2013** for the development of Multi Cargo Port with supporting utilities and infrastructure facilities at Hazira, Surat, Gujarat by M/s. Adani Hazira Port Ltd (Earlier Known as Adani Hazira Port Pvt Ltd).: -

<table>
<tr><th>S. No.</th><th>Stipulated Conditions</th><th>Compliance Status as on 30.09.2022</th></tr>
<tr><td>6.</td><td>Specific Conditions</td><td></td></tr>
<tr><td>i.</td><td>“Consent for Establishment” shall be obtained from State Pollution Control Board under Air & Water Act and a copy shall be submitted to the Ministry before start of any construction work at site.</td><td>Complied,

AHPL obtained Consent to Establish (NOC) from Gujarat Pollution Control Board on 16.05.2012 and the same was submitted to the Ministry on 05.10.2012 prior to obtaining the Environment and CRZ clearances. Subsequently there were amendments in the Consent to Establish which were also submitted to the MoEF&CC before start of respective construction as per the details given below: -
<table>
<tr><th>Consent No.</th><th>Issued On</th><th>Submitted To MoEF & CC On</th></tr>
<tr><td>CTE_ 49766</td><td>05.10.2012</td><td>Along with Six Monthly Compliance Report dated 19.11.2014 & 19.05.2017.</td></tr>
<tr><td>CTE- 64900</td><td>26.09.2014</td><td>Along with Six Monthly Compliance Report dated 12.05.2015 & 19.05.2017.</td></tr>
<tr><td>CTE- 74330</td><td>13.01.2016</td><td>Along with Six Monthly Compliance Report dated 23.05.2016 & 19.05.2017.</td></tr>
<tr><td>CTE- 77767</td><td>16.04.2016</td><td>Along with the Six Monthly Compliance Report dated 21.11.2016 & 19.05.2017.</td></tr>
<tr><td>CTE- 101590</td><td>20.05.2019</td><td>Along with the Six Monthly Compliance Report dated 27.11.2019</td></tr>
<tr><td>CTE- 115984</td><td>04.12.2021</td><td>Along with the Six Monthly Compliance Report October 2021-March 2022 period. Email dated 31.05.2022</td></tr>
</table>
The port is in operation with valid CC&A (Consent to Operate).</td></tr>
<tr><td>ii.</td><td>The action plan on the issues raised during public hearing shall be submitted to the Pollution Control Board. The action plan shall be implemented without fail. Report on compliance shall be submitted to the Regional Office, MOEF along with the six-monthly reports.</td><td>Complied

Public hearing (PH) was conducted on 14.08.2012. All the issues have been addressed adequately and to the satisfaction of the stakeholders. The action taken for implementation of the issues are being submitted to the Ministry as well as Gujarat Pollution Control Board along with the Six-Monthly EC Compliance report.

The key points raised during PH were: -

1) Preference to be given to the local people for employment and transport & other contracts.
M/s. AHPL is giving preference to the locals for contracts, such as M/s. Hazira Vikas Samiti is engaged for providing transport facilities to employees. M/s. AHPL also giving preference for skilled local candidates for employment as per suitable requirements. As on 30th September 2022 total 206 out of 239 on roll employees are from Gujarat.</td></tr>
</table>

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
		2) Villagers were anxious about their displacement due to port development. M/s. AHPL has developed the port in uninhabited land area by reclamation and there is no acquisition of private property. The details action status of all other issues raised during the public hearing is enclosed as Annexure-1
iii.	All the recommendations of SCZMA shall be complied with.	**Being Complied** All the recommendations of the Gujarat Coastal Zone Management Authority (GCZMA) are being complied. Compliance status of the conditions stipulated in GCZMA recommendations vide letter dated 11/05/2012 bearing No.: ENV-10-2012-30-E is enclosed as **Appendix-1.**
iv.	Periodical study on shore line changes shall be conducted and mitigation carried out if necessary. The details shall be submitted along with six monthly monitoring reports.	**Complied**. Shorelines change study was conducted through NIO, Vizag during the period from November 2014 to December 2015. Report of the shoreline change study was submitted along with compliance report dated 21.11.2016. Study confirms that there is no significant change in the shoreline near by the port except for the approved layout of the AHPL. The report did not warrant any mitigation measures for protection of shoreline. A study on Shoreline Change Assessment in 10 km area around the port has been carried out by Gujarat Institute of Desert Ecology. Study also confirms that there is no significant change in the shoreline near by the port except for the approved layout of the AHPL. The report did not warrant any mitigation measures for protection of shoreline. The report is attached herewith as Annexure 5
v.	Oil spills if any shall be properly collected and disposed as per Rules. Proper Oil Contingency Management Plan shall be put in the place.	**Complied**. • There was no Oil Spill during the compliance period. Also no oil spill has occurred till date at the port and in nearby area. • Oil Spill Contingency Plan has been prepared and the same was approved by Indian Coast Guard (Letter No.: 7563, dated 09.01.2014). • The same has been implemented at site to properly collect and dispose oil spills (if any). • The last Mock drill on scenario of Oil Spill was jointly organized with Shell LNG Terminal-Hazira, Reliance Industries Limited- Petrochemicals-Hazira, Sun Petro and CIL-Hazira on **21st December 2021**. *Photographs of oil Spill Mock drill are as under*

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
		 Mobilization of Tier 1 and Tier 2 Equipment -BOOM  Mobilization of Tier 1 and Tier 2 Equipment  Beach clean-up activity
vi.	The detailed plan with budgetary provisions for	**Complied**. • CSR activities are carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development.

<table>
<tr><th>S. No.</th><th>Stipulated Conditions</th><th>Compliance Status as on 30.09.2022</th></tr>
<tr><td></td><td>the CSR shall be submitted to the ministry.</td><td>

Detail of the CSR activities along with budgetary provisions and progress are regularly submitted to MoEF & CC as part of six-monthly compliance reports.
The budget of current Financial Year for CSR activities and expenditure in the compliance period is as under-

<table>
<tr><th>Sr. No.</th><th>Vertical</th><th>Approved Budget for FY 2022-23 (In Lacs Rupees)</th><th>Utilization amount (In Lacs Rupees)</th></tr>
<tr><td>1</td><td>Education</td><td>143.05</td><td>62.69</td></tr>
<tr><td>2</td><td>Health</td><td>27.58</td><td>4.05</td></tr>
<tr><td>3</td><td>Sustainable Livelihood Development</td><td>186.56</td><td>18.46</td></tr>
<tr><td>4</td><td>Civil Infrastructure Development</td><td>88.16</td><td>66.99</td></tr>
<tr><td>5</td><td>General Management and Administration for CSR activities</td><td>31.75</td><td>10.66</td></tr>
<tr><td colspan="2">Total</td><td>477.1</td><td>162.85</td></tr>
</table>

The status of the CSR activities carried out during the Compliance Period is enclosed as <u>Annexure-2</u>.

</td></tr>
<tr><td>vii.</td><td>All the recommendation of the EMP and DMP shall be complied within letter and spirit.</td><td>
Complied.

Recommendation given in EMP is being complied in letter and spirit. Status of the same is enclosed as <u>Annexure-3</u>
AHPL is an ISO 14001: 2015, ISO 9001:2015, ISO 48001: 2018 and ISO 50001: 2018 certified company. Copy of certificates were submitted to the authorities with the Six-Monthly Compliance Report (Oct 2019-March 2020) on 25.05.2020
AHPL has developed and implemented DMP. Regular mock drill to ensure the compliance and preparedness is being done.

Last Mock Drill (On Site) was conducted on: – 27-09-2022, the scenario was Smoke observed from ISO Container of Mancozeb (Class 9).

Last Update of ERP & DMP: 28.03.2022 and the updated copy was submitted to Joint Director, Industrial Health and Safety, Surat on 20.06.2022
Copy of the Schematic of ERP & DMP communication flow is submitted along with the six-monthly compliance report dated 19.05.2017. The Copy of updated ERP & DMP was submitted to the authorities along with last Six-monthly Compliance report as Annexure 5 through e mail dated 28.05.2021.

</td></tr>
<tr><td>viii.</td><td>Periodical monitoring of the sea water quality at the outlet shall be carried out to check the discharge is meeting the standard and not causing any impact to marine life.</td><td>
Complied.

Marine water quality is being monitored through M/s. Pollucon Laboratories, Surat (a MoEF&CC recognized and NABL accredited laboratory).
The sea surface and bottom water quality is being monitored periodically. The trends with respect to baseline is being observed to ensure that the quality of sea water is not changing significantly.
Monitoring of sea water quality at three locations is being done on monthly basis. Copy of the Sea Water Quality Monitoring /Analysis Reports for the period of April 2022 to September 2022 is enclosed as Annexure-4D.

</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Stipulated Conditions</th><th>Compliance Status as on 30.09.2022</th></tr>
<tr><td></td><td></td><td>
The Summary of Sea Surface and bottom water quality for key physico chemical parameters are as under-
<table>
<tr><th rowspan="2">SR.NO.</th><th rowspan="2">TEST PARAMETERS</th><th rowspan="2">UNIT</th><th colspan="3">Overall</th></tr>
<tr><th>Min</th><th>Max</th><th>Avg</th></tr>
<tr><td>1</td><td>pH</td><td>--</td><td>8.02</td><td>8.34</td><td>8.17</td></tr>
<tr><td>2</td><td>Temperature</td><td>oC</td><td>29.40</td><td>30.50</td><td>29.99</td></tr>
<tr><td>3</td><td>Total Suspended Solids</td><td>mg/L</td><td>113.00</td><td>187.00</td><td>149.03</td></tr>
<tr><td>4</td><td>BOD (3 Days @ 27 oC)</td><td>mg/L</td><td>1.82</td><td>3.34</td><td>2.56</td></tr>
<tr><td>5</td><td>Dissolved Oxygen</td><td>mg/L</td><td>5.10</td><td>6.00</td><td>5.85</td></tr>
<tr><td>6</td><td>Salinity</td><td>ppt</td><td>33.98</td><td>35.94</td><td>34.93</td></tr>
<tr><td>7</td><td>Oil & Grease</td><td>mg/L</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>8</td><td>Nitrate as NO3</td><td>µmol/L</td><td>2.17</td><td>3.59</td><td>2.78</td></tr>
<tr><td>9</td><td>Nitrite as NO2</td><td>µmol/L</td><td>0.19</td><td>0.83</td><td>0.54</td></tr>
<tr><td>10</td><td>Ammonical Nitrogen as NH3</td><td>µmol/L</td><td>1.41</td><td>2.41</td><td>2.15</td></tr>
<tr><td>11</td><td>Phosphates as PO4</td><td>µmol/L</td><td>1.92</td><td>2.64</td><td>2.28</td></tr>
<tr><td>12</td><td>Total Nitrogen</td><td>µmol/L</td><td>3.90</td><td>6.22</td><td>5.47</td></tr>
<tr><td>13</td><td>Petroleum Hydrocarbon</td><td>µg/L</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>14</td><td>Total Dissolved Solids</td><td>mg/L</td><td>34518.00</td><td>36962.00</td><td>36035.64</td></tr>
<tr><td>15</td><td>COD</td><td>mg/L</td><td>7.00</td><td>14.72</td><td>11.13</td></tr>
</table>

From the monitoring report it is evident that there is no significant change in the sea water quality with respect to standards of baseline level which could have impact on the marine life.
AHPL has not discharged any treated/untreated water in the sea.

</td></tr>
<tr><td>ix.</td><td>Transport of cargo shall in closed system and dust control viz. water sprinkler, along conveyor and transfer points shall be provided.</td><td>
Complied.

Following control measures are in place and effectively working at port to control fugitive dust: -

Transportation of coal from jetty to coal storage yard through 1.7 Km. long covered conveyor belt.
Water sprinklers in the coal yard,
Dust arresting sprinklers are installed on Coal Discharge Chute
Dust Suppression System / Spray Nozzles in Conveyor System and Discharge Chute,
Water spray through Water Browsers,
Water Mist Canon / Fog System,
Wind Brake Shield of 14 meters high and 1900 meters long,
Transportation of cargo from port to hinterland is being done through dumpers / trucks covered with tarpaulin,
Regular cleaning of roads through Road Sweeping Machines, and
Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 78.79 ha within the port premises.

</td></tr>
</table>

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
		The photographs of Covered Conveyor belts, Mist Canyon and water sprinkling system, Green Belt area, Wind break shield, Road sweeping machines are attached herewith as **Annexure 6**
x.	Construction activity shall be carried out strictly as per the provisions of CRZ notification 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone.	**Complied**. • No construction work other than those permitted in CRZ Notification has been done. • Development of the port and other ancillary facility is being done as per the approval received under CRZ Notification, 2011 and EIA Notification, 2006.
xi.	The project shall be executed in such a manner that there shall not be any disturbance to the fishing activity.	**Complied**. • AHPL is regularly working with fishermen to understand their needs and provide required support as part of CSR activities. AHPL is carrying out various CSR activities in the vicinity of port through Adani Foundation (AF), in the field of Education, Community Health, Sustainable livelihood development and Community Infrastructure development and also particular for fishermen community since 2012, the support was extended for providing gears to fishermen, house repairing and construction of house for Halpati community, education to kids from Halpati community and health camps. An amount of *1.88 Cr is spent during last six years* on various activities specifically for fishermen community in and around the port area.
xii.	It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project.	**Complied**. • There is no displacement of people, houses or fishermen as the port is being developed on reclamation land and land allotted by Government also there is no acquisition of private land. Majority of fishing activities are in the river TAPI estuary region which is approx. 3-4 KM away from the project site. There are few "PAGADIA" fishermen doing fishing near the project area. They are continuing with their activities without any disturbance
xiii.	The project proponent shall set up separate Environment Management Cell for effective implementation of the stipulated environmental safe guards under the supervision of a Senior Executive.	**Complied**. • Environment Management Cell has been set up with qualified staff to ensure the effective implementation of environmental safeguards at the Port. The Head of Environment Management Cell is CEO of the Port. • In addition to the site Environment Management Cell a well-established corporate environment cell also ensures effective implementation of the environmental safeguards. • Environment Management Cell Organogram is enclosed as **Annexure-7**
xiv.	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	**Complied**. • Separate budget has been allocated for the Environment Management. Allocated budget for the FY: 2022-23 is INR 558.04 Lacs and total expenditure during the compliance Period is INR 223.26 Lakhs regarding environment management. • Detail of the environment budget of the current FY and expenditure incurred during compliance period is enclosed as **Annexure-8** • Environment budget is not being diverted to any other purpose.
7.	**General Conditions**	

<table>
<tr><th>S. No.</th><th>Stipulated Conditions</th><th>Compliance Status as on 30.09.2022</th></tr>
<tr><td>i.</td><td>Appropriate measures must be taken while undertaking digging activities to avoid any degradation of water quality.</td><td>

Complied.

No digging activities were carried out during the compliance period.
No major digging activities were carried out. Proper care is taken to ensure that no excavated material is mixed with the water. Entire excavated material is being used in leveling and grading of project area.
Marine, Surface and Ground Water quality is being monitored through M/s. Pollucon Laboratories Pvt. Ltd., Surat (a MoEF & CC and NABL accredited laboratory) on monthly basis at 3 locations in Basin area.
Reports show that there are no impacts on the water quality. Copy of the water monitoring reports for the period, April 2022 to September 2022 is enclosed as <u>Annexure-4B, 4C, 4D</u> for ground, surface, and marine water quality, respectively.

Summary of Ground Water Quality-Open Well & Bore Well (Annexure 4B) for Key parameters are as under-

<table>
<tr><th>SR. NO.</th><th>PARAMETERS</th><th>UNIT</th><th>Min</th><th>Max</th><th>Average</th></tr>
<tr><td>1</td><td>Colour</td><td>Hazen</td><td>2.00</td><td>4.00</td><td>3.08</td></tr>
<tr><td>2</td><td>Odour</td><td>--</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>3</td><td>Taste</td><td>--</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>4</td><td>Turbidity</td><td>NTU</td><td>0.12</td><td>0.35</td><td>0.20</td></tr>
<tr><td>5</td><td>pH Value</td><td>--</td><td>7.49</td><td>7.96</td><td>7.74</td></tr>
<tr><td>6</td><td>Total Hardness as CaCO3</td><td>mg/L</td><td>318.00</td><td>532.00</td><td>423.08</td></tr>
<tr><td>7</td><td>Chloride as Cl</td><td>mg/L</td><td>107.00</td><td>172.00</td><td>134.17</td></tr>
<tr><td>8</td><td>Fluoride as F</td><td>mg/L</td><td>0.07</td><td>0.26</td><td>0.15</td></tr>
<tr><td>9</td><td>Total Dissolved Solids</td><td>mg/L</td><td>809.00</td><td>1312.00</td><td>1060.17</td></tr>
<tr><td>10</td><td>Calcium as Ca</td><td>mg/L</td><td>56.40</td><td>94.00</td><td>77.17</td></tr>
<tr><td>11</td><td>Magnesium as Mg</td><td>mg/L</td><td>36.00</td><td>77.52</td><td>55.84</td></tr>
<tr><td>12</td><td>Sulphate as SO4</td><td>mg/L</td><td>19.68</td><td>46.80</td><td>34.65</td></tr>
<tr><td>13</td><td>Nitrate Nitrogen as NO3</td><td>mg/L</td><td>3.12</td><td>7.20</td><td>5.34</td></tr>
<tr><td>14</td><td>Alkalinity</td><td>mg/L</td><td>273.00</td><td>392.00</td><td>309.75</td></tr>
<tr><td>15</td><td>Coliform</td><td>/100 ml</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>16</td><td>E-Coli</td><td>/100 ml</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
</table>

Summary of Surface Water Quality (Pond Water) is as under-

<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">TEST PARAMETER</th><th rowspan="2">UNIT</th><th colspan="3">Surface (Pond) Water Mora Village</th></tr>
<tr><th>Min</th><th>Max</th><th>Average</th></tr>
<tr><td>1</td><td>Odour</td><td>--</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>2</td><td>Colour</td><td>Hazen</td><td>2</td><td>4</td><td>3.00</td></tr>
<tr><td>3</td><td>Taste</td><td>--</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>4</td><td>pH Value</td><td>--</td><td>7.49</td><td>7.8</td><td>7.62</td></tr>
<tr><td>5</td><td>Turbidity</td><td>NTU</td><td>0.12</td><td>0.25</td><td>0.20</td></tr>
<tr><td>6</td><td>Total Dissolved Solids</td><td>mg/L</td><td>561</td><td>712</td><td>648</td></tr>
</table>

</td></tr>
</table>

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
		<table><tr><td>7</td><td>Total Hardness as CaCO3</td><td>mg/L</td><td>198</td><td>256</td><td>226</td></tr><tr><td>8</td><td>Chloride as Cl</td><td>mg/L</td><td>59.9</td><td>92</td><td>70</td></tr><tr><td>9</td><td>Fluoride as F</td><td>mg/L</td><td>0.17</td><td>0.44</td><td>0.27</td></tr><tr><td>10</td><td>Iron as Fe</td><td>mg/L</td><td>0</td><td>0</td><td>0</td></tr><tr><td>11</td><td>Coliform</td><td>/100 ml</td><td>0</td><td>0</td><td>0</td></tr><tr><td>12</td><td>E-Coli</td><td>/100 ml</td><td>0</td><td>0</td><td>0</td></tr></table> Summary marine water quality (Annexure 4D) is mentioned on above page in reply of General Condition(i.)
ii.	Full support shall be extended to the officers of this Ministry /Regional Office at Bhopal by the project proponent during inspection of the project for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigation measures and other environmental protection activities.	Being Complied • AHPL is regularly submitting six monthly compliance reports which comprise compliance to the conditions stipulated in Environment and CRZ clearance, action taken report of Environment Management Plan, environment monitoring reports etc. • Last report was submitted through e mail on 31.05.2022 to all concerned authorities. • Whenever any authorities such as MoEF&CC, GPCB and GMB etc. visit the port, full support is extended and AHPL provides all additional information seek by them during the inspection. • Last visit by representative of MoEF & CC, IRO, Gandhinagar visited AHPL Hazira on *18.02.2022*. We have extended all required supports during his visit. • Officials from Regional Office, Gujarat Pollution Control Board (GPCB) Surat visited AHPL on *21.03.2022.*
iii.	A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bhopal regarding the implementation of the stipulated conditions.	**Being Complied** • Six monthly monitoring reports regarding the implementation of the stipulated conditions are regularly submitted to the RO - MoEF & CC, Bhopal and other authorities the last report Last report was submitted through e mail on 31.05.2022. The copy of same is also uploaded on company website. The link is http://www.adaniports.com/ports-downloads
iv.	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary subsequently, if deemed necessary for environmental protection, which shall be complied with.	Noted and agreed to comply
v.	The Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.	Noted and agreed to comply

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
vi.	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to Ministry of Environment and Forests.	**Complied** Name of the port was changed from Adani Hazira Port Private Limited to Adani Hazira Port Limited and the letter received from MoEF&CC regarding the name change was submitted with last EC compliance report as Annexure 9 on 28.05.2021.
vii.	The project proponents shall inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of Land Development Work.	**Complied** Financial Closure date was 29th September, 2011. Approval from GMB to commence work was obtained on 09th April, 2010 vide letter No.: GMB/N/PVT/923(10)/42/458. Copy of the same has been submitted to the MoEF & CC and other concerned authorities along with the six monthly compliance report dated 19.05.2017.
viii.	A copy of the clearance letter shall be marked to concerned Panchayat/ Local NGO, if any from whom any suggestions/ representations has been received while processing the proposal.	**Complied**. Copy of the clearance letter was sent to the concerned Panchayat and local NGO. Copy of the RPAD receipt were submitted to MoEF&CC along with six monthly compliance report dated 27.11.2013 and again along with the six-monthly compliance report dated 19.05.2017.
ix.	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/Tehsildar's Office for 30 days.	This condition does not belong to AHPL.
8.	These 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 1994, including the amendments and rules thereafter.	Noted and Complying with 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, including the amendments. AHPL has obtained: - • Environmental and CRZ Clearance issued by MoEF & CC, New Delhi vide letter No.: 11-150/2010-IA.III dated 03rd May, 2013. • Consolidated Consent and Authorization under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981 vide Consent Order No.: AWH-118804 valid till 12.07.2027. Attached herewith as **Annexure 9** • Public Liability Insurance (PLI) vide Policy No.: 41068925, IFFCO TOKIO General Insurance Company Limited valid up to 31st March, 2023. Attached herewith as **Annexure 10**
9.	All other statutory clearance such as the approvals for storage of diesel from Chief Controller of Explosive, Fire	**Complied**. All applicable clearances from respective authorities have been obtained i.e.: -

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
	Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponent from the respective competent authorities.	1. **PESO License from Chief Controller of Explosive, Nagpur** vides Order No.: P/HQ/GJ/15/5294 (P270337), Renewed and valid till 31/12/2025. Copy of the PESO License was submitted with last Six Monthly EC Compliance Report. 2. **License to work a Factory** Adani Hazira Port Pvt. Ltd. (Liquid Terminal) from Director of Industrial Safety and Health, Govt. of Gujarat their vide Registration No.: 3502 / 51410 / 2013 and License No.: 18757, Renewed on 03-11-2018, valid till 23rd December 2023. Copy of the license to work a factory is submitted with the Six-monthly EC compliance Report AHPL/MoEFF&CC 2019-20/001 dated 27.11.2019 3. Fire NOC for Liquid Terminal- Obtained NOC from Fire Officer, Surat, (Latest on 7th March 2019) and NOC from commissioner of Police (Dated-12th May 2019)
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 Environment and CRZ clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at http://www.envfor.nic.in. The advertisement should be made within 10 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bhopal.	**Complied**. • Advertisements were published in Gujarat News Paper "Gujarat Mitra" and English News Paper "The Times of India" on 13/05/2013 (within 10 days of receipt of EC & CRZ clearance). • Copy of the advertisement is submitted to MoEF&CC along with the six monthly compliance report dated 27th November, 2013.
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.	**Noted**.
12.	Status of Compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	**Complied**. Compliance report of conditions stipulated in Environment and CRZ Clearance is being uploaded periodically on the company website i.e.: http://www.adaniports.com/ports-downloads

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
13.	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.	Noted.
14.	A copy of the clearance letter shall be sent 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.	**Closed**, • Copy of the clearance letter was sent to the concerned Panchayat and local NGO from whom the suggestions/ representations received. • Copy of the RPAD receipt is submitted to MoEF & CC along with Six Monthly Compliance Report dated 27.11.2013 and again along with the six monthly compliance report dated 19.05.2017. • Clearance letter is available on website at http://www.adaniports.com/ports-downloads
15.	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, the respective Zonal Office of CPCB and the SPCB.	**Complied**. The six monthly compliance report comprising of the status of compliance of the stipulated EC conditions, including results of monitored data is being uploaded on the company website at http://www.adaniports.com/ports-downloads Also the compliance report was submitted to following: 1. IRO -MoEF&CC, Gandhinagar 2. RO - MoEF & CC, Bhopal, 3. MoEF & CC, New Delhi, 4. DoEF, Gandhinagar, 5. Zonal Office - CPCB, Vadodara, 6. HO - GPCB, Gandhinagar, and 7. RO - GPCB, Surat. Last report was submitted on 31.05.2022 through E mail.
16.	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	**Complied**. The Environment Statement in Form-V for the Financial Year: 2021-22 is attached herewith as **Annexure 11 .** http://www.adaniports.com/ports-downloads.

S. No.	Stipulated Conditions	Compliance Status as on 30.09.2022
	put on the website of the company along with status of compliance of EC Conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	

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APPENDIX-1:

COMPLIANCE TO THE CONDITIONS STIPULATED IN CRZ RECOMMENDATIONS

ISSUED BY FORESTS & ENVIRONMENT DEPARTMENT,

GOVERNMENT OF GUJARAT TO MOEF & CC, NEW DELHI

VIDE LETTER NO.: ENV-10-2012-30-E, DATED 11TH MAY, 2012

FOR MODIFICATION / EXPANSION OF MULTI - CARGO PORT FACILITY AT HAZIRA, DIST. - SURAT BY M/S. ADANI HAZIRA PORT PVT. LIMITED

Appendix -1: Compliance to the conditions stipulated in CRZ recommendation issued by Forests & Environment Department, Government of Gujarat to MoEF & CC, New Delhi vide letter No.: ENV-10-2012-30-E dated 11th May, 2012 for modification / expansion of Multi-Cargo Port Facility at Hazira, Dist. - Surat by M/s. Adani Hazira Port. Limited: -

S. No.	Conditions	Compliance Status
A.	**Specific Condition**	
1.	The provision of CRZ Notification 2011 shall be strictly adhered by M/s. AHPPL. No activity in contradiction to the provision of CRZ Notification shall be carried out by M/s. AHPPL.	**Complied**. • Construction activities are carried out as as per the provisions of CRZ Notification, 2011. • No construction work other than those permitted in CRZ Notification has been done. • Development of the port and other ancillary facility is being done as per the approval received under CRZ Notification, 2011 and EIA Notification, 2006 and subsequent amendments.
2	M/s. AHPPL shall not construct any storage facilities for material / chemicals in the CRZ area except for those permissible as per Annexure - II of CRZ Notification 2011 also for other hazardous chemicals, outside CRZ Areas, the AHPPL shall consult SDMA for Disaster Management Plan.	**Complied**. • Only permissible activities being carried out in CRZ area. • Disaster Management Plan has been prepared prior to the commissioning of multi cargo port. - DMP has been submitted to GSDMA vide letter dated 20.10.2012. - Comments were received from authority vide letter no. GSDMA /SM / Ind.safety/ 770560 dated 03.12.2012. - Suggestions were incorporated and revised plan was submitted to GSDMA on 23.05.2014. Regular mock drill to ensure the compliance and preparedness is being done. Last Mock Drill (On Site) was conducted on 27th September 2022, the scenario of mock drill was Smoke observed from ISO Container of Mancozeb (Class 9). After noticing the smoke, One workmen immediately convey message to Shift-Incharge – Container Terminal.

S. No.	Conditions	Compliance Status
		   Last Update of ERP & DMP: 28.03.2022 • Last submission of ERP & DMP to Chief Controller of Explosive on 29th March 2022 and Joint Director Industrial Safety and Health on 20.06.2022.
3.	All necessary permissions from different Government Departments / agencies shall be obtained by M/s. AHPPL before commencing the activities.	**Complied**. All the statutory permissions from the concerned statutory authorities are obtained i.e.: -

S. No.	Conditions	Compliance Status
		- Environment and CRZ Clearance from MoEF & CC, GOI vide order No.: F.No.:11-150/2010-IA-III dated 03.05.2013, - CTE & CC&A from Gujarat Pollution Board (For details Please - PESO License from Chief Controller of Explosive, Nagpur License to work a Factory Adani Hazira Port Pvt. Ltd. (Liquid Terminal) from Director of Industrial Safety and Health, Govt. of Gujarat. Please referrer EC condition 9 for details.
4.	The AHPPL shall ensure that there shall be no damage to the existing mangrove patches near the site and also ensure the free flow of water to avoid damage to the mangrove.	**Noted and complied with**. There are no adverse impacts on mangrove as well as flow of water with respect to development activities.
5.	No dredging, reclamation or any other project related activities shall be carried out in CRZ area categorized as CRZ-I (A) and it shall have to be ensured that the mangrove habitats and other ecologically important and significant areas, if any in the region are not affected due to any of the project activities.	**Complied**. There is no dredging and reclamation activities in CRZ I (A) area during the compliance period. The mangrove habitats near by the port are being protected by AHPL.
6.	The dredging material shall be disposed of at the location already approved by the Ministry of Environment and Forests, Government of India.	**Complied**. As per communication from MoEF&CC dated 12th November 2003 bearing letter No.: J-16011/ 11/2003-IA-III- Hazira Port Pvt Ltd conditions states "dumping of dredged spoils should be dumped at the sites A & C as per the following coordinates: - (A) 21°03' to 21°05' N & 72°28' to 72°30' E (C) 21°03' to 21°05' N & 72°30' to 72°32' E The maintenance dredging is being carried out through Water Injection dredger in which no Dredging material is generated. Some part of dredging is being carried out through Cutter Section Dredger and in this process Dredging material is being generated. No disposal has been done till date. All the dredging material is being utilized for level rising, reclamation and apart from the above activity, if any excess material generated will be disposed of at the location already approved by the MoEF&CC.
7.	All the recommendations and suggestions given by M/s. NIO and Cholamandalam MS Risk Services Ltd, Chennai in their EIA reports	**Complied**. All the recommendations and suggestions for conservation/protection and betterment of

S. No.	Conditions	Compliance Status
	for conservation / protection and betterment of environment shall be implemented strictly by M/s. AHPL.	environment are being implemented strictly. Recommendation given in EMP is being complied in letter and spirit. Status of the same is enclosed as **Annexure-3**.
8.	The construction and operational activities shall be carried out in such a way that there is no negative impact on mangroves, if any and other important coastal / marine / habitats. The construction activities shall be carried out only under the guidance / supervision of reputed institute / organization.	**Complied**. There are no mangroves and other important coastal / marine / habitats presents within the port development area. There is no construction activity in the compliance period. The Port development work is supervised by Gujarat Maritime Board (GMB).
9.	M/s. AHPPL shall strictly ensure that no creeks or rivers are blocked due to any activity at Shipyard.	**Complied**. All the activities are carried out as per EC & CRZ clearance and no creeks are blocked due to development activities. Shipyard is not envisaged in our proposal.
10.	The construction debris and / or any other type of waste shall not be disposed of into the sea, creek or in CRZ areas. The debris shall be removed from construction site immediately after the construction is over.	**Complied** Construction and Demolition waste is being managed as per Construction and Demolition waste rules 2016.
11.	The construction camps shall be located outside the CRZ area and the construction labour shall be provided with the necessary amenities, including sanitation, water supply and fuel and it shall be ensured that the environmental conditions are not deteriorated by construction labours.	**Complied**. During construction phase labors have been managed through contractors and they are from surrounding villages so they stay in their own residential facilities in the surrounding villages. Drinking water, toilets and rest shelters are being provided to the labors during work.
12.	M/s. AHPPL shall prepare and regularly update their Local Oil Spill Contingency and Disaster Management Plan in consonance with National Oil Spill and Disaster Contingency Plan and shall submit the same to this department after having it vetted through Indian Coast Guard.	Complied. • Oil Spill Contingency Plan is prepared and the same was approved by Indian Coast Guard (Letter No.: 7563, dated 09.01.2014). • Disaster Management Plan was prepared prior to the commissioning of multi cargo port. • DMP has been submitted to GSDMA vide letter dated 20.10.2012. • Comments were received from authority vide letter no. GSDMA /SM / Ind.safety/ 770560 dated 03.12.2012.

S. No.	Conditions	Compliance Status
		• Suggestions were incorporated and revised plan was submitted to GSDMA on 23.05.2014. • Regular mock drill to ensure the compliance and preparedness is being done. Last Mock Drill (On Site) was on :31.03.2022 Last Update of ERP & DMP : 28.03.2022 Last submission of ERP & DMP to Chief Controller of Explosive on 29.03.2022
13.	M/s. AHPPL shall bear the cost of external agency that may be appointed by this department for supervision / monitoring of proposed activities and the environment impact of the proposed activities.	Noted and agreeing to bear the cost of external agency, if any that may be appointed by this department.
14.	The jetty and most of the approach would be supported on piles allowing adequate flow of water without significant obstruction.	**Complied**. Jetty approach is supported by piles allowing adequate flow of water.
15.	The ground water shall not be tapped within the CRZ areas by the AHPPL to meet with the water requirements in any case.	**Being Complied** Ground water is not being used for any purpose in the Port. The industrial water requirement is being met through 2000KL of treated wastewater from M/s. KRIBHCO and domestic water requirement is met through tanker water.
16.	M/s. AHPPL shall take up massive greenbelt development activities in consultation with Forest Dept. / GEER Foundation / Gujarat Ecology Commission. A comprehensive plan for this purpose has to be submitted to the Forests and Environment Department.	**Being Complied** The Green Belt is being developed by AHPL. The total Green Belt area developed till 30th September 2022 is 78.79 Ha. Photograph of Green Belt area is attached herewith as **Annexure** 6
17.	Mangrove plantation in 200 Ha. shall be carried out in consultation with Gujarat Ecology Commission / Forest Dept. by M/s. AHPPL with in a period of two years from the issuance of CRZ clearance by MoEF, GoI and an action plan in this regard shall be submitted to this Department along with satellite images and GPS readings with Latitudes and Longitudes.	**Complied** Company has carried out mangrove afforestation in an area of 200 hectares i.e.: 50 hectares in Kantiyajal and 150 hectares in Village Nada-Devla of District - Bharuch and same is completed. Consolidated report on mangrove plantation on an area of 200 hectares at Village: Kantiyajal, Taluka: Hansot and Village: Nada-Devla, Taluka: Jambusar, District: Bharuch (Gujarat) developed by M/s. Saline Area Vitalization Enterprise (SAVE) Limited, Ahmedabad. Supporting documents of the same submitted to MoEF & CC and other authorities along with the six-monthly compliance report dated 20.11.2017.

S. No.	Conditions	Compliance Status
		The ecological health assessment of the mangrove plantation is being carried out by Gujarat Institute of Desert Ecology.
18.	The AHPPL shall have to take up bio-shielding development programme as part of CSR in consultation with Forest Department / PCCF and action plan in this regard shall have to be submitted to the MoEF - GoI and this Department.	**Complied** • AHPL has developed Bio-Shield at Village - Tankari Bandar, Taluka - Jambusar, District - Bharuch (Gujarat) in an area of 18 hectares with the help of a local NGO named Saline Area Vitalization Enterprise (SAVE) Limited. The ecological health assessment of the Bioshield plantation is being carried out by Gujarat Institute of Desert Ecology.
19.	M/s. AHPPL shall have to contribute financially for taking up the socio-economic upliftment activities in this region in consultation with Forest and Environment Dept. and the District Collector / District Development Officer.	**Being Complied** CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. Appropriate financial contribution is being made to the Schemes promoted by District Authorities and Forest & Environment Department, GoG are also included. Please refer the **Annexure-2** for the status of the CSR activities planned and carried out during the compliance period.

Sr. No.	Vertical	Approved Budget for FY 2022-23 (In Lacs Rupees)	Utilization amount (Apr 22 to Sep-22) (In Lacs Rupees)
1	Education	143.05	62.69
2	Health	27.58	4.05
3	Sustainable Livelihood Development	186.56	18.46
4	Civil Infrastructure Development	88.16	66.99
5	General Management and Administration for CSR activities	31.75	10.66
Total		**477.1**	**162.85**

S. No.	Conditions	Compliance Status
20.	A separate budget shall be earmarked for environment management and socio-economic activities including green belt development / mangrove plantation and details thereof shall be furnished to this Department as well as the MoEF, GoI. The details with respect to the expenditure from this budget head shall also be furnished along with the compliance report.	**Being Complied** • Environmental Management Plan is in place and the funds earmarked are being utilized for effective implementation of environmental safeguards and environment monitoring. Key components are Environment monitoring, Mangrove plantation, environmental studies etc. • Please refer the **Annexure-7** for details of budget and Expenditure for Environment Management for the compliance period. • CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. • Please refer the **Annexure-2** for the status of the CSR activities planned and carried out during the Financial Year: 2021-22.
21.	A separate Environment Management Cell with qualified personnel shall be created for environmental monitoring and management during construction and operational phases of the project.	**Complied**. • Environment Management Cell has been set up with qualified staff to ensure the effective implementation of environmental safe guards. • In addition to the site Environment Management Cell a well-established corporate environment cell also ensures effective implementation of the environmental safeguards. • Please refer the **Annexure-8** for Environment Management Cell Organogram.
22.	Environment Audit Report including the changes, if any, with respect to baseline environmental quality in the coastal and marine environment shall be submitted every year by M/s. AHPL to this Department as well as MoEF, GoI.	**Complied**. • Regular Environmental Monitoring are being carried out through a GPCB approved environment auditor M/s. Pollucon Laboratories, Surat (a MoEF&CC and NABL accredited laboratory) and others concerned authorities along with Six Monthly Compliance Report. • No significant changes observed with respect to past monitoring results.
23.	A six monthly report on compliance of the conditions mentioned in this letter shall have to be furnished by M/s. AHPL on a regular basis to this Department as well as MoEF, GoI.	**Noted and complied with**. • Six monthly compliance reports are being submitted to all the concerned authorities on regular basis. • Last report was submitted on 31.05.2022 through E mail.
24.	Any other condition that may be stipulated by this Department / MoEF, GoI from time to time for environment protection / management purpose shall have to be complied with by M/s. AHPL.	Noted and comply with the additional conditions stipulated by the MoEF & CC, if any.

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ANNEXURE-1:

ACTION PLAN AND COMPLIANCE STATUS ON THE ISSUES RAISED DURING THE PUBLIC HEARING

Annexure-1: Action plan and compliance status on the issues raised during the public hearing:

S. No.	Name	Details of Representation	Response during PH	Status as on 30th September 2022
1	Rohitbhai Jayantibhai Patel, Sarpanch, Hazira	On behalf of Hazira village, I welcome the expansion project of M/s. Adani Hazira Port Pvt. Ltd. at Hazira. Priority will be given to thousands of people of Hazira and surrounding villages for transport, business and employment opportunities. Company has provided training to the people of Hazira and surrounding villages for crane operation at Mundra and given employment as crane operator at Hazira Port. I believe that company will install latest technology for pollution control. Proposed project will surely care for human life. Due to proposed port Hazira people will surely get water, health and education facilities. I request that company would take required precautions for accident prevention and safety. Adani Foundation has provided required support as and when needed by Hazira village. I request that fishermen's concerns be taken care. I welcome this port as we are getting transport related business opportunities and we hope that same would be continued in future. Please clarify how much priority will be given to people from Hazira and surrounding areas for employment. Forest land is also requested for development of port at Hazira. So kindly clarify for compensation/afforestation. Please clarify what arrangements have been made by company if calamities like Tsunami, Earthquake or Flood arise after implementation of the proposed project.	Rohitbhai, we are happy to note that on behalf of Hazira gram panchayat you have given warm welcome for this project. We whole heartedly thank you for this gesture. We assure you that our Conduct and Approach in managing activities would be in reciprocation to your welcome. • National Highway –6 is being widened. On completion the constriction and congestion that we see today will be behind us. As mentioned in the EIA in the first 5 years of the multi cargo port maximum number of 1200 trucks is expected to ply in the national highway connecting the port. After the railway line is developed and the trains start plying 60% of the transportation load will be conveyed through rail transport only 40% will come on the national highway. That is a moderate load.	• Closed. Point is about welcoming the project and does not warrant any further action. • Widening of the National Highway – 6 is completed. Currently there is no traffic congestion on National Highway – 6. Railway line for transport of cargo is yet to be developed.

2.	Dharmedrabhai Bhikhubhai Patel, Ex-deputy Sarpanch, Hazira	We welcome this public hearing. It is good that you are giving preference to local affected people and hearing them during public hearing. We don't have any objection against the development of Adani Group along with other industrial development in Hazira leading to development of Gujarat and the Nation. Adani company is complying with the environmental laws promulgated by the State and Union Government. In fact, it is duty of Adani Port to do so. Under their CSR activities Adani Group should provide support for development of Hazira village and employment to unemployed people. All transport businesses should be given to small & big local transporters of Hazira only. Youth from families of affected fishermen should be provided required training and employment. New transport route should be proposed as the present route to take containers is very narrow. We thank Adani Group for giving support for the construction of classrooms for standard 11 & 12 in Navchetan school. I thank you for making me successful in providing compensation to the affected fishermen. I request for employment to locals people and transport contract to local transporters only. We support the development of Adani Port in our area. We don't have any objection to the project in this public hearing.	• This port will have focus on container cargo. Container cargo comes in boxes and is clean by nature. So the question of fugitive dust emission on the road is not expected to be severe for this port. • The coal handling will be done taking care that all the trucks are properly covered so that there is no dust emitted on the road. As you know practically all our transporters are from this area. It is their responsibility to take care of overloading. If transporters do not overload, there would not be any spillage on the roads. It is not only	• Closed. Major cargo handled at the port is container and liquid which do not increase the fugitive dust. AHPL is monitoring ambient air quality at five locations in and around project through a NABL accredited and MoEF recognized laboratory M/s Pollucon laboratories, Surat. Report confirms that ambient air quality is well within the NAAQS. Copy of the reports are enclosed as Annexure – 4A • Complying with. All the trucks carrying coal and other dusty cargo are being covered through tarpaulin. AHPL also ensures that no truck goes out of the port with overload.
3	Bhagubhai Maniram Patel, Sarpanch, Junagam	As this is biggest port in the South Gujarat and as there is no government land left, we wish that there will not be resettlement of the Junagam village due to this proposed expansion project of Adani Port.		

		There is a fear in the people of the village that they will have to vacate the village in future. So we request collector to give us guarantee in writing that we will be able to live with peace where we are today. Berths will be developed through dredging up to -15 meters. We are getting ground water from the depth of 20 to 65 ft in some of the areas, which we are using for drinking purpose. What will be the impact on the ground water due to dredging upto -15 meters? After construction of liquid berth No.3 which will handle & store 1.95 Million Tones by 2017-18, what emergency steps would be required to save the human life incase just like Bhopal if there will be gas leakage due to Tsunami, Earthquake or terrorist activities. We welcome Adani Port & they require land for the container and coal storage. However, all industries located in the Hazira area have acquired government land and another 2000 acre land is allotted to tourism department. Sir therefore, I request you to declare remaining land of Junagam, Suvali. Damka & Bhatlai as residential area or agricultural zone. This is to ensure that in future we will not be displaced. As the port is to be constructed at the coast line, there are chances of spillage of liquid into sea and impact of solid hazardous waste. In this condition explain plan to mitigate impact on fisher man community. Secondly there is a question of unemployment of the youth of the Hazira area. As told by the company 700 people will be employed, youth from local families presently engaged in farming, animal husbandry and fisheries should be trained. Due to development of the port people from different states of India will come and	responsibility of GPCB or the company but we all have to collectively work together for spillage free coal transportation. • Junagam sarpanchshri expressed apprehension that we will take away government land and lands belonging to farmers in Junagam village. We want to assure you that we do not intend to take any private land of farmers or any house site land. If you carefully see the development plan we have just presented, the map will alleviate your uncalled fears. There would not be any question of rehabilitation of any village. Moreover, we will take care that your property. Your assets and convenience are not jeopardized by our action. • You talked about vultures; I would like to point out that there is no sanctuary or national park near by the port. In the EIA, we have studied the entire area and we will take due care to preserve the environment.	• Closed. There is no displacement of people, houses or fishermen as the port is being developed on reclaimed land and land allotted by Government as there is no acquisition of private land. • Closed. There is no sanctuary or national park near by the port. In the EIA, we have studied the entire area and

		therefore, there are chances of crime such as gang rape, hooliganism and terrorist attack. Is there any plan to control these potential evils? Training to unemployed women and employment is being planned. In future we and Adani Port would like to work together with full cooperation. On behalf of Jungam village and villagers, I welcome the expansion of the terminal.	• We re-emphasize that we will comply with all the laws and in doing so we would be guided by GPCB and other concerned authorities. • Some of you have expressed concern about terrorist activity creating great risk to our chemical terminals with attendant adverse consequences in our neighbourhood. We are going to be ISPS compliant; as a result of this discipline, only authorized persons and material can enter into the port. More over district administration and police also take precautionary measures to intercept terrorist activities. Coast guards contribute to this effort. In a sense the entire nation is collectively fighting against terrorism.	we will take due care to preserve the environment. • Complied. AHPL is operating the port in compliance with all rules and regulations.
4	Alpeshkumar Thakor – Fisherman, Hazira.	Plantation of the mangroves has been carried out between well numbers 4 to 7. This plantation has been destroyed by dredging and area is filled up. In this area fisherman used to catch prawns, crabs and sustain their livelihood. Through dredging company has destroyed Mangroves. There are approximately 2500 fishermen, belonging to Halpathi and Koli Patel communities living in the village. These people will be unemployed as fishing activity will be stopped due to dredging up to 20 meter by the company. Is it development or destruction? If fishermen get sand from the river by the boat in the Magdalla area, they have to pay royalty for the same. But why companies are given permission for dredging without royalty? What about approximately 2500 fishermen?		• Complied. AHPL security system is in compliance with ISPS. ISPS Statement of compliance Ref Number is: MMD/KDL/SOC/ 030 and valid up to 10.02.2026. AHPL has access control system in place to avoid unauthorized entry of men and material.
5	Babubhai Aahir (Sarpanch, Suvali)	As our friends have already given suggestion for safety and employment, it is not required to repeat the same. Foundation should provide employment opportunity to the land looser, fisherman, individual engaged in animal husbandry who are above 50 years and uneducated. Unemployed youth of this area should be provided training and given opportunity for the employment. Company should control the pollution arising due to transportation of chemical or coal. Earlier "Shell" company used to avoid overloading.	• In the context of natural calamities, we have done modeling studies to understand the risk of oil spillage. We have also prepared Disaster Management Plan. This plan is being presented to the District Collector. After his approval it will go to State Disaster	• Complied. Regional DMP for the Hazira Peninsula, covering all major industries and the port has been prepared in

		So Adani Port should also not do the overloading to prevent the accidents. There is no medical facility available for treatment in case of emergency. As there is drought this year, company should consider providing drinking water in surrounding area.	Management Authority at Gandhinagar for necessary approval and guidance. During natural calamities all local industrial units and government organizations work together to mitigate impacts of natural calamities. In that situation we would work under the guidance of District Collector and police authorities to do the needful. Disaster Management Plan is structured in such a way. • In regard to impact on fisherman, I want to point out the real situation that we are not in the river mouth, but just outside of it. The port development is only in a stretch of 4 km of coast line. We have not displaced any fisherman. The surrounding areas are open for fishing, nevertheless we have compensated fisherman who were identified by the Grampanchayat to be active in the areas where we are now operating. As Susmaben mentioned we will support fisherman by giving them tools, nets etc. and be	consultation with District Authorities and same is being implemented. Oil Spill Contingency Plan has been prepared and the same was approved/ vetted by Indian Coast Guard (Letter No.: 7563, dated 09.01.2014). In addition, AHPL has developed and implemented ER & DMP. Regular mock drill to ensure the compliance and preparedness is being done. Last Mock Drill (On Site) was on: 27.09.2022. Last Update of ERP & DMP: 28.03.2022.
6	Divyeshbhai, Hazira	*(During the representation of the Shri. Divyeshbhai* *there was a aggressive representation of Shri. Jayesh Patel resident of village Dihen, that he wants to present his questions.* *Honourable Collector replied that resident or stakeholders from affected villages should represent first. During this time Shri. Jayesh Patel and other people created disturbance which was controlled by Panel and then representation from Mr. Divyeshbhai continued.)* Why this public hearing is kept at Junagam even it is of Hazira Village? Now we will talk about the pollution. Lots of dust is observed in the houses of the hazira village during the night hours. As per information particles of dust have been found in the lungs of the woman. If this information proves to be true we will file a pitition in the High Court. During the widening of the National Highway No. 6 land in the surroundings villages will be taken. As National Highway is not passing through Hazira, the villagers need to travel 8 Kilometres extra. Why it is not extended straight? Fishermen are being told that there is no fish in the sea but slags are cast in the corners of the sea due to which some fish die. Dolphin is also found at present in the Hazira area. We welcome the project if the port company is ready to give written assurance regarding employment.		
7	Jayeshbhai Patel, Resident of Dihen village	I raise my objections against proposed expansion project of AHPL for which public hearing is organized and I		

	and President, Gujarat State Farmers Samaj	request that my objections should be included. M/s. Shell India has got environmental clearance in 2003 in which clearance was given for development of three berths. These berths are constructed at places other than shown earlier. So I request collector to remove these three berths. Out of proposed 7 berths for container and 4 for bulk terminal, 3 have been already constructed and port is functional. In this situation, I request to include in this public hearing what actions have been taken by collector against Adani for functioning of port & disposal of coal in Hazira and what actions have been taken by GPCB against company for disposal of coal in open. This project is being developed on the mouth of river Tapi therefore it is my feeling and request that it should not be given Environmental Clearance. EIA study does not include the objections of the report of Sugnyaben Bhatt Commission which was set up by Gujarat Government in 2006 in the aftermath of Surat flood. So it is my request that this public hearing and Environmental Clearance should be cancelled. Hazira is located on the mouth of Mindhola & Tapi river. As per ICMAM report of Tapi river, erosion effect had spread up to Dumas because of filling of Tapi river due to Industrialization in this area. Erosion of shore is up to 2500 meter towards Dumas. ICMAM report is not studied. There is no clarity on what steps are required to control the erosion of shore near Dumas, so it is my request that it should not be given Environment Clearance.	helpful to them. **(At this stage Shri Sheikh and Shri Jayeshbhai started shouting & disturbing the clarification of the project proponent. The chairperson told them repeatedly not to disturb the proceedings)** • We would help sons and daughters of fisherman to educate them and trained. We would do everything practicable to achieve this end. • We are developing	• Closed. CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. Appropriate financial contribution is being made. Schemes promoted by District Authorities and Forest & Environment Department, GoG are also included. Please refer the **Annexure-2** for the status of the CSR activities carried out during the Compliance period.

		This area is declared reserved for vultures. As per survey there are about 150 vultures in the forest area. This report does not include what would happen to vultures, where they would go and what would be impact on Environment. So it is my request that it should not be given Environmental Clearance. There are approximately 2500-3000 fishermen families. There will be crisis for their livelihood. There is no clarity for rehabilitation and resettlement from Adani. So it is my feeling and request that it should not be given Environmental Clearance. Routes to sea are almost closed specifically for "Pagadia fishermen", who do fishing on foot. There is a big problem of their livelihood. Due to loss of fishing activities now they will not get thousands of crores of rupees which they were supposed to get due to fishing activities. Rs. 15 lacs is not sufficient compensation for that. This area comes under CRZ-IA. Specific fish called "Levta" grows in the mudflat and fishermen catch that fish in this mud and earn their livelihood. Due to excavation and reclamation there will be damage to biological mud and destruction of marine ecology. EIA report does not have clarity on what actions are required. So it is my feeling and request that it should be clarified in EIA report or not be given Environmental Clearance. Before Adani came there was mangrove forest in the area of 40 ha. As per survey today mangroves survive in the area of 15 ha only. Due to destruction of mangrove there will be damage to environment and coastal erosion. This study is not covered in EIA so it is my feeling and request that it should not be given Environmental Clearance. Five ports from 15 different companies and two big ports within 5	the port by reclamation. This cannot any way cause salinity ingress in the ground water. We are going to investigate the quality of ground water every year • Our EIA has been done by M/s. Cholamandlam MS Risk Service Limited and M/s. National Institute of Oceanography. These are well respected and neutral expert organizations a head quartered outside Gujarat. Their studies have been accepted	• Complied Proper care is being taken during construction activity to avoid salinity ingress and any degradation of water quality. M/s. AHPL is monitoring the Ground Water Quality at one location on monthly basis. Results show no significant change in the quality. Ground water quality is being monitored through M/s. Pollucon Laboratories, Surat (a MoEF&CC recognized and NABL accredited laboratory). Please refer the **Annexure-4B** for the Environmental Monitoring / Analysis Reports for the period **April 2022 to September 2022** • Complied. CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural

		Km are coming in this area. The cumulative impact on road & rail transport due to operation of both ports Adani & Essar is not studied while preparing the impacts on land environment. Six-lane-road is also not going to be sufficient for this. So I request that Environment clearance should be given only after doing cumulative study. As reported, level of Suspended Solids & Petroleum Hydrocarbon is high as compared to desired levels in water. Level of pollution in the areas of water, air and land is already high as compared to other locations in the country. EIA report does not have clarity on what steps will be taken to bring down the pollution. So it is my feeling and request that it should not be given Environmental Clearance. (***It is to be noted that Mr. Jayeshbhai Patel belongs to "Dihen village" which is approximately 18 Km away from the port site***)	by Gujarat Coastal Zone Management Authority. Thus we want to work with you and be helpful to you. ***(At this stage some of the individuals asked clarification for employment in the company. Collector Shri directed the company representative to answer it, and advised audience to listen to the representative peacefully.)***	Infrastructure Development. Please refer the **Annexure-2** for the status of the CSR activities carried out during the Compliance period. • Closed Point does not warrant any further action.
8	Dhansukhbhai Patel, President Hazira Coastal Area	Employment is given to 30-35 people in the form of contract but we insist that it should be permanent in nature. For this liquid cargo transport, it will be storage of chemicals or processing of chemicals? If it is chemical processing then hazard will increase, so I request to provide information on what measures Adani will take for health and safety? Please provide information if this project has got any clearance from Central Government like what they have got from State Government. Adani has declared only 4-5 villages as affected. Will there not be any impact on Mora, Kawas or Interior of Ichhapur while trucks pass through them? There are 10-12 big companies in this area and they have developed residential township with all facilities for their employees. Is it not possible that each company will take one village from 10-12 villages and also	• The port has opportunities for both technical and non-technical employment. Moreover indirect employment in transport and other services will also be there. All these opportunities may be taken by local residents. To facilitate them to take this opportunity we will provide necessary training to enhance their competence, so that they may not only get employment m Adani port but else were also. ***(At this stage Jayeshbhai and other peoples repeatedly disturbed the hearing and stopped the company representative to elaborate further. Collector repeatedly***	• Complied. AHPL has always given employment priority to local qualified persons and in future the same will be continued. As on 30th of September 2022 total 206 out of 239 On roll employees are from Gujarat.

		provide them same facilities? For this, MOU is necessary and matters related to self-employment & development of village should be mentioned. We will be benefited in future; only if there will be MOU. ***(It is to be noted that Mr. Dhansukhbhai Patel belongs to Kawas village which does not fall within 10 Km radius of the study area)***	***asked all concerned to maintain calm mul listen to the company representative. All major points being over collector concluded the public hearing.)***	
9	Kamlaben Rohitbhai Patel, Choryasi Taluka Panchayat, Leader of opposition party	I welcome the expansion project of Adani company. Due to proposed port priority would be given to Hazira and surrounding area for employment and business. I request that fishermen's concerned would be taken care by this project. Adani Foundation of Adani Company has given commitment for the various activities for the development of village. So I welcome the project and declare my support for the Port of Adani Company at Hazira.		
10	Mohanbhai Ambubhai Patel, Village: Vaswa	***(Collector informed Mohanbhai to raise those issues only, which were not raised earlier)*** Adani Company has told that 700 people will be employed. Please clarify whether it will be permanent or contractual basis? Thousands of people are working on contractual basis in the surrounding companies but nobody gets permanent employment. ***(Then Regional Officer, GPCB again informed the concerned persons to raise other issues if any. The employment issue will be addressed by the company.)*** As per survey carried out by NIO out of 1600 km of Gujarat coast nearly 25% is already filled due to construction of ports at other places. As a consequence of this, there will be huge damage to agriculture in the surrounding area and there would also be ingress of sea water in the area. Adani Company has decided to pay compensation of Rs. 15 lacs to 40		

		fishermen but what arrangement company will make for the 4000 fishermen in the surrounding villages? Adani Company is developing their project on 31428 ha of land. Is this land private or government? If it is on private land then whole Junagam village would be vacated. Survey numbers are also not shown for this land. ***(It is to be noted that Mr. Mohanbhai Patel belongs to Vanswa village which does not fall within 10 Km radius of the study area)***		
11	Jayantibhai Khalasi President, Fish Progress Union, Hazira	You all will go away after this public hearing but whom should we contact regarding pollution in our area? ***(Then Collector informed him that regarding pollution he may contact GPCB.*** ***Regional Officer, GPCB also informed him that regarding pollution he can submit in writing.)***		

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ANNEXURE-2:

DETAILS OF THE CSR ACTIVITIES CARRIED OUT AND BUDGET EXPEDITURE FOR FY 2021-22

The Budget and Expenditure of CSR activities in Compliance Period (April -September 2022) is as foloows

Sr. No.	Verticals/Thematic Area	Approved Budget for FY 2022-23 (In Lacs Rupees)	Utilization amount (In Lacs Rupees)
1	Education	143.05	62.69
2	Health	27.58	4.05
3	Sustainable Livelihood Development	186.56	18.46
4	Civil Infrastructure Development	88.16	66.99
5	General Management and Administration for CSR activities	31.75	10.66
Total		**477.1**	**162.85**

Details of CSR Expenditure of last three Financial Years

S.NO	FY	Budget (In INR Lacs)	Expenditure (In INR Lacs)
1	2019-20	330.53	265.75
2	2020-21	255.13	223.61
3	2021-22	668.89	469.35

Details of Corporate Social Responsibility Activities Carried out during April 2022-September 2022 by Adani Hazira Port Limited

Adani Foundation (AF) is working as a Corporate Social Responsibility (CSR) wing of Adani Group and the CSR activities are being conducted by Adani Foundation team in the four major thrust areas. Adani Hazira Port Limited is conducting it's CSR activities through Adani Foundation team in following four thrust area mainly.

MAJOR THRUST AREAS OF CSR ACTIVITIES

A. Education:

Major Highlights of Activities Carried Out in Education during April-2022 to September 2022

I. Navchetan Vidhyalay Junagam

The school is a Gujarati medium, GSEB affiliated primary school approved by DPEO, Gujarat. It is established in 2003 by local trust, Navchetan Vikas Mandal, Junagam, to provide quality education to children coming from surrounding rural areas from 2014, it is sponsored and managed (academically & administratively) by Adani foundation.

The school is equipped with Smart Class, Science Laboratory and Computer Laboratory and Activity class, Library and big play ground. This year Adani Foundation has constructed alternative staircase at primary wing building of **Navchetan Vidyalaya**, Junagam, Keeping in view of fire safety guidelines of Gujarat state government for schools. The pedagogy includes activity-based learning, each one teach one learning method, special remedial classes to slow learners, regular Unit tests in school. Adani foundation provides academic materials like Notebooks, Workbooks, and Textbooks. Students from class III to have got chance to learn off campus by exposure visit. "Education is a shared commitment between dedicated teachers, motivated students and enthusiastic parents".

The school has arranged a PRAVESHOTSAV program to welcome the students of Class-I. Educational kits with a flower plant provided to the students of Class-I. Rapport building activities for KG students and revision work with activity-based education.

5-S is a system for organizing spaces so work can be performed efficiently, effectively, and safely. 381 students and Teacher's remain present in the session.

Disaster management program was arranged for the students 347 Students from Class- V to XII attended the same.

Baseline assessment of under NIPUN BHARAT project of NEP is executed. Baseline assessment of students of Class- I to IV for Foundational Literacy and Numeracy (FLN) was carried out. 2nd dose of vaccination against COVID, for the age group of 12 to 15 years students were completed on 28/07/2022

On 05/08/2022, a session on "Indian Armed Forces, Introduction, Roles and Responsibilities" was organized. The keynote speaker was Captain Prasan Tokas (Ex. Army and AGM, Security, AHPL, Hazira). A total of 312 students of Class VIII to XII and 12 teachers remain present

76th Independence Day was celebrated with great enthusiasm and patriotic fervor. On this special occasion, the program started with flag hoisting.




II. Project Utthan

The future of India depends upon the quality of education imparted to our children. We believe that it is the joint responsibility of the Government and citizens to improver school education. With an aim to enhance the

quality of primary education in Surat District, Adani Foundation proposed to adopt 10 government schools of Hazira coastal area of 08 villages under the project '*Utthan*', and from December-2019 the project starts with form MoU signed between Adani Foundation representative and DPEO, Surat. By this intervention, Adani Foundation seeks to facilitate; Focus on progressive learners (PRIYA VIDYARTHI) and celebrate their progress, make learning joyful, provides adequate resources and facilities, strengthen the curricula to provide basic skills, especially in the areas of literacy, numeracy and skills for life and focus on Teachers' capacity building.

The strength of 25 Utthan Schools of Hazira site is 2926 of class- I to VIII, among them 1308 students are of Class-III to VII. 1764 students were assessed.

Training and capacity building of Utthan Sahayaks make important contribution to raise a school to the apex of excellence. It increases the productivity and internal efficiency of teachers.

Utthan Sahayaks have received 22 certificates, which includes Course offered by DiKSHA of GoG, Webinar/Seminar arranged by Universities or International Educational institutes.

In last six months with support of 16 Utthan Sahayak, 86 progressive students are main streamed, and they have achieved 295 competencies.

Independence Day was celebrated with great enthusiasm and patriotic fervor in 25 Utthan Schools Students, Teachers' and Utthan Sahayaks took out a rally to create awareness of the "Har Ghar Tiranga" initiative on 14th & 15th August 2022. Students have prepared drawings and various best out of waste of tricolor. Every month Mother's meet is conducted in which 575+ mothers remain present.

Block	Identified Progressive Students	No. of Competencies to be achieved	Progressive students main streamed in Aug. & Sep. 2022	Competencies achieved in Aug. & Sep. 2022	No. of Progressive students Yet to be main streamed	No. of Competencies Yet to be achieved
Choryasi	812	2199	98	376	714	1823
Olpad	496	1236	89	243	407	993
Total	1308	3435	187	619	1121	2816

B. Sustainable Livelihood Development:

Highlights of Major Activities Carried Out in Sustainable Livelihood Development during April-2022 to September 2022

The Adani Foundation is the Corporate Social Responsibility arm of Adani Group with a vision to "Accomplish passionate commitment to the social obligations towards communities fostering sustainable development thus improving quality of life". It's an integrated infrastructure conglomerate that is committed to inclusive growth and sustainable development in not only the communities it operates in, but also in contributing towards nation building. The Adani Foundation – Hazira has been running several activities and catering to the needs of the local community residing in 8 core and 15 peripheral villages. The mainly OBC dominated population in this area.

Adani Foundation in collaboration with BAIF institute for Sustainable Development (BISLD), Adani Foundation has conducted 26 trainings batches in various villages for ideal and profitable Sex Sorted Semen, AI, Nutrition and animal Health. 545+ Animal keepers have attended these trainings

2300 Mango Saplings distributed to 289 beneficiaries in 6 Villages Junagaam, Suvali, Damka, Vasva, Bhatlai and Hazira.

Work in started solar irrigation system setup under energy project at Lavachha and aadmor Villages, Olpad block.

35 Self Helping Groups (SHGs) member from 6 SHGs of Ghanavad village were trained in production of Papad, Pickle and Spices in collaboration with the RSETI Center.

10 Sakhi Mandal members from 3 villages were trained in Costume Jewelry in collaboration with the RSETI Center.

2 new Halpati community SHG groups were formed in Vansva village. We have planned for stitching center. 6 new SHG formed at Umarpada

C. Community Health:

Highlights of Major Activities Carried Out in Community Health during April-2022 to September 2022

Spectacles distribution program organized at Govt. primary school, Mora with support from Rotary club, Surat & Prizma eye care, Surat.18 students got spectacles during program, those who diagnosed earlier during eye checkup camp in school. Earlier 281 students benefitted from eye check up camp in school out of which 18 students required spectacles. Regular Check up camps supports in early detection of any kind of eye related issues and treatment and helps in spreading awareness regarding eye care.

21 days residential De-addiction program conducted with support from Parivartan trust, Surat. Various engagement activity conducted during residential program like personal counselling, Group discussion, Yoga & Meditation etc. for continuous engagement of patients and distract them from addiction. Total 16 patients got treatment at de-addiction center till September 2022. We have also conducted awareness program, Street plays in villages.

AF has supported Jagruti Sakhi Mandal (SHG), Songadh, Tapi to start production of 2.5 lakh sanitary pads which will further distributed among Adolescent Girls of Anganwadi Centers across Tapi District.

Multi–specialty general health check up camp organized at Barbodhan village in Olpad block of Surat district. Total 170+ patients get benefitted through medical camp. AF Conducted gynecologist visits in villages regarding health issues for women & adolescent girls . Total 7 visits conducted till September 2022.

D. Community Infrastructure Development

Highlights of Major Activities Carried Out in Community Infrastructure Development during April-2022 to September 2022

Adani foundation has developed 3 ponds at Damka, Suvali & Bhatlai villages . The Suvali and Bhatlai ponds were developed as Amrit Sarovar under Azadi ka Amrit Mahotsav. Plantation was done around Suvali-pond.

Fencing on Road divider was provided from Mora circle to Mora village by Adani foundation, Hazira. Plantation was carried on road divider near Mora Circle.

Two rooms of 11m X 6.m each was built by Adani Foundation, Hazira for residing of 75 girls of Vanraj Ashram Shala. Inauguration of girls' hostel at Vanraj Ashram Shala, Umarda village of Umarpada block by Shri Capt. A.K. Singh sir, CEO – Adani Hazira Port Ltd.

Construction of community Hall (1st floor) was done by Adani foundation, Hazira at Damka village.


World Environment Day 2022 Celebration with Community

In Rajgiri Gram Panchayat, School Students, Youth, talati and Sarpanch were participated in Awareness Campaign organized by Adani Foundation and Adani Hazira Port Limited. Total 45 school students, yoth and villagers were paraticipated in awareness program and plantation drive. **90 plants** of Indigenous species Gulmohar, Peepal, Badam, Ashok were planted with help of school students, youths and Sarpanch of Rajgiri Villages . The saplings were distributed among children to create their interest towards nature.



Budget and Expenditure details of the period April 2022 to September 2022

Thrust Area		Annual Budget (Amount in Lacs INR)	In Q1 (Amount in Lacs INR)	In Q2 (Amount in Lacs INR)	Till Q2 (Amount in Lacs in INR)	Utilization in %
Education	Other activities	70.16	5.9	15.31	21.21	30.23%
	Utthan	72.89	5.23	36.25	41.48	56.91%
Community Health		27.58	1.97	2.08	4.05	14.67%
Sustainable Livelihood Development		186.56	4.94	13.52	18.46	9.90%
Community Infrastructure Development		88.16	48.44	18.55	66.99	75.99%
General Management and Administration		31.75	3.34	7.32	10.66	33.56%
		477.10	Total	93.03	162.85	34.13%

Media Coverage of CSR Activities of AHPL (April 2022-September 2022)

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पर्यावरण संरक्षण व हरित विकास के संदेश के साथ हजीरा बंदरगाह पर मनाया पर्यावरण सप्ताह

ड्राइंग, कविता, स्लोगन प्रतियोगिता और जूट बैग वितरण, नेचर वॉक, वृक्षारोपण कार्यक्रम

लोकतेज संवाददाता

सूरत। अदानी हजीरा पोर्ट ली. (एएचपीएल) में अडानी ग्रुप द्वारा विश्व पर्यावरण सप्ताह के तहत विभिन्न पर्यावरण जागरूकता कार्यक्रम आयोजित किए गए। ऑनलाइन क्विज, वेबिनार, ऑफलाइन क्विज, कार्यकर्ताओं और ग्रामीणों के बीच पर्यावरण जागरूकता वार्ता, ड्राइंग, कविता, स्लोगन प्रतियोगिता और जूट बैग वितरण, नेचर वॉक, वृक्षारोपण जैसे कार्यक्रम आयोजित किए गए।

हजीरा के पास राजगरीगाम में वृक्षारोपण के अलावा प्राथमिक विद्यालय के बच्चों में %प्लास्टिक नहीं% की शपथ के तहत तुलसी और बादाम के पौधे बांटे गए। पर्यावरण सप्ताह के तहत आयोजित विभिन्न प्रतियोगिताओं के विजेताओं के सम्मान में पुरस्कार वितरित किए गए। इस अवसर पर मुख्य परिचालन अधिकारी अश्विनराय कुंडलिया ने बंदरगाह परिसर में पर्यावरण संरक्षण और प्रदूषण रोकथाम, जैव विविधता और ट्रिपलबॉटम लाइन के बारे में भी बताया।

પર્યાવરણ અંગેની અદાણી ગ્રૂપની પ્રતિબધ્ધતા એક દિવસ નહીં અદાણી હજીરા પોર્ટે ઉજવ્યો પર્યાવરણ સપ્તાહ

अदानी हजीरा पोर्टः जागरुकता कार्यक्रम, पौधरोपण के साथ मनाया पर्यावरण सप्ताह

सूरत | पर्यावरण संवर्धन और हरित विकास के लिए कटिबद्ध अदानी ग्रुप की सूरत के निकट स्थित अदानी हजीरा पोर्ट ने विश्व पर्यावरण दिवस एक दिन मनाने की जगह पूरे सप्ताह पर्यावरण जागरुकता के कार्यक्रमों के माध्यम से मनाया। हजीरा पोर्ट ने ऑनलाइन क्विज, वेबिनार, ऑफलाइन क्विज, कामदारों और समुदायों के बीच पर्यावरण जागृति वार्ता, चित्र स्पर्धा, कविता, स्लोगन प्रतियोगिता, जूट बेग वितरण, नेचर वॉक पौधरोपण कार्यक्रमों का पूरे सप्ताह आयोजन किया गया। हजीरा के निकट राजगरी गांव के मंदिर और कम्यूनिटी होल परिवार में पीपल, आसोपालव, गुलमोहर जैसे पौधों का रोपण बच्चों और ग्रामीणों को साथ रखकर किया। राजगरी गांव के सरपंच धनसुख पटेल ने अदानी हजीरा पोर्ट और अदानी फाउंडेशन की पर्यावरण जागरूकता और प्रेरक गतिविधियों के लिए आभार व्यक्त किया। पर्यावरण सप्ताह के समापन पर आयोजित समारोह में सभी प्रतियोगिता के विजेताओं को सम्मानित किया गया। समापन समारोह के मुख्य वक्ता अश्विन रायकुंडलीया (चीफ ऑपरेटिंग ऑफीसर) ने बंदरगाह परिसर में पर्यावरण संरक्षण और प्रदूषण निवारण किस तरह महत्वपूर्ण है, इस पर बात की।

	ADANI HAZIR PORT LIMITED	From: April 2022 to September 2022

પર્યાવરણ અંગેની અદાણી ગ્રૂપની પ્રતિબધ્ધતા

અદાણી હજીરા પોર્ટે ઉજવ્યો પર્યાવરણ સપ્તાહ

(પ્રિતી દુબે)સુરત,તા.૧૦

પર્યાવરણ સંવર્ધન અને હરીત વિકાસ માટે પ્રતિબધ્ધ અદાણીગ્રૂપની સુરત નજીક આવેલા અદાણી હજીરા પોર્ટલી. (AHPL)એ વિશ્વ પર્યાવરણ દિવસની પરંપરાગત એક દિવસની ઉજવણીની જગ્યાએ આખો સપ્તાહ પર્યાવરણ જાગૃતિના વિવિધ કાર્યક્રમો થકી ઉજવણી કરી હતી. અદાણી હજીરા પોર્ટ લિમિટેડ (AHPL)એ ઓનલાઈનક્વિઝ, વેબિનાર, ઓફ-લાઈન ક્વિઝ, કામદારો અને સમુદાયો વચ્ચે પર્યાવરણ જાગૃતિ ચર્તાલાપ, ચિત્ર સ્પર્ધા, કવિતા, સ્લોગન સ્પર્ધા અને જ્યુટ બેગ વિતરણ, નેચરવોક, વૃક્ષારોપણજેવા કાર્યક્રમોનું સમગ્ર સપ્તાહ દરમિયાન આયોજન કર્યુ હતું. પર્યાવરણ સપ્તાહનીઉજવણીની શરૂઆત અદાણી હજીરા પોર્ટ લિમિટેડ (AHPL),હજીરા ખાતે જનજાગૃતિ માટેના ઈકોરેલી કાપડના અને ડિજિટલ બેનર લગાડીને થઈ હતી. અદાણીપોર્ટના કર્મચારીઓ અને સહયોગીઓ માટે ઓનલાઈન અને ઓફલાઈન અને પ્રકારની ક્વિઝ સ્પર્ધાનું આયોજન થયું હતું. કન્ટેનર ટર્મિનલ ગેન્ટ્રીક્રેન એરિયા, ડ્રાય કાર્ગો ઓપરેશન એરિયા, જેટી એરિયા અને લિક્વિડ ટર્મિનલ ઓપરેશન એરિયામાં અને બાલ્ક ફ્લો બોક્સ પર પર્યાવરણીય સંરક્ષણ પર ઓન ધ સ્પોટક્વિઝનું આયોજન કરવામાં આવ્યું હતું. કોન્ટ્રાક્ટકામદારો અને સુપરવાઈઝર માટે પર્યાવરણ જાગૃતિ માટે વક્તવ્ય અને અધિકારોને સિંગલ યુઝ પ્લાસ્ટીકનો ઉપયોગ ઘટાડવા જાગૃત કરવા માટે જ્યુટબેગનું વિતરણ કરવામાં આવ્યું હતું. હજીરા નજીક આવેલા રાજગરીગામના મંદિર અને કોમ્યુનિટીહોલના પરિસરમાં પીપળો, આસોપાલવ, ગુલમહોર જેવા સ્થાનિક વૃક્ષનુંવાવેતર કરીને ગ્રામજનોને સાથે રાખીને રોપણકર્યુ હતું. રાજગરી ગામના સરપંચ વનસુખ પટેલે જણાવ્યુ હતું કે, અદાણી હજીરાપોર્ટ લિમિટેડ અને અદાણી ફાઉન્ડેશનને આવી પર્યાવરણીય જાગૃતિ અને પ્રેરક પ્રવૃત્તિઓ કરવા બદલ તેમનો આભાર વ્યક્ત કર્યો, તેમણે કહ્યું કે માત્ર પર્યાવરણની જ રક્ષા કરવાની જરૂર નથી પરંતુ ભાવિ પેઢીને પ્રકૃતિ સાથે સુમેળમાં રહેવા પર ધ્યાન કેન્દ્રિત કરવા માટે શિક્ષિત કરવાની પણ જરૂર છે. પ્રાથમિક શાળાના બાળકોને 'નો પ્લાસ્ટિક'ના સપથ લેવડાવીને તુલસી અને બદામના રોપાઓનું વિતરણ કરાયું હતું. બદરના ગ્રીન બેલ્ટ વિસ્તારને મજબુત કરવા પોર્ટપરિસરમાં વૃક્ષારોપણ કરાયુ હતું.ઔષધીય

વનસ્પતિઓ અને જૈવ વિવિધતાના મહત્વ અંગે જાગૃતિ લાવવામાટે કર્મચારીઓ, સહયોગીઓ અને કરાર આધારિત કામદારોમા ઔષધીય છોડના રોપાઓનું વિતરણ કરવામાં આવ્યું હતું. અદાણી હજીરા પોર્ટના કર્મચારીઓ અને સહયોગીઓ માટે ચાર સત્રના વેબિનાર અને ચિત્ર સ્પર્ધાનું આયોજન કરવામાં આવ્યું હતું. પર્યાવરણ સપ્તાહની ઉજવણીના સમાપન સમારોહમાં વિવિધ સ્પર્ધાના વિજેતાઓનું સન્માન કરી ઈનામ વિતરણ થયુ થયું હતું. સમાપન સમારોહના મુખ્ય વક્તા તરીકે અશિનરાય કુંડલીયા, ચીફ ઓપરેટિંગ ઓફિસર એ બંદર પરિસરમાં પર્યાવરણનું સંરક્ષણ અને પ્રદૂષણ નિવારણ કેવી રીતે મહત્વપૂર્ણ છે એની વાત કરી હતી. તેમણે દરિયાઈ જૈવવિવિધતા તેના સંરક્ષણ અને ટકાઉ પગલાની ટ્રિપલ બોટમ લાઈન વિશે પણ સમજાવ્યુ હતું. સમાપન કરતાં HSE ના વડા રૂપેશ ઝંબુડીએ તમામ સહભાગીઓને વિનંતી કરી કે પર્યાવરણની સુરક્ષાની જવાબદારી સૌની કરજ છે.

જો દરેક વ્યક્તિ રાહ જોશે કે બીજું કોઈ કાર્ય કરશે અને તેઓ આ બાબતે કંઈ નહીં કરે તો કોઈ કંઈકારક થશે નહીં. તેમણે ઉમેર્યું કે ચેરિટીની શરૂઆત ઘરથી થાય છે તેથી દરેક વ્યક્તિએ પોતાની જાતથી શરૂઆત કરવી પડશે અને પર્યાવરણના સંરક્ષણ તેમજ પ્રકૃતિના સંરક્ષણ માટે સકારાત્મક યોગદાન આપવું પડશે.

સાથે ભમરડા, લીંબુ-ચમચી, કાંગારૂ રોડ, સુરત ખાતે રમાશે,

હજીરા પોર્ટ ખાતે પર્યાવરણ સંવર્ધન અને હરીત વિકાસના સંદેશ સાથે પર્યાવરણ સપ્તાહ ઉજવાયું

ધબકાર પ્રતિનિધિ,
સુરત, તા. ૧૦

અદાણી હજીરા પોર્ટ લિ. ખાતે અદાણી ગ્રૂપ દ્વારા વિશ્વ પર્યાવરણ સપ્તાહ હેઠળ પર્યાવરણ જાગૃતિના વિવિધ કાર્યક્રમો યોજાયા હતા. જેમાં ઓનલાઈન ક્વિઝ, વેબિનાર, ઓફ-લાઈન ક્વિઝ, શ્રમિકો અને ગ્રામજનો વચ્ચે પર્યાવરણ જાગૃતિ વાર્તાલાપ, ચિત્ર, કવિતા, સ્લોગન સ્પર્ધા અને જ્યુટ બેગ વિતરણ, નેચરવોક, વૃક્ષારોપણ જેવા કાર્યક્રમોનું આયોજન કરાયું હતું.

હજીરા નજીક આવેલા રાજગરીગામે બાળકો સાથે મળીને વૃક્ષ રોપ ઉપરાંત પ્રાથમિક શાળાના બાળકોને 'નો પ્લાસ્ટિક' ના શપથ લેવડાવીને તુલસી અને બદામના રોપાઓનું વિતરણ કરાયું હતું. પર્યાવરણ સપ્તાહના ભાગરૂપે યોજાયેલા વિવિધ સ્પર્ધાના વિજેતાઓનું સન્માન કરી ઈનામ વિતરણ કરાયું હતું. આ પ્રસંગે ચીફ ઓપરેટિંગ ઓફિસર આશ્વિનરાય કુંડલીયાએ બંદર પરિસરમાં પર્યાવરણનું સંરક્ષણ અને પ્રદૂષણ નિવારણ, જૈવવિવિધતા અને ટ્રિપલ બોટમ લાઈન વિશે પણ સમજાવ્યું હતું.

अदाणी फाउंडेशन ने मानसून में टपकती छत के नीचे रहने वाली आदिवासी लड़कियों की मदद की

लोकतेज संवाददाता

सूरत । सूरत जिले के आदिवासी बहुल इलाके उमरपाड़ा तालुका के छोटे से उमरदा गांव के वनराज आश्रम स्कूल में पढ़ने वाले करीब 75 छात्रों ने मानसून में एक जर्जर और टपकते छत वाले घर को हॉस्टल के तौर पर इस्तेमाल करते थे। अदाणी फाउंडेशन, हजीरा ने आश्रम स्कूल और प्रशासन से तालमेल बिठाते हुए तुरंत छात्रावास बनाना शुरू कर दिया।

छात्रावास का उद्घाटन हजीरा अदाणी पोर्ट के सीईओ कैप्टन अखिल किशोर सिंह ने किया।

अदाणी फाउंडेशन, हजीरा ने इन गरीब आदिवासी लड़कियों की दुर्दशा को समझा है और इस प्रणाली को तुरंत स्थापित करने के लिए संगठन के साथ सहयोग किया है। अब ये छात्र इस मानसून में रहने की चिंता किए बिना पढ़ाई कर सकेंगे।

नवनिर्मित छात्रावास में दो अलग-अलग हॉल हैं जिनमें 75 छात्र रह सकते हैं। पहले इन छात्रों को एक पुराने और जर्जर भवन के नीचे रहना पड़ता था। मानसून के दौरान जब हॉल में छत से पानी आता है तो उनके लिए जीना मुश्किल हो जाता था। नए छात्रावास में उनकी परेशानी का समाधान हुआ है अब साल भर पढ़ाई में अब कोई बाधा नहीं आएगी। कैप्टन अखिल किशोर सिंह, सीईओ- अदाणीहजीरा पोर्ट लिमिटेड ने व्यक्तिगत रूप से स्कूल का दौरा किया और आज वनराज आश्रम स्कूल, उमरदा में नवनिर्मित छात्रावास भवन का उद्घाटन किया। उन्होंने छात्रों के साथ बातचीत की और उन्हें एक सफल करियर और आगे के समृद्ध जीवन का मार्ग प्रशस्त करने के लिए प्रोत्साहित किया। इस मौके पर स्कूल के शिक्षक, तथा स्थानिय अधिकारीओं ने अदाणी फाउंडेशन हजीरा के काम की सराहना की गई।

અદાણી ફાઉન્ડેશન ચોમાસામાં ટપકતી છત નીચે રહેતી આદિવાસી કન્યાઓની વ્હારે આવ્યું

સુરત તા.૯ : સુરત જિલ્લાના આદિવાસી બહુલ એવા ઉમરપાડા તાલુકાના ખોબા જેવડા ઉમરદાગામમાં આવેલી વનરાજ આશ્રમ શાળામાં રહીને અભ્યાસ કરતી ૭૫ જેટલી છાત્રા એક જર્જરિત થયેલી અને ચોમાસમાં ટપકતી છતવાળા મકાનનો હોસ્ટેલ તરીકે ઉપયોગ કરતી હતી. છાત્રાઓ માટે હોસ્ટેલની જરૂરિયાત છે એની જાણ અદાણી ફાઉન્ડેશન, હજીરાને થતાં આશ્રમ શાળા અને વહીવટી તંત્ર સાથે સંકલન સાધીને તાત્કાલિક હોસ્ટેલનું મકાન બનાવવાની શરૂઆત કરી હતી. હજીરા અદાણી પોર્ટના સીઈઓ શ્રી કેપ્ટન અનિલ કિશોર સિંહના હસ્તે આ હોસ્ટેલનું લોકાર્પણ થયું હતું.અદાણી ફાઉન્ડેશન, હજીરાએઆ ગરીબ આદિવાસી કન્યાઓની વ્યથા સમજીને તુરંત આ વ્યવસ્થા ઊભી કરવા માટે સંસ્થાને સહયોગ આપ્યો છે. હવે આ વિદ્યાર્થિનીઓ આ ચોમાસે રેહવાની ચિંતા કર્યા વગર અભ્યાસ કરી શકશે.

નવનિર્મિત છાત્રાલયમાં બે અલગ-અલગ હોલ છે જેમાં ૭૫ વિદ્યાર્થીનીઓ રહી શકશે. અગાઉ આ વિદ્યાર્થીનીઓએ જૂની અને જર્જરીત ઈમારત નીચે રહેવું પડતું હતું. ચોમાસા દરમિયાન જ્યારે હોલમાં છત પરથી પાણી આવતું ત્યારે તેમના માટે રહેવું મુશ્કેલ થતું. નવી છાત્રાલયમાં એમની મુશ્કેલીનું નિરાકરણ થતાં સમગ્ર વર્ષ

દરમિયાન એમના શિક્ષણમાં હવે કોઈ ખલેલ નહીં પડે. શ્રી કેપ્ટન અનિલ કિશોર સિંહ, CEO-અદાણી હજીરા પોર્ટ લિ.એ અંગત રીતે સમય કાઢી શાળાની મુલાકાત લીધી અને આજે વનરાજ આશ્રમશાળા, ઉમરદા ખાતે નવનિર્મિત હોસ્ટેલ બિલ્ડીંગનું ઉદ્ઘાટન કર્યું. તેમણે વિદ્યાર્થીઓ સાથે વાર્તાલાપ કર્યો અને તેમને સફળ કારકિર્દી અને આગળ સમૃદ્ધ જીવન માટેનો માર્ગ મોકળો કરવા પ્રોત્સાહિત કર્યા.આ પ્રસંગે શાળાના શિક્ષકો, આગેવાનોએ અદાણી ફાઉન્ડેશન, હજીરાના આ કાર્યને બિરદાવ્યુ હતું.

અદાણી ગ્રામીણ ક્રિકેટમાં 52 ટીમો વચ્ચે જૂનાગામની શિવાલય ઈલેવન ચેમ્પિયન

સુરત, તા.૨૩

છેલ્લા દોઢ મહિનાથી હજીરાના કાંઠા વિસ્તારમાં અદાણી ગ્રામીણ ક્રિકેટ ટુર્નામેંટનો કાર્નિવલ જામ્યો હતો. સમગ્ર ચોર્યાસી અને ઓલપાડ તાલુકાના 40 ગામોની 52 ટીમના લગભગ 780 ખેલાડીઓએ આ ટુર્નામેન્ટ માં ઉત્સાહભેર ભાગ લીધો હતો. આ ટુર્નામેન્ટ નવચેતન ક્રિકેટ ગ્રાઉન્ડ, જૂનાગામ અને મોટાવાડા ક્રિકેટ ગ્રાઉન્ડ ઉપર રમાઈ હતી. દરેક ખેલાડીને અદાણી ફાઉન્ડેશન તરફથી ટી-શર્ટ અપાયા હતા. ટુર્નામેન્ટ ની ફાઈનલમાં વિજેતા ટીમ અને પરાજિત ટીમને રોકડ ઈનામ અને ટ્રોફી ઉપસ્થિત મહાનુભાવોના હસ્તે એનાયત કરવામાં આવી હતી.

આ ટુર્નામેન્ટના આયોજનનો મુખ્ય હેતુ કાંઠા વિસ્તારના યુવા રમતવીરો અને એમની રમતગમતના કૌશલ્યને પ્રોત્સાહન મળે તથા એ વિસ્તારના ગામો વચ્ચે સંવાદ અને એકતા વધે, લોકો વચ્ચે ખેલદિલી અને પરસ્પર ભાઈચારાની ભાવના વિકસાવવાનો રહ્યો છે. આ ટુર્નામેંટમાં 52 સ્થાનિક ટીમોએ ભાગ લીધો હતો અને ફાઈનલ મેચ શિવાલય ઈલેવન, જૂનાગામ અને મોરભગવા ઈલેવન ટીમ વચ્ચે રમાઈ હતી. મોરભગવાની ટીમે ટોસ જીતી શિવાલય ઈલેવનને બેટિંગ આપી હતી. શિવાલય ઈલેવને 20 ઓવરમાં 7 વિકેટ ગુમાવી 167 રન બનાવ્યા હતા, જેમાં સૌથી વધુ રન ચિરાગ પટેલે 28 બોલમાં 31 રન કર્યા હતા, મોરભગવા ઈલેવન તરફથી કેતન સારંગે 4 ઓવરમાં 35 રન આપી 3 વિકેટ લીધી હતી. અંતમાં મોરભગવા ઈલેવન 17.3 ઓવરમાં 10 વિકેટ ગુમાવી 130 રન જ કરી શકી હતી. જેમાં કેવિન પટેલે સૌથી વધુ 37 બોલમાં 31 રન કર્યા હતા, શિવાલય તરફથી નીરવ પટેલે 4 ઓવરમા 24 રન આપી 4 વિકેટ લઈ જીતનો પાયો નાખ્યો હતો.

હજીરા કાંઠા વિસ્તારના ચોર્યાસી અને ઓલપાડ તાલુકાના 40 ગામની 52 ટીમના 780 ખેલાડીઓએ ભાગ લીધો હતો

દિવ્ય ભાસ્કર બારડોલી-વ્યારા ભાસ્કર 24-05-2022

ચોર્યાસી અને ઓલપાડ તાલુકાના 40 ગામમાંથી 780 ખેલાડીઓએ ક્રિકેટ ટુર્નામેન્ટમાં ભાગ લીધો

ભાસ્કર ન્યૂઝ | બારડોલી

કાંઠા વિસ્તારના યુવા રમતવીરોમાં રમતગમતના કૌશલ્યને પ્રોત્સાહન મળે તથા એ વિસ્તારના ગામો વચ્ચે સંવાદ અને એકતા વધે, લોકો વચ્ચે ખેલદિલી અને પરસ્પર ભાઈચારાની ભાવના વિકસિત થાય એવા હેતુથી અદાણી ફાઉન્ડેશન-હજીરા દ્વારા હજીરા કાંઠા વિસ્તારમાં અદાણી ગ્રામીણ ક્રિકેટ ટુર્નામેન્ટ યોજાઈ હતી. જેમાં સમગ્ર ચોર્યાસી અને ઓલપાડ તાલુકાના 40 ગામોની ૫૨ ટીમના 780 ખેલાડીઓએ ટુર્નામેન્ટમાં ઉત્સાહભેર ભાગ લીધો હતો. આ ટુર્નામેન્ટ નવચેતન ક્રિકેટ ગ્રાઉન્ડ, જૂનાગામ અને મોટાવાડા ક્રિકેટ ગ્રાઉન્ડ ઉપર રમાઈ હતી. દરેક ખેલાડીને અદાણી ફાઉન્ડેશન તરફથી ટી-શર્ટ તેમજ ટુર્નામેન્ટની ફાઈનલમાં વિજેતા ટીમ અને પરાજિત ટીમને રોકડ ઈનામ અને ટ્રોફી ઉપસ્થિત મહાનુભાવોના હસ્તે એનાયત કરવામાં આવી હતી. ફાઈનલ મેચના અંતે કાંઠા વિસ્તાર સહકારી મંડળીના મંત્રી રમેશભાઈ પટેલ, મોટાવાડા સ્પોર્ટ્સ એસોસિએશનના પ્રમુખ નવીન પટેલ, જૂનાગામના સરપંચ ભગુભાઈ પટેલ, અદાણી ફાઉન્ડેશનના CSR હેડ પ્રિયેશ રાઠોડ, પ્રોગ્રામ મેનેજર ડો.આશુતોષ ઠાકર ઉપસ્થિત રહ્યા હતા.

વેકેશનમાં પણ બાળકો ને અભ્યાસ સાથે જોડી રાખવાનો ઉમદા પ્રયાસ

હજીરા કાંઠા વિસ્તારની સરકારી પ્રાથમિક શાળાઓના ધો-૪ થી ૮ના બાળકો માટે સમર કેમ્પનું આયોજન

ન્યાયદર્શન.સુરત,

બાળકો વેકેશનને મન મૂકીને માણે, બાળકોની મનપસંદ સહઅભ્યાસિક શૈક્ષણિક પ્રવૃત્તિઓ પ્રત્યે પોતાની રુચિ જળવાયેલી રહે, બાળકોની કુતુહલતા અને જિજ્ઞાસાવૃત્તિ સંતોષાય, બાળકોમાં એકતા, સહકાર, સમૂહ ભાવના, ખેલદિલી, ધીરજ જેવા ગુણોનો વિકાસ થાય, બાળકોમાં કોઠાસૂઝ વિકસે, શાળા સાથેનું જોડાણ જળવાઈ રહે અને બાળકો વધુ કાર્યદક્ષ બને તેવા હેતુસર અદાણી ફાઉન્ડેશન દ્વારા બાળકોના સર્વાંગી વિકાસ સંદર્ભે ઉત્થાન પ્રોજેક્ટ અંતર્ગત સરકારી પ્રાથમિક શાળાઓમાં સમર કેમ્પ નું આયોજન કરવામાં આવ્યું છે.

આ કેમ્પમાં બાળકોને અક્ષર સુધારણા (ગુજરાતી, હિન્દી, અંગ્રેજી), ઓરીગામી, સમૂહ વાંચન, પપેટ બનાવવા, અંક અને ઘડિયા લેખન, હાથરૂમાલ અને ટીશર્ટ પેઇન્ટિંગ, શબ્દ રમત, પેપર બેગ, ગ્રીટિંગ્સ કાર્ડ બનાવવા જેવી વિવિધ પ્રવૃતિઓ કરાવવામાં આવી રહી છે. હજીરા કાંઠા વિસ્તારના આઠ ગામના ધોરણ- ૪ થી ૮ ધોરણના કુલ ૪૧૨ બાળકો ખૂબ ઉત્સાહભેર સમર કેમ્પમાં ભાગ લઈ રહ્યા છે. કેમ્પમાં ભાગ લઈ રહેલા બાળકો ઉત્થાન સહાયક પાસેથી વિવિધ પ્રવૃત્તિ શીખી રહ્યા છે. આ સમર કેમ્પ પૂર્ણ થશે ત્યારે બાળકો દ્વારા તૈયાર થયેલ નમૂના નું પ્રદર્શન ગોઠવાશે, પ્રદર્શનમાં બી.આર. કો-ઓર્ડીનેટર સી.આર.સી., મુખ્ય શિક્ષકો, શાળા વ્યવસ્થાપન સમિતિના સભ્યો, સરપંચઓ બહોળા પ્રમાણમાં વાલીઓએ આમંત્રિત કરાશે. જેથી બાળકોને પ્રોત્સાહન પૂરું પાડી શકાય.

अदानी फाउंडेशन, हजीरा द्वारा आयोजित

अदाणी ग्रामीण क्रिकेट टूर्नामेंट में जूनागाम की शिवालय इलेवन चैंपियन बनी

चोर्यासी और ओलपाड तालुका के 40 गांवों के 52 टीमों के 780 खिलाड़ियों ने भाग लिया

लोकतेज संवाददाता

सूरत । पिछले डेढ़ महीने से हजीरा के तटवर्ती इलाके में अदाणी ग्रामीण क्रिकेट टूर्नामेंट का कार्निवल समाप्त हो गया था। पूरे चौरासी और ओलपाड तालुका के 40 गांवों की 52 टीमों के करीब 780 खिलाड़ियों ने टूर्नामेंट में बढ़-चढ़कर हिस्सा लिया। जूनागाम और मोटावाड़ा क्रिकेट ग्राउंड पर सभी मेच खेली गई। अदाणी फाउंडेशन की ओर से खिलाड़ी को टी-शर्ट दी गई। टूर्नामेंट के विजेता टीम और फाइनल में हारने वाली टीम को नकद पुरस्कार और ट्राफियां पुरस्कार यहा उपस्थित गणमान्य व्यक्तियों द्वारा प्रदान किया गया।

इस टूर्नामेंट के आयोजन का मुख्य उद्देश्य तटीय क्षेत्र के युवा एथलीट हैं और उनके खेल कौशल को प्रोत्साहित किया जाता है और गांवों के बीच संवाद और एकता बढ़ती है, लोगों में खेल भावना और पारस्परिकता बढ़ती है जो भाईचारे की भावना को विकसित करना है। इस टूर्नामेंट में 52 स्थानीय टीमों ने भाग लिया और फाइनल मैच शिवालय इलेवन, जूनागम और मोरभगवा इलेवन टीम के बीच खेला गया था।

मोरभगवा की टीम ने टॉस जीतकर बल्लेबाजी चुनी थी। शिवालय इलेवन ने 20 ओवर में 7 विकेट खोकर 167 रन बनाए जिसमें सबसे अधिक रन चिराग पटेल ने 28 गेंदों में 31 रन बनाए । मोरभगवा इलेवन की ओर से केतन सारंग ने 4 ओवर में 35 रन देकर 3 विकेट लिए। मोरभगवा इलेवन ने 17.3 ओवर में 10 विकेट गंवाए और 130 रन ही बना सके। जिसमें केविन पटेल ने सबसे अधिक 37 गेंद में 31 रन बनाए थे। शिवालय इलेवन की ओर से नीरव पटेल 4 ओवर में 24 रन देकर 4 महत्वपुर्ण विकट लेकर टीम में जीत की नींव रखी थी। फाइनल मैच के अंत में तटीय क्षेत्र सहकारी समिति के मंत्री रमेशभाई पटेल, मोटावाड़ा स्पोर्ट्स एसोसिएशन के अध्यक्ष, नवीन पटेल, जूनागम सरपंच भागूभाई पटेल, अदानी फाउंडेशन के सीएसआर हेड प्रियेश राठौर, कार्यक्रम प्रबंधक डॉ. आशुतोष ठाकर जैसे गणमान्य व्यक्तियों के हाथों पुरस्कार वितरण किया गया। मैन ऑफ द फाइनल मैच शिवालय इलेवन के नीरव पटेल, टूर्नामेंट के सर्वश्रेष्ठ बल्लेबाज दामका के कपिल पटेल और डाभरी के कमलेश पटेल को सर्वश्रेष्ठ गेंदबाज और प्लेयर ऑफ द सीरीज का पुरस्कार दिया गया।

जय श्री श्याम

चाका तेरी रहमतों के सहारे
मैं चलता हूँ,और
तेरा ही साथ लेकर आगे
बढ़ता हूँ,चाका तू
मुझसे नजर ना फेरना
कभी, इक तू ही है
जिसके सहारे मैं चलता
हूँ।। जय श्री श्याम.

R.N.I. REGD.NO.GUJHIN/2012/47584

अतुल्य हिन्दुस्तान

हिन्दी दैनिक

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अतुल्य हिन्दुस्तान
संवाददाता

सूरत। पिछले डेढ़ महीने से अदाणी ग्रामीण क्रिकेट टूर्नामेंट का कार्निवल हजीरा के तटीय इलाके में हो रहा है। चोर्यासी और ओलपाड तालुका के 40 गांवों की 52 टीमों के लगभग 780 खिलाड़ियों ने उत्साहपूर्वक टूर्नामेंट में भाग लिया। टूर्नामेंट नलचेतन क्रिकेट ग्राउंड, जूनागम और मोतावाड़ा क्रिकेट ग्राउंड में खेला गया था। अदाणी फाउंडेशन की ओर से हर खिलाड़ी को एक टी-शर्ट दी गई। टूर्नामेंट के फाइनल में विजेता टीम और हारने वाली टीम को उपस्थित गणमान्य व्यक्तियों द्वारा नकद पुरस्कार और ट्रॉफियां प्रदान की गईं।

इस टूर्नामेंट के आयोजन का मुख्य उद्देश्य तटीय क्षेत्र के युवा खिलाड़ियों और उनके खेल कौशल को बढ़ावा देना और क्षेत्र के गांवों में संवाद और एकता को बढ़ाना, लोगों में खेल भावना और भाईचारे की भावना विकसित करना है।

टूर्नामेंट में 52 स्थानीय टीमों ने भाग लिया और फाइनल मैच शिवालय इलेवन, जूनागम और मोरभगवा इलेवन के बीच खेला गया। मोरभगवती की टीम ने टॉस जीतकर पहले बल्लेबाजी करने का फैसला किया। शिवालय इलेवन ने 20 ओवर में 7 विकेट खोकर 167 रन बनाए जिसमें चिराग पटेल ने 28 गेंदों पर 31 रन बनाए, मोरभगवा इलेवन के केतन सारंग ने 4 ओवर में 35 रन देकर 3 विकेट लिए। अंत में मोरभागवा इलेवन ने 17.3 ओवर में 10 विकेट खोकर 130 रन ही बना पाई। जिसमें केलिन पटेल ने 37 गेंदों में 31 रन बनाए, शिवालय इलेवन के नीरव पटेल ने 4 ओवर में 24 रन देकर 4 विकेट लेकर शिवालय इलेवन की जीत की नींव रखी।

फाइनल मैच के अंत में कोंठा क्षेत्र सहकारी समिति के मंत्री रमेशभाई पटेल, मोटावाड़ा खेल संघ के अध्यक्ष श्री नवीन पटेल, जूनागम के सरपंच श्री भगुभाई पटेल, अदाणी फाउंडेशन के सीएसआर प्रमुख श्री प्रियेश राठौड़, कार्यक्रम प्रबंधक डॉ. आशुतोष, ठाकुर मौजूद थे। फाइनल में, मैन ऑफ द मैच शिवालय इलेवन के नीरव पटेल, टूर्नामेंट के सर्वश्रेष्ठ बल्लेबाज धामका के कपिल पटेल और डभारी के कमलेश पटेल को सर्वश्रेष्ठ गेंदबाज और प्लेयर ऑफ द सीरीज का पुरस्कार दिया गया।

અદાણી ફાઉન્ડેશન,હજીરા આયોજિત

અદાણી ગ્રામીણ ક્રિકેટ ટુર્નામેન્ટમાં જૂનાગામની શિવાલય ઈલેવન ૫૨ ટીમ વચ્ચે ચેમ્પિયન બની

સુરત : છેલ્લા દોઢ મહિનાથી હજીરાના કાંઠા વિસ્તારમાં અદાણી ગ્રામીણ ક્રિકેટ ટુર્નામેંટનો કાર્નિવલ જામ્યોહતો. સમગ્ર ચોર્યાસી અને ઓલપાડ તાલુકાના ૪૦ ગામોની ૫૨ ટીમના લગભગ ૭૮૦ ખેલાડીઓએ આ ટુર્નામેન્ટ માં ઉત્સાહભેર ભાગ લીધો હતો. આ ટુર્નામેન્ટનવચેતન ક્રિકેટ ગ્રાઉન્ડ, જૂનાગામ અનેમોટાવાડા ક્રિકેટ ગ્રાઉન્ડ ઉપર રમાઈ હતી. દરેક ખેલાડીને અદાણી ફાઉન્ડેશન તરફથી ટી-શર્ટ અપાયા હતા. ટુર્નામેન્ટ ની ફાઈનલમાં વિજેતા ટીમ અને પરાજિત ટીમને રોકડ ઈનામ અને ટ્રોફી ઉપસ્થિત મહાનુભાવોના હસ્તે એનાયત કરવામાં આવી હતી.

આ ટુર્નામેન્ટના આયોજનનો મુખ્ય હેતુ કાંઠા વિસ્તારના યુવારમતવીરો અને એમની રમતગમતના કૌશલ્યને પ્રોત્સાહન મળે તથા એ વિસ્તારના ગામો વચ્ચે સંવાદ અને એકતા વધે, લોકો વચ્ચે ખેલદિલી અને પરસ્પર ભાઈચારાની ભાવનાવિકસાવવાનો રહ્યો છે.

આ ટુર્નામેંટમાં ૫૨ સ્થાનિક ટીમોએ ભાગ લીધો હતો અને ફાઇનલ મેચ શિવાલય ઈલેવન, જૂનાગામ અને મોરભગવા ઈલેવન ટીમ વચ્ચે રમાઈ હતી. મોરભગવાની ટીમે ટોસ જીતી શિવાલય ઈલેવનને બેટિંગ આપી હતી. શિવાલય ઈલેવને ૨૦ ઓવરમાં ૭ વિકેટ ગુમાવી ૧૬૭ રન બનાવ્યા હતા, જેમાંસૌથી વધુ રન ચિરાગ પટેલે ૨૮ બોલમાં ૩૧ રન કર્યા હતા, મોરભગવા ઈલેવન તરફથી કેતન સારંગે૪ ઓવરમાં ૩૫ રન આપી ૩ વિકેટ લીધી હતી.

અદાણી ફાઉન્ડેશન-હજીરાના ઉત્થાન પ્રોજેક્ટ અંતર્ગત

વેકેશનમાં પણ બાળકોને અભ્યાસ સાથે જોડી રાખવાનો ઉમદા પ્રયાસ

હજીરા કાંઠા વિસ્તારની સરકારી પ્રાથમિક શાળાઓના ધો.૪ થી ૮ના બાળકો માટે સમર કેમ્પનું આયોજન

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બાળકો વેકેશનને મન મૂકીને માણે, મનપસંદ સહઅભ્યાસિક શૈક્ષણિક પ્રવૃત્તિઓ પ્રત્યે રૂચિ કેળવે એ માટે શાળા સાથેનું જોડાણ જળવાઈ રહે અને બાળકો વધુ કાર્યદક્ષ બને તેવા હેતુસર અદાણી ફાઉન્ડેશન દ્વારા ઉત્થાન પ્રોજેક્ટ અંતર્ગત સરકારી પ્રાથમિક શાળાઓમાં સમર કેમ્પનું આયોજન કરવામાં આવ્યું છે. જેમાં બાળકોને અક્ષર સુધારણા (ગુજરાતી, હિન્દી,અંગ્રેજી), ઓરીગામી, સમૂહવાંચન, પપેટ બનાવવા, અંક અને ઘડિયા લેખન, હાથરૂમાલ અને ટીશર્ટ પેઇન્ટિંગ, શબ્દરમતો, પેપરબેગ, ગ્રીટિંગ્સ કાર્ડ બનાવવા જેવી વિવિધ પ્રવૃતિઓ કરાવવામાં આવી રહી છે. હજીરાકાંઠા વિસ્તારના આઠ ગામના ધો.૪ થી ૮ કુલ ૪૧૨ બાળકો ખૂબ ઉત્સાહભેર સમર કેમ્પમાં ભાગ લઈ રહ્યા છે.

કેમ્પમાં બાળકો ઉત્થાન સહાયક પાસેથી વિવિધ પ્રવૃતિ શીખી રહ્યા છે. કેમ્પ પૂર્ણ થશે ત્યારે બાળકો દ્વારા તૈયાર થયેલ નમૂનાઓનું પ્રદર્શન ગોઠવાશે. પ્રદર્શનમા બી.આર. કો-ઓર્ડીનેટર સી.આર.સી., શિક્ષકો, શાળા વ્યવસ્થાપન સમિતિના સભ્યો, સરપંચો બાળકોને પ્રોત્સાહિત કરશે.

लोकतेज
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हजीरा कांठा क्षेत्र के शासकीय प्राथमिक विद्यालयों के समर केम्प का आयोजन

अदानी फाउंडेशन ने उत्थान परियोजना के तहत आयोजित समर कैंप के दौरान 412 छात्रों ने उत्साहपूर्वक भाग लिया

लोकतेज संवाददाता

सूरत। गर्मी की छुट्टियों में बच्चों की रचनात्मक शक्ति को बढ़ाने का प्रयास किया जा रहा है। समर कैंप के दौरान 412 छात्रों ने उत्साहपूर्वक अभिनव गतिविधियां कीं। कक्षा 4 से 8 के छात्र ग्रीष्म अवकाश में रचनात्मक कार्य करते हुए स्कूल में परीक्षाएं पूरी होने के बाद अब गर्मी की छुट्टी घोषित कर दी गई है। इन दिनों के दौरान छात्र पाठ्यपुस्तकों का अध्ययन नहीं करते बल्कि पाठ्येतर गतिविधियों में संलग्न होते हैं और अपनी रचनात्मक शक्ति को बढ़ाते हैं। अदानी फाउंडेशन ने उत्थान परियोजना के तहत एक ग्रीष्मकालीन शिविर का आयोजन किया है जिसमें छात्र विभिन्न गतिविधियों में लगे हुए हैं। बच्चे छुट्टियों का आनंद लेते हैं, उनकी पसंदीदा सह-पाठ्यक्रम शैक्षिक गतिविधियों में उनकी रुचि बनी रहती है, बच्चों की जिज्ञासा संतुष्ट होती है, बच्चों में एकता, सहयोग, टीम भावना, चंचलता, धैर्य जैसे गुण विकसित होते हैं, बच्चों में कुशलता का विकास होता है। अदाणी फाउंडेशन ने बच्चों के सर्वांगीण विकास के लिए उत्थान परियोजना के तहत सरकारी प्राथमिक विद्यालयों में समर कैंप का आयोजन किया है। इस शिविर में पत्र सुधार (गुजराती, हिंदी, अंग्रेजी), ओरिगामी, ग्रुप रीडिंग, कठपुतली बनाना, नंबर और घड़ियां लिखना, रूमाल और टी-शर्ट पेंटिंग, वर्ड गेम, पेपर बैग बनाना, ग्रीटिंग कार्ड बनाना जैसी विभिन्न गतिविधियां की जा रही हैं। समर कैंप में हजीरा कांठा क्षेत्र के आठ गांवों में आठवीं से आठवीं कक्षा तक के कुल 412 बच्चे बड़े उत्साह के साथ भाग ले रहे हैं। कैंप में भाग लेने वाले बच्चे उत्थान सहायक से विभिन्न गतिविधियां सीख रहे हैं। इस समर कैंप के पूरा होने पर बच्चों द्वारा तैयार किए गए नमूनों की प्रदर्शनी की व्यवस्था की जाएगी। यह बच्चों में रचनात्मक प्रवृत्ति को प्रोत्साहित करने और उनमें आत्मविश्वास पैदा करने के उद्देश्य से आयोजित किया जाएगा। प्रदर्शनी में बी.आर. समन्वयक, सीआरसी, शिक्षक, स्कूल प्रबंधन समिति के सदस्य, सरपंचों अभिभावकों को बड़ी संख्या में आमंत्रित किया जाएगा जिससे बच्चों को प्रोत्साहन मिलेगा।

એક ઉમદા પ્રયત્ન વેકેશનમાં પણ બાળકોને અભ્યાસ સાથે જોડી રાખવાનો પ્રયાસ

અદાણી ફાઉન્ડેશન હજીરાના ઉત્થાન પ્રોજેક્ટ અંતર્ગત હજીરા કાંઠા વિસ્તારની સરકારી પ્રાથમિક શાળાઓના ધોરણ ૪ થી ૮ ના બાળકો માટે સમર કેમ્પનું આયોજન

સુરત,તા.૦૬

બાળકો વેકેશનને મન મૂકીને માણે, બાળકોની મનપસંદ સહઅભ્યાસિક શૈક્ષણિક પ્રવૃત્તિઓ પ્રત્યે પોતાની રુચિ જળવાયેલીરહે, બાળકોની કુતુહલતા અને જિજ્ઞાસાવૃત્તિ સંતોષાય, બાળકોમાં એકતા,સહકાર,સમૂહભાવના, ખેલદિલી,ધીરજજેવા ગુણોનો વિકાસ થાય, બાળકોમાં કોઠાસૂઝ વિકસે, શાળા સાથેનું જોડાણ

જળવાઈ રહેઅને બાળકો વધુ કાર્યદક્ષ બને તેવા હેતુસર અદાણી ફાઉન્ડેશન દ્વારા બાળકોના સર્વાંગી વિકાસ સંદર્ભે ઉત્થાન પ્રોજેક્ટ અંતર્ગતસરકારી પ્રાથમિક શાળાઓમાં સમરકેમ્પનું આયોજન કરવામાં આવ્યું છે. આ કેમ્પમાં બાળકોને અક્ષર સુધારણા (ગુજરાતી, હિન્દી, અંગ્રેજી), ઓરીગામી, સમૂહ વાંચન, પપેટ બનાવવા,અંક અને ઘડિયા લેખન,હાથરૂમાલ અને ટીશર્ટ પેન્ટિંગ, શબ્દ રમતો, પેપર બેગ, ગ્રીટિંગ્સ કાર્ડ બનાવવાજેવી વિવિધ પ્રવૃતિઓ કરાવવામાં આવી રહી છે.

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અદાણી ફાઉન્ડેશન દ્વારા હજીરાના કાંઠા વિસ્તારના ગામોમાં વિવિધ વિકાસ કાર્યો કરાયા

ભટલાઈ, દામકા અને સુવાલી ખાતે તળાવ ઉંડા કરવાની કામગીરી સહિત મોરા સર્કલથી ગામ સુધી ફેન્સીંગ અને વૃક્ષારોપણ કરવામાં આવ્યું

ધબકાર પ્રતિનિધિ, સુરત, તા. ૦૬

અદાણી ફાઉન્ડેશન હજીરા કાંઠા વિસ્તારના અને ગામોમાં આરોગ્ય, શિક્ષણ, તાલીમ અને માળખાગત સુવિધાના વિકાસને લગતી અનેક પ્રવૃતિ સાથે સંકળાયેલું છે. અદાણી ફાઉન્ડેશન ભારતના વિવિધ પ્રદેશોમાં સમુદાયના ટકાઉ આજીવિકા વિકાસમાં સંકળાયેલું હોવાથી વિવિધ કામગીરી માટે વિનંતી આવતી હોય છે. એ અંતર્ગત જ હજીરાના કાંઠા વિસ્તાર મોરા, ભટલાઈ, દામકા, સુવાલી ગામમાંથી આવેલી વિવિધ વિનંતીની કામગીરી તાજેતરમાં જ પૂર્ણ થઈ છે.

સુરતના ચોર્યાસી તાલુકામાં મહત્તમ ગામો દરિયાકાંઠે છે એથી ભૂગર્ભ જળ ખારું હોવાથી સિંચાઈ હેતુ માટે તેનો ઉપયોગ કરી શકાતો નથી. મોટાભાગના વિસ્તારોમાં સિંચાઈ માટે તાજા પાણીની પહોંચ પડકારજનક મુદ્દો છે. વરસાદને સાચવવો અને ચોમાસા પછી સિંચાઈ માટે તેનો ઉપયોગ કરવો પ્રદેશો માટેનો એક ઉપાય છે. સરકાર 'આઝાદી કા અમૃત મહોત્સવ' અંતર્ગત તળાવ ઉંડા કરવાનું પણ આયોજન કરી રહી છે. અદાણી ફાઉન્ડેશનને ગ્રામ પંચાયત તરફથી મળેલી વિનંતીને આધારે હજીરા વિસ્તારના દામકા, સુવાલી અને ભટલાઈ ગામમાં નવા ૦૩ તળાવ બનાવવાની કામગીરી ચોમાસા અગાઉ કરી હતી. એક તળાવની ક્ષમતા લગભગ ૨૦,૦૦૦ ઘન મીટર જેટલી છે. જેનો ઘરેલું, સિંચાઈ હેતુ અને પશુઓ માટે ઉપયોગ કરી શકશે. આખરે તો પાણી આ વિસ્તારના લોકોની આર્થિક સ્થિતિને સુધારવામાં મદદ કરશે. ઉપરાંત ભૂગર્ભ જળને રિચાર્જ કરશે અને તેની ગુણવત્તામાં પણ સુધારો કરશે.

હજીરાના કાંઠા વિસ્તારમાં મોરા ગામ અને એની મધ્યનો બજાર મહત્વનો છે. મોરા ગામના મુખ્ય રસ્તાની બંને બાજુ દુકાનો છે અને ફેરિયાઓ ફળ-શાકભાજી વેચવા માટે બેસે છે. રસ્તાને જુદું પાડતું રોડ ડિવાઈડર ખુલ્લુ હતું એની ઉપર કોઈ ફેન્સિંગ ન હતી. જેથી ફેરિયાઓ આ ડિવાઈડરની વચ્ચે કચરો નાખી જતાં તેથી રખડતા પશુઓ આવી ચઢતા હતા. તેમજ લોકો પણ રસ્તો ક્રોસ કરવા માટે આ ડિવાઈડર ઓળંગીને જતાં. અનેક વખત અહીં નાના-મોટા અકસ્માતો, ટ્રાફિક જામ જેવી અનેક સમસ્યાઓ હતી. આ બધા કારણોસર મોરા ગામના સરપંચે એક વિનંતી અનુસાર મુખ્ય માર્ગ ઉપર આવેલા રોડ ડિવાઈડરને વ્યવસ્થિત કરીને એની ઉપર નવી ફેન્સિંગ કરી આપવાની રજૂઆત કરી હતી. તેથી મોરા ગામના મુખ્ય માર્ગ ઉપરના ડિવાઈડરની ઉપર નવી અને મજબૂત રેલિંગ બનાવી વૃક્ષારોપણ કરી પર્યાવરણને ઉપયોગી થઈ સુશોભનનું પણ કાર્ય કરવામાં આવ્યું છે. નવા ડિવાઈડર સુંદર થયાની સાથે મુખ્ય માર્ગ પર અકસ્માતના જોખમમાં પણ નોંધપાત્ર ઘટાડો કરશે.

Annexure-3:

Compliance Status of EMP as mentioned in the Integrated EIA Report, Sep. 2012:

S. No.	EMP Conditions	Compliance Status as on 30th September 2022
I.	**AS PER TERRESTRIAL ENVIRONMENTAL IMPACT ASSESSMENT REPORT: -**	
A	**CONSTRUCTION PHASE:-**	
1.	**Dredged Soils Management Plan:** AHPL has been permitted to dredge about 37 million cubic meter of soil, which shall be reused for backfilling in the project site. The dredged soil samples will be collected and analysed periodically for designated pollutants as per the recommendations of statutory authorities.	**Complied**. No disposal was done till date. All the dredging material was utilized for level raising, reclamation. If any excess material generated will be disposed of at the location already approved by the MoEF&CC.
2.	**Air Quality Management:** Fugitive dust will be generated during construction phase of the project due to handling of wet dredged and excavated soils. Dust control program will be implemented to reduce the dust generation during construction at project site. Water sprinkling will be adopted on haulage roads and construction site.	**Being Complied** Water sprinkling was being done on haulage roads on regular basis.
3.	**Noise Control Programs:** 1. Onsite fabrication activities should be undertaken at a designated location, which should be located away from the office buildings and any other working areas. 2. In case noise emissions from the fabrication activities exceed a level of 85 dB (A) at the fence-line of the fabrication yard, temporary noise barrier can be installed. 3. Portable diesel engine generators and diesel engine driven compressors, if any, should be covered with noise enclosures.	**Complied** Fabrication activities was done at a designated location away from the office buildings and working areas. **Complied** Noise level was below 85 dB(A) during the fabrication. Currently no fabrication activities are going on. **Complied**. In-built noise enclosures are available in portable diesel engine generators and diesel engine driven compressors to reduce the noise level.
4.	**Sewage Management Program:** Sewage generated from the construction site will be treated in modular STP and shall be used for green belt development / landscaping after achieving prescribed standards by GPCB.	**Being Complied** Sewage generated from the construction site is being treated in STP and treated water is being used for greenbelt development.
5.	**Solid and Hazardous Waste Management Program:** The solid waste generated should be segregated and categorized under various rules such as HWM 2008, SWM 2000, the Batteries Rules 2001 including processing of used oil by authorized recyclers should be carried out by the rules and procedures prescribed by CPCB and also meet the requirements of GPCB.	**Being Complied** All the wastes are being segregate at source and handled as per applicable rules/ guidelines and disposed off through GPCB approved agency.

6.	**Construction Phase Storm Water Runoff:** It has been recommended to adopt soil stabilization plans and storm water sedimentation basins to control the silt before discharging the storm water into sea.	**Complied** Separate storm water drain was developed to discharge the storm water.
7.	**Sanitation:** The facilities presently available with the nearby villages will continued to be used during construction activities and no major sanitation problem is expected during construction period. The workers at the project site will be provided with proper sanitation arrangement.	**Complied** Proper sanitation arrangements were available for workers at project site.
B.	**OPERATION PHASE: -**	
1.	**Air Quality Management:**	
i.	**Cargo-Handling Equipment**: 1. Retrofitting the old equipment to meet the vehicular emission standards. 2. All the vehicles and equipment will be certified with PUC norms shall be deployed.	**Being Complied** All the deployed vehicles and equipment are PUC certified.
ii.	**Standby Diesel Generators:** DG Sets will be operated on clean diesel fuel with sulphur content less than 0.5%. Minimum stack height of 30m will be provided to disperse the gases into the atmosphere as per the guidelines suggested by Central Pollution Control Board.	**Being Complied** DG Sets are being operated only in case of power failure, DG are operated on clean diesel fuel with sulphur content less than 0.5% and provided the adequate stack height are being provided as per CPCB/GPCB norms to disperse the gases into the atmosphere.
iii.	**Fugitive Coal Dust Control Program:** The management of AHPL has proposed to adopt the following fugitive coal dust control measures: - **a. Dry Fog System -** A new, proven and cost effective technique to control dust is "**Dry Fog**" system to suppress the dust from the air. The name fog is just what it implies small droplets of water injected into the air. Fogging works by releasing very small droplets of water into the air. Airborne dust particles adhere to the water droplet and agglomerate. If the fog is generated in the right way, by using pressurized water, the energy required can be very low between 2 to 3 kW for a system requiring hundreds of nozzles, e.g.: A large stockpile tripper conveyor - giving considerable operating cost savings when compared to other techniques, The sprinkler droplet sizes should be maintained less than 100 microns. **b. Sprinklers:** Once stockpiled, water can be sprayed on the stockpiles to keep them damped down. Swivelling sprinklers should be used along the lengths of the stockpile with caution, however, as the volume of water required can be significant, causing drainage and run-off treatment problems.	**Complied**. Following control measures are in place and effectively working at port to control fugitive dust: - 1. Transportation of coal from jetty to coal storage yard through 1.7 Km. long conveyor belt with hood. 2. Water sprinklers in the coal yard, 3. Dust Suppression System / Spray Nozzles in Conveyor System and Discharge Chute, 4. Water spray through Water Browsers, 5. Water Mist Canon / Fog System, 6. Wind Brake Shield of 14 meters high and 1900 meters long, 7. Transportation of cargo from port to hinterland is being done through dumpers / trucks covered with tarpaulin, 8. Regular cleaning of the roads through Road Sweeping Machines, and 9. Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 78.79 ha within the port premises.
2.	**Noise Control Program:**	**Complied**.

	The following source noise control plans have been suggested: - ➢ Covering of sound intensive components with insulation. ➢ Using noise absorbing building materials if required for housing compressors and diesel generators etc. as per the guidelines suggested by Central Pollution Control Board. ➢ Adopting low noise driving (Eco-driving) ➢ Using silent exhaustion pipes for major diesel engine vehicles and heavy trucks operated inside the port. ➢ Planting trees which act as barrier to arrest dispersion of noise levels. ➢ Using electricity powered equipment inside the port instead of diesel powered ones will be explored to the extent possible.	• All the sound intensive components (DG Set and Compressor) are with acoustic enclosures. • Green belt development is in progress. • All RTGs and Quay Cranes are electricity operated.
3.	**Waste Water Management:** Port handling operations would generate wastewater from the following sources: - 1. Ship ballast water, 2. Ship deck wastewater including sewage, 3. Rejects from desalination plant, 4. Workshop and vehicle maintenance shop wastewater, 5. Leachate from coal stock yard, 6. Floor cleaning and tank cleaning wastewater from the liquid tank farm, 7. Sewage from port facilities. The proposed wastewater treatment and reuse program has been presented hereunder: - A variety of vessels use the waters within the port, including bulk coal ships, tugs and line boats. Discharges from bulk ships are not expected to occur within the port because these large ships normally have on-board storage and sewage treatment plants, allowing discharge of treated effluent at sea as per the provision of MARPOL. ➢ Except monsoon, leachate from coal stock yard is not envisaged. However small quantities, if any, will be treated in the effluent treatment plant. Wastewater from vehicle work-shops will also be treated in the proposed onsite effluent treatment plant. ➢ As far as possible all chemical spills at liquid handling facilities will be treated with dry spill absorbing material and water will not be used. Spillage if any occurs will be treated in a dedicated onsite wastewater treatment plant, which consists of an oil removal unit, primary chemical treatment unit and biological treatment	**Being Complied** - AHPL is not accepting Ballast/ Sewage water from Ships. - Desalination plant not yet installed. - There is no effluent generation from workshop. Vehicle maintenance is not done in port premises. - There is no leachate from dump pond. - Tank cleaning wastewater is being treated into ETP. - Domestic waste water is being treated in the STP and then used for horticulture purpose within the port premises. **Complied**. Dedicated coal dump pond is provided to collect the runoff (if any) from coal yard and it is further reused for dust suppression purpose into coal yard. **Complied with**. No spill has occurred till date. If, spills occurred, spilled material/chemical will be treated into ETP and treated wastewater will be reused in greenbelt development / plantation purpose.

	units followed by activated carbon unit. Biologically treated wastewater will be further treated in the central sewage treatment plant. Treated wastewater will be used for dust suppression and horticulture applications at the facility. No treated wastewater will be discharged outside the port facilities.	
4.	**Storm Water Management Plan:** ➢ Storm water from the coal stockpile area will be passed through a series of sediment traps to remove the majority of the coal sediment before discharging into the natural drains. It has been proposed to construct a garland drain for all bulk storage facilities to avoid silting into the marine eco-system. ➢ All liquid storage tanks will be provided with dykes to avoid any cross contamination of storm water from chemical spills. Storm water drains shall be designed in order to avoid any flooding of the coal stock yard and liquid chemical tank farm areas.	**Complied** Garland drain for all bulk storage facilities are provided to avoid silting into the marine eco-system. Storm water from the coal stockpile area is collected into dump ponds to remove the coal sediment. **Complied**. All liquid storage tanks are provided with dykes to avoid any cross contamination of storm water from chemical spills. Storm water drains and effluents drains are separate.
5.	**Solid and Hazardous Waste Management:** ➢ Solid wastes generated from the port handling facilities consist of packaging waste such as wood, paper/carton, steel scrap etc. ➢ All the hazardous wastes and solid wastes such as Oil containing cargo residue, Chemical containing cargo residue and sludge, contaminated cotton waste, spent exchange resin and ETP Sludge, etc. shall be segregated at source and stored at the earmarked area. ➢ Recyclable wastes will be collected and disposed to waste recycling vendors through certified recyclers wherever applicable. ➢ Hazardous wastes include contaminated chemical spills, spent dry adsorbing spill absorbing material used for large marine and onshore chemical spills, used lubricating oils and greases. The chemicals spill inventories and spent dry absorbing material will be stored in a dedicated onsite tank and will be disposed to authorized hazardous waste incinerators.	**Complied**. - Solid wastes generated during port development i.e.: construction & demolition wastes are reused for level rising of low lying area within the port premises. Kitchen/ Food, Horticulture/Garden wastes are being sent to Organic Waste Converter (OWC) to convert it into compost and reused as manure in greenbelt/plantation. - Packaging materials generated from the cargo handling i.e.: Wood, Paper/Carton, Steel Scrap, Plastic/Tarpaulin etc. are collected and sold out to recyclers. **Complied**. All the wastes are segregated at source and stored at a dedicated Hazardous Waste storage shed/yard. **Complied**. Recyclable waste is being collected and disposed of through CPCB/GPCB registered recyclers. **Complied**. No spill has occurred till date.

	➢ Spent lube oils and greases will be disposed to authorized used oil recycling vendors. ➢ A dedicated and completely enclosed shed will be identified to store the hazardous wastes in order to avoid any cross contamination from storm water. ➢ All the waste should be segregated, collected, categorized as per the HWM Rules 2008, SWM Rules 2000 and Batteries Rules 2001 prescribed by CPCB under Environmental Protection Act, 1986.	**Complied**. Recyclable wastes is being collected and disposed off through CPCB/GPCB registered recyclers. **Complied**. All the wastes are stored at a dedicated hazardous waste storage shed/yard. **Being Complied** All the wastes are being segregate at source and handled as per applicable rules/ guidelines.
6.	**Greenbelt and Plantation:** ➢ AHPL will develop thick green belt plantation in and around the proposed project facility covering 81.27 Ha. Efforts will be taken to increase the green cover in and around the project boundary using local species with a view to ameliorating project related disturbances and enhancing the ecological value of the area. Greenbelt would be developed as per the CPCB guidelines. ➢ A capital cost of Rs. 1.62 Crore and an annual recurring budget of Rs. 0.65 Crore will be earmarked for this purpose.	**Complied** Company has set up dedicated greenbelt area for plantation at periphery / avenue plantation / landscaping etc. Total greenbelt area developed so far is approx. 78.79 ha till 30th September 2022. Horticulture budget for FY 2022-23 is Rs. 169 Lakhs and expenditure during compliance period is INR 54.23 Lakhs.
7.	**Community Development Plan:** AHPL has identified focused areas for community development and implement developmental program. The identified activities under CSR program are as follows: - 1. Infrastructure development for educational facilities like building of schools, computer rooms, multipurpose activity halls 2. Supporting education through distribution of stationary, scholarships, science kits, bicycles to children, conducting education camps, competitions. 3. Strengthening the community health by arranging health camps, AID awareness camps, providing financial support to senior citizens and poor people, building dispensaries and mobile dispensaries. 4. Improvement of rural sanitation by conducting mass awareness campaign, helping villagers for constructing and maintaining household toilets, school toilets. 5. Improvement in animal husbandry and agriculture by arranging camps for farmers and cattle owners, conducting programs to use new irrigation technologies, organic farming, and free fodder supply. 6. Organizing need based skill development program to women and youth for their empowerment. 7. Rural infrastructure development by construction of rainwater harvesting ponds, check dams, roads, bus	**Complied**. • CSR activities carried out by Adani Foundation in four verticals i.e.: - (1) Education, (2). Community Health, (3). Sustainable Livelihood and (4). Rural Infrastructure Development. • Detail of the CSR activities along with budgetary provisions and progress are regularly submitted to MoEF & CC as part of six monthly compliance reports. • Please refer the **Annexure-2** for the status of the CSR activities during the compliance period Financial Year: 2021-22. The total Expenditure in CSR activities in the Compliance period is INR **162.85** Lacs. **S.NO** | **FY** | **Budget (In INR Lacs)** | **Expenditure (In INR Lacs)** 1 | 2019-20 | 330.53 | 265.75 2 | 2020-21 | 255.13 | 223.61 3 | 2021-22 | 668.89 | 469.35

	stops, drainage systems, fish landing shed, solar street lamps. AHPL has committed to spend about Rs. 8.21 Crore in the first five years of the operation towards various rural upliftment and community development programs and tentative budget has been presented in the below table - Budgeted Expenditure for CSR and Community Development Activities:- **S. No. / Descriptions / Budgeted Amount For 1st 5 year Period (Amount rupees in Crore)** 1 Education 2.29 2 Community Health 1.18 3 Sustainable Livelihood Activities 1.43 4 Rural Infrastructure Development 2.04 5 Entry Point Activities 1.27 **Total 8.21**	
II.	**MARINE ENVIRONMENT MANAGEMENT PLAN:**	
A.	**CONSTRUCTION PHASE: -** ➢ The dredge spoil generated during capital dredging will be used for land reclamation for the port development and associated utilities. ➢ Unused dredged material will be disposed off at approved dump sites to the north of port area including dredged soil generated through maintenance dredging. ➢ Appropriate dredging methodology shall be adopted to control the generation of high levels of suspended solids. If the suspended solids concentration increases, the dredging operation should be stopped till the normal conditions are achieved. ➢ General clean up along the corridor used for construction related activities, adjacent intertidal areas, creeks etc. should be undertaken and all the discarded materials must be removed from the site and aesthetic quality of the surroundings to be restored, once the construction activities are completed.	**Complied**. No disposal has been done till date. All the dredging material is being utilized for level raising, reclamation. **Complied** If any excess material generated will be disposed of at the location already approved by the MoEF&CC. **Noted & Being Complied** Monitoring of turbidity level in the sea water is being done and there is no abnormal increase observed. **Being Complied**. Clean up of the area is regularly being done.
B.	**OPERATION PHASE: -** The following mitigation measures are recommended during port operation: - ➢ Sewage generated from the port operations will be treated in sewage treatment plant and treated water shall be used for horticulture and green belt development. ➢ All the solid waste generated from the port will be properly segregated, stored and disposed as per the applicable statutory requirement. ➢ All the structures shall be designed in such a way that it should not restrict the prevailing tidal ingress in the	**Complied**. Sewage generated from the port operations is being treated in STP and treated water is being used for horticulture and green belt development. **Complied**. All the solid waste generated from the port is properly segregated, stored and disposed as per the applicable rules. **Being Complied** Free flow to the mangrove is not restricted by any of our activity.

	creek and mangrove habitats in the vicinity to ensure good health condition. ➢ Coastline between Suwali Point and Tapti Estuary mouth and around the port area will be periodically surveyed to assess erosion and accretion. Should the need arises the corrective action in terms of shore stabilization shall be undertaken. ➢ All the minor and major spillages of chemicals will be effectively controlled with appropriate tools and equipments. ➢ An oil/chemical spill management plan shall be evolved and be in place for tier-1 (100t) and tier-2 (700t) spills in consultation with Gujarat Maritime Board/Coast Guard. ➢ All the marine outfall shall meet the Gujarat Pollution Control Board Effluent Discharge Criteria for Seawater Disposal Standards. ➢ Monitoring of water area of the port and effluent disposal sited shall be studied for pH and Corg, Suspended Solids, DO, BOD in order to identify for deviations if any from the baseline environmental quality. ➢ The mitigation measures suggested for effluent release and maintaining of effluent disposal sites should also be adopted for effluent release by NIKO should be implemented.	**Complied**. Shoreline change study was conducted by NIO, Vizag during the period from November, 2014 to December, 2015. Study confirms that there is no significant change in the nearby shoreline except for the approved layout of the AHPL. The report did not warrant any mitigation measures. **Noted and Being Complied**. Shoreline Change Assessment in the port boundary and nearby the area of 10 km radius is conducted by Gujarat Institute of Desert Ecology. The report is attached herewith as Annexure … There is no oil spill till date. **Complied**. Oil Spill Contingency Plan has been prepared and the same was approved/vetted by Indian Coast Guard (Letter No.: 7563, dated 09.01.2014). **Noted and Being Complied** No effluent is being discharged. **Complied**. Please refer the **Annexure-4D** for the Sea Water Quality Monitoring / Analysis Reports for the compliance period April 2022 to September 2022 AHPL is not discharging any effluent outside the port premises.

***

ANNEXURE-4

Environmental Monitoring / Analysis Results For The Period From April 2022 to September 2022

4A. AMBIENT AIR QUALITY MONITORING (APRIL - 2022 TO SEPTEMBER - 2022): -

Table-1.1: Ambient Air Quality Monitoring Results At Near Port Gate No.: 2

Sr. No.	Date of Sampling	Location-1: Near Port Gate No.: 2 (N 21° 05.426'E 72° 37.739')											
		PM_{10}	$PM_{2.5}$	Pb	BaP	As	Ni	CO	C_6H_6	NH_3	SO_2	NO_X	O_3
		µg/m³	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
1	04-04-2022	81.64	43.23	ND*	ND*	ND*	ND*	0.58	ND*	38.73	23.27	38.3	22.17
2	08-04-2022	89.63	50.23	0.69	ND*	2.23	10.28	0.93	ND*	35.88	17.61	30.68	29.69
3	11-04-2022	72.56	38.47	ND*	ND*	ND*	ND*	0.78	ND*	43.86	24.23	36.91	26.44
4	15-04-2022	91.58	52.49	0.61	ND*	2.56	10.83	0.56	ND*	36.41	21.52	42.37	24.91
5	18-04-2022	82.49	42.95	ND*	ND*	ND*	ND*	0.57	ND*	25.24	18.74	34.59	28.61
6	22-04-2022	71.96	32.7	ND*	ND*	ND*	ND*	0.94	ND*	41.55	20.73	28.46	30.28
7	25-04-2022	84.29	44.23	0.56	ND*	2.46	10.61	0.38	ND*	37.33	26.41	39.54	25.79
8	29-04-2022	67.56	33.93	ND*	ND*	ND*	ND*	0.92	ND*	27.58	19.67	37.61	23.26
9	02-05-2022	86.23	47.23	0.82	ND*	2.3	10.21	0.72	ND*	34.59	24.62	40.28	30.28
10	05-05-2022	81.29	45.06	ND*	ND*	ND*	ND*	0.66	ND*	31.23	20.49	31.65	22.44
11	09-05-2022	74.57	34.64	ND*	ND*	ND*	ND*	0.61	ND*	28.32	23.7	37.59	29.44
12	12-05-2022	69.33	30.41	ND*	ND*	ND*	ND*	0.78	ND*	30.54	25.72	41.56	19.47
13	16-05-2022	78.58	39.2	ND*	ND*	ND*	ND*	0.82	ND*	41.79	22.51	29.42	27.52
14	19-05-2022	90.51	48.67	0.72	ND*	2.46	10.57	0.56	ND*	29.48	18.68	35.37	21.59
15	23-05-2022	77.54	43.23	ND*	ND*	ND*	ND*	0.6	ND*	33.51	14.29	32.59	28.86
16	26-05-2022	89.51	50.44	0.65	ND*	2.56	10.33	0.71	ND*	42.59	17.27	36.36	26.22
17	30-05-2022	79.44	41.92	ND*	ND*	ND*	ND*	0.68	ND*	47.54	19.56	28.45	24.88
18	02-06-2022	73.85	34.31	ND*	ND*	ND*	ND*	0.6	ND*	30.38	16.18	31.93	23.8
19	06-06-2022	84.26	48.27	0.58	ND*	2.46	10.33	0.88	ND*	38.29	22.71	38.63	19.44
20	09-06-2022	80.88	45.27	ND*	ND*	ND*	ND*	0.82	ND*	33.95	17.34	34.57	28.45
21	13-06-2022	63.48	37.2	ND*	ND*	ND*	ND*	0.87	ND*	42.43	24.22	39.32	25.71
22	16-06-2022	89.37	51.24	0.68	ND*	2.22	10.72	0.71	ND*	31.76	19.48	37.59	30.27
23	20-06-2022	72.12	36.37	ND*	ND*	ND*	ND*	0.46	ND*	39.66	15.31	26.83	24.55
24	23-06-2022	85.33	49.27	0.61	ND*	2.39	10.44	0.5	ND*	28.58	23.56	35.2	29.24
25	27-06-2022	78.69	42.6	ND*	ND*	ND*	ND*	0.86	ND*	25.88	18.61	41.61	27.67
26	30-06-2022	69.25	40.63	ND*	ND*	ND*	ND*	0.94	ND*	29.22	21.35	33.78	22.62
27	04-07-2022	80.12	43.6	0.68	ND*	2.26	10.57	0.8	ND*	42.63	18.53	32.42	26.53
28	07-07-2022	66.27	34.56	ND*	ND*	ND*	ND*	0.58	ND*	35.65	15.08	27.52	29.47

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29	11-07-2022	72.24	41.52	ND*	ND*	ND*	ND*	0.92	ND*	25.42	24.36	38.7	23.78
30	14-07-2022	59.27	29.62	ND*	ND*	ND*	ND*	0.66	ND*	40.55	14.43	33.56	28.46
31	18-07-2022	74.36	44.49	ND*	ND*	ND*	ND*	0.38	ND*	26.45	17.14	35.65	31.52
32	21-07-2022	81.62	40.58	0.58	ND*	2.34	10.39	0.9	ND*	32.23	23.66	29.24	25.4
33	25-07-2022	67.52	33.26	ND*	ND*	ND*	ND*	0.79	ND*	34.57	16.6	34.24	20.26
34	28-07-2022	71.46	38.1	ND*	ND*	ND*	ND*	0.65	ND*	38.66	21.89	39.2	24.21
35	01-08-2022	88.56	48.56	0.68	ND*	2.54	10.33	0.52	ND*	33.41	25.39	38.53	27.63
36	04-08-2022	79.33	40.56	ND*	ND*	ND*	ND*	0.7	ND*	26.33	18.37	29.53	25.89
37	08-08-2022	85.69	46.23	0.8	ND*	2.65	10.54	0.42	ND*	36.57	23.68	31.22	16.34
38	11-08-2022	74.35	42.66	ND*	ND*	ND*	ND*	0.76	ND*	39.55	21.3	36.36	21.56
39	15-08-2022	65.57	37.66	ND*	ND*	ND*	ND*	0.58	ND*	46.55	15.28	33.53	26.55
40	18-08-2022	78.69	44.5	ND*	ND*	ND*	ND*	0.81	ND*	40.25	17.53	27.38	28.36
41	22-08-2022	83.53	47.56	0.75	ND*	2.46	10.45	0.6	ND*	27.25	22.37	37.53	24.23
42	25-08-2022	72.18	35.47	ND*	ND*	ND*	ND*	0.92	ND*	44.25	20.51	32.63	29.51
43	29-08-2022	77.53	39.59	ND*	ND*	ND*	ND*	0.78	ND*	34.52	24.57	39.37	23.68
44	01-09-2022	69.21	33.64	ND*	ND*	ND*	ND*	0.62	ND*	40.22	22.4	35.67	28.45
45	05-09-2022	85.69	43.68	0.65	ND*	2.42	10.33	0.64	ND*	25.61	26.2	39.59	22.36
46	08-09-2022	66.42	39.27	ND*	ND*	ND*	ND*	0.7	ND*	44.26	19.81	32.5	26.33
47	12-09-2022	60.84	26.41	ND*	ND*	ND*	ND*	0.52	ND*	31.23	17.32	37.59	29.48
48	15-09-2022	54.62	28.45	ND*	ND*	ND*	ND*	0.46	ND*	35.35	20.57	40.27	16.52
49	19-09-2022	74.53	42.5	ND*	ND*	ND*	ND*	0.78	ND*	26.39	15.35	36.55	27.58
50	22-09-2022	91.54	48.6	0.78	ND*	2.56	10.45	0.87	ND*	36.82	23.91	30.22	18.31
51	26-09-2022	63.82	25.51	ND*	ND*	ND*	ND*	0.8	ND*	39.38	25.36	33.46	23.53
52	29-09-2022	80.26	44.26	0.55	ND*	2.22	10.17	0.92	ND*	22.49	21.53	38.59	30.54

Observation: Above given Results are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-Idt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

ND*: - Not Detected - Lead as Pb ($\mu g/m^3$): 0.5
ND*: - Not Detected - Carbon Monoxide as CO (mg/m^3): 0.01
ND*: - Not Detected - Benzene as C_6H_6 ($\mu g/m^3$): 2
ND*: - Not Detected - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
ND*: - Not Detected - Arsenic as As (ng/m^3): 2
ND*: - Not Detected - Nickel as Ni (ng/m^3): 5

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Table-1.2: Ambient Air Quality Monitoring Results at HSE Building Terrace

Sr. No.	Date of Sampling	Location-2: HSE Building Terrace (N 21° 05.043′ E 72° 38.491′)											
		PM_{10}	$PM_{2.5}$	Pb	BaP	As	Ni	CO	C_6H_6	NH_3	SO_2	NO_X	O_3
		µg/m³	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
1	04-04-2022	53.64	26.51	ND*	ND*	ND*	ND*	0.52	ND*	18.99	10.75	21.67	16.2
2	08-04-2022	48.54	18.97	ND*	ND*	ND*	ND*	0.63	ND*	15.18	6.42	14.59	13.77
3	11-04-2022	63.39	31.67	ND*	ND*	ND*	ND*	0.48	ND*	32.65	13.64	23.46	19.45
4	15-04-2022	68.62	34.53	ND*	ND*	ND*	ND*	0.34	ND*	24.33	9.27	30.26	28.89
5	18-04-2022	73.32	38.65	ND*	ND*	ND*	ND*	0.23	ND*	13.63	11.23	18.38	18.46
6	22-04-2022	46.47	20.38	ND*	ND*	ND*	ND*	0.76	ND*	16.51	14.88	22.45	24.64
7	25-04-2022	54.25	27.18	ND*	ND*	ND*	ND*	0.25	ND*	19.36	18.24	27.44	22.42
8	29-04-2022	45.65	24.5	ND*	ND*	ND*	ND*	0.14	ND*	10.86	15.42	16.61	11.65
9	02-05-2022	52.54	27.55	ND*	ND*	ND*	ND*	0.3	ND*	14.69	13.72	25.01	11.61
10	05-05-2022	60.79	31.92	ND*	ND*	ND*	ND*	0.34	ND*	19.26	9.33	19.69	18.12
11	09-05-2022	42.85	17.4	ND*	ND*	ND*	ND*	0.24	ND*	16.88	6.52	21.3	20.28
12	12-05-2022	59.43	14.78	ND*	ND*	ND*	ND*	0.25	ND*	11.36	14.88	29.45	17.97
13	16-05-2022	47.81	20.83	ND*	ND*	ND*	ND*	0.52	ND*	22.75	17.59	16.45	13.88
14	19-05-2022	79.53	32.57	ND*	ND*	ND*	ND*	0.33	ND*	26.28	8.14	23.74	23.54
15	23-05-2022	62.58	35.58	ND*	ND*	ND*	ND*	0.42	ND*	28.99	16.9	26.47	19.37
16	26-05-2022	55.27	23.75	ND*	ND*	ND*	ND*	0.22	ND*	13.23	7.61	14.3	22.77
17	30-05-2022	63.52	26.49	ND*	ND*	ND*	ND*	0.26	ND*	34.24	10.52	22.42	14.54
18	02-06-2022	58.35	32.32	ND*	ND*	ND*	ND*	0.49	ND*	16.32	14.35	17.95	19.35
19	06-06-2022	66.75	38.4	ND*	ND*	ND*	ND*	0.57	ND*	21.21	18.49	24.62	16.57
20	09-06-2022	62.62	30.58	ND*	ND*	ND*	ND*	0.32	ND*	11.03	12.5	22.44	14.56
21	13-06-2022	42.61	15.24	ND*	ND*	ND*	ND*	0.58	ND*	26.37	16.22	16.88	22.57
22	16-06-2022	74.27	46.27	ND*	ND*	ND*	ND*	0.63	ND*	18.68	13.47	21.3	10.55
23	20-06-2022	44.26	22.63	ND*	ND*	ND*	ND*	0.45	ND*	23.39	10.26	15.35	17.68
24	23-06-2022	72.6	36.5	ND*	ND*	ND*	ND*	0.15	ND*	14.53	17.26	28.55	13.84
25	27-06-2022	68.44	27.55	ND*	ND*	ND*	ND*	0.38	ND*	12.49	11.29	19.52	21.14
26	30-06-2022	41.36	23.36	ND*	ND*	ND*	ND*	0.16	ND*	15.65	19.12	30.52	15.9
27	04-07-2022	68.42	33.57	ND*	ND*	ND*	ND*	0.13	ND*	26.19	11.21	25.94	16.47
28	07-07-2022	43.14	16.34	ND*	ND*	ND*	ND*	0.16	ND*	31.87	20.45	18.81	19.53
29	11-07-2022	53.28	29.45	ND*	ND*	ND*	ND*	0.72	ND*	14.53	13.45	24.23	15.24

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30	14-07-2022	49.57	17.5	ND*	ND*	ND*	ND*	0.46	ND*	19.43	8.7	17.51	26.37
31	18-07-2022	54.34	27.65	ND*	ND*	ND*	ND*	0.25	ND*	15.23	6.88	20.65	28.63
32	21-07-2022	58.54	19.5	ND*	ND*	ND*	ND*	0.61	ND*	21.63	9.36	13.56	22.33
33	25-07-2022	62.11	21.74	ND*	ND*	ND*	ND*	0.24	ND*	22.73	12.63	27.66	18.65
34	28-07-2022	56.59	18.48	ND*	ND*	ND*	ND*	0.55	ND*	28.67	16.25	21.53	23.63
35	01-08-2022	73.69	37.54	ND*	ND*	ND*	ND*	0.3	ND*	22.23	16.4	22.67	21.35
36	04-08-2022	52.64	23.57	ND*	ND*	ND*	ND*	0.36	ND*	12.79	11.67	26.31	13.29
37	08-08-2022	61.58	33.55	ND*	ND*	ND*	ND*	0.24	ND*	10.38	9.57	18.65	18.61
38	11-08-2022	51.67	30.36	ND*	ND*	ND*	ND*	0.31	ND*	17.53	15.37	28.67	14.27
39	15-08-2022	45.39	22.8	ND*	ND*	ND*	ND*	0.5	ND*	30.53	8.3	23.13	16.25
40	18-08-2022	56.32	28.44	ND*	ND*	ND*	ND*	0.14	ND*	27.57	12.4	17.26	23.32
41	22-08-2022	74.25	34.53	ND*	ND*	ND*	ND*	0.55	ND*	18.65	13.67	24.32	17.6
42	25-08-2022	58.33	21.62	ND*	ND*	ND*	ND*	0.19	ND*	21.28	7.26	15.71	19.25
43	29-08-2022	67.51	24.82	ND*	ND*	ND*	ND*	0.49	ND*	16.56	14.21	21.3	12.86
44	01-09-2022	53.63	21.57	ND*	ND*	ND*	ND*	0.41	ND*	27.61	18.67	28.63	25.42
45	05-09-2022	73.51	38.44	ND*	ND*	ND*	ND*	0.29	ND*	16.34	12.45	25.41	23.63
46	08-09-2022	60.82	35.48	ND*	ND*	ND*	ND*	0.18	ND*	22.63	10.27	19.35	11.29
47	12-09-2022	46.34	16.54	ND*	ND*	ND*	ND*	0.14	ND*	26.42	13.52	26.36	15.39
48	15-09-2022	42.68	18.62	ND*	ND*	ND*	ND*	0.37	ND*	17.51	15.2	35.34	18.53
49	19-09-2022	68.47	26.68	ND*	ND*	ND*	ND*	0.3	ND*	12.69	8.68	31.53	13.21
50	22-09-2022	81.59	45.4	ND*	ND*	ND*	ND*	0.38	ND*	10.75	6.48	21.34	16.67
51	26-09-2022	48.42	19.61	ND*	ND*	ND*	ND*	0.32	ND*	18.26	14.21	27.64	12.63
52	29-09-2022	62.63	23.52	ND*	ND*	ND*	ND*	0.61	ND*	14.35	11.69	23.11	19.31

Observation: Above given Results are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-Idt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

ND*: - Not Detected - Lead as Pb ($\mu g/m^3$): 0.5
ND*: - Not Detected - Carbon Monoxide as CO (mg/m^3): 0.01
ND*: - Not Detected - Benzene as C_6H_6 ($\mu g/m^3$): 2
ND*: - Not Detected - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
ND*: - Not Detected - Arsenic as As (ng/m^3): 2
ND*: - Not Detected - Nickel as Ni (ng/m^3): 5

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Table-1.3: Ambient Air Quality Monitoring Results at Central Water Pump House

Sr. No.	Date of Sampling	Location-3: Central Water Pump House (N 21° 04.697'E 72° 38.420')											
		PM_{10}	$PM_{2.5}$	Pb	BaP	As	Ni	CO	C_6H_6	NH_3	SO_2	NO_X	O_3
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ng/m^3	ng/m^3	ng/m^3	mg/m^3	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
1	04-04-2022	53.64	26.51	ND*	ND*	ND*	ND*	0.52	ND*	18.99	10.75	21.67	16.2
2	08-04-2022	48.54	18.97	ND*	ND*	ND*	ND*	0.63	ND*	15.18	6.42	14.59	13.77
3	11-04-2022	63.39	31.67	ND*	ND*	ND*	ND*	0.48	ND*	32.65	13.64	23.46	19.45
4	15-04-2022	68.62	34.53	ND*	ND*	ND*	ND*	0.34	ND*	24.33	9.27	30.26	28.89
5	18-04-2022	73.32	38.65	ND*	ND*	ND*	ND*	0.23	ND*	13.63	11.23	18.38	18.46
6	22-04-2022	46.47	20.38	ND*	ND*	ND*	ND*	0.76	ND*	16.51	14.88	22.45	24.64
7	25-04-2022	54.25	27.18	ND*	ND*	ND*	ND*	0.25	ND*	19.36	18.24	27.44	22.42
8	29-04-2022	45.65	24.5	ND*	ND*	ND*	ND*	0.14	ND*	10.86	15.42	16.61	11.65
9	02-05-2022	64.23	34.53	ND*	ND*	ND*	ND*	0.21	ND*	17.51	9.41	18.91	15.6
10	05-05-2022	54.22	27.48	ND*	ND*	ND*	ND*	0.55	ND*	15.25	6.17	15.35	20.56
11	09-05-2022	69.42	31.38	ND*	ND*	ND*	ND*	0.13	ND*	23.97	14.6	25.54	16.48
12	12-05-2022	48.47	17.37	ND*	ND*	ND*	ND*	0.18	ND*	14.51	16.75	22.71	12.45
13	16-05-2022	60.24	28.45	ND*	ND*	ND*	ND*	0.5	ND*	27.88	8.34	12.22	19.28
14	19-05-2022	66.38	24.66	ND*	ND*	ND*	ND*	0.19	ND*	16.56	15.99	14.69	25.38
15	23-05-2022	52.78	21.55	ND*	ND*	ND*	ND*	0.49	ND*	21.64	13.11	20.3	17.56
16	26-05-2022	70.51	36.35	ND*	ND*	ND*	ND*	0.57	ND*	29.58	10.21	26.38	24.58
17	30-05-2022	57.63	33.48	ND*	ND*	ND*	ND*	0.27	ND*	31.53	12.43	19.53	13.76
18	02-06-2022	52.47	20.2	ND*	ND*	ND*	ND*	0.41	ND*	24.66	11.25	25.69	25.36
19	06-06-2022	72.27	30.24	ND*	ND*	ND*	ND*	0.27	ND*	13.57	13.5	21.36	22.42
20	09-06-2022	46.91	23.67	ND*	ND*	ND*	ND*	0.25	ND*	25.44	6.53	19.44	19.27
21	13-06-2022	50.34	19.42	ND*	ND*	ND*	ND*	0.29	ND*	21.42	18.37	27.69	24.24
22	16-06-2022	56.38	27.53	ND*	ND*	ND*	ND*	0.68	ND*	14.35	7.71	14.62	26.26
23	20-06-2022	61.29	18.26	ND*	ND*	ND*	ND*	0.33	ND*	26.83	12.62	17.73	11.24
24	23-06-2022	53.12	28.58	ND*	ND*	ND*	ND*	0.22	ND*	16.54	14.2	23.56	16.36
25	27-06-2022	58.62	24.22	ND*	ND*	ND*	ND*	0.11	ND*	19.37	8.44	28.44	12.83
26	30-06-2022	45.35	17.28	ND*	ND*	ND*	ND*	0.7	ND*	23.45	10.36	24.75	21.77
27	04-07-2022	60.37	27.82	ND*	ND*	ND*	ND*	0.37	ND*	14.37	6.57	19.94	23.58
28	07-07-2022	50.75	24.8	ND*	ND*	ND*	ND*	0.71	ND*	16.82	8.45	22.46	15.57
29	11-07-2022	59.35	22.29	ND*	ND*	ND*	ND*	0.36	ND*	12.66	15.64	17.26	11.84

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30	14-07-2022	44.21	16.57	ND*	ND*	ND*	ND*	0.42	ND*	26.31	12.43	15.46	18.24
31	18-07-2022	57.56	25.56	ND*	ND*	ND*	ND*	0.34	ND*	20.57	9.3	24.87	16.55
32	21-07-2022	49.42	20.52	ND*	ND*	ND*	ND*	0.29	ND*	24.15	14.23	18.65	19.34
33	25-07-2022	54.52	18.41	ND*	ND*	ND*	ND*	0.3	ND*	29.21	7.11	21.43	12.58
34	28-07-2022	46.44	21.58	ND*	ND*	ND*	ND*	0.31	ND*	17.27	13.27	25.67	27.37
35	01-08-2022	66.55	32.6	ND*	ND*	ND*	ND*	0.18	ND*	15.57	18.69	26.42	14.57
36	04-08-2022	58.62	28.57	ND*	ND*	ND*	ND*	0.38	ND*	18.69	15.43	18.35	16.54
37	08-08-2022	68.57	36.87	ND*	ND*	ND*	ND*	0.56	ND*	28.49	19.29	28.4	12.55
38	11-08-2022	55.38	33.56	ND*	ND*	ND*	ND*	0.65	ND*	20.32	11.8	17.56	22.48
39	15-08-2022	51.55	26.4	ND*	ND*	ND*	ND*	0.46	ND*	25.67	10.54	15.61	19.53
40	18-08-2022	47.58	22.7	ND*	ND*	ND*	ND*	0.16	ND*	22.64	7.65	19.55	25.34
41	22-08-2022	56.68	27.58	ND*	ND*	ND*	ND*	0.66	ND*	14.36	12.35	27.5	15.82
42	25-08-2022	44.57	16.35	ND*	ND*	ND*	ND*	0.8	ND*	35.41	9.36	20.24	26.38
43	29-08-2022	62.42	30.3	ND*	ND*	ND*	ND*	0.32	ND*	21.51	13.86	31.52	13.62
44	01-09-2022	48.52	16.55	ND*	ND*	ND*	ND*	0.22	ND*	24.35	11.22	18.68	13.56
45	05-09-2022	67.55	26.31	ND*	ND*	ND*	ND*	0.63	ND*	12.88	20.4	23.3	17.53
46	08-09-2022	45.66	20.62	ND*	ND*	ND*	ND*	0.45	ND*	25.37	16.59	29.54	22.76
47	12-09-2022	40.37	14.52	ND*	ND*	ND*	ND*	0.17	ND*	18.37	10.38	16.56	19.16
48	15-09-2022	35.81	12.61	ND*	ND*	ND*	ND*	0.25	ND*	16.27	6.58	31.37	12.88
49	19-09-2022	51.59	21.4	ND*	ND*	ND*	ND*	0.56	ND*	19.53	15.42	26.22	24.7
50	22-09-2022	76.29	40.68	ND*	ND*	ND*	ND*	0.47	ND*	28.39	9.5	14.56	14.32
51	26-09-2022	58.62	23.46	ND*	ND*	ND*	ND*	0.57	ND*	20.38	12.89	19.55	20.66
52	29-09-2022	68.25	37.58	ND*	ND*	ND*	ND*	0.76	ND*	11.55	17.51	21.25	16.43

Observation: Above given Results are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-Idt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

ND*: - Not Detected - Lead as Pb ($\mu g/m^3$): 0.1
ND*: - Not Detected - Carbon Monoxide as CO (mg/m^3): 0.01
ND*: - Not Detected - Benzene as C_6H_6 ($\mu g/m^3$): 2
ND*: - Not Detected - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
ND*: - Not Detected - Arsenic as As (ng/m^3): 2
ND*: - Not Detected - Nickel as Ni (ng/m^3): 5

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Table-1.4: Ambient Air Quality Monitoring Results at Container Terminal

Sr. No.	Date of Sampling	Location-4: Container Terminal (N 21° 05.187'E 72° 37.774)											
		PM_{10}	$PM_{2.5}$	Pb	BaP	As	Ni	CO	C_6H_6	NH_3	SO_2	NO_X	O_3
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ng/m^3	ng/m^3	ng/m^3	mg/m^3	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
1	04-04-2022	63.58	32.49	ND*	ND*	ND*	ND*	0.32	ND*	25.91	18.46	25.67	13.6
2	08-04-2022	70.28	38.27	ND*	ND*	ND*	ND*	0.61	ND*	27.63	13.84	28.52	21.59
3	11-04-2022	59.58	25.39	ND*	ND*	ND*	ND*	0.84	ND*	17.56	10.88	26.15	25.42
4	15-04-2022	73.73	37.57	ND*	ND*	ND*	ND*	0.29	ND*	15.24	19.54	32.57	27.3
5	18-04-2022	53.18	24.18	ND*	ND*	ND*	ND*	0.6	ND*	18.64	17.71	27.58	23.52
6	22-04-2022	66.54	29.87	ND*	ND*	ND*	ND*	0.71	ND*	29.64	12.53	19.63	20.26
7	25-04-2022	75.96	35.27	ND*	ND*	ND*	ND*	0.5	ND*	24.23	7.64	29.59	16.54
8	29-04-2022	58.73	30.25	ND*	ND*	ND*	ND*	0.26	ND*	19.24	9.8	22.42	22.36
9	02-05-2022	73.57	38.26	ND*	ND*	ND*	ND*	0.47	ND*	19.57	19.24	28.26	16.58
10	05-05-2022	65.34	36.44	ND*	ND*	ND*	ND*	0.8	ND*	25.39	10.65	21.34	13.32
11	09-05-2022	48.53	26.36	ND*	ND*	ND*	ND*	0.64	ND*	12.47	8.97	19.54	23.43
12	12-05-2022	53.46	21.67	ND*	ND*	ND*	ND*	0.62	ND*	23.49	17.38	31.35	28.66
13	16-05-2022	66.21	32.4	ND*	ND*	ND*	ND*	0.84	ND*	31.85	15.75	20.52	25.68
14	19-05-2022	75.67	39.57	ND*	ND*	ND*	ND*	0.44	ND*	18.51	9.64	27.55	14.24
15	23-05-2022	67.54	26.99	ND*	ND*	ND*	ND*	0.74	ND*	26.87	11.59	16.79	20.65
16	26-05-2022	76.53	33.64	ND*	ND*	ND*	ND*	0.54	ND*	16.23	13.81	23.46	17.29
17	30-05-2022	46.23	17.6	ND*	ND*	ND*	ND*	0.41	ND*	41.21	6.29	17.64	11.28
18	02-06-2022	48.31	15.68	ND*	ND*	ND*	ND*	0.76	ND*	13.42	7.17	15.33	15.77
19	06-06-2022	52.46	21.52	ND*	ND*	ND*	ND*	0.56	ND*	29.51	19.61	26.53	11.54
20	09-06-2022	69.84	40.29	ND*	ND*	ND*	ND*	0.44	ND*	22.69	11.5	29.48	17.39
21	13-06-2022	54.34	22.42	ND*	ND*	ND*	ND*	0.72	ND*	33.45	20.3	34.37	26.31
22	16-06-2022	67.52	36.54	ND*	ND*	ND*	ND*	0.36	ND*	24.24	16.57	31.25	20.49
23	20-06-2022	49.53	25.69	ND*	ND*	ND*	ND*	0.54	ND*	28.76	14.89	16.44	27.27
24	23-06-2022	68.62	42.7	ND*	ND*	ND*	ND*	0.65	ND*	21.53	18.24	33.45	19.54
25	27-06-2022	63.84	34.22	ND*	ND*	ND*	ND*	0.4	ND*	15.35	15.71	24.34	10.19
26	30-06-2022	59.42	28.47	ND*	ND*	ND*	ND*	0.78	ND*	18.62	13.7	27.4	14.26
27	04-07-2022	64.52	30.52	ND*	ND*	ND*	ND*	0.26	ND*	20.62	13.55	21.2	18.54
28	07-07-2022	56.42	20.35	ND*	ND*	ND*	ND*	0.48	ND*	26.59	17.65	30.52	23.42
29	11-07-2022	66.52	33.47	ND*	ND*	ND*	ND*	0.54	ND*	10.41	19.26	28.98	10.64

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30	14-07-2022	39.26	14.52	ND*	ND*	ND*	ND*	0.4	ND*	34.27	11.58	26.27	22.48
31	18-07-2022	65.42	37.88	ND*	ND*	ND*	ND*	0.44	ND*	18.68	10.57	29.53	19.29
32	21-07-2022	60.54	26.27	ND*	ND*	ND*	ND*	0.22	ND*	16.13	16.61	22.35	12.86
33	25-07-2022	57.42	29.21	ND*	ND*	ND*	ND*	0.19	ND*	31.53	9.62	32.21	15.37
34	28-07-2022	63.57	32.51	ND*	ND*	ND*	ND*	0.68	ND*	13.49	14.63	37.53	13.29
35	01-08-2022	59.38	28.6	ND*	ND*	ND*	ND*	0.41	ND*	26.62	21.51	34.95	24.57
36	04-08-2022	65.79	31.67	ND*	ND*	ND*	ND*	0.72	ND*	23.35	8.68	21.59	22.66
37	08-08-2022	74.56	27.28	ND*	ND*	ND*	ND*	0.11	ND*	19.48	15.65	25.47	11.54
38	11-08-2022	70.35	39.57	ND*	ND*	ND*	ND*	0.37	ND*	29.41	13.52	24.54	21.6
39	15-08-2022	56.52	29.31	ND*	ND*	ND*	ND*	0.62	ND*	33.55	6.57	26.53	23.82
40	18-08-2022	63.59	35.68	ND*	ND*	ND*	ND*	0.33	ND*	17.22	9.54	15.85	15.64
41	22-08-2022	79.52	32.42	ND*	ND*	ND*	ND*	0.39	ND*	24.55	16.27	30.54	10.53
42	25-08-2022	49.52	19.55	ND*	ND*	ND*	ND*	0.15	ND*	28.68	12.61	23.33	17.26
43	29-08-2022	55.42	26.51	ND*	ND*	ND*	ND*	0.4	ND*	13.57	18.53	35.6	19.83
44	01-09-2022	56.35	25.46	ND*	ND*	ND*	ND*	0.69	ND*	22.24	9.64	31.23	23.47
45	05-09-2022	61.54	22.6	ND*	ND*	ND*	ND*	0.5	ND*	15.23	16.29	20.23	15.68
46	08-09-2022	50.34	26.44	ND*	ND*	ND*	ND*	0.66	ND*	17.68	14.37	23.59	21.47
47	12-09-2022	55.42	19.54	ND*	ND*	ND*	ND*	0.55	ND*	11.66	12.78	21.51	24.31
48	15-09-2022	39.46	21.3	ND*	ND*	ND*	ND*	0.27	ND*	24.89	7.48	27.58	14.52
49	19-09-2022	57.58	24.35	ND*	ND*	ND*	ND*	0.65	ND*	21.67	11.55	29.48	16.86
50	22-09-2022	71.62	27.58	ND*	ND*	ND*	ND*	0.74	ND*	19.31	15.82	17.65	11.1
51	26-09-2022	53.36	20.31	ND*	ND*	ND*	ND*	0.54	ND*	29.38	18.31	24.53	18.23
52	29-09-2022	59.41	31.19	ND*	ND*	ND*	ND*	0.6	ND*	18.63	13.75	28.39	13.69

Observation: Above given Results are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-Idt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

ND*: - Not Detected - Lead as Pb ($\mu g/m^3$): 0.5
ND*: - Not Detected - Carbon Monoxide as CO (mg/m^3): 0.01
ND*: - Not Detected - Benzene as C_6H_6 ($\mu g/m^3$): 2
ND*: - Not Detected - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
ND*: - Not Detected - Arsenic as As (ng/m^3): 2
ND*: - Not Detected - Nickel as Ni (ng/m^3): 5

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Table-1.5: Ambient Air Quality Monitoring Results at Hazira Village

Sr. No.	Date of Sampling	Location-5: Hazira Village (N 21° 05.44′ E 72° 38.44′)											
		PM_{10}	$PM_{2.5}$	Pb	BaP	As	Ni	CO	C_6H_6	NH_3	SO_2	NO_X	O_3
		µg/m³	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
1	04-04-2022	73.53	35.67	ND*	ND*	ND*	ND*	0.46	ND*	29.22	12.66	34.28	19.65
2	08-04-2022	81.51	40.64	0.64	ND*	2.12	10.18	0.11	ND*	17.32	16.25	24.26	27.53
3	11-04-2022	69.67	34.52	ND*	ND*	ND*	ND*	0.62	ND*	38.58	19.26	32.49	23.43
4	15-04-2022	83.59	42.29	0.55	ND*	2.56	10.45	0.15	ND*	27.47	17.27	36.23	30.39
5	18-04-2022	79.41	33.52	ND*	ND*	ND*	ND*	0.86	ND*	21.25	15.25	23.57	28.45
6	22-04-2022	61.56	27.69	ND*	ND*	ND*	ND*	0.44	ND*	25.32	10.23	16.25	18.97
7	25-04-2022	70.43	38.34	0.51	ND*	2.38	10.34	0.37	ND*	31.28	20.27	33.53	12.44
8	29-04-2022	63.44	28.54	ND*	ND*	ND*	ND*	0.64	ND*	36.55	13.5	31.34	20.34
9	02-05-2022	80.55	42.66	0.75	ND*	2.16	10.18	0.39	ND*	21.98	21.53	31.44	24.22
10	05-05-2022	71.61	38.88	ND*	ND*	ND*	ND*	0.45	ND*	29.04	15.33	25.54	21.27
11	09-05-2022	58.23	29.21	ND*	ND*	ND*	ND*	0.76	ND*	19.06	18.38	29.62	15.34
12	12-05-2022	63.49	26.46	ND*	ND*	ND*	ND*	0.36	ND*	26.98	22.47	35.71	26.34
13	16-05-2022	72.43	36.49	ND*	ND*	ND*	ND*	0.4	ND*	35.54	14.21	24.62	29.38
14	19-05-2022	84.54	45.21	0.65	ND*	2.22	10.45	0.31	ND*	30.92	11.21	32.38	22.34
15	23-05-2022	73.45	41.18	ND*	ND*	ND*	ND*	0.46	ND*	17.41	7.71	36.27	25.89
16	26-05-2022	83.51	46.32	0.52	ND*	2.34	10.28	0.77	ND*	38.14	23.42	30.58	14.67
17	30-05-2022	70.26	37.56	ND*	ND*	ND*	ND*	0.23	ND*	44.51	20.25	23.65	23.78
18	02-06-2022	69.45	26.26	ND*	ND*	ND*	ND*	0.21	ND*	25.16	10.65	23.58	21.55
19	06-06-2022	77.62	45.33	0.62	ND*	2.22	10.18	0.24	ND*	35.53	17.52	18.66	20.34
20	09-06-2022	72.62	48.46	ND*	ND*	ND*	ND*	0.23	ND*	27.09	13.38	27.52	24.62
21	13-06-2022	58.69	25.33	ND*	ND*	ND*	ND*	0.52	ND*	37.97	21.6	37.41	29.39
22	16-06-2022	81.27	49.3	0.66	ND*	2.12	10.53	0.55	ND*	28.61	11.61	25.35	27.52
23	20-06-2022	57.53	33.29	ND*	ND*	ND*	ND*	0.66	ND*	34.95	8.67	22.49	25.48
24	23-06-2022	78.62	37.67	0.57	ND*	2.18	10.38	0.26	ND*	23.56	12.9	26.3	23.47
25	27-06-2022	73.45	29.25	ND*	ND*	ND*	ND*	0.81	ND*	32.22	19.27	35.49	26.43
26	30-06-2022	66.28	35.3	ND*	ND*	ND*	ND*	0.53	ND*	20.24	14.67	19.9	18.66
27	04-07-2022	75.19	37.56	0.62	ND*	2.46	10.41	0.53	ND*	28.37	15.26	36.58	28.57
28	07-07-2022	60.19	31.42	ND*	ND*	ND*	ND*	0.32	ND*	38.59	12.09	30.41	25.64
29	11-07-2022	43.27	38.5	ND*	ND*	ND*	ND*	0.64	ND*	22.82	20.72	34.54	20.45

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30	14-07-2022	54.58	24.79	ND*	ND*	ND*	ND*	0.27	ND*	30.26	18.18	29.85	24.54
31	18-07-2022	69.28	32.26	ND*	ND*	ND*	ND*	0.14	ND*	12.55	16.31	38.68	22.58
32	21-07-2022	65.25	35.72	0.52	ND*	2.16	10.18	0.56	ND*	29.46	21.23	26.33	18.93
33	25-07-2022	45.42	25.43	ND*	ND*	ND*	ND*	0.52	ND*	25.64	19.52	23.62	26.45
34	28-07-2022	67.17	30.46	ND*	ND*	ND*	ND*	0.41	ND*	33.45	17.96	33.85	21.52
35	01-08-2022	80.53	40.27	0.54	ND*	2.42	10.17	0.44	ND*	20.29	23.4	25.37	20.36
36	04-08-2022	72.54	36.49	ND*	ND*	ND*	ND*	0.87	ND*	15.76	10.28	23.55	27.56
37	08-08-2022	79.54	39.55	0.66	ND*	2.34	10.38	0.57	ND*	30.28	21.4	21.65	14.51
38	11-08-2022	65.69	35.38	ND*	ND*	ND*	ND*	0.73	ND*	35.36	19.37	30.42	28.61
39	15-08-2022	60.64	31.51	ND*	ND*	ND*	ND*	0.93	ND*	38.67	17.23	28.44	24.3
40	18-08-2022	73.58	38.43	ND*	ND*	ND*	ND*	0.82	ND*	33.66	11.3	24.65	19.61
41	22-08-2022	69.51	43.57	0.62	ND*	2.16	10.23	0.89	ND*	21.69	14.57	20.32	22.72
42	25-08-2022	63.54	32.64	ND*	ND*	ND*	ND*	1.03	ND*	24.66	18.48	29.67	16.81
43	29-08-2022	74.67	33.87	ND*	ND*	ND*	ND*	0.88	ND*	26.44	22.46	37.63	25.68
44	01-09-2022	62.83	30.32	ND*	ND*	ND*	ND*	0.26	ND*	34.23	21.92	24.37	19.51
45	05-09-2022	80.37	40.26	0.58	ND*	2.36	10.18	0.23	ND*	22.38	23.43	32.41	30.25
46	08-09-2022	56.3	23.64	ND*	ND*	ND*	ND*	0.39	ND*	28.59	12.7	20.52	28.62
47	12-09-2022	51.52	21.56	ND*	ND*	ND*	ND*	0.53	ND*	23.42	15.6	33.54	25.33
48	15-09-2022	49.38	24.23	ND*	ND*	ND*	ND*	0.33	ND*	21.54	13.47	23.44	20.37
49	19-09-2022	63.44	39.44	ND*	ND*	ND*	ND*	0.19	ND*	15.38	18.56	19.27	15.44
50	22-09-2022	86.29	50.61	0.71	ND*	2.26	10.38	0.42	ND*	30.47	17.65	26.45	21.53
51	26-09-2022	66.52	28.54	ND*	ND*	ND*	ND*	0.58	ND*	35.45	22.64	36.44	14.61
52	29-09-2022	73.76	36.81	0.52	ND*	2.16	10.17	0.24	ND*	20.29	20.65	34.52	26.2

Observation: Above given Results are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-Idt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

ND*: - Not Detected - Lead as Pb ($\mu g/m^3$): 0.1
ND*: - Not Detected - Carbon Monoxide as CO (mg/m^3): 0.01
ND*: - Not Detected - Benzene as C_6H_6 ($\mu g/m^3$): 2
ND*: - Not Detected - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
ND*: - Not Detected - Arsenic as As (ng/m^3): 2
ND*: - Not Detected - Nickel as Ni (ng/m^3): 5

Authorized Signatory

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Table-1.6: Ambient Air Quality Monitoring Results at Suvali Village

Sr. No.	Date of Sampling	Location-6: Suvali Village (N 21° 08.55' E 72° 38.24')											
		PM_{10}	$PM_{2.5}$	Pb	BaP	As	Ni	CO	C_6H_6	NH_3	SO_2	NO_X	O_3
		µg/m³	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
1	04-04-2022	43.43	21.53	ND*	ND*	ND*	ND*	0.24	ND*	24.43	15.38	30.28	12.57
2	08-04-2022	54.34	26.36	ND*	ND*	ND*	ND*	0.3	ND*	20.68	11.56	17.69	19.52
3	11-04-2022	47.53	17.81	ND*	ND*	ND*	ND*	0.16	ND*	13.64	14.54	15.93	14.38
4	15-04-2022	59.48	28.42	ND*	ND*	ND*	ND*	0.31	ND*	11.24	10.41	27.55	18.35
5	18-04-2022	68.36	36.21	ND*	ND*	ND*	ND*	0.19	ND*	19.54	16.54	20.37	25.36
6	22-04-2022	41.37	19.55	ND*	ND*	ND*	ND*	0.42	ND*	12.34	7.64	18.29	13.31
7	25-04-2022	48.23	24.28	ND*	ND*	ND*	ND*	0.27	ND*	14.39	13.52	22.41	24.57
8	29-04-2022	40.28	16.33	ND*	ND*	ND*	ND*	0.21	ND*	18.51	8.67	14.42	17.63
9	02-05-2022	56.28	24.57	ND*	ND*	ND*	ND*	0.14	ND*	10.22	16.37	23.36	19.88
10	05-05-2022	50.26	22.45	ND*	ND*	ND*	ND*	0.48	ND*	21.66	12.36	28.54	14.87
11	09-05-2022	64.31	19.52	ND*	ND*	ND*	ND*	0.32	ND*	12.68	10.56	17.58	12.68
12	12-05-2022	44.23	23.25	ND*	ND*	ND*	ND*	0.29	ND*	18.31	8.64	15.63	23.28
13	16-05-2022	55.38	25.31	ND*	ND*	ND*	ND*	0.38	ND*	16.58	6.25	27.4	11.59
14	19-05-2022	69.23	27.91	ND*	ND*	ND*	ND*	0.15	ND*	11.51	14.54	24.7	18.6
15	23-05-2022	47.55	31.28	ND*	ND*	ND*	ND*	0.37	ND*	15.23	9.35	29.5	13.54
16	26-05-2022	63.45	26.25	ND*	ND*	ND*	ND*	0.17	ND*	22.14	15.37	22.5	10.57
17	30-05-2022	53.15	28.86	ND*	ND*	ND*	ND*	0.16	ND*	26.37	7.59	12.72	20.41
18	02-06-2022	62.47	18.37	ND*	ND*	ND*	ND*	0.64	ND*	18.55	9.59	20.26	10.38
19	06-06-2022	59.39	25.45	ND*	ND*	ND*	ND*	0.19	ND*	25.62	6.65	13.37	12.38
20	09-06-2022	51.62	28.43	ND*	ND*	ND*	ND*	0.42	ND*	17.31	16.23	16.42	21.23
21	13-06-2022	45.64	17.5	ND*	ND*	ND*	ND*	0.14	ND*	14.58	7.59	24.26	17.58
22	16-06-2022	60.84	22.6	ND*	ND*	ND*	ND*	0.48	ND*	21.54	10.24	17.22	19.82
23	20-06-2022	53.62	15.31	ND*	ND*	ND*	ND*	0.39	ND*	15.36	13.4	19.55	15.4
24	23-06-2022	57.69	26.49	ND*	ND*	ND*	ND*	0.13	ND*	12.44	15.24	23.46	18.24
25	27-06-2022	49.41	19.54	ND*	ND*	ND*	ND*	0.47	ND*	23.45	12.46	15.4	16.49
26	30-06-2022	54.25	32.44	ND*	ND*	ND*	ND*	0.3	ND*	13.61	8.45	21.56	13.16
27	04-07-2022	55.51	22.66	ND*	ND*	ND*	ND*	0.45	ND*	16.79	8.29	22.43	21.94
28	07-07-2022	33.21	15.45	ND*	ND*	ND*	ND*	0.62	ND*	23.49	10.25	25.47	17.36
29	11-07-2022	38.27	26.47	ND*	ND*	ND*	ND*	0.15	ND*	18.25	6.58	27.53	13.52

Authorized Signatory

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30	14-07-2022	34.55	19.54	ND*	ND*	ND*	ND*	0.33	ND*	12.61	9.25	19.55	10.27
31	18-07-2022	54.55	18.4	ND*	ND*	ND*	ND*	0.18	ND*	22.41	7.59	21.3	15.66
32	21-07-2022	43.78	16.64	ND*	ND*	ND*	ND*	0.47	ND*	10.78	12.68	15.95	11.56
33	25-07-2022	39.12	14.33	ND*	ND*	ND*	ND*	0.23	ND*	17.28	14.56	24.22	14.3
34	28-07-2022	50.55	17.67	ND*	ND*	ND*	ND*	0.63	ND*	14.25	11.57	16.57	19.61
35	01-08-2022	52.85	27.53	ND*	ND*	ND*	ND*	0.13	ND*	14.27	12.72	16.55	12.66
36	04-08-2022	46.26	16.53	ND*	ND*	ND*	ND*	0.29	ND*	21.93	9.57	24.43	18.53
37	08-08-2022	55.67	21.85	ND*	ND*	ND*	ND*	0.53	ND*	25.42	11.21	19.39	11.25
38	11-08-2022	59.53	25.5	ND*	ND*	ND*	ND*	0.25	ND*	15.36	15.37	25.69	23.75
39	15-08-2022	40.54	19.4	ND*	ND*	ND*	ND*	0.23	ND*	24.58	13.54	18.51	20.58
40	18-08-2022	51.26	24.38	ND*	ND*	ND*	ND*	0.27	ND*	16.21	6.58	14.52	13.55
41	22-08-2022	60.14	29.57	ND*	ND*	ND*	ND*	0.34	ND*	13.55	8.65	17.52	19.32
42	25-08-2022	68.54	26.34	ND*	ND*	ND*	ND*	0.26	ND*	19.34	10.24	23.51	22.86
43	29-08-2022	48.61	23.78	ND*	ND*	ND*	ND*	0.07	ND*	10.58	14.58	26.35	15.77
44	01-09-2022	40.22	13.48	ND*	ND*	ND*	ND*	0.21	ND*	13.36	14.34	15.51	11.37
45	05-09-2022	55.67	29.31	ND*	ND*	ND*	ND*	0.11	ND*	10.38	23.45	22.62	13.46
46	08-09-2022	41.28	19.63	ND*	ND*	ND*	ND*	0.34	ND*	19.32	12.36	18.65	23.37
47	12-09-2022	35.62	13.41	ND*	ND*	ND*	ND*	0.13	ND*	25.58	8.99	14.59	20.71
48	15-09-2022	46.35	15.65	ND*	ND*	ND*	ND*	0.4	ND*	12.27	11.22	19.55	10.35
49	19-09-2022	60.25	35.67	ND*	ND*	ND*	ND*	0.36	ND*	13.54	7.61	13.55	22.65
50	22-09-2022	66.35	30.61	ND*	ND*	ND*	ND*	0.15	ND*	25.63	13.49	8.54	17.34
51	26-09-2022	42.62	16.51	ND*	ND*	ND*	ND*	0.44	ND*	15.22	9.88	20.23	21.64
52	29-09-2022	51.34	34.54	ND*	ND*	ND*	ND*	0.49	ND*	17.51	15.37	17.59	24.52

Observation: Above given Results are within the norms Specified Limit as per CPCB Notification NoB-29016/20/90/PCI-Idt: 18/11/2009 National Ambient Air Quality Standards, New Delhi, for 24 hourly or 8 hourly or 1 hourly monitored values

ND*: - Not Detected - Lead as Pb ($\mu g/m^3$): 0.1
ND*: - Not Detected - Carbon Monoxide as CO (mg/m^3): 0.01
ND*: - Not Detected - Benzene as C_6H_6 ($\mu g/m^3$): 2
ND*: - Not Detected - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m^3): 0.5
ND*: - Not Detected - Arsenic as As (ng/m^3): 2
ND*: - Not Detected - Nickel as Ni (ng/m^3): 5

Authorized Signatory

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4B. GROUND WATER QUALITY MONITORING: -

Table-1.7A: Ground Water Quality Results for the period: April, 2022 to September, 2022

Sr. NO.	TEST PARAMETERS	UNIT	GROUND WATER BORE WELL					
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
			28-04-2022	30-05-2022	30-06-2022	29-07-2022	29-08-2022	30-09-2022
1	Colour	Hazen	3	3	2	3	2	3
2	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.18	0.12	0.14	0.22	0.26	0.17
5	pH Value	--	7.67	7.96	7.56	7.75	7.95	7.81
6	Total Hardness as $CaCO_3$	mg/L	439	478	462	490	518	532
7	Iron as Fe	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Chloride as Cl	mg/L	112	129	142	160	166	172
9	Residual Free Chlorine	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
10	Fluoride as F	mg/L	0.13	0.126	0.098	0.15	0.22	0.26
11	Total Dissolved Solids	mg/L	1018	1135	1073	1190	1312	809
12	Calcium as Ca	mg/L	69.6	86.4	80.8	90	94	83.6
13	Magnesium as Mg	mg/L	63.6	62.88	62.4	63.6	67.92	77.52
14	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
15	Manganese as Mn	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
16	Sulphate as SO_4	mg/L	27.64	41.88	34.6	39.8	46.8	41.95
17	Nitrate Nitrogen as NO_3	mg/L	5.83	5.39	6.32	7.2	6.4	5.83
18	Phenolic compounds as C_6H_5OH	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
19	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
20	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
21	Selenium as Se	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
22	Arsenic as As	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
23	Cyanide as CN	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
24	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
25	Zinc as Zn	mg/L	0.29	0.17	0.21	0.19	0.22	0.31
26	Anionic Detergents as MBAS	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
27	Chromiumas Cr^{+6}	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
28	Mineral Oil	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
29	Alkalinity	mg/L	328	284	273	290	310	286
30	Aluminum as Al	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
31	Boron as B	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32	**Pesticides**							
32.1	Alachor	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Authorized Signatory

Sr. NO.	TEST PARAMETERS	UNIT	GROUND WATER BORE WELL					
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
			28-04-2022	30-05-2022	30-06-2022	29-07-2022	29-08-2022	30-09-2022
32.2	Atrazine	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.3	Aldrin/Dieldrine	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.4	Alpha HCH	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.5	Beta HCH	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.6	Butachlor	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.7	Chlorpyriphos	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.8	Delta HCH	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.9	2,4- Dichlorophrnoxy acetic acid	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.10	DDT (o,p&p,p-Isomers of DDT, DDE & DDD	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.11	Endosulfan (alpha, beta, and sulphate)	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.12	Ethion	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.13	Gamma – HCH (Lindane)	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.14	Isoproturon	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.15	Malathion	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.16	Methyl Parathion	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.17	Monocrotophos	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.18	Phorate	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
33	Coliform	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent
34	E-Coli	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Ground Water.

Authorized Signatory

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Table-1.7B: Ground Water Quality Results for the period: April, 2022 to September, 2022

Sr. NO.	TEST PARAMETERS	UNIT	GROUND WATER OPEN WELL					
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
			28-04-2022	30-05-2022	30-06-2022	29-07-2022	29-08-2022	30-09-2022
1	Colour	Hazen	4	4	3	3	4	3
2	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.19	0.18	0.13	0.18	0.24	0.35
5	pH Value	--	7.76	7.75	7.49	7.62	7.81	7.73
6	Total Hardness as $CaCO_3$	mg/L	369	360	318	340	365	406
7	Iron as Fe	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	0.093
8	Chloride as Cl	mg/L	131	112	107	119	125	135
9	Residual Free Chlorine	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
10	Fluoride as F	mg/L	0.094	0.073	0.081	0.11	0.18	0.23
11	Total Dissolved Solids	mg/L	1068	982	1029	1108	1183	815
12	Calcium as Ca	mg/L	56.4	62.4	72.4	76	80	74.4
13	Magnesium as Mg	mg/L	54.72	48.96	40.08	36	39.6	52.8
14	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
15	Manganese as Mn	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
16	Sulphate as SO_4	mg/L	19.68	25.89	29.58	34.8	41.2	31.95
17	Nitrate Nitrogen as NO_3	mg/L	4.73	3.12	4.15	5.1	4.8	5.23
18	Phenolic compounds as C_6H_5OH	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
19	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
20	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
21	Selenium as Se	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
22	Arsenic as As	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
23	Cyanide as CN	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
24	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
25	Zinc as Zn	mg/L	0.190	0.130	0.093	0.140	0.098	0.180
26	Anionic Detergents as MBAS	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
27	Chromiumas Cr^{+6}	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
28	Mineral Oil	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
29	Alkalinity	mg/L	386	286	274	296	312	392
30	Aluminum as Al	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
31	Boron as B	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32								
32.1	Alachor	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.2	Atrazine	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.3	Aldrin/Dieldrine	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

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Sr. NO.	TEST PARAMETERS	UNIT	GROUND WATER OPEN WELL					
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
			28-04-2022	30-05-2022	30-06-2022	29-07-2022	29-08-2022	30-09-2022
32.4	Alpha HCH	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.5	Beta HCH	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.6	Butachlor	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.7	Chlorpyriphos	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.8	Delta HCH	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.9	2,4- Dichlorophrnoxy acetic acid	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.10	DDT (o,p&p,p-Isomers of DDT, DDE & DDD	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.11	Endosulfan (alpha, beta, and sulphate)	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.12	Ethion	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.13	Gamma – HCH (Lindane)	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.14	Isoproturon	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.15	Malathion	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.16	Methyl Parathion	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.17	Monocrotophos	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32.18	Phorate	µg/l	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
33	Coliform	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent
34	E-Coli	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Ground Water.

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4C. SURFACE WATER QUALITY MONITORING: -

Table-1.8: Surface Water (Pond) Quality Results for the period: April, 2022 to September, 2022

Sr. No.	Parameters	Unit	At Mora Village (Surface Water – Pond)					
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
			28-04-2022	30-05-2022	30-06-2022	29-07-2022	29-08-2022	30-09-2022
1	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
2	Colour	Hazen	3	3	2	3	4	3
3	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	pH Value	--	7.59	7.65	7.49	7.8	7.72	7.49
5	Turbidity	NTU	0.2	0.12	0.18	0.25	0.19	0.25
6	Total Dissolved Solids	mg/L	712	708	659	572	561	673
7	Total Hardness as $CaCO_3$	mg/L	240	256	230	206	198	228
8	Chloride as Cl	mg/L	92	72.47	67.97	62.9	59.9	63
9	Fluoride as F	mg/L	0.176	0.25	0.17	0.22	0.44	0.37
10	Iron as Fe	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
11	Coliform	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent
12	E-Coli	/100 ml	Absent	Absent	Absent	Absent	Absent	Absent

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Surface Water.

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4D. SEA WATER QUALITY MONITORING: -

Table-1.9: Sea Water Quality Analysis Results of CB2 South End towards Landside from the Sea Basin for the period: April, 2022 to September, 2022

Sr. No.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS CB2 SOUTH END TOWARDS LANDSIDE FROM SEA BASIN(N 21° 5'1.92", E 72°37'56.58")											
			28/04/2022		30/05/2022		16/06/2022		29/07/2022		29/08/2022		30/09/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.14	8.03	8.17	8.11	8.09	8.02	8.19	8.06	8.34	8.29	8.21	8.14
2	Temperature	°C	30.5	30.4	30.4	30.2	30.2	30	30.1	29.8	29.7	29.5	29.9	29.7
3	Total Suspended Solids	mg/L	129	113	173	168	153	138	187	186	163	142	147	128
4	BOD (3 Days @ 27 °C)	mg/L	3.34	2.69	2.8	2.71	2.68	2.4	2.49	1.97	2.56	2.33	2.98	2.5
5	Dissolved Oxygen	mg/L	5.9	5.8	5.9	5.75	6	5.95	5.1	5.95	6	5.85	5.9	5.8
6	Salinity	ppt	35.36	35.79	35.3	35.62	34.86	35.23	34.48	34.92	34.16	34.3	34.56	34.86
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO_3	µmol /L	2.91	2.83	3.06	2.91	2.73	2.64	2.61	2.53	2.39	2.17	3.59	3.27
9	Nitrite as NO_2	µmol /L	0.59	0.51	0.63	0.56	0.82	0.76	0.75	0.64	0.41	0.32	0.3	0.19
10	AmmonicalNitrogenas NH_3	µmol /L	2.41	2.35	2.34	2.28	2.19	2.08	1.98	1.81	1.65	1.41	2.18	2.06
11	Phosphates as PO_4	µmol /L	2.27	2.2	2.51	2.45	2.35	2.16	2.24	2.06	2.09	1.92	2.57	2.41
12	Total Nitrogen	µmol /L	5.91	5.69	6.03	5.75	5.74	5.48	5.34	4.98	4.45	3.9	6.07	5.52
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	36542	36814	36372	36684	35996	36312	35628	36112	35396	35492	35692	35974
15	COD	mg/L	13.94	12.38	13.18	12.26	11.52	10.38	10.78	9.94	9.8	8.4	11.6	9.9
A	**Phytoplankton**													
16.1	Chlorophyll	mg/m^3	3.09	2.96	2.96	2.72	2.61	2.5	2.45	2.24	2.32	2.23	2.64	2.56
16.2	Phaeophytin	mg/m^3	1.61	0.29	1.65	0.45	0.64	2.11	1.41	1.51	1.38	0.66	0.78	0.97
16.3	Cell Count	No.x 10^3/L	240	172	242	164	220	168	147	121	186	158	201	198
16.4	Name of Group Number and name of group species of each group	--	Cyclotella sp., Lepto Cylindrus Sp., Thallasiosira sp., Peridinium sp., Navicula sp.	Nitzschia sp., Pleurosigma sp., Scenedesmus sp., Synedra sp.	Skeletonema sp., Scenedesma sp., Rhizosolenia sp., Coscinodiscus sp., Asterinella sp.	Nitzschia sp., Navicula sp., Pleurosigma sp., Pediastrum sp.	Skeletonema sp., Peridinium sp., Thallasiosira sp., Leptocylindrus sp., Cyclotella sp.	Nitzschia sp., Navicula sp., Fragillaria sp., Cymbella sp.	Skeletonema sp., Fragillaria sp., Thallasiosira sp., Asterionella sp., Coscinodiscus sp.	Nitzschia sp., Navicula sp., Rhizosolenia sp., Cyclotella sp.	Skeletonema sp., Guinardia sp., Rhizosolenia sp., Coscinodiscus sp., Pediastrum sp.	Synedra sp., Navicula sp., Pleurosigma sp., Fragillaria sp., Cymbella sp.	Skeletonema sp., Rhizosolenia sp., Asterionella sp., Coscinodiscus sp., Thallasiosira sp.	Fragillaria sp., Cyclotella sp., Synedra sp., Leptocylinrus sp.

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Sr. No.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS CB2 SOUTH END TOWARDS LANDSIDE FROM SEA BASIN(N 21° 5'1.92", E 72°37'56.58")											
			28/04/2022		30/05/2022		16/06/2022		29/07/2022		29/08/2022		30/09/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
B	**Zooplanktons**													
17.1	Abundance (Population)	Nox103 /100m3	29		32		25		28		33		26	
17.2	Name of Group Number and name of group species of each group	--	Copepods, Ostracods, Chaetognaths, Amiphipod		Copepods, Polychaetes, Decapods, Ostracodes		Polychaetes, Ostracods, Amphipods		Polychaetes, Ostracods, Copepods, Gastropods		Copepods, Polychaetes, Amphipods, Ostracodes		Copepods, Polychaetes, Decapods, Chaetognaths	
17.3	Total Biomass	ml/100 m^3	2.85		3.15		2.45		2.75		3.15		2.45	
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2410		2500		2670		2410		2270		2380	
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present	
18.3	E.coli	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.4	Enterococcus species	/ml	Present		Present		Present		Present		Present		Present	
18.5	Salmonella species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.6	Shigella species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.7	Vibrio species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Water.

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Table-1.10: Sea Water Quality Analysis Results of MP1 West End towards Channel from the Sea Basin for the period: April, 2022 to September, 2022

Sr. No.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS MP1 WEST END TOWARDS CHANNEL FROM SEA BASIN(N 21° 5'9.78",E 72°37'24.48")											
			28/04/2022		30/05/2022		16/06/2022		29/07/2022		29/08/2022		30/09/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.19	8.14	8.18	8.13	8.23	8.19	8.17	8.13	8.29	8.24	8.15	8.09
2	Temperature	oC	30.5	30.3	30.4	30.2	30.1	29.9	30	29.8	29.6	29.5	29.8	29.5
3	Total Suspended Solids	mg/L	136	120	173	160	156	138	173	159	162	143	153	132
4	BOD (3 Days @ 27 °C)	mg/L	2.8	2.59	3.1	2.86	2.74	2.56	2.39	2.06	1.96	1.82	2.35	2.17
5	Dissolved Oxygen	mg/L	5.95	5.8	5.95	5.8	5.85	5.8	6	5.9	5.95	5.8	5.9	5.85
6	Salinity	ppt	35.42	35.94	35.26	35.4	34.92	35.38	34.32	34.56	33.98	34.2	34.41	34.92
7	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
8	Nitrate as NO_3	µmol /L	2.98	2.87	2.98	2.9	2.83	2.78	2.67	2.54	2.41	2.3	3.47	3.31
9	Nitrite as NO_2	µmol /L	0.62	0.53	0.57	0.49	0.69	0.56	0.83	0.69	0.39	0.35	0.54	0.42
10	AmmonicalNitrogenas NH_3	µmol /L	2.35	2.3	2.39	2.31	2.23	2.1	2.13	2.08	1.87	1.72	2.21	2.06
11	Phosphates as PO_4	µmol /L	2.12	2.06	2.41	2.36	2.28	2.24	2.39	2.27	2.15	2.06	2.39	2.33
12	Total Nitrogen	µmol /L	5.95	5.7	5.94	5.7	5.75	5.44	5.63	5.31	4.67	4.37	6.22	5.79
13	Petroleum Hydrocarbon	µg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
14	Total Dissolved Solids	mg/L	36470	36962	36346	36468	36114	36452	34518	35690	35198	35419	35608	36028
15	COD	mg/L	12.87	11.94	14.12	13.9	12.16	10.89	10.86	10.24	8.6	7.2	9.7	8.6
A	**Phytoplankton**													
16.1	Chlorophyll	mg/m^3	3.04	2.77	2.91	2.69	2.56	2.48	2.35	2.21	2.43	2.1	2.75	2.62
16.2	Phaeophytin	mg/m^3	0.47	0.49	0.45	0.54	0.67	1.18	1.31	1.24	0.62	0.36	0.22	0.95
16.3	Cell Count	No.x 10^3/L	224	156	216	146	202	170	135	114	206	178	234	212
16.4	Name of Group Number and name of group species of each group	--	Thallasionema sp., Asterionella sp., Rhizosolenia sp., Biddulphia sp., Melosira sp.	Navicula sp., Synedra sp., Pleurosigma sp., Ceratiumsp, Nitzschia sp.	Coscinodiscus sp., Rhizosolenia sp., Pleurosigma sp., Melosira sp., Skeletonema sp.	Nitzschia sp., Navicula sp., Synedra sp., Guinardia sp.	Thallasiosira sp., Rhizosolenia sp., Lepto Cylindrus sp., Cyclotella sp., Pleurosigma sp.	Nitzschia sp., Navicula sp., Synedra sp., Guinardia sp., Skeletonema sp.	Thallasiosira sp., Skeletonema sp., Coscinodiscus sp., Guinardia sp.	Nitzschia sp., Navicula sp., Fragillaria sp., Cyclotella sp.	Rhizosolenia sp., Guinardia sp., Cyclotella sp., Skeletonema sp.	Nitzschia sp., Navicula sp., Coscinodiscus sp., Thallasionema sp.	Thallasiosira sp., Skeletonema sp., Coscinodiscus sp., Guinardia sp., Cheatocerous sp.	Lepticylindrus sp., Navicula sp., Nitzschia sp., Melosira sp., Gyrosigma sp.

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Sr. No.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS MP1 WEST END TOWARDS CHANNEL FROM SEA BASIN(N 21° 5'9.78",E 72°37'24.48")											
			28/04/2022		30/05/2022		16/06/2022		29/07/2022		29/08/2022		30/09/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
B	**Zooplanktons**													
17.1	Abundance (Population)	Nox103 /100m3	30		34		28		31		26		33	
17.2	Name of Group Number and name of group species of each group	--	Amiphipod, Polychaetes, Ostracods, Decapods		Copepods, Polychaetes, Decapods, Gastropods		Amphipods, Foraminiferans, Polychaetes		Polychaetes, Foraminiferans, Copepods, Gastropods		Polychaetes, Foraminiferans, Copepods, Amphipods		Lamellibranches, Amphipods, Copepods, Polychaetes	
17.3	Total Biomass	ml/100 m^3	2.95		3.3		2.70		2.95		2.55		3.20	
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2750		2430		2580		2620		2590		2460	
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present	
18.3	E.coli	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.4	Enterococcus species	/ml	Present		Present		Present		Present		Present		Present	
18.5	Salmonella species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.6	Shigella species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.7	Vibrio species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Water.

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Table-1.11: Sea Water Quality Analysis Results of CB1 End towards Channel from the Sea Basin for the period: April, 2022 to September, 2022

Sr. No.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS CB1 END TOWARDS CHANNEL FROM SEA BASIN (N 21° 5'14.67" , E 72°37'40.14")											
			28/04/2022		30/05/2022		16/06/2022		29/07/2022		29/08/2022		30/09/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	3.17	2.86	2.98	2.7	2.67	2.49	2.47	2.24	2.32	2.16	2.79	2.56
2	Temperature	oC	5.9	5.85	5.9	5.7	5.85	5.75	5.9	5.85	6	5.9	5.8	5.7
3	Total Suspended Solids	mg/L	35.39	35.92	35.24	35.56	34.96	35.32	34.28	34.4	34.12	34.39	34.58	35.14
4	BOD (3 Days @ 27 °C)	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	Dissolved Oxygen	mg/L	2.99	2.87	2.99	2.87	2.58	2.31	2.43	2.26	2.39	2.28	3.29	3.21
6	Salinity	ppt	0.63	0.56	0.57	0.41	0.67	0.56	0.79	0.68	0.38	0.29	0.47	0.35
7	Oil & Grease	mg/L	2.34	2.29	2.31	2.25	2.23	2.17	2.06	1.97	2.25	2.14	2.41	2.39
8	Nitrate as NO_3	µmol /L	2.4	2.35	2.64	2.51	2.29	2.23	2.35	2.29	2.16	2.08	2.35	2.27
9	Nitrite as NO_2	µmol /L	5.96	5.72	5.87	5.53	5.48	5.04	5.28	4.91	5.02	4.71	6.17	5.95
10	AmmonicalNitrogenas NH_3	µmol /L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
11	Phosphates as PO_4	µmol /L	36482	36930	36314	36592	36152	36412	35493	35604	35268	35629	35796	36324
12	Total Nitrogen	µmol /L	14.72	13.56	13.68	12.1	12.54	11.93	10.36	9.28	8.4	7	12	10
13	Petroleum Hydrocarbon	µg/L	3.17	2.86	2.98	2.7	2.67	2.49	2.47	2.24	2.32	2.16	2.79	2.56
14	Total Dissolved Solids	mg/L	5.9	5.85	5.9	5.7	5.85	5.75	5.9	5.85	6	5.9	5.8	5.7
15	COD	mg/L	35.39	35.92	35.24	35.56	34.96	35.32	34.28	34.4	34.12	34.39	34.58	35.14
A	**Phytoplankton**													
16.1	Chlorophyll	mg/m^3	2.93	2.85	2.93	2.69	2.56	2.34	2.4	2.26	2.56	2.34	2.69	2.53
16.2	Phaeophytin	mg/m^3	0.30	0.17	0.26	0.33	0.89	0.92	0.92	0.80	0.60	0.55	0.44	0.30
16.3	Cell Count	No.x 10^3/L	238	136	232	142	216	134	154	140	178	152	225	205
16.4	Name of Group Number and name of group species of each group	--	Lepto Cylindrus Sp., Scenedesmus sp., Coscinodiscus sp., Guinardia sp., Rhizosolenia sp.	Fragillaria sp., Synedra sp., Cyclotella sp., Nitzschia sp., Navicula sp.	Guinardia sp., Melosira sp., Lepto Cylindrus sp., Coscinodiscus sp., Thallasiosira sp.	Nitzschia sp., Navicula sp., Rhizosolenia sp., Pleurosigma sp.	Lepto Cylindrus sp., Cyclotella sp., Guinardia sp., Skeletonema sp., Pediastrum sp.	Nitzschia sp., Navicula sp., Thalassionema sp., Meuriegma sp., Thallasionema sp.	Cyclotella sp., Guinardia sp., Skeletonema sp., Pediastrum sp., Cymbella sp.	Nitzschia sp., Navicula sp., Cyclotella sp., Fragillaria sp.	Guinardia sp., Melosira sp., Pleurosigma sp., Thallasionema sp., Rhizosolenia sp.	Nitzschia sp., Navicula sp., Cyclotella sp., Fragillaria sp., Cymbella sp.	Pbormidium sp., Scenedesmus sp., Closterium Sp., Coscinodiscus sp., Skeletonema sp.	Lepticylindrus sp., Thallasiosira sp., Navicula sp., Nitzschia sp., Cyclotella sp.

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Sr. No.	TEST PARAMETERS	UNIT	RESULTS OF SEA WATER QUALITY ANALYSIS CB1 END TOWARDS CHANNEL FROM SEA BASIN (N 21° 5'14.67" , E 72°37'40.14")											
			28/04/2022		30/05/2022		16/06/2022		29/07/2022		29/08/2022		30/09/2022	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
B	**Zooplanktons**													
17.1	Abundance (Population)	Nox103 /100m3	28		31		25		30		26		31	
17.2	Name of Group Number and name of group species of each group	--	Polychaetes, Decapods, Gastropods, Amiphipod		Copepods, Polychaetes, Bivalves, Gastropods		Foraminiferans, Amphipods, Polychaetes, Copepods		Amphipods, Gastropods, Polychaetes, Copepods		Gastropods, Polychaetes, Amphipods, Foraminiferans		Amphipods, Gastropods, Polychaetes, Copepods	
17.3	Total Biomass	ml/100 m^3	2.70		3.05		2.45		2.90		2.55		2.90	
C	**Microbiological Parameters**													
18.1	Total Bacterial Count	CFU/ml	2630		2540		2410		2630		2650		2390	
18.2	Total Coliform	/ml	Present		Present		Present		Present		Present		Present	
18.3	E.coli	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.4	Enterococcus species	/ml	Present		Present		Present		Present		Present		Present	
18.5	Salmonella species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.6	Shigella species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	
18.7	Vibrio species	/ml	Absent		Absent		Absent		Absent		Absent		Absent	

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Water.

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4E. DUMP POND DISCHARGE WATER QUALITY MONITORING: -

Table-1.12: Dump Pond Water Quality Analysis Results for the Period: April, 2022 to September, 2022

Sr. No.	Parameters	Unit	30/05/2022	30/05/2022	29/08/2022	29/08/2022
			OLD COAL YARD	PET COCK	OLD COAL YARD	PET COCK
1	pH	--	8.89	8.81	8.24	8.4
2	Total Dissolved Solids	mg/L	2419	2316	2080	1946
3	Total Suspended Solids	mg/L	69	58	70	64
4	Turbidity	NTU	13.1	9.8	9.8	8.1
5	BOD (3 Days @ 27 °C)	mg/L	25	38	34	40
6	Dissolved Oxygen	mg/L	6.2	6	6.2	6.4
7	COD	mg/L	174	184	134	152
8	Salinity	ppt	1.65	1.84	1.32	1.41
9	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
10	Total Hardness as $CaCO_3$	mg/L	210	185	184	174
11	Fluoride as F	mg/L	0.6	0.58	0.52	0.6
12	Chloride as Cl	mg/L	909	889	768	872
13	Zinc as Zn	mg/L	0.35	0.26	0.22	0.16
14	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
15	Lead as Pb	mg/L	Not Detected	Not Detected	Not Detected	Not Detected
16	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	Not Detected

Detection Limit, Mercury as Hg: 0.00025 mg/L, Oil & Grease: 2.0 mg/L, Cadmium as Cd: 0.001 mg/L, Lead as Pb: 0.005 mg/L

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Dump Pond Discharge Water.

Authorized Signatory

4F. AMBIENT NOISE LEVEL MONITORING: -

Table-1.13: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Near Port Gate No.: 2

Sampling Location	1 - Near Port Gate No.: 2					
Longitude Latitude	N 21° 05.426'E 72°37.739'					
Date of Monitoring	04/04/2022	02/05/2022	02/06/2022	04/07/2022	01/08/2022	01/09/2022
06:00-07:00	67.6	68.5	72.5	69.7	72.5	70.5
07:00-08:00	62.1	62.3	65.6	62.1	65.6	58.3
08:00-09:00	65.8	72.4	69.4	72.6	69.4	69.4
09:00-10:00	60.7	63.8	66.8	70.5	66.5	65.1
10:00-11:00	55.4	58.7	61.3	64.2	61.2	60.3
11:00-12:00	61.7	64.5	61.4	66.8	60.3	71.5
12:00-13:00	53.9	60.9	63.6	60.0	58.9	62.8
13:00-14:00	56.4	51.4	55.7	59.2	55.2	56.2
14:00-15:00	67.2	70.3	68.3	70.4	67.4	67.4
15:00-16:00	56.8	66.9	64.7	61.2	69.3	56.3
16:00-17:00	52.6	61.4	60.4	58.2	64.4	63.6
17:00-18:00	62.4	52.3	55.6	59.8	57.9	54.2
18:00-19:00	59.1	63.7	66.9	64.3	59.1	61.8
19:00-20:00	55.3	58.9	62.4	66.5	53.3	67.7
20:00-21:00	58.9	65.2	67.8	70.2	68.9	65.8
21:00-22:00	65.3	57.3	61.2	67.4	61.3	69.2
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Day Time shall mean from 6:00 am to 10:00 pm						

Table-1.14: Ambient Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Near Port Gate No.: 2

Sampling Location	1 - Near Port Gate No.: 2					
Longitude Latitude	N 21° 05.426'E 72°37.739'					
Date of Monitoring	04/04/2022 & 05/04/2022	02/05/2022 & 03/05/2022	02/06/2022 & 03/06/2022	04/07/2022 & 05/07/2022	01/08/2022 & 02/08/2022	01/09/2022 & 02/09/2022
22:00-23:00	64.9	51.6	55.4	52.4	54.5	50.4
23:00-00:00	59.0	55.1	60.6	58.9	58.9	53.3
00:00-01:00	60.4	50.3	53.4	55.6	53.2	51.2
01:00-02:00	59.9	55.7	58.6	53.7	51.1	55.6
02:00-03:00	55.3	60.4	63.4	62.5	57.3	60.8
03:00-04:00	55.1	52.2	56.1	58.4	55.6	55.3
04:00-05:00	54.8	49.3	54.3	52.1	52.4	58.9
05:00-06:00	49.7	53.2	57.5	60.8	55.0	63.3
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Night Time shall mean from 10:00 pm to 06:00 am.						

Observation: Above given Results are within the specified norms as perThe Noise Pollution (Regulation and Control) Rules 2000.

Authorized Signatory

Table-1.15: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At HSE Building Terrace

Sampling Location	2 - HSE Building Terrace					
Longitude Latitude	N 21° 05.043' E 72° 38.491'					
Date of Monitoring	11/04/2022	09/05/2022	09/06/2022	11/07/2022	08/08/2022	08/09/2022
06:00-07:00	61.3	71.9	69.5	65.4	69.5	62.4
07:00-08:00	54.7	66.4	68.6	71.5	70.4	73.6
08:00-09:00	67.5	69.9	66.2	69.6	65.1	64.2
09:00-10:00	59.6	57.2	60.1	63.8	61.3	58.9
10:00-11:00	54.1	63.1	67.9	65.2	66.9	68.7
11:00-12:00	63.6	68.5	71.4	67.3	72.4	61.6
12:00-13:00	63.4	59.8	62.3	65.5	57.3	59.4
13:00-14:00	61.5	71.4	69.1	72.6	68.5	69.3
14:00-15:00	60.8	54.2	56.5	59.4	51.3	54.2
15:00-16:00	61.7	69.6	72.4	70.1	65.4	68.4
16:00-17:00	65.6	59.3	57.4	60.6	63.6	63.8
17:00-18:00	69.5	69.4	65.3	61.4	66.5	56.7
18:00-19:00	60.2	62.8	65.7	60.5	59.8	58.6
19:00-20:00	61.6	54.3	60.2	64.6	52.2	59.8
20:00-21:00	56.3	61.1	64.3	61.9	67.4	60.3
21:00-22:00	57.4	52.5	54.2	53.7	54.4	56.1
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Day Time shall mean from 6:00 am to 10:00 pm						

Table-1.16: Ambient Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At HSE Building Terrace

Sampling Location	2 - HSE Building Terrace					
Longitude Latitude	N 21° 05.043' E 72° 38.491'					
Date of Monitoring	11/04/2022 & 12/04/2022	09/05/2022 & 10/05/2022	09/06/2022 & 10/06/2022	11/07/2022 & 12/07/2022	08/08/2022 & 09/08/2022	08/09/2022 & 09/09/2022
22:00-23:00	68.7	59.4	63.6	63.6	55.4	60.5
23:00-00:00	53.3	48.7	52.4	56.6	51.2	54.2
00:00-01:00	56.7	52.2	56.8	54.2	56.3	50.3
01:00-02:00	54.3	52.1	56.1	59.8	49.8	55.8
02:00-03:00	52.2	61.8	64.9	60.7	63.3	58.9
03:00-04:00	56.1	56.3	59.4	63.5	54.2	60.7
04:00-05:00	58.9	59.0	53.2	56.2	56.1	55.7
05:00-06:00	53.6	47.5	51.6	58.9	45.5	60.2
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Night Time shall mean from 10:00 pm to 06:00 am.						

Observation: Above given Results are within the specified norms as perThe Noise Pollution(Regulation and Control) Rules 2000.

Authorized Signatory

Table-1.17: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Central Water Pump House

Sampling Location	3 - Central Water Pump House					
Longitude Latitude	N 21° 04.697′ E 72° 38.420′					
Date of Monitoring	14/04/2022	12/05/2022	13/06/2022	14/07/2022	11/08/2022	12/09/2022
06:00-07:00	58.4	57.4	55.1	59.8	61.5	65.7
07:00-08:00	59.5	61.1	66.7	62.6	58.7	59.3
08:00-09:00	56.5	58.4	54.3	57.8	63.3	52.4
09:00-10:00	67.8	64.3	67.5	68.6	66.3	63.2
10:00-11:00	63.7	60.4	54.1	58.4	63.2	52.8
11:00-12:00	60.5	57.6	62.3	65.1	61.9	68.9
12:00-13:00	58.3	56.1	60.6	56.3	60.2	52.2
13:00-14:00	66.4	67.5	70.2	68.9	70.4	61.4
14:00-15:00	54.7	58.6	54.2	59.7	55.6	63.5
15:00-16:00	60.6	68.4	71.6	67.5	71.2	62.4
16:00-17:00	66.8	53.5	51.4	57.6	57.8	52.1
17:00-18:00	68.3	69.5	67.9	69.5	73.4	73.6
18:00-19:00	63.8	65.4	70.3	72.4	61.6	69.5
19:00-20:00	59.9	60.7	63.4	66.9	65.7	60.2
20:00-21:00	63.1	68.3	62.1	58.7	64.1	54.1
21:00-22:00	61.4	55.4	53.4	55.4	58.4	55.4
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Day Time shall mean from 6:00 am to 10:00 pm.						

Table-1.18: Ambient Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Central Water Pump House

Sampling Location	3 - Central Water Pump House					
Longitude Latitude	N 21° 04.697′ E 72° 38.420′					
Date of Monitoring	14/04/2022 & 15/04/2022	12/05/2022 & 13/05/2022	13/06/2022 & 14/06/2022	14/07/2022 & 15/07/2022	11/08/2022 & 12/08/2022	12/09/2022 & 13/09/2022
22:00-23:00	60.7	48.9	53.5	56.2	51.4	52.2
23:00-00:00	68.5	52.4	56.1	59.9	55.3	56.1
00:00-01:00	56.4	61.8	65.4	61.1	58.4	59.8
01:00-02:00	48.0	60.3	54.3	52.8	63.3	56.4
02:00-03:00	56.2	52.5	58.9	63.4	57.6	61.2
03:00-04:00	51.6	58.4	61.4	56.3	60.2	51.1
04:00-05:00	63.2	63.1	60.3	62.5	61.1	57.6
05:00-06:00	55.8	54.4	59.7	56.4	50.8	51.2
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Night Time shall mean from 10:00 pm to 06:00 am.						

Observation: Above given Results are within the specified norms as per The Noise Pollution(Regulation and Control) Rules 2000.

Authorized Signatory

Table-1.19: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Container Terminal

Sampling Location	4 - Container Terminal					
Longitude Latitude	N 21° 05.187' E 72° 37.774'					
Date of Monitoring	08/04/2022	05/05/2022	06/06/2022	07/07/2022	04/08/2022	05/09/2022
06:00-07:00	62.5	69.3	73.4	70.1	66.4	67.5
07:00-08:00	65.1	71.2	69.5	65.3	69.5	62.3
08:00-09:00	59.2	64.9	61.4	64.5	61.2	60.8
09:00-10:00	57.0	57.5	55.2	58.4	54.6	54.1
10:00-11:00	52.1	62.6	65.6	62.1	65.1	65.6
11:00-12:00	54.6	51.4	56.9	59.4	56.3	56.2
12:00-13:00	59.3	63.5	67.4	70.5	59.7	64.3
13:00-14:00	66.5	57.9	54.2	57.8	54.1	59.7
14:00-15:00	65.7	59.1	63.6	66.8	63.8	61.6
15:00-16:00	62.9	61.3	67.9	62.3	57.4	67.8
16:00-17:00	70.9	56.5	52.1	55.8	60.2	51.2
17:00-18:00	55.1	70.6	61.0	64.2	67.4	67.9
18:00-19:00	68.7	68.9	68.5	70.6	70.5	71.8
19:00-20:00	61.9	62.4	60.4	57.1	66.1	53.6
20:00-21:00	54.2	64.7	67.5	65.5	61.3	63.7
21:00-22:00	67.0	61.5	58.3	60.6	57.6	59.5
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Day Time shall mean from 6:00 am to 10:00 pm.						

Table-1.20: Ambient Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Container Terminal

Sampling Location	4 - Container Terminal					
Longitude Latitude	N 21° 05.187' E 72° 37.774'					
Date of Monitoring	08/04/2022 & 09/04/2022	05/05/2022 & 06/05/2022	06/06/2022 & 07/06/2022	07/07/2022 & 08/07/2022	04/08/2022 & 05/08/2022	05/09/2022 & 06/09/2022
22:00-23:00	66.2	58.7	62.5	59.7	57.7	54.3
23:00-00:00	52.5	56.2	51.1	54.2	51.1	50.8
00:00-01:00	61.3	50.3	54.6	56.3	47.5	52.4
01:00-02:00	57.4	54.6	51.4	58.1	52.2	51.1
02:00-03:00	53.4	58.4	53.6	55.5	51.8	52.8
03:00-04:00	63.5	49.1	52.8	57.4	45.3	54.2
04:00-05:00	56.9	52.3	56.4	53.2	55.6	50.4
05:00-06:00	57.7	62.3	65.9	62.4	59.1	59.8
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Night Time shall mean from 10:00 pm to 06:00 am.						

Observation: Above given Results are within the specified norms as per The Noise Pollution(Regulation and Control) Rules 2000.

Authorized Signatory

Table-1.21:Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Hazira Village

Sampling Location	5 - Hazira Village					
Longitude Latitude	N 21° 05.44' E 72° 38.44'					
Date of Monitoring	18/04/2022	16/05/2022	16/06/2022	18/07/2022	15/08/2022	15/09/2022
06:00-07:00	68.9	70.5	65.3	62.4	71.4	66.8
07:00-08:00	60.0	66.9	64.1	60.6	64.6	56.2
08:00-09:00	63.7	63.7	68.5	65.1	59.8	63.7
09:00-10:00	64.1	60.1	55.4	59.8	65.7	55.6
10:00-11:00	42.4	64.5	67.8	64.4	60.5	68.9
11:00-12:00	62.1	67.4	71.4	68.5	71.2	64.2
12:00-13:00	69.1	69.2	68.3	64.2	67.3	61.5
13:00-14:00	61.6	62.3	59.6	62.5	59.6	58.7
14:00-15:00	63.5	66.6	62.1	59.7	69.5	63.8
15:00-16:00	71.8	58.5	62.6	66.3	61.2	69.5
16:00-17:00	64.6	67.3	64.3	63.3	70.5	67.9
17:00-18:00	60.1	61.2	58.5	61.2	69.8	59.6
18:00-19:00	66.4	55.3	52.1	55.5	58.4	51.4
19:00-20:00	67.7	67.9	72.4	69.6	63.1	72.6
20:00-21:00	70.2	66.1	63.2	66.7	71.6	61.3
21:00-22:00	62.3	69.6	65.4	69.8	65.4	65.8
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Day Time shall mean from 6:00 am to 10:00 pm.						

Table-1.22: Ambient Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: April, 2022 to September, 2022 At Hazira Village

Sampling Location	5 - Hazira Village					
Longitude Latitude	N 21° 05.44' E 72° 38.44'					
Date of Monitoring	18/04/2022 & 19/04/2022	16/05/2022 & 17/05/2022	16/06/2022 & 17/06/2022	18/07/2022 & 19/07/2022	15/08/2022 & 16/08/2022	15/09/2022 & 16/09/2022
22:00-23:00	67.6	55.2	59.8	55.4	50.2	51.1
23:00-00:00	50.9	51.1	56.4	60.2	47.7	58.6
00:00-01:00	53.0	59.7	65.4	63.3	61.5	65.7
01:00-02:00	58.9	62.4	58.7	61.4	58.3	63.6
02:00-03:00	50.1	56.1	61.3	64.8	54.2	60.5
03:00-04:00	55.5	65.5	61.4	59.2	61.3	56.8
04:00-05:00	55.2	50.2	54.3	56.3	45.8	52.2
05:00-06:00	54.9	61.0	59.6	62.4	64.2	57.3
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Night Time shall mean from 10:00 pm to 06:00 am.						

Observation: Above given Results are within the specified norms as per The Noise Pollution(Regulation and Control) Rules 2000.

Note:The Noise Level of Hazira Village is compare with the Industrial area Norms as Hazira Village is Surround By Numbers of industries.

Authorized Signatory

Table-1.23: Ambient Noise Level Monitoring Results during the Day Time in Leq. dB(A) for the period: April,2022 to September,2022 At Suvali Village

Sampling Location	6 - Suvali Village					
Longitude Latitude	N 21° 08.55' E 72° 38.24'					
Date of Monitoring	22/04/2022	19/05/2022	21/06/2022	22/07/2022	18/08/2022	19/09/2022
06:00-07:00	53.6	44.2	46.8	50.4	48.9	48.7
07:00-08:00	54.1	51.9	53.6	55.1	55.4	52.3
08:00-09:00	48.2	63.7	59.5	62.4	60.2	59.8
09:00-10:00	47.4	58.4	55.4	52.6	63.9	50.3
10:00-11:00	50.6	45.1	49.2	54.8	48.7	51.1
11:00-12:00	53.4	56.3	53.1	56.2	52.3	54.2
12:00-13:00	49.6	54.2	57.8	60.3	57.1	63.8
13:00-14:00	47.3	51.8	56.7	54.2	56.3	52.2
14:00-15:00	52.5	56.7	61.3	63.8	59.8	61.7
15:00-16:00	47.6	54.9	52.1	49.8	53.1	47.2
16:00-17:00	53.8	46.2	50.3	53.2	43.6	50.8
17:00-18:00	51.2	57.8	61.8	58.9	53.3	54.3
18:00-19:00	48.6	45.6	48.7	51.1	42.1	55.8
19:00-20:00	52.4	51.1	57.4	55.3	56.8	58.9
20:00-21:00	49.7	44.8	49.3	53.6	49.7	51.7
21:00-22:00	54.6	51.2	56.4	52.8	56.2	53.3
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Day Time shall mean from 6:00 am to 10:00 pm.						

Table-1.24: Ambient Noise Level Monitoring Results during the Night Time in Leq. dB(A) for the period: April,2022 to September,2022 At Suvali Village

Sampling Location	6 - Suvali Village					
Longitude Latitude	N 21° 08.55' E 72° 38.24'					
Date of Monitoring	22/04/2022 & 23/04/2022	19/05/2022 & 20/05/2022	21/06/2022 & 22/06/2022	22/07/2022 & 23/07/2022	18/08/2022 & 19/08/2022	19/09/2022 & 20/09/2022
22:00-23:00	45.1	45.5	50.5	48.7	50.6	53.6
23:00-00:00	50.4	47.9	45.1	49.3	44.2	47.5
00:00-01:00	44.2	42.6	40.6	43.5	46.1	45.1
01:00-02:00	43.9	43.8	44.8	49.8	41.1	52.6
02:00-03:00	48.7	46.3	49.7	52.2	48.9	49.7
03:00-04:00	42.5	44.2	49.3	51.4	47.5	55.3
04:00-05:00	48.9	52.8	55.4	50.6	56.4	46.1
05:00-06:00	44.6	44.6	49.1	47.2	49.3	50.5
#dB(A) Leq. Denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.						
Night Time shall mean from 10:00 pm to 06:00 am.						

Observation: Above given Results are within the specified norms as per The Noise Pollution(Regulation and Control) Rules 2000.

4G. DG SETS STACK EMISSION AND NOISE LEVEL MONITORING: -

Authorized Signatory

Table-1.25: DG Sets Stack Monitoring Results for the period: April, 2022 to September, 2022

Table-1.25 (a): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	DG SET TOYO DENKI -1		DG SET TOYO DENKI -2		DG SET TOYO DENKI -3	
			23/05/2022	31/08/2022	23/05/2022	31/08/2022	23/05/2022	31/08/2022
1	Particulate Matter	mg/Nm^3	28.61	24.52	26.83	28.66	25.75	30.62
2	Sulphur Dioxide	ppm	6.62	4.44	6.18	6.39	4.5	7.46
3	Oxide of Nitrogen	ppm	36.5	34.23	33.86	36.25	35.84	38.63
4	Carbon Monoxide (CO)	mg/m^3	22.41	23.39	21.86	22.9	23.39	25.77
5	Non Methyl Hydro Carbon (NMHC)	mg/m^3	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.25 (b): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	SS-1 LT DG -320 KVA		SS3 -DG -200 KVA		LT Phase -1 (625 KVA)	
			23/05/2022	31/08/2022	24/05/2022	31/08/2022	24/05/2022	29/08/2022
1	Particulate Matter	mg/Nm^3	26.42	30.33	17.66	24.51	27.53	35.61
2	Sulphur Dioxide	ppm	5.27	6.46	5.12	7.13	6.54	5.21
3	Oxide of Nitrogen	ppm	33.43	35.64	29.61	33.51	37.23	35.46
4	Carbon Monoxide (CO)	mg/m^3	17.18	6.3	11.45	7.44	25.19	5.04
5	Non Methyl Hydro Carbon (NMHC)	mg/m^3	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.25 (c): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	LT Phase -2 (750 KVA)		ER-1 (100 KVA)	
			24/05/2022	29/08/2022	24/05/2022	31/08/2022
1	Particulate Matter	mg/Nm^3	35.32	30.39	24.29	21.59
2	Sulphur Dioxide	ppm	7.63	7.02	4.27	5.11
3	Oxide of Nitrogen	ppm	35.65	38.61	36.29	34.24
4	Carbon Monoxide (CO)	mg/m^3	27.48	6.3	14.89	5.27
5	Non Methyl Hydro Carbon (NMHC)	mg/m^3	Not Detected	Not Detected	Not Detected	Not Detected

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Table-1.25 (d): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	NDG Building (380 KVA)		Custom Building (320 KVA)	
			24/05/2022	31/08/2022	23/05/2022	31/08/2022
1	Particulate Matter	mg/Nm^3	20.32	22.66	23.57	26.57
2	Sulphur Dioxide	ppm	7.42	6.34	6.1	5.12
3	Oxide of Nitrogen	ppm	31.53	32.65	35.3	31.53
4	Carbon Monoxide (CO)	mg/m^3	13.74	5.96	18.32	5.04
5	Non Methyl Hydro Carbon (NMHC)	mg/m^3	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.26: DG Sets Noise Level Monitoring Results for the period: April, 2022 to September, 2022

Sr. No.	DG Set Average Noise Level In Leq. dB(A)		
	Sampling Location	At 1 M Distance From The Enclosure	
	Sampling Date	23/05/2022 & 24/05/2022	29/05/2022 & 31/05/2022
1.	DG SET TOYO DENKI - 1	71.5	69.7
2.	DG SET TOYO DENKI - 2	66.3	71.6
3.	DG SET TOYO DENKI -3	62.1	65.4
4.	SS-1 LT DG -320 KVA	70.8	72.2
5.	SS3 -DG -200 KVA	64.5	66.5
6.	LT PHASE -1 (625 KVA)	61.3	66.3
7.	LT PHASE -2 (750 KVA)	58.7	60.5
8.	ER-1 (100 KVA)	69.4	70.5
9.	NDG BUILDING (380 KVA)	63.1	61.1
10.	CUSTOM BUILDING (320 KVA)	65.2	68.3

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4H. SEA SEDIMENT QUALITY MONITORING: -

Table-1.27: Sea Sediment Quality Results of CB2 South End towards Landside for the period: April, 2022 to September, 2022

Sr. No.	PARAMETERS	UNIT	CB2 SOUTH END TOWARDS LANDSIDEFROM SEA BASIN (N 21° 5'1.92", E 72°37'56.58")					
			28/04/2022	30/05/2022	16/06/2022	29/07/2022	29/08/2022	30/09/2022
1	Organic Matter	%	0.40	0.40	0.43	0.41	0.37	0.46
2	Phosphorus as P	µg/g	658	598	639	678	568	641
3	Texture	--	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	**Heavy Metals**							
5.1	Aluminum as Al	%	4.89	4.8	4.99	5.14	4.62	5.26
5.2	Total Chromium as Cr^{+3}	µg/g	112	120	132	118	129	104
5.3	Manganese as Mn	µg/g	790	716	758	673	708	617
5.4	Iron as Fe	%	5.24	4.72	5.12	4.95	4.72	4.85
5.5	Nickel as Ni	µg/g	61.83	35.86	53.98	47.19	51.35	37.96
5.6	Copper as Cu	µg/g	53.45	53.27	60.83	53.28	43.98	57.32
5.7	Zinc as Zn	µg/g	106	128	107	139	124	115
5.8	Lead as Pb	µg/g	2.29	2.18	1.94	1.38	1.76	2.35
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
6	**Benthic Organisms**							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Gastropods, Crustaceans, Polychaetes, Bivalves	Bivalves, Polychaetes, Amphipods, Gastropods	Bivalves, Polychaetes, Gastropods	Bivalves, Polychaetes, Gastropods, Amphipods	Polychaetes, Crustaceans, Gastropods	Bivalves, Polychaetes, Branchyurans
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Foraminiferans	Forammiforms	Nematodes	--	Foraminiferans	Nematodes
6.3	Population	No./m^2	437	353	324	412	441	417

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Sediment.

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Table-1.28: Sea Sediment Quality Results of MP1 West End towards Channel of Sea Basin for theperiod: April, 2022 to September, 2022

Sr. No.	PARAMETERS	UNIT	MP1 WEST END TOWARDS CHANNEL OF SEA BASIN (N 21° 5'9.78",E 72°37'24.48")					
			28/04/2022	30/05/2022	16/06/2022	29/07/2022	29/08/2022	30/09/2022
1	Organic Matter	%	0.36	0.39	0.36	0.40	0.38	0.40
2	Phosphorus as P	µg/g	640	630	618	673	592	658
3	Texture	--	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	**Heavy Metals**							
5.1	Aluminum as Al	%	4.86	4.81	5.12	4.93	4.73	5.06
5.2	Total Chromium as Cr^{+3}	µg/g	105	112	129	114	97.68	119
5.3	Manganese as Mn	µg/g	814	716	678	708	684	732
5.4	Iron as Fe	%	5.18	4.92	5.24	4.8	4.62	5.14
5.5	Nickel as Ni	µg/g	56.73	48.87	59.86	47.36	55.34	40.37
5.6	Copper as Cu	µg/g	49.25	43.65	55.73	52.64	43.98	53.15
5.7	Zinc as Zn	µg/g	112	119	108	137	125	97.28
5.8	Lead as Pb	µg/g	2.76	2.18	1.93	1.37	1.48	2.37
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
6	**Benthic Organisms**							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Ostracods, Gastropods, Bivalves, Polychaetes	Polychaetes, Bivalves, Gastropods	Polychaetes, Bivalves, Amphipods	Polychaetes, Bivalves, Gastropods	Polychaetes, Crustaceans, Bivalves	Crustaceans, Bivalves, Gastropods, Branchyurans
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	--	Nematodes, Forammiforms	Foraminiferans	Nematodes	Nematodes	Foraminiferans
6.3	Population	No./m^2	471	439	351	380	409	526

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Sediment.

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Table-1.29: Sea Sediment Quality Results of CB1 End towards Channel for the period: April, 2022 to September, 2022

Sr. No.	PARAMETERS	UNIT	CB1 WEST END TOWARDS CHANNEL OF SEA BASIN (N 21° 5'14.67" , E 72°37'40.14")					
			28/04/2022	30/05/2022	16/06/2022	29/07/2022	29/08/2022	30/09/2022
1	Organic Matter	%	0.38	0.44	0.39	0.43	0.42	0.48
2	Phosphorus as P	µg/g	632	624	687	706	632	712
3	Texture	--	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt	Sandy Silt
4	Petroleum Hydrocarbon	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
5	**Heavy Metals**							
5.1	Aluminum as Al	%	4.96	4.72	5.10	4.91	4.76	5.13
5.2	Total Chromium as Cr^{+3}	µg/g	103	123	116	118	109	129
5.3	Manganese as Mn	µg/g	758	728	673	683	705	664
5.4	Iron as Fe	%	5.12	4.85	4.96	4.97	4.8	4.92
5.5	Nickel as Ni	µg/g	63.86	47.89	56.73	52.86	43.65	51.27
5.6	Copper as Cu	µg/g	54.19	54.17	51.28	50.17	56.93	43.68
5.7	Zinc as Zn	µg/g	103	130	119	147	112	132
5.8	Lead as Pb	µg/g	2.39	2.29	1.83	1.56	1.37	2.19
5.9	Mercury as Hg	µg/g	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
6	**Benthic Organisms**							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Amphipods, Crustaceans, Bivalves, Polychaetes	Polychaetes, Bivalves, Gastropods, Ostracodes	Polychaetes, Bivalves, Gastropods	Polychaetes, Crustaceans, Gastropods	Polychaetes, Crustaceans, Gastropods, Ostracodes	Polychaetes, Crustaceans, Gastropods
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Foraminiferans	Nematodes	Nematodes	Nematodes	--	Foraminiferans
6.3	Population	No./m^2	412	408	350	379	321	496

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Sea Sediment.

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4I. SOIL QUALITY MONITROING: -

Table-1.30A: Soil Quality Testing Results for the period: April, 2022 to September, 2022

SR. NO.	PARAMETERS	UNIT	NEAR PORT GATE NO. 2	
			16/06/2022	12/09/2022
1	Type	--	Sandy Loam	Sandy Loam
Grain Size Analysis				
2	Gravel	%	2.7	2.5
3	Coarse Sand	%	6.3	6.5
4	Medium Sand	%	18	20
5	Fine Sand	%	42	40
6	Total Sand	%	69	69
7	Silt + Clay	%	31	31
8	pH (1:5)	--	8.83	8.92
9	Electricity Conductivity	µmho/cm	1925	1844
10	Alkali matter	mg/kg	576	548
11	Cation Exchange Capacity	meq/100 gm	12.48	12.3
12	Sodium Absorption Ratio	--	10.76	10.56
13	Organic Matter	mg/kg	0.54	0.56
14	Available Nitrogen	meq/100 gm	0.79	0.62
15	Available Potassium	mg/kg	8.36	7.2
16	Available Phosphorus	mg/kg	0.74	0.86
17	Available Sodium	mg/kg	11.28	11.1
18	Permeability	cm/sec	1.40×10^{-7}	1.1×10^{-7}

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Soil Quality.

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Table-1.30B: Soil Quality Testing Results for the period: April, 2022 to September, 2022

SR. NO.	PARAMETERS	UNIT	NEAR LT CANTEEN PARKING	
			16/06/2022	12/09/2022
1	Type	--	Sandy Loam	Sandy Loam
Grain Size Analysis				
2	Gravel	%	1.3	1.8
3	Coarse Sand	%	6.7	8.2
4	Medium Sand	%	26	23
5	Fine Sand	%	38	44
6	Total Sand	%	72	77
7	Silt + Clay	%	28	23
8	pH (1:5)	--	8.71	8.84
9	Electricity Conductivity	µmho/cm	1946	1889
10	Alkali matter	mg/kg	603	596
11	Cation Exchange Capacity	meq/100 gm	12.64	12.5
12	Sodium Absorption Ratio	--	10.93	10.66
13	Organic Matter	mg/kg	0.6	0.62
14	Available Nitrogen	meq/100 gm	0.68	0.66
15	Available Potassium	mg/kg	7.96	7.45
16	Available Phosphorus	mg/kg	0.89	0.92
17	Available Sodium	mg/kg	10.84	10.94
18	Permeability	cm/sec	1.50×10^{-7}	1.40×10^{-7}

Observation: From the above results it is concluded that there is No Significant Changes in the Quality of Soil Quality.

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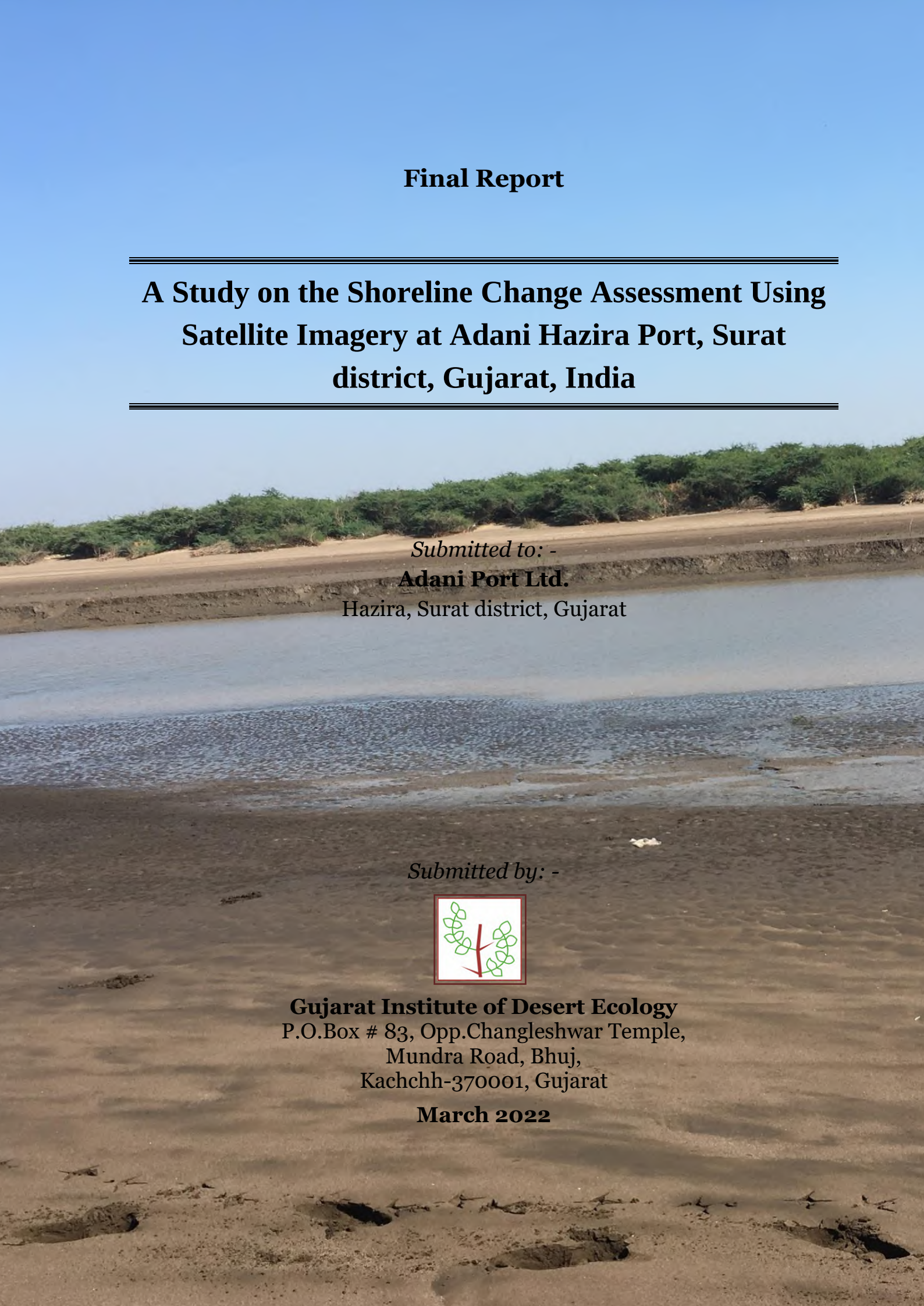
ANNEXURE-5

Shore Line Assesment Report prepared by Gujarat Institute of Deserts Ecology

Final Report

A Study on the Shoreline Change Assessment Using Satellite Imagery at Adani Hazira Port, Surat district, Gujarat, India



Submitted to: -

Adani Port Ltd.

Hazira, Surat district, Gujarat

Submitted by: -

Gujarat Institute of Desert Ecology

P.O.Box # 83, Opp.Changleshwar Temple,
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March 2022

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1.1. Introduction

The shoreline is the place where large bodies like an ocean or lake meets the land. The coastal shoreline is the interface between the land and water and is very dynamic in nature which gets altered due to various coastal processes that govern it such as, wave characteristics, near-shore circulation, sediment characteristics and beach forms, etc. Shoreline change is a result of a process called littoral transport, which is responsible for moving eroded materials along the coasts by means of waves and currents in the near shore zone (Misra and Ramakrishnan, 2015). The developmental and maintenance activities such as construction of port, mining of beach sand, industrialization, garbage dump, urbanization, recreational activities, discharge of domestic sewage and industrial effluent, and reduction in sediment supply from rivers have amplified the processes of modifications, including changes in the shoreline (Kannan and Malarvannan, 2016).

Important aspect of shoreline is the sustainable development and protection of the coastal environment. Therefore, monitoring of coastline areas is the crucial subject since shorelines are the most important and dynamic of natural phenomenon (Tamassoki, Amiri, and Soleymani, 2014), where changes in one part affects the other parts, which will be a chain reaction.

1.2. Gujarat

Gujarat is situated in the western coast of India, on the Arabian Sea. Among the maritime states of India, Gujarat has the largest coastal stretch of around 28,000 km^2 or longest coastline of around 1650 km, which supports variety of marine flora and fauna. This state has two gulfs, the Gulf of Khambat and Gulf of Kachchh, and the coast is differentiated high rainfall area (2500 mm in south Gujarat) and low rainfall area (250 mm in north- west part of Kachchh). The coast experiences different range of tides, waves, cyclones and currents in the sea, affecting the physical as well as the biological conditions of the whole marine ecosystem.

1.2.1. Gulf of Khambhat

Gulf of Khambhat is located in the northern part of the Arabian sea, has a width of 80 km at mouth and funnels down to 25 km over the longitudinal reach of 140 km. The entire

bank surrounding the Gulf is bordered with large tidal flats nested into numerous tidal creeks. The Ambika, Purna, Kim, Tapti, Narmada, Mahi, Sabarmati and Dhadhar are the major rivers discharge into this Gulf. Mal Bank is a prominent sand shoal present at northern part of the Gulf. Middle part of the Gulf is deeper with depth ranging up to 30 m. Seabed in most part of the Gulf remains in quasi steady state and it moves as sand bars with tides. Many offshore oil, gas and chemical terminals exists and new installations are planned between Hazira and Dahej on the eastern part of the Gulf. On the other hand, the tides in the Gulf remain the largest of the Indian coast with spring tidal ranges of around 9 m resulting in strong currents. Due to strong flood and ebb tidal currents, the water remains always turbid with high bed and suspended sediment loads. Studies in the Gulf of Khambhat suggest that sand wave formation is under high-energy hydrodynamic conditions associated with the large tidal range. The sand waves, with the finer sediments concentrated at the crests, are derived from the coarse sediments supplied mainly by the Narmada and Tapti rivers.(Kumar and Kumar, 2010).

1.3. About Adani Hazira Port Ltd. (AHPL)

Adani Hazira Port Ltd. (AHPL) handles all types of cargo including bulk, break-bulk, bulk liquid chemicals, petroleum products and edible oil, containers, automotive and crude oil. In addition to its proximity to the Delhi-Mumbai Industrial Corridor, one of the world's largest high-tech industrial zones AHPL has excellent multi modal connectivity to the northern, north-western and central parts of India.

1.4. Origin of the Study

Adani Hazira Port Ltd. has obtained Environmental Clearance (EC) from the Ministry of Environment, Forests & Climate Change (MoEF&CC), Government of India, EC & CRZ Clearance condition issued vide File No. File No.: 11-150/2010-IA.1H dated 29th September, 2020, with the specification that Adani Hazira Port shall carry out intensive monitoring on shoreline changes and reporting once in six months through the Regional Office, to the MoEF&CC, New Delhi. The Adani Hazira port has been directed to undertake "Periodical study on shore line changes shall be conducted and mitigation carried out if necessary" as per the suggestions of EC & CRZ condition. Therefore, Adani Hazira Port Ltd. approached M/s. Gujarat Institute of Desert Ecology (GUIDE) to study the intensive

monitoring on shoreline changes through high resolution satellite imageries (LISS-IV). The present report compiles the results of shoreline change analysis by using satellite imageries and beach profile analysis of 20 km coastline stretch of Adani Hazira Port. Due to the dynamic nature of shoreline boundary, it's important to understand the long and short-term rate of shoreline changes for coastal vulnerabilities point of view.

1.5. Objectives of Study

1. To map and compare shoreline behavior (changes) of 20 km (10 km on either side) coastline stretch of Adani Hazira Port breakwater using LISS IV high resolution satellite imageries during the years 2013 and 2015 before and after construction of port activities.
2. To monitor shoreline, change in every 3 years from 2015 onwards i.e., year 2018 and year 2021 using LISS IV, high resolution satellite imageries.
3. To identify the zones of high erosion and accretion using LISS IV, high resolution satellite imageries.
4. Collection of shoreline information and cross-sectional profiles using DGPS, at 20.00 Mt. interval along the route & offset between high tide line to low tide line, along the 10km stretch around the project site.
5. Shoreline change analysis by super imposing DGPS Survey data with satellite data.
6. Comparing shoreline changes results with NCSCM (National Centre for Sustainable Costal Management) CRZ data.

2. STUDY AREA

2.1. Location

The study area is located on the western coast of Gulf of Khambhat at Hazira in Surat District of Gujarat. Gulf of Khambhat coast experiences one of the highest tidal amplitudes and currents than anywhere along the Indian coast (Figure 2.1). Due to its funnel shape and the semi-enclosed nature at the head, the tidal height increases tremendously towards upstream. The highest spring tide recorded at Gulf is 12.5 m, which is second highest tidal amplitude anywhere in the world. This high tidal amplitude, particularly in the upper Gulf has huge intertidal extent of about 1.5 to 5 km, probably widest along the Indian coast. The long-shore currents by means of low wave dominate the open coasts along the Arabian Sea. Nevertheless, due to exceptionally strong flood and ebb tides, powerful tidal currents with a speed of 3 to 4 knots dominate the flow. The maximum velocities of 6 knots associated with high wave energy occur during mid-tide.

The study site is totally 20 km coastline stretch (10 km on either side) of Adani Hazira Port, located on the northern co-ordinates of site 21°8'14.59"N,72°37'17.174"E to Southern Co-ordinates of site 21°1'2.139"N,72°43'40.214"E, which is given in Figure 2.1.

2.2. Climate

The summer begins in early March and lasts until June. April and May are the hottest months, the average maximum temperature being 37 °C. Monsoon begins in late June. Surat city receives approximately 1,200 mm of rainfall by the end of September. October and November months experience the retreat of the monsoon and a return of high temperatures until late November. Winter starts in December and ends in late February, with average mean temperatures of around 23°C with insignificant rainfall.

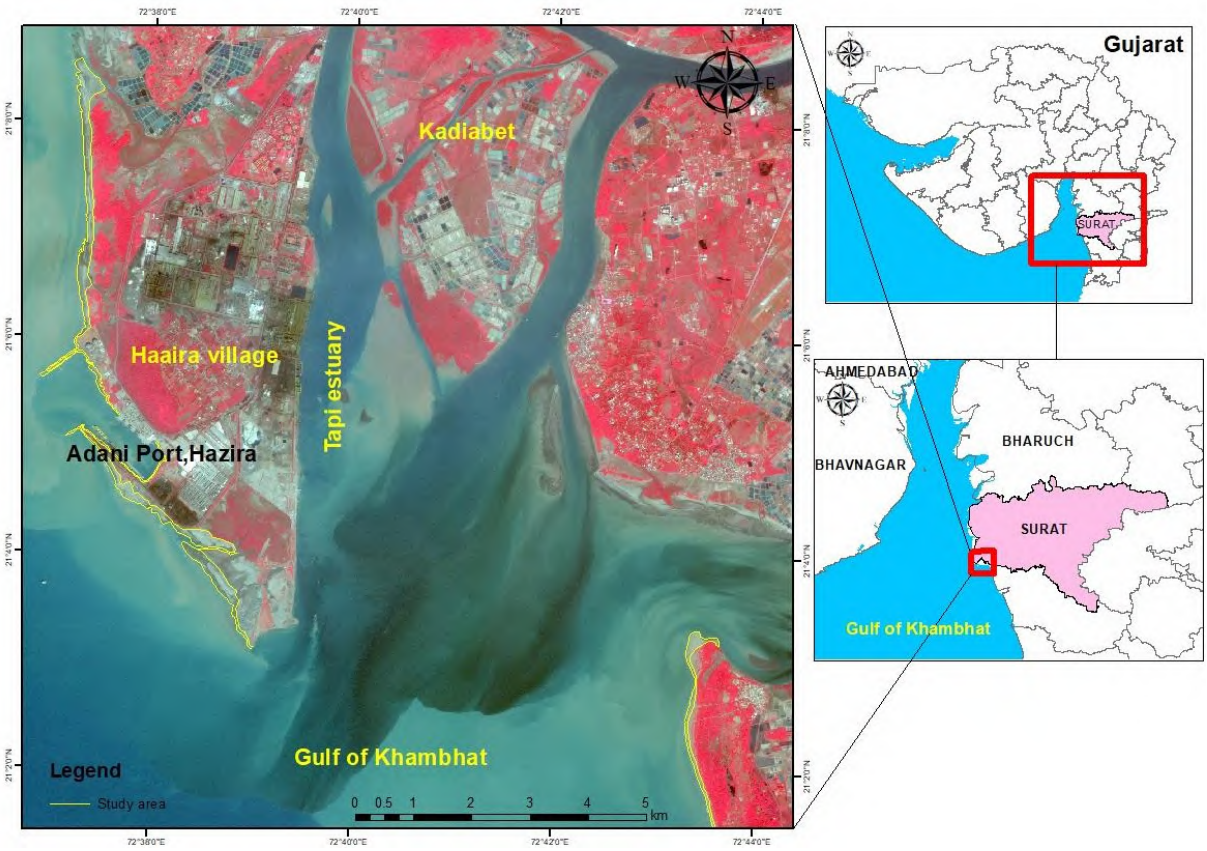

Figure 2.1: Location map of the study area

2.2.1. Tidal Regime

The tide in the Gulf is mixed semi-diurnal type, with large diurnal inequality and varying amplitude, which decrease from north to south. While, unique position of Gulf of Khambat, the coasts experience very high tidal amplitude; probably the highest anywhere along the Indian coast. Funnel shape and the semi-enclosed nature of Gulf lead to a tremendous increase in tidal height towards upstream(Gupta 2002). The maximum spring tide recorded is 8.1m (Mitra, Kumar and Jena, 2020). As a result, inter-tidal expanse is huge to the extent of 1.5 to 8 km, perhaps widest along the Indian coast. The Hazira mangrove area has bi-diurnal tidal regime (i.e., two ebb and flow tides per day). There were due to the funnel shape of the Gulf of Khambhat coupled with the resonance effect of exceptionally high tides. Along its eastern shore the mean spring high water range increases from 5.7 m. The Tapi estuary experiences fairly high tidal ranges in the mouth segment due to its proximity to the Gulf of Khambhat and hence marked changes in the tidal range and durations of flood and ebb phases, however, occur as the tide progresses along the length of the estuary. During neap, this decrease is from 2.3 m to 1.7 m at Hazira.

2.2.2. Currents

Long-shore currents with low wave dominate the open coasts along the Arabian Sea. In the Gulf due to exceptionally high flood and ebb tides, powerful tidal currents with maximum velocities of 6 knots associated with high wave energy occur during mid-tide. Currents in the Gulf, through tidal, are monsoonal in origin and dominated by barotropic tides(Alakkat, Shetye, and Michael 1999) . The flow adjusts its directional orientation with the changing direction of wind affected by changing seasons of the year. The turnover residence times are quite short because of its shallow depth, large tidal amplitude and strong tidal current (Gupta, 2002).

The wave– current interaction process is studied by (Osuna and Monbaliu, 2004) using a coupling scheme which allows the synchronous data transfer between a wave and a tide/surge model. In most of the earlier studies of currents were up to 2 m/s (Masson, 1996) whereas in the Gulf of Khambhat, currents were more than 2 m/s and it was reported that this could be associated with interaction between high currents and the waves (Kumar and Kumar, 2010).

2.2.3. Salinity

Salinity is an indicator of the rate of freshwater inflow in the coastal waters and estuaries in particular. Normally, seawater salinity is 35–36 ppt, which may vary depending on the rate of evaporation and precipitation.

Flora and fauna inhabiting inshore and coastal waters are generally acclimatized to a certain range of salinity where they thrive. Evidently, wide changes in salinity during the monsoon, can result in adoption with modification and dominance of selected species in the lower order while higher order biota may migrate.

The estuarine salinity varies over a wide range on the annual cycle (George *et al.,* 2012). The salinity at a given location varies depending on the state and stage of the tide even during monsoon except in the inner estuary, which is fully fresh water dominated. Due to the proximity to the river flow, the salinity variations were over a wider range in the inner estuary in the dry season.

3. METHODOLOGY AND DATA USED

3.1. Shoreline Change Analysis

The methodology flowchart of the present study on the shoreline change is shown in

Figure 3.1. The shoreline change analysis has been carried out using multi-date satellite images to estimate the rate of change in terms of distance of the shore eroded or accreted using cross shore profile in terms of area and volume. From the satellite images, shoreline has been extracted after rectification and co-registration. The rate of shoreline changes from1990-2021 has been analysed and compared with DGPS survey and ground truth data for which Digital shoreline change analysis system (DSAS) software that works within the Geographic Information System (ArcGIS) software was applied. DSAS computes rate-of-change statistics for a time series of shoreline vector data. It is also useful for computing rates of change for other boundary change conditions that incorporate a clearly-identified feature position at discrete times (Himmelstoss *et al.,* 2018).

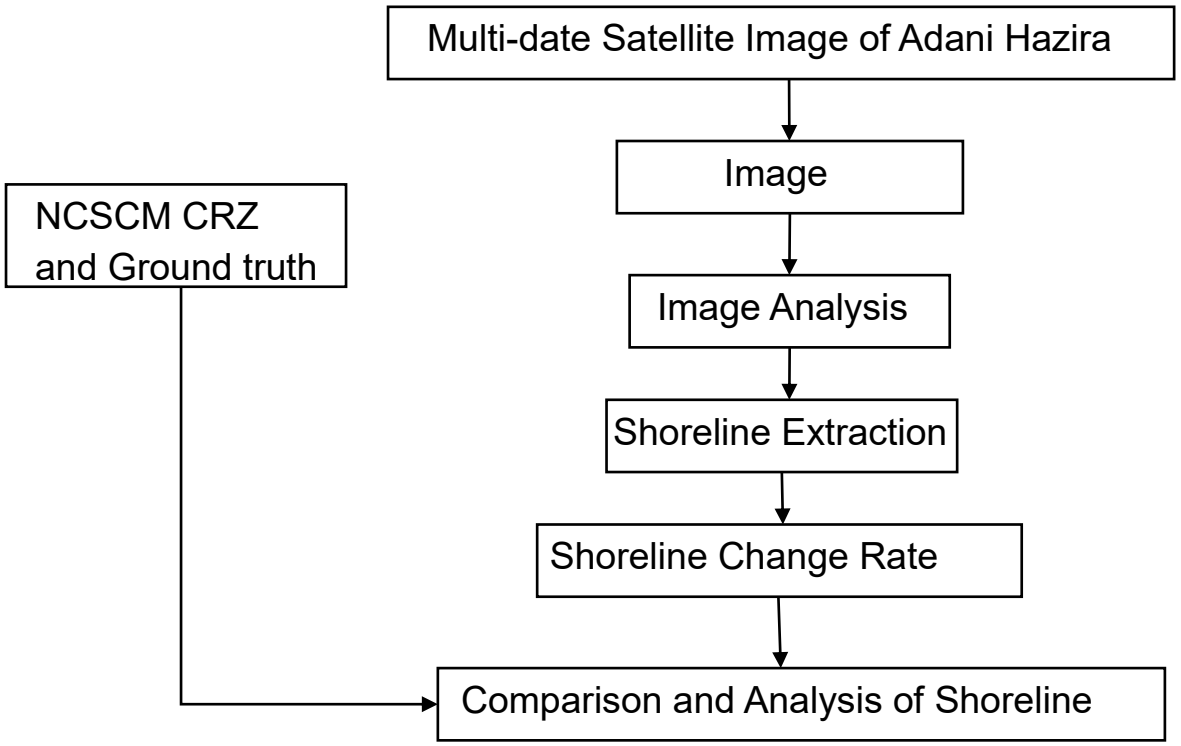

Figure 3.1: Flowchart of the Methodology Adopted

3.2. Short Term Shoreline Change Analysis

The end point rate (EPR) is calculated by dividing the distance of shoreline movement by the time elapsed between the oldest and the most recent shoreline (Figure 3.2). The major advantages of the EPR are the ease of computation and minimal requirement of only two shoreline dates. The major disadvantage is that in cases where more data are available, the additional information is ignored.

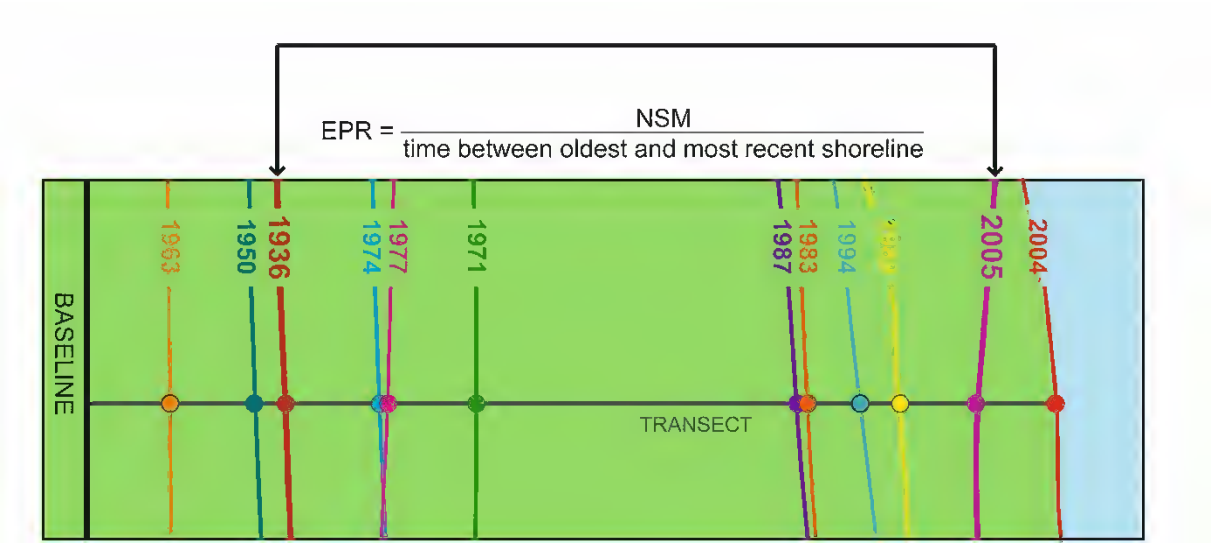

Figure 3.2: Calculation of Short-Term Shoreline change analysis (Sample image source:(Sweet *et al.* 2017))

3.3. Long Term Shoreline Change Analysis

A linear regression rate-of-change (LRR) statistics is determined by fitting a least-square regression line to all shoreline points for a particular transect Figure 3.3. The regression line is placed so that the sum of the squared residuals (determined by squaring the offset distance of each data point from the regression line and adding the squared residuals together) is minimized. The linear regression rate is the slope of the line. However, the linear regression method is susceptible to outlier effects and also tends to underestimate the rate of change relative to other statistics (Sutikno et al., 2017).

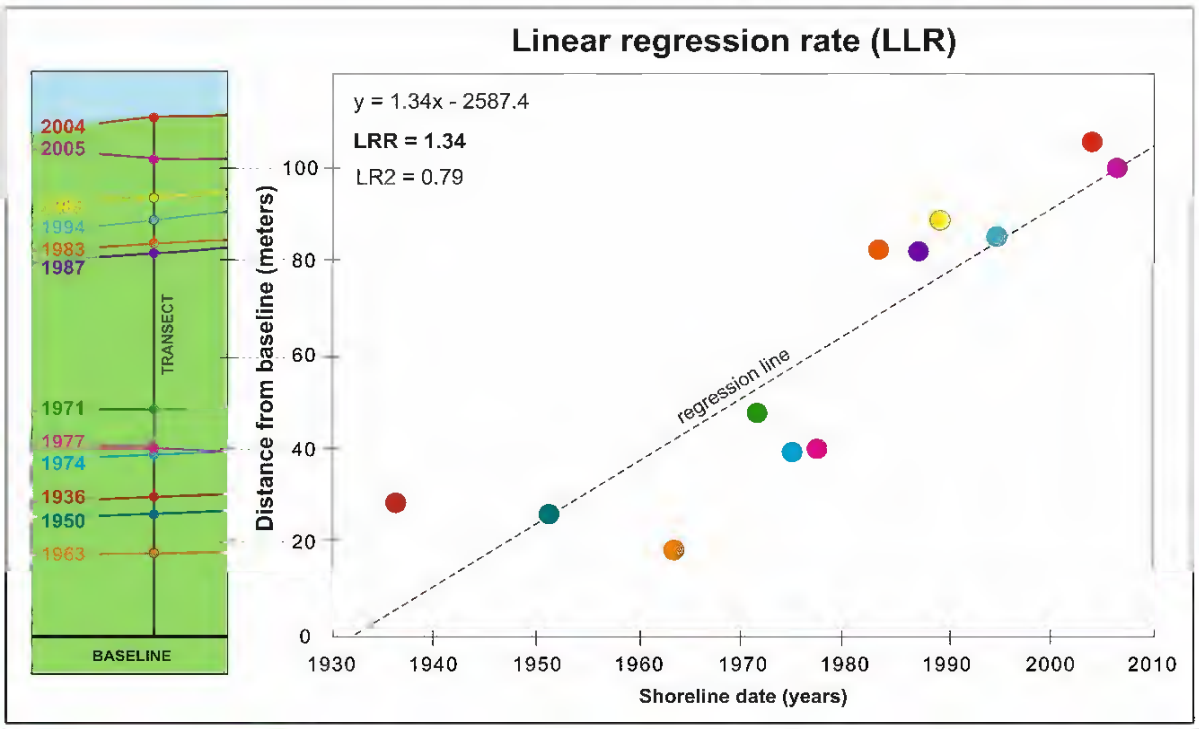

Figure 3.3: Calculation of Long Term (LRR) Shoreline Change Analysis (Sample image source:(Sweet *et al.* 2017))

3.4. Data Used

Some of Multi-date satellite imageries has been downloaded by various sources like Landsat imageries downloaded from websites https://earthexplorer.usgs.gov/and https://earthdata.nasa.gov/ respectively. Some of the LISS -IV Satellite imageries were procured from NRSC, Hyderabad was used for the analysis of the present study. The details of the satellite imagery used for the present study is given below.

Table 3.1: Satellite Image Data Used for Decadal Shoreline Change Analysis

Satellite	Date	Sensor	Resolution (m)
Landsat 5	19 October 1990	TM	30m
ASTER	10 November 2001	VNIR 1	15m
ASTER	20January 2002	VNIR 1	15m
ASTER	25 December 2009	VNIR 1	15m
IRS-R2	29 October 2021	LISS 4	5.8

Table 3.2: Satellite Image Data on Shoreline Change Procured From NRSC

Satellite	Date	Sensor	Resolution (m)
IRS-R2	9 April 2013	LISS 4	5.8
IRS-R2	17 May 2015	LISS 4	5.8
IRS-R2	07 April 2018	LISS 4	5.8
IRS-R2	29 October 2021	LISS 4	5.8

3.4.1. Pre-processing

Pre-processing of satellite data includes correction of geometric, atmospheric and radiometric aspects and clipping of the area in order to obtain the exact imagery of the project sites. The rectification operation aims to correct distorted images to create a more faithful representation of the original scene. It typically involves the initial processing of raw image data to correct for geometric distortions.

Radiometric Correction: Radiometric correction addresses variations in the pixel intensities (DNs) that have not caused by the object or scene scanned. These variations include differing sensitivities or malfunctioning of the detectors, topographic effects and atmospheric effects.

Geometric Correction: Geometric correction addresses errors in the relative positions of pixels. These errors induced by sensor viewing geometry or terrain variations. Geometric correction was done based on Ground Control Points (GCPs) and the image was re-sampled using nearest neighbourhood interpolation method.

Shoreline Extraction: Continuous shoreline positions were extracted automatically and digitized manually for seven different periods i.e., 1990, 2001, 2002, 2009, 2013, 2015, 2018 and 2021. Digital Shoreline Analysis System (DSAS) version 5.1, an extension of ESRI ArcGIS software was used to calculate shoreline rate of change statistics from a time series of multiple shoreline positions. The

shoreline positions were compiled in ArcGIS with 5 attribute fields that included Object ID (a unique number assigned to each transect), shape, shape length, ID, date (original survey year) and uncertainty values. All different shoreline features were then merged within a single line on the attribute table, which enabled the multiple coastline files to be appended together into a single shape file. The Shoreline change rate was calculated by End point rate (EPR) for short term and weighted linear regression (WLR) for long term period. DSAS is purely a statistical approach. A baseline was digitized onshore by closely digitizing the direction and shape of the outer shoreline, which was used as the starting point for all transects cast.

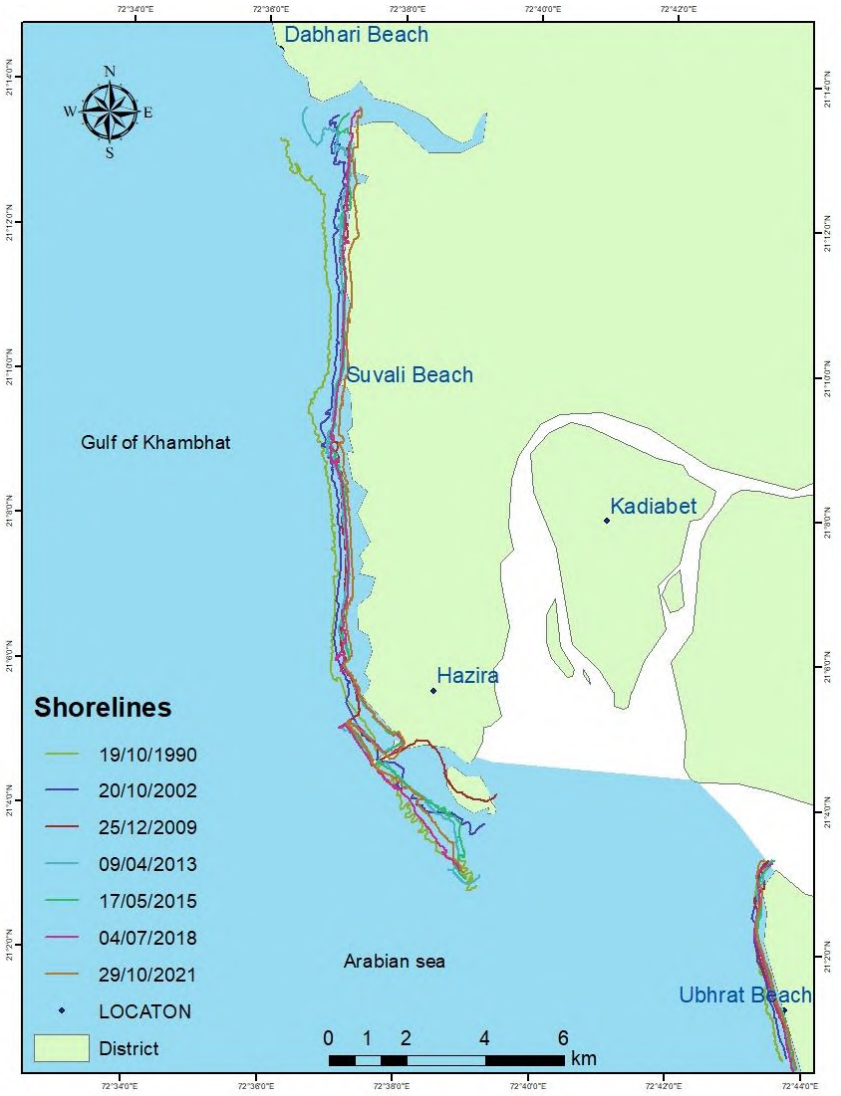

Figure 3.4: Shoreline Digitization for Different Year Using Multi Date Satellite Imageries.

3.5. Field Work

Field investigation is a very important part of the project. Fieldwork helps to check and collect most of the ground information required for shoreline mapping. The field work was conducted during the period between 22nd and 26th November 2021 for DGPS survey and collecting ground truthing data.

Figure 3.5: Establishing DGPS Base Station (A) And Collecting Survey and Ground Truthing Data(B), (C), (D) Using Rover.

4. RESULTS AND ANALYSIS

In the present study, the rate of shoreline change statistics on a time series of multiple shoreline positions of 20 km coastal stretch of Hazira coast (10 km either side of Adani Hazira Port) has been considered for the calculation by using satellite images. A total of 2289 transects were generated with 10m spacing along the shoreline. The length of each transect (Cross shore) was between 500 to 3000m. The variations on the rate of shoreline change were re-coded as N – S coast configuration. The shoreline change analysis carried out for 1990-2021 and 2013-2021 using LRR method, an overall long-term shoreline change analysis carried out using moderate to high resolution images such as Landsat, ASTER and LISS 4, whereas an overall short-term shoreline change analysis using high resolution images such as LISS-IV.

The shoreline change analysis has been carried out for the year 2013-2015 by using high resolution LISS-IV (5.8m) images to study the changes before 2014. Further, the shoreline change analysis has been carried out for the years 2015-2018, 2018-2021 to study the immediate changes after the commissioning of the port and initiation of the activities (December, 2011) for short term variation for the year 2013-2015, 2015-2018, 2018-2021 using EPR method has been carried out.

Based on the rate of change over the period, shoreline change has been categorized into 5 classes (NCSCM, 2014). They are; high accretion (>5m/year), moderate accretion (5-1m/year), stable coast (1 to -1m/year), moderate erosion (-1 to -5m/year) and high erosion (<-5m/year).

4.1. Results For Shoreline Change Analysis From Satellite Images

The erosion and accretion are highlighted with red and green colour respectively for better understanding. The study area is divided into three major blocks 1) Suvali beach 2) South Hazira coast and 3) Ubhrat Beach for accurate analysis as shown in Figure 4.1.

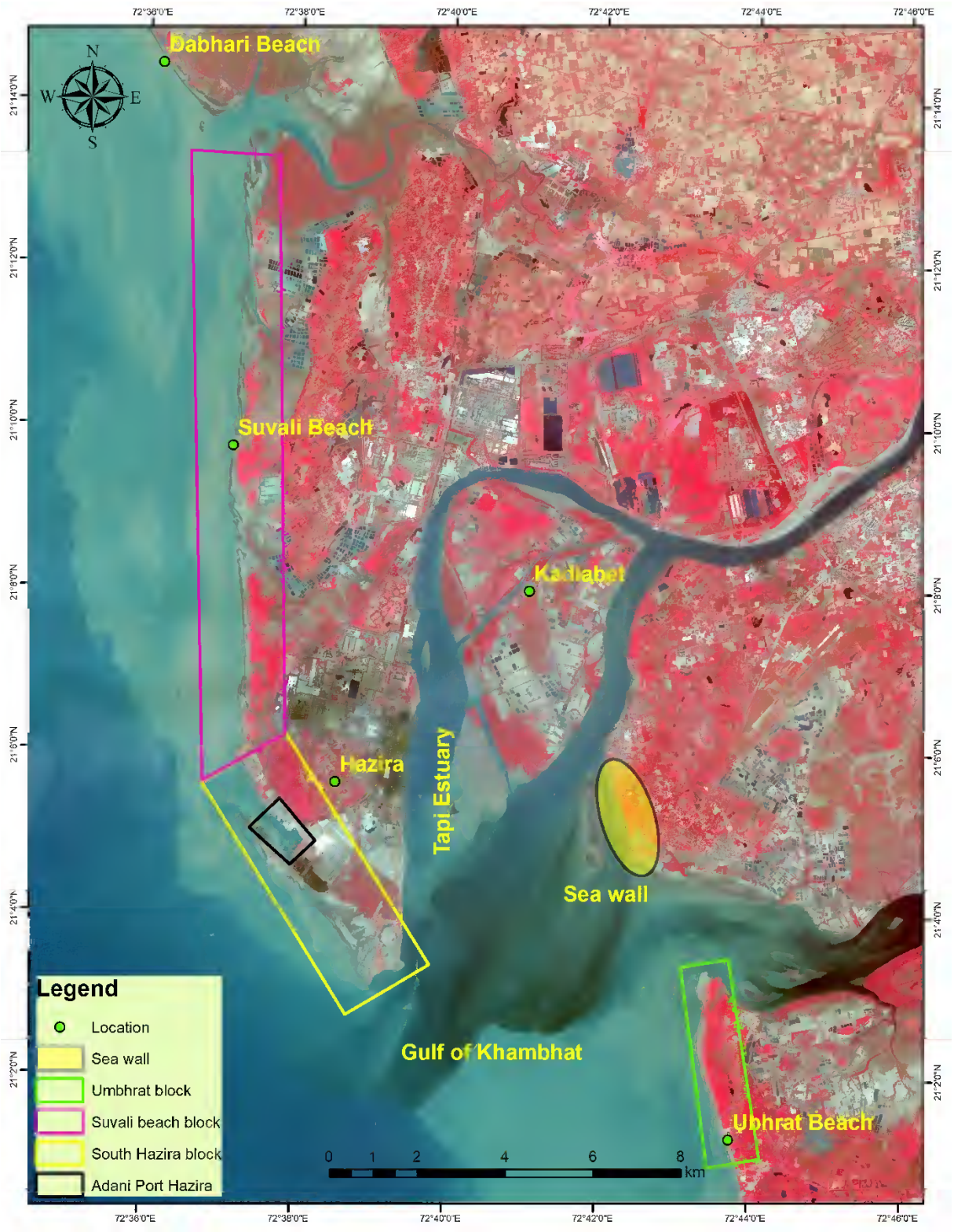

Figure 4.1: Study Area Divided in Three Blocks

4.1.1. Results for Overall Shoreline Change During 1990 and 2021

The images of low and high resolution (Landsat 30m and LISS IV 5.8m) for the period 1990 to 2021 (Figure 4.2) revealed that high erosion rate between northern tip of Hazira near Dabhari Beach to Adani Hazira port and between Adani Hazira port to Southern tip of Hazira coast (-5 to -54.7 m/year). Extreme southern tip of Hazira coast showed Moderate erosion due to high tidal currents and the open sea shows high erosion. High accretion (5 to 12.7 m/year) and stable coast are seen at Adani Hazira port, since wave action is protected by bunds in this area of the coast.

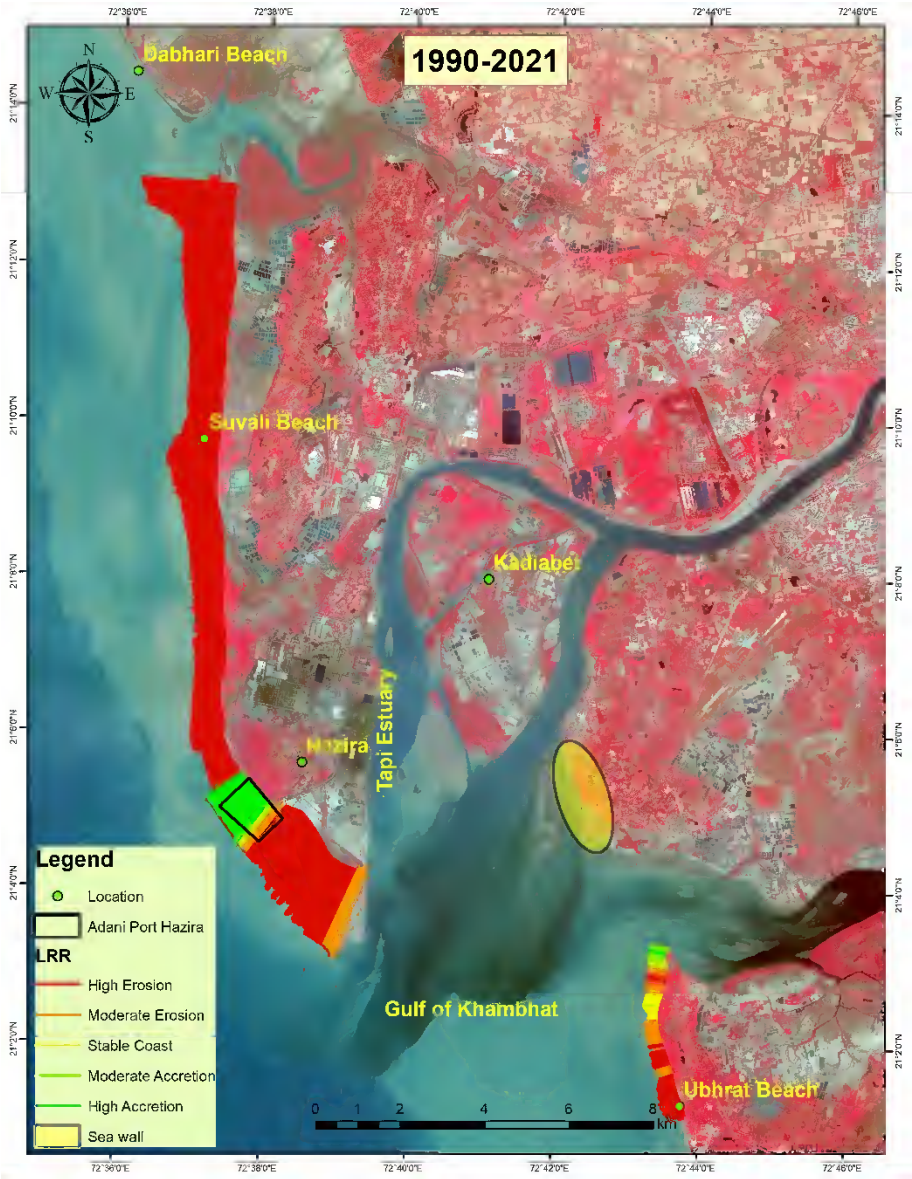

Figure 4.2: Shoreline Change Map Oct 1990- Oct 2021

4.1.2. Results for Overall Shoreline Change During 2013 and 2021

The rate of change of shoreline has been calculated using high resolution (LISS IV 5.8m) satellite images; the result has been processed since 2013 to 2021. The image on Figure 4.3 indicates that there is a high rate of erosion (-5 to -51 m/year) to the north of Hazira coast and at the bottom of the Southern tip of Hazira coast whereas high accretion (5 to 71 m/year) was observed at the south coast.

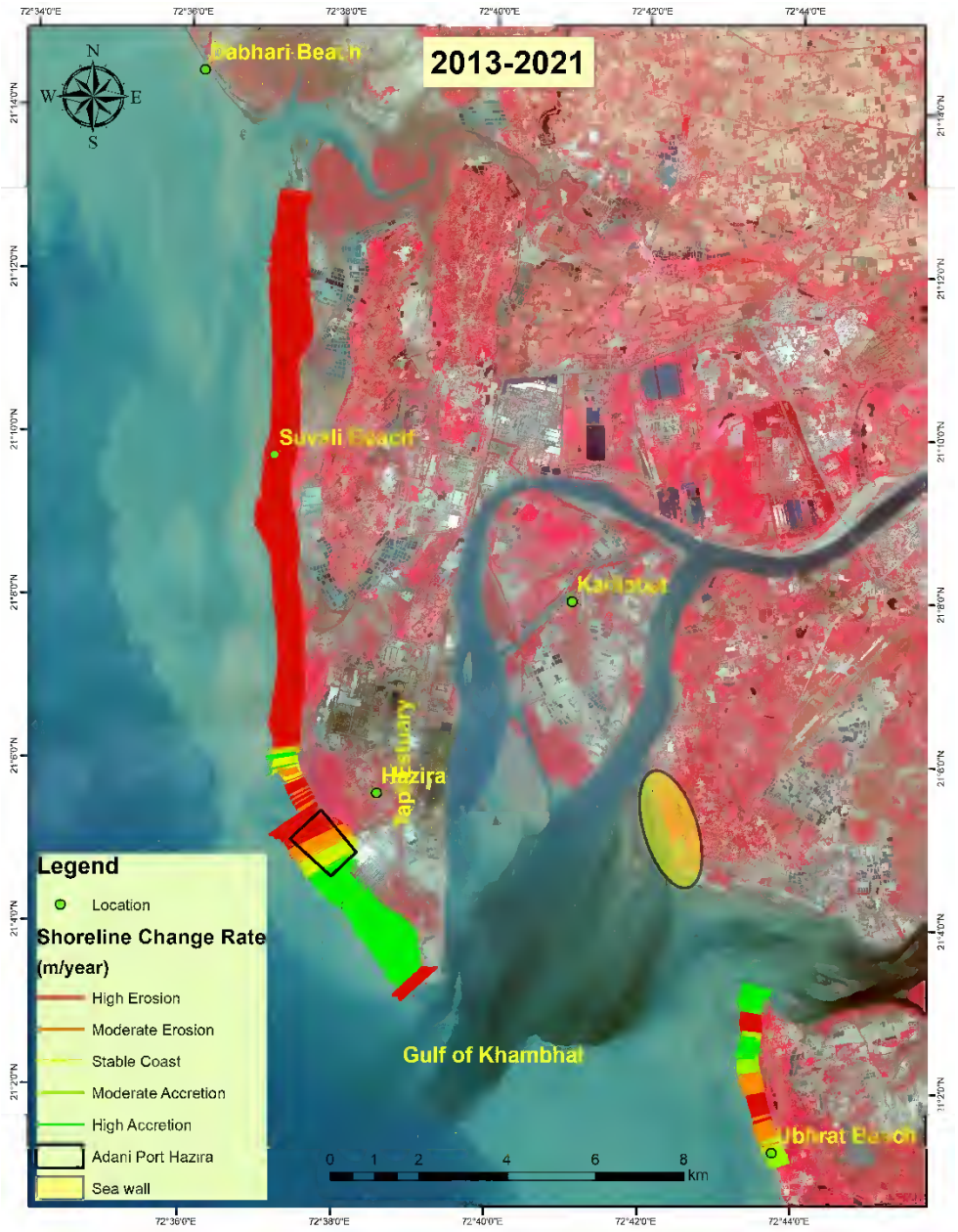

Figure 4.4: Shoreline Change Map Apr, 2013 and Oct 2021

Table 4.1: Details of Average and Maximum Long Term Shoreline Changes

Period	Name of the Places	Average Shoreline Change (m/yr)	Maximum Shoreline Change (m)
1990-2021	Suvali Beach	-19.03	-54.73
	Southern Hazira	-6.9	-24.58
	Ubhrat Beach	-3.79	-10.97
2013-2021	Suvali Beach	-18.49	-51.03
	Southern Hazira	18.61	71.37
	Ubhrat Beach	1.62	26.65

4.1.3. Results Of Short-Term Shoreline Change for The Period 1990 to 2021

Further short-term analysis was carried for study area separately from 1990-2001-02, 2001-02 to 2009 and from 2009 to 2021. The images (Figure 4.4) clearly depicts the high erosion (-154.2 m/year) pattern near Adani Hazira port whereas, the Ubhrat beach area showed high to moderate accretion (20.3 m/year) except southern portion of beach during the period of 1990 to 2001-02.

Similarly high erosion (-177 m/year) pattern was noticed along Hazira coast, except near Adani Hazira port with some area showing high accretion (50 m/year). At Ubhrat beach generally high erosion was noticed except at northern tip where high accretion was evident during the period of 2001-02 to 2009 by using moderate resolution (ASTER15m) satellite images (Figure 4.5).

The moderate to high resolution (ASTER15m and to LISS IV 5.8m) satellite images processed for 2009 to 2021 demonstrated high to moderate erosion (-1 to -44.2 m/year) on the northern parts of Hazira coast while Southern coast showed high accretion (166.3 m/year). At Ubhrat beach high erosion was found except at the northern tip where high accretion resulted (Fig 4.5) due to reduced wave action at the mouth of Tapi estuary. Details of average shoreline changes and maximum shoreline changes during each decade is summarised in Table 4.2.

Table 4.2: Details of Average and Maximum Shoreline Changes Each Decade.

Period	Name of the Places	Average Shoreline	Maximum
1990-2001-02	Suvali Beach	-20.01	-121.93
	Southern Hazira	-30.15	-154.26
	Ubhart Beach	0.92	20.23
2001-02-2009	Suvali Beach	-19.80	-52.07
	Southern Hazira	-73.82	-177.3
	Ubhart Beach	-7.68	-25.52
2009-2021	Suvali Beach	-14.43	-44.2
	Southern Hazira	53.14	166.3
	Ubhart Beach	-3.18	-15.68

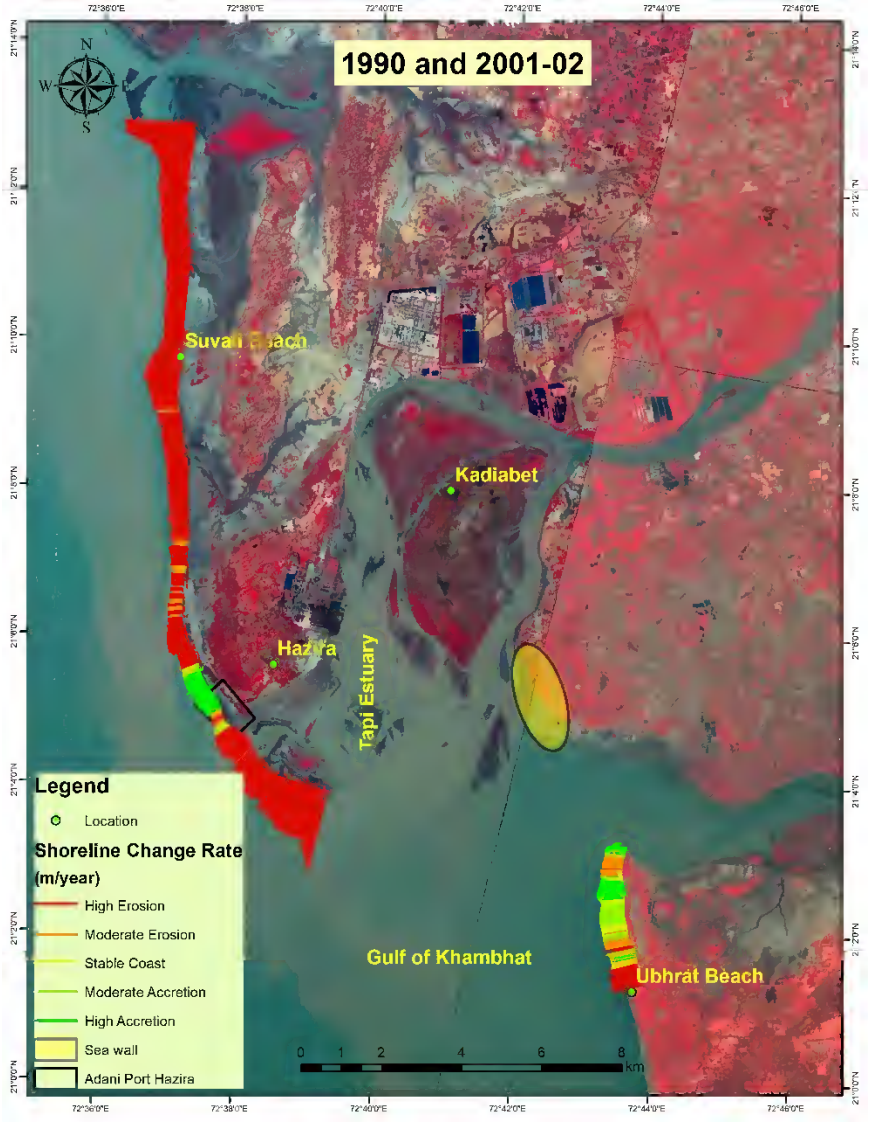

Figure 4.5: Shoreline Change Map (Oct 1990, Nov 2001 to Jan-2002)

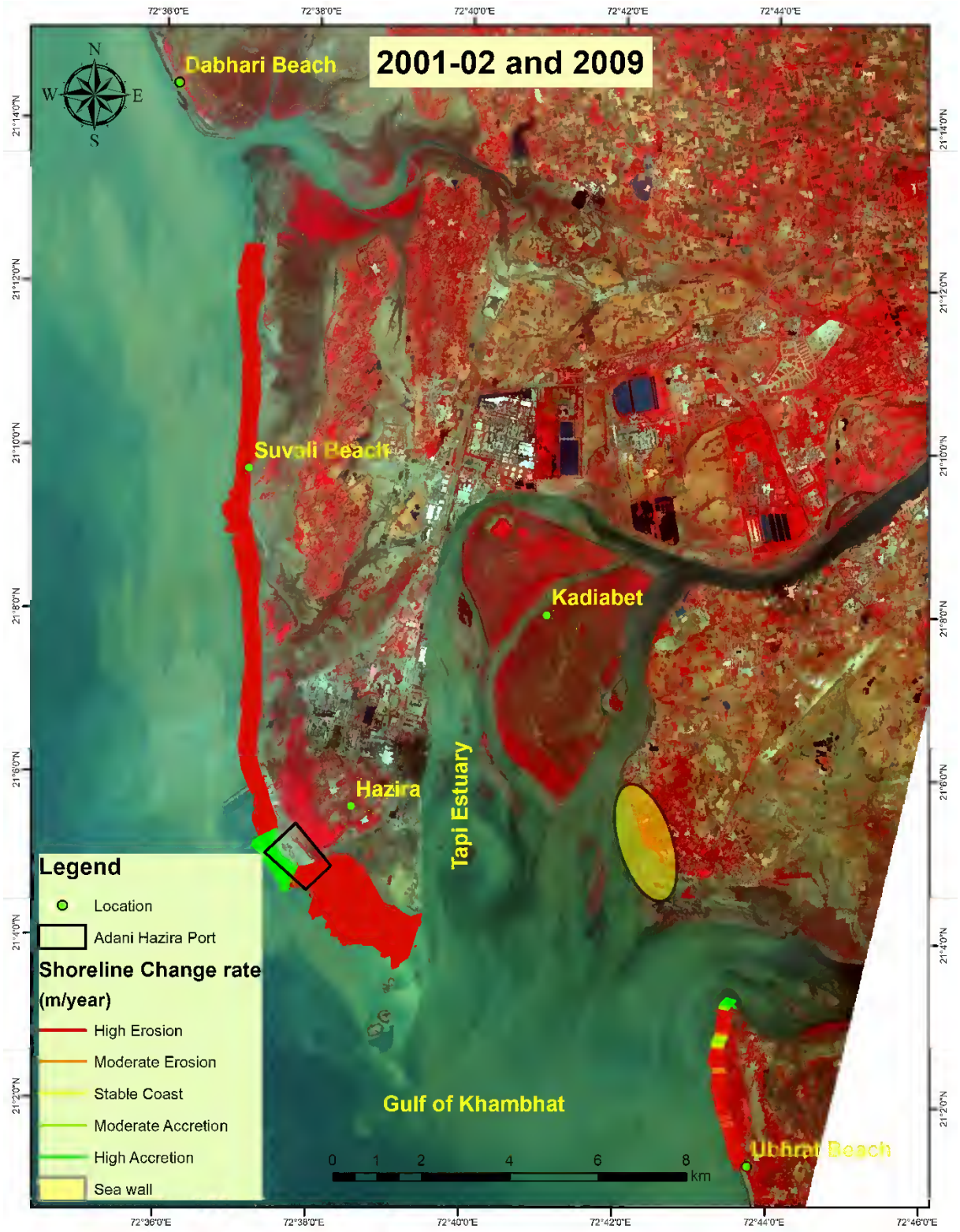

Figure 4.6: Shoreline Change Map (Nov 2001, Jan-2002 to Dec 2009)

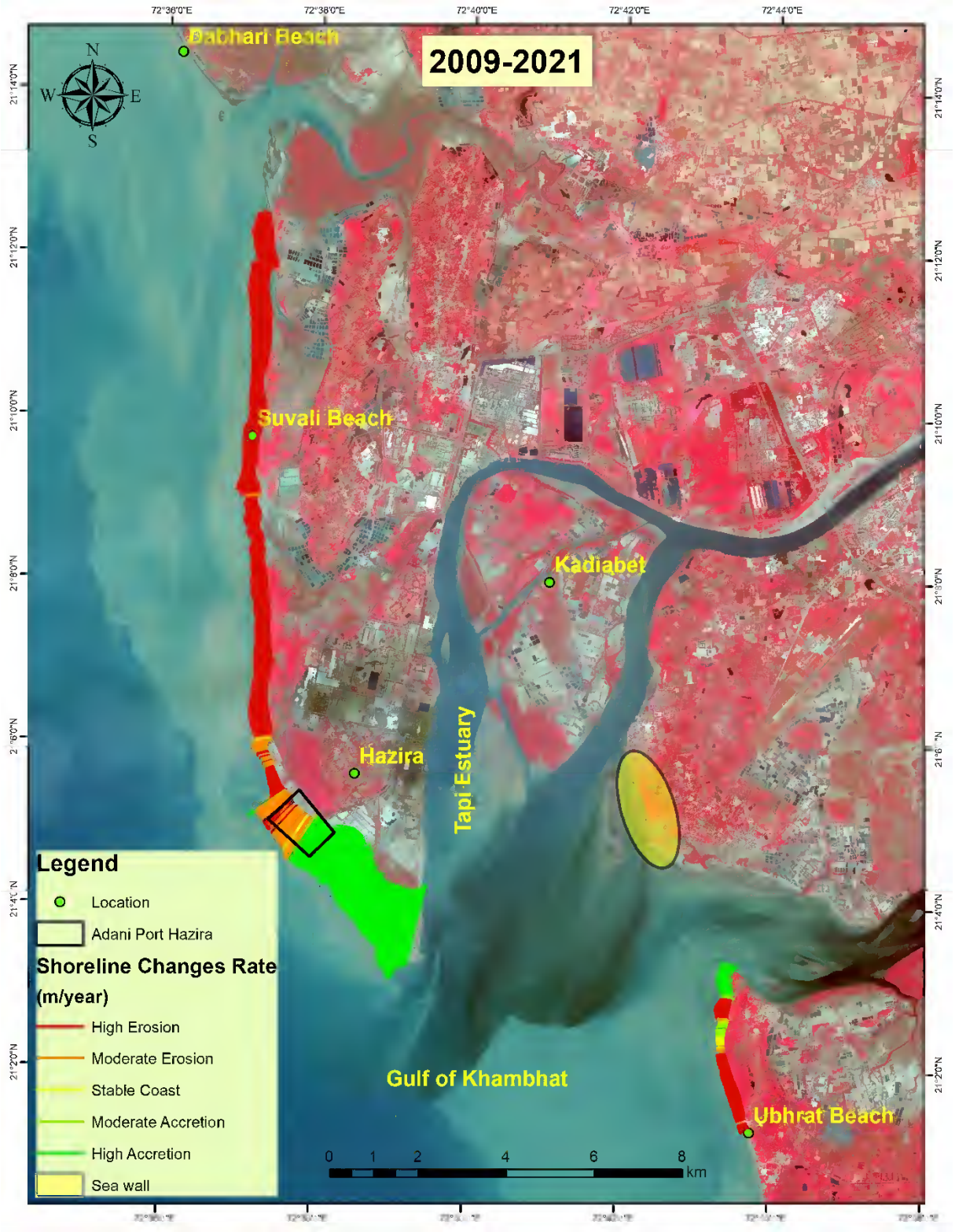

Figure 4.7: Shoreline Change Map Dec 2009 and Oct 2021

4.1.4. Results for Shoreline Chang Using High Resolution Satellite Images

The results on the imagery data analysed prior to the port activity (before 2014) using high resolution (LISS IV 5.8m) is presented in figure 4.7. According to the image validation, erosion (-173 m/year) has been noticed at the northern part of Hazira coast including Suvali beach and northern tip near Dabhari beach as well as at the bottom tip while at some area near Adani Hazira Port indicated high rate of accretion (208 m/year). Similarly, at northern tip of Ubhrat beach, high erosion was noticed high accretion during 2013 to 2015.

The high-resolution satellite images, obtained for the period 2015 to 2018 showed (Figure 4.9) high rate of accretion (257.5 m/year) at both Hazira coast and Ubhrat coast except a few pockets would have been resulted due to high tidal currents.

Table 4.3: Details of Average and Maximum Short-Period Shoreline Changes

Period	Name of the Places	Average Shoreline Change(m/yr)	Maximum Shoreline Change(m)
2013-2015	Suvali Beach	-26.22	-123.87
	Southern Hazira	-9.97	-173.19
	Ubhart Beach	-8.73	-32.25
2015-2018	Suvali Beach	7.21	125.71
	Southern Hazira	56.27	257.52
	Ubhart Beach	19.28	43.55
2018-2021	Suvali Beach	-42.05	-117.92
	Southern Hazira	-29.31	-156.81
	Ubhart Beach	-11.2	-28.49

The high resolution (LISS IV 5.8m) satellite images, processed for the period 2018 to 2021 have shown high rate of erosion (-5 to -156 m/year) along the Hazira coast except near Adani port where it was moderate due to the presence of accretion at the rate of 73.8 m/year. At Ubhrat beach area high erosion except at northern tip was observed (Figure 4.10). The details of the instantaneous rate of shoreline changes (Short interval time) recorded from2013 to 2021 are summarised in Table 4.3. The data indicated that shore

line change was very much dynamic and no regular pattern was evident at all the study sites. However, the rate of change was comparatively less at Ubhart beach during 8 years.

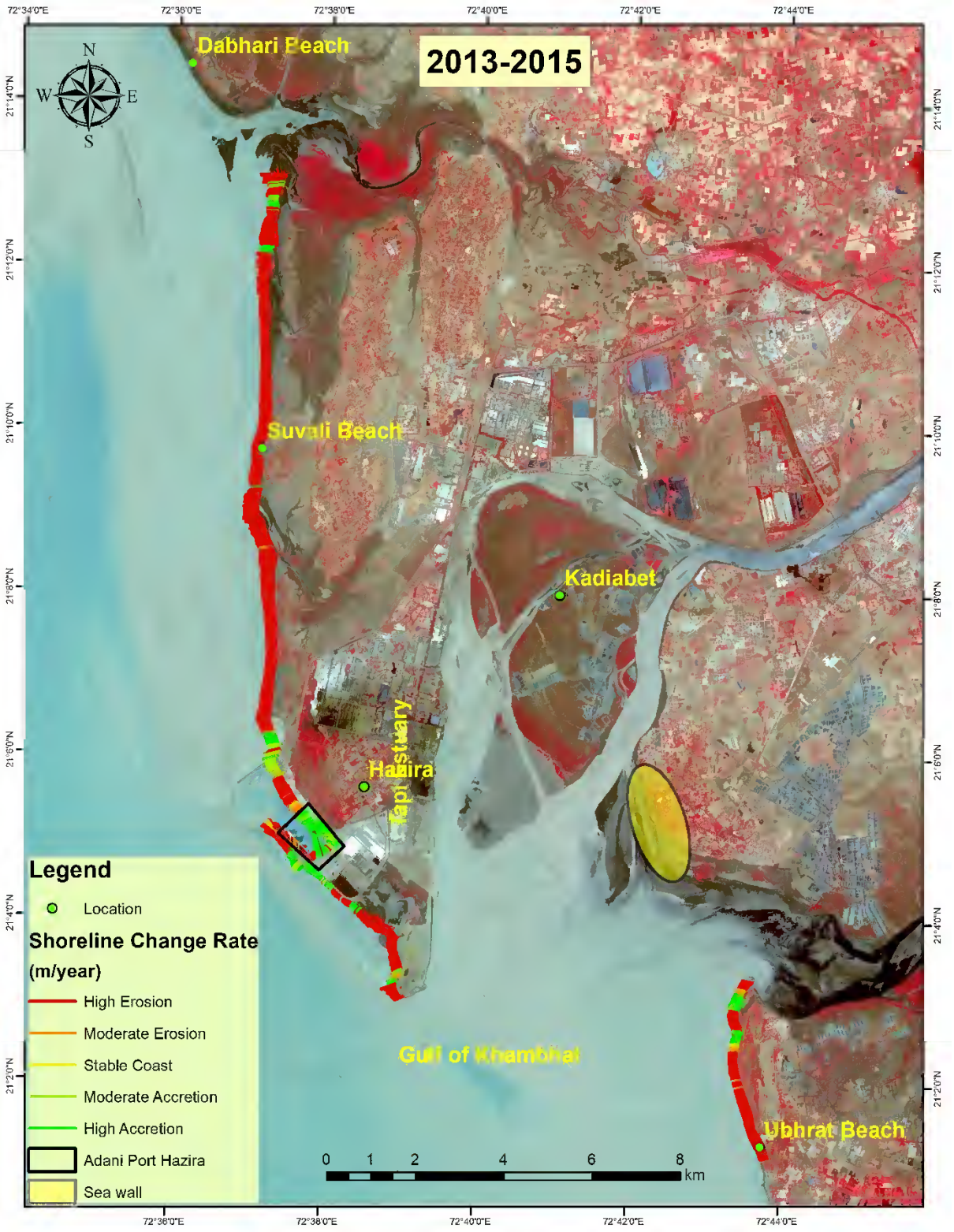

Figure 4.8: Shoreline Change Map Apr 2013 - May 2015

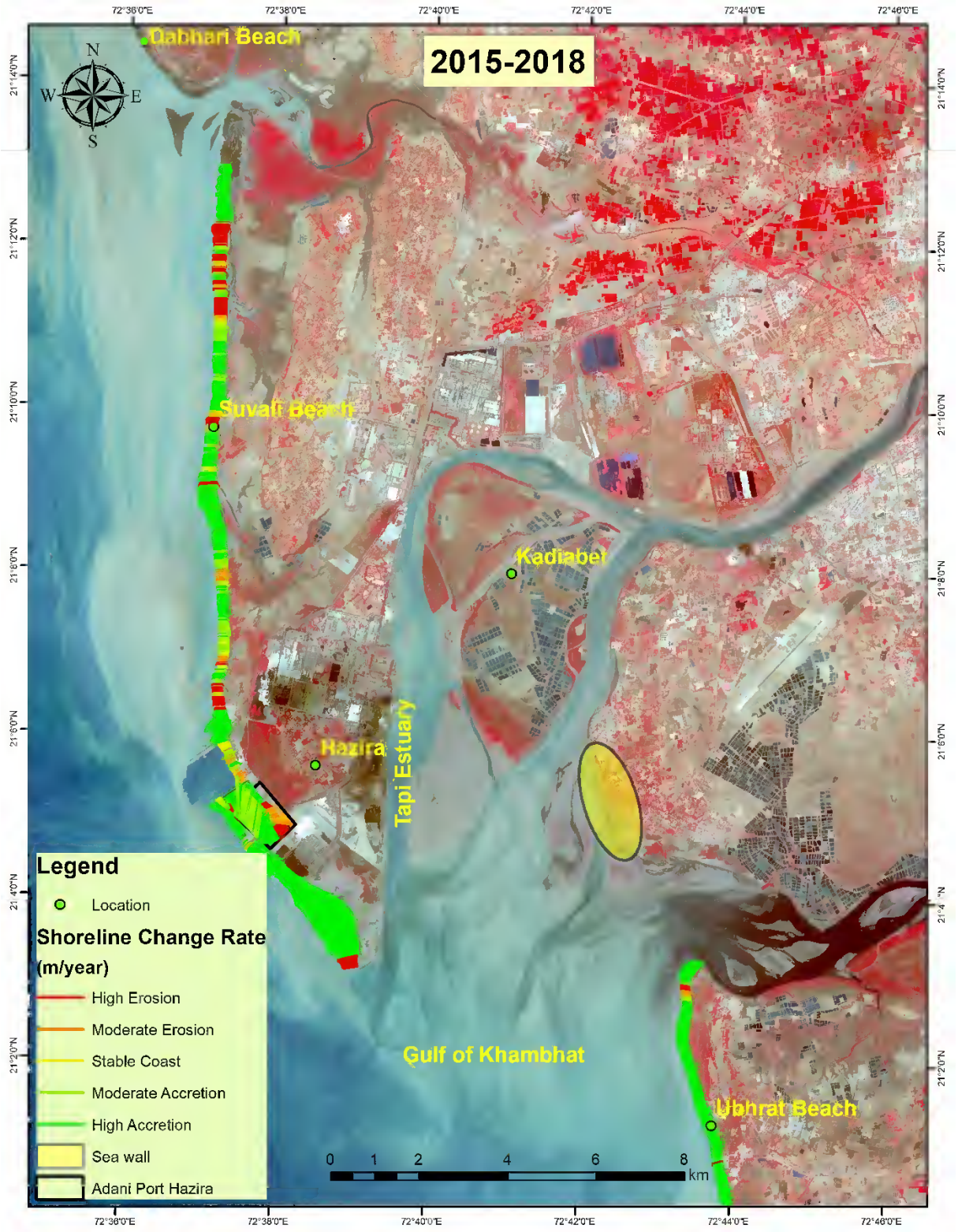

Figure 4.9: Shoreline Change Map May 2015- April 2018

Figure 4.10 : Shoreline Change Map Apr 2018- Oct 2021

4.1.5. Zones of High Erosion and High Accretion

For the present study on shoreline changes evaluation, two sets of data were considered. They are images from moderate to high resolution (30~5m) satellite images for the period from 1990-2021 as well as the high resolution (~5m) images for 2013-2021 and the results are presented in figure 4.10 to 4.15.

Based on the analysis of the imageries it is possible to delineate the study areas into zones for the ease of classification into high erosion and high accretion within the study limits. The images have indicated that a total distance of 11.8 km in the northern coast of Hazira from Suvali beach to Port area has been identified as zone of high erosion whereas from South Hazira coast approximately 3.6 km up to the northern tip of Ubhrat beach is the high accretion zones (Figure 4.11). Misra and Ramakrishnan (2015) have also reported high rate of erosion and accretion along northern tip of Ubhrat beach.

The change in the shoreline during last 30 years from 1990 to 2021 at Suvali beach block area the maximum erosion occurred at cross-section of ~804 m (**Error! Reference source not found.**) and that at Ubhrat beach ~359m cross section (**Error! Reference source not found.**).On the contrary at Southern Hazira block maximum deposition, (~903m) was found during 2009 to 2021(**Error! Reference source not found.**).

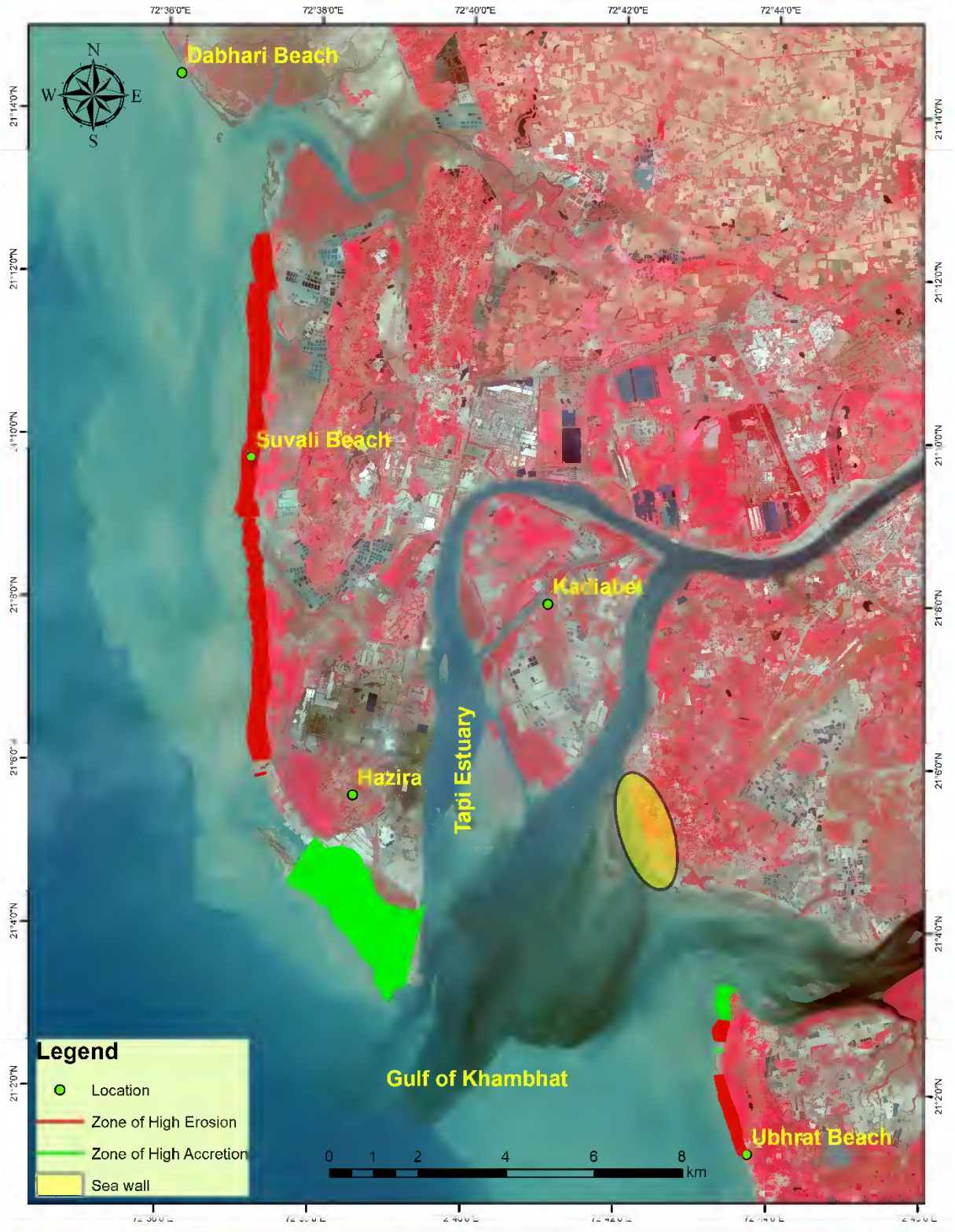

Figure 4.11: Zones of High Erosion and High Accretion

Validation of the shoreline data of the 20km (10km from either side of the port) stretch of Adani Hazira port, using Differential GPS (DGPS) during the period between 22nd and 26th November, 2021 (Figure 4.12). The results obtained with the higher resolution satellite

images on the field shoreline changes exactly match with the shoreline details derived from the satellite images.

The shoreline data drive from high resolution satellite imagery of 2018 has been compared with NCSCM (National Centre for Coastal Management) approved CRZ map Figure 4.13. Shoreline data drawn from high resolution satellite imagery of 2018 is quite similar to the shoreline configuration derived from the NCSCM (National Centre for Coastal Management) approved CRZ map of 2017-18.

Figure 4.12: Shoreline Data Collected Using DGPS

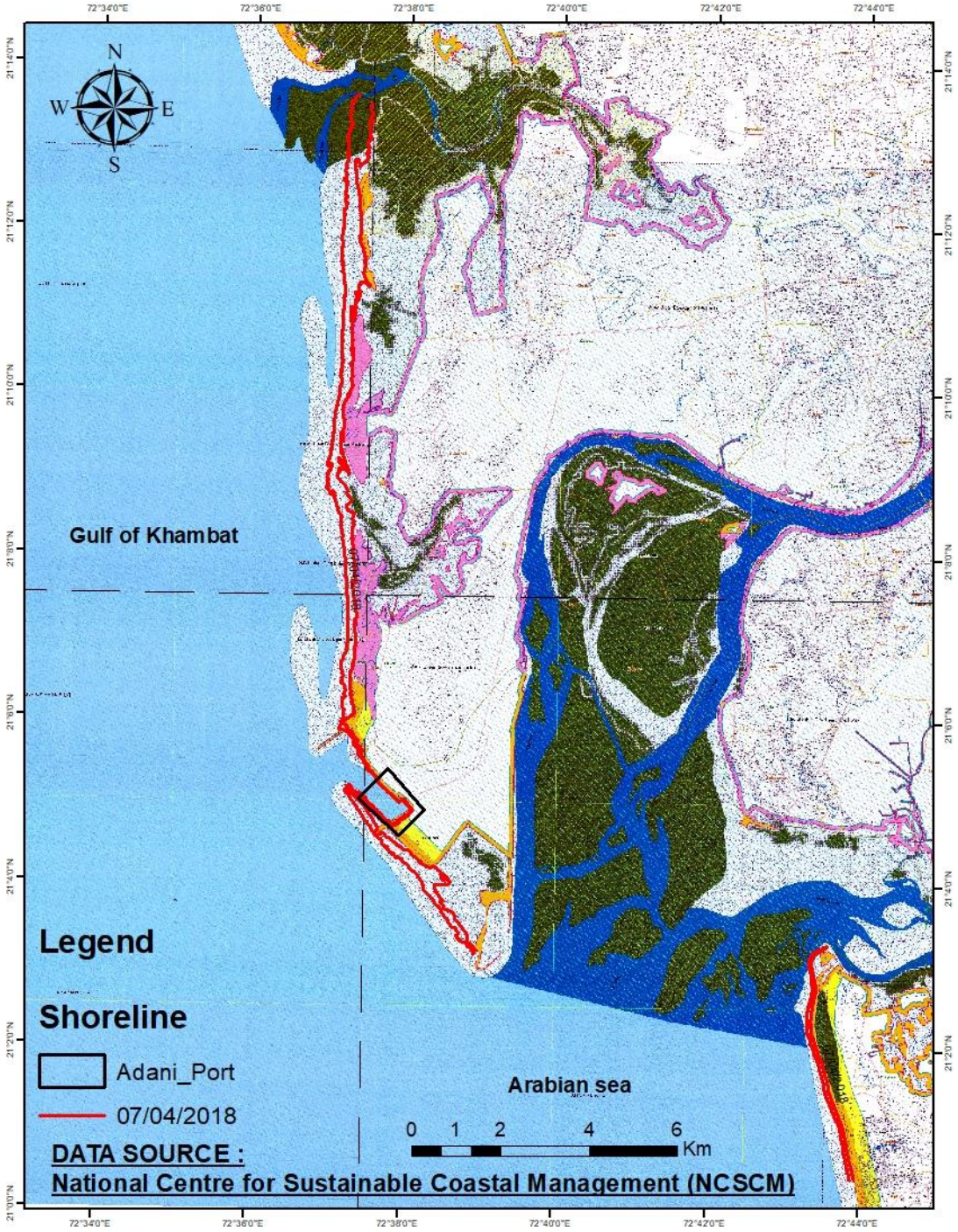

Figure 4.13: NCSCM (National Centre for Coastal Management) Approved CRZ Map of 2017-18

4.1.6. Beach Profile

Shoreline Change analysis using Cross section Profile (CSP) has been carried out using DGPS Survey. CSP data has been collected from 11 different locations along the Hazira Coast. The total profile line stretches of 20 km covering the area of approximately 10 km south and 10 km north of the existing port site was considered for the period between 22nd and 26th November 2021as shown in Figure 4.14.

The aim of this analysis was to create a baseline data for comparison for the future with profile data from same location for different seasons. Beach profiles were plotted location wise. The trends of beach profile were assessed qualitatively and is shown in Figure 4.15. This data shall serve to assess the beach profile at Hazira coast in future. Difference, if any, shall be investigated further to understand impact due the port activities in the shoreline evolution.

Beach profile is defined as a set of beach levels taken at recorded distances in a straight line (Figure 4.15). Beach profiles are meaningful in real sense if surveys are taken over a time at exactly the same place and directions.

Further, beach profile also suggests high erosion in these areas on an average 4 m (Figure 4.15) and also vertical changes is clearly seen along the northern part of Hazira coast, as there is high and the sediment is being deposited along the Sothern tip and northern tip of Ubhrat beach. The rate of shoreline changes may be also depended on the inflow of fresh water in to the estuarine area, during the rainy season.

Figure 4.14: Beach Profiles Location

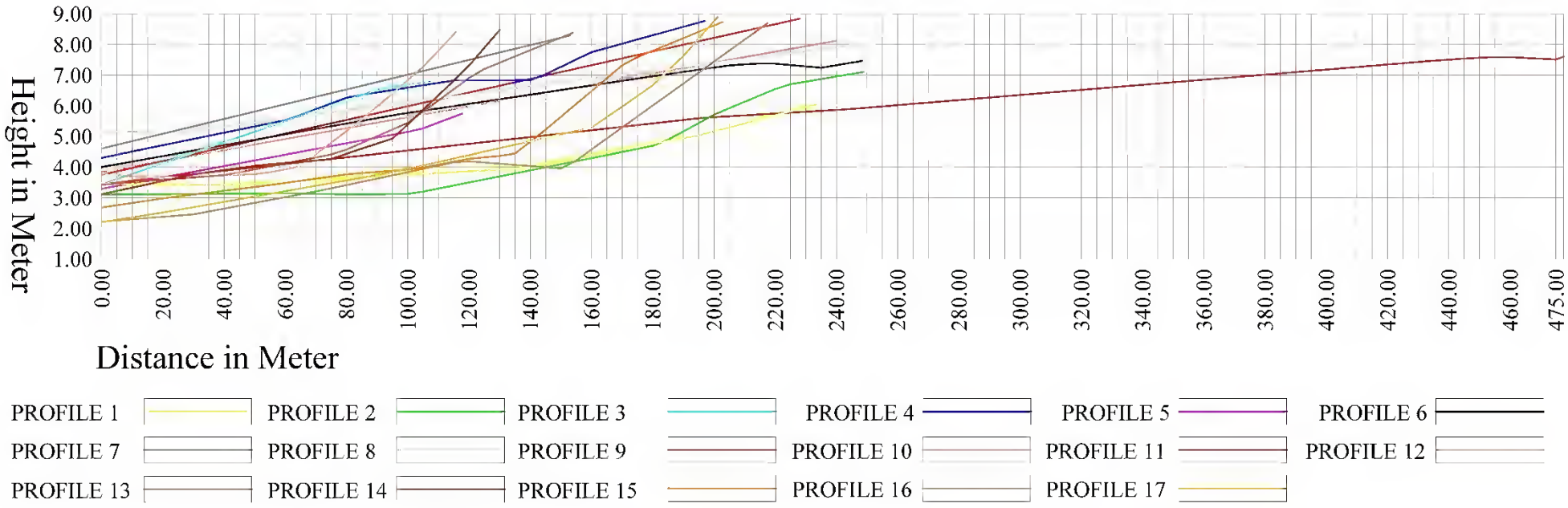

Figure 4.15 : Beach Profile at Different Locations

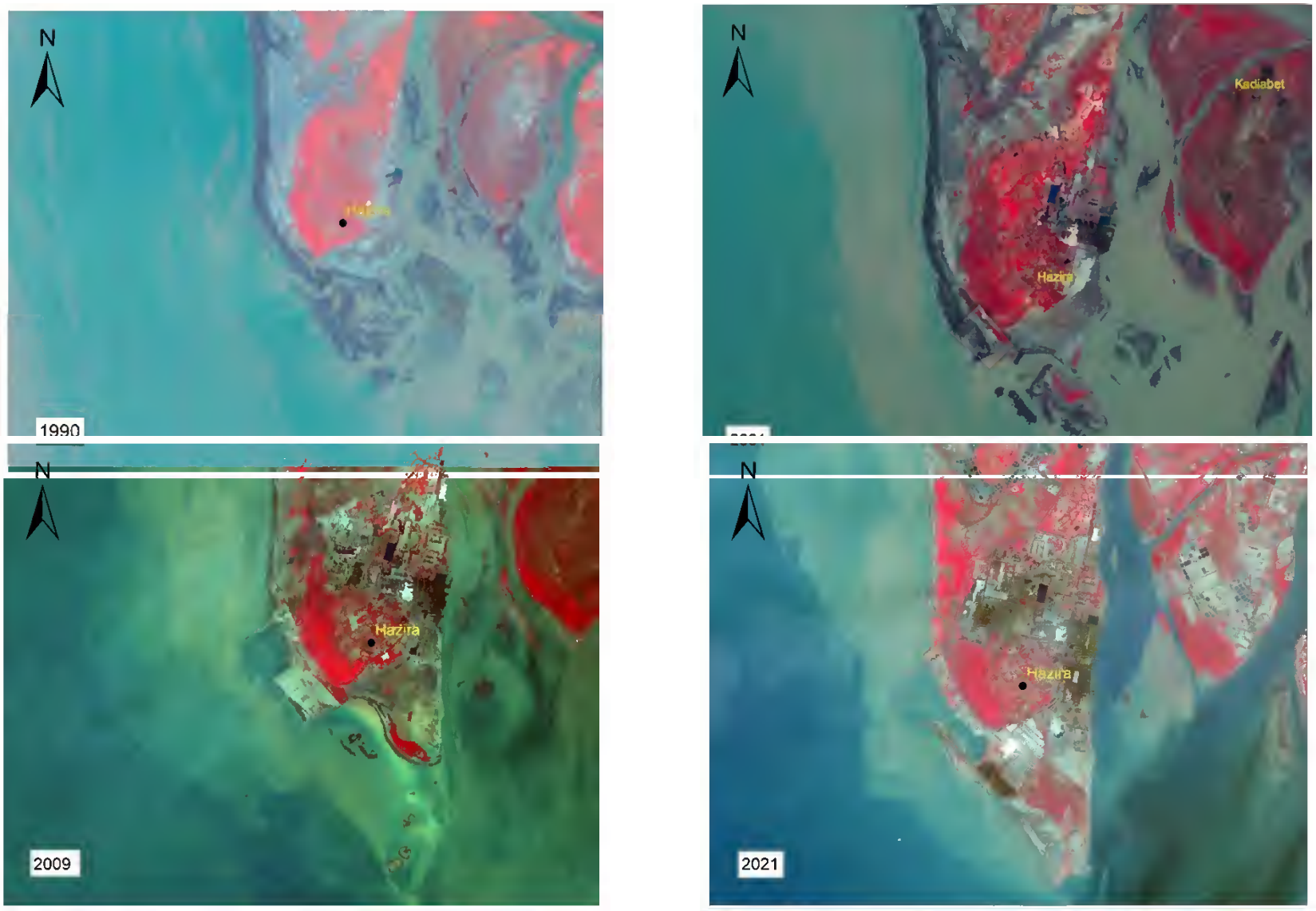

Figure 4.16: Satellite View of Southern tip of Hazira During 1990, 2001, 2009 and 2021

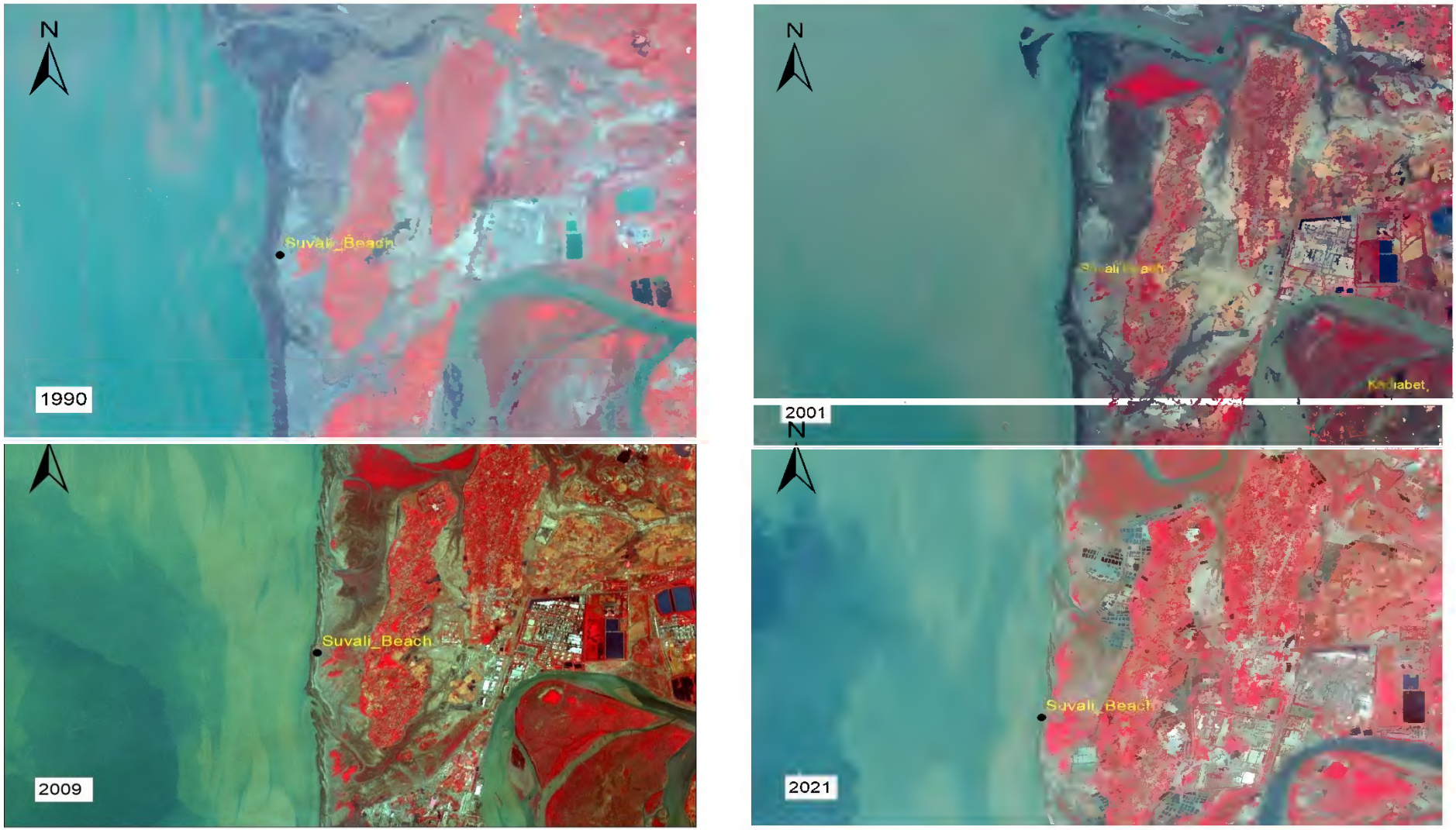

Figure 4.17: Satellite View of Suvali Beach During 1990, 2001, 2009 and 2021

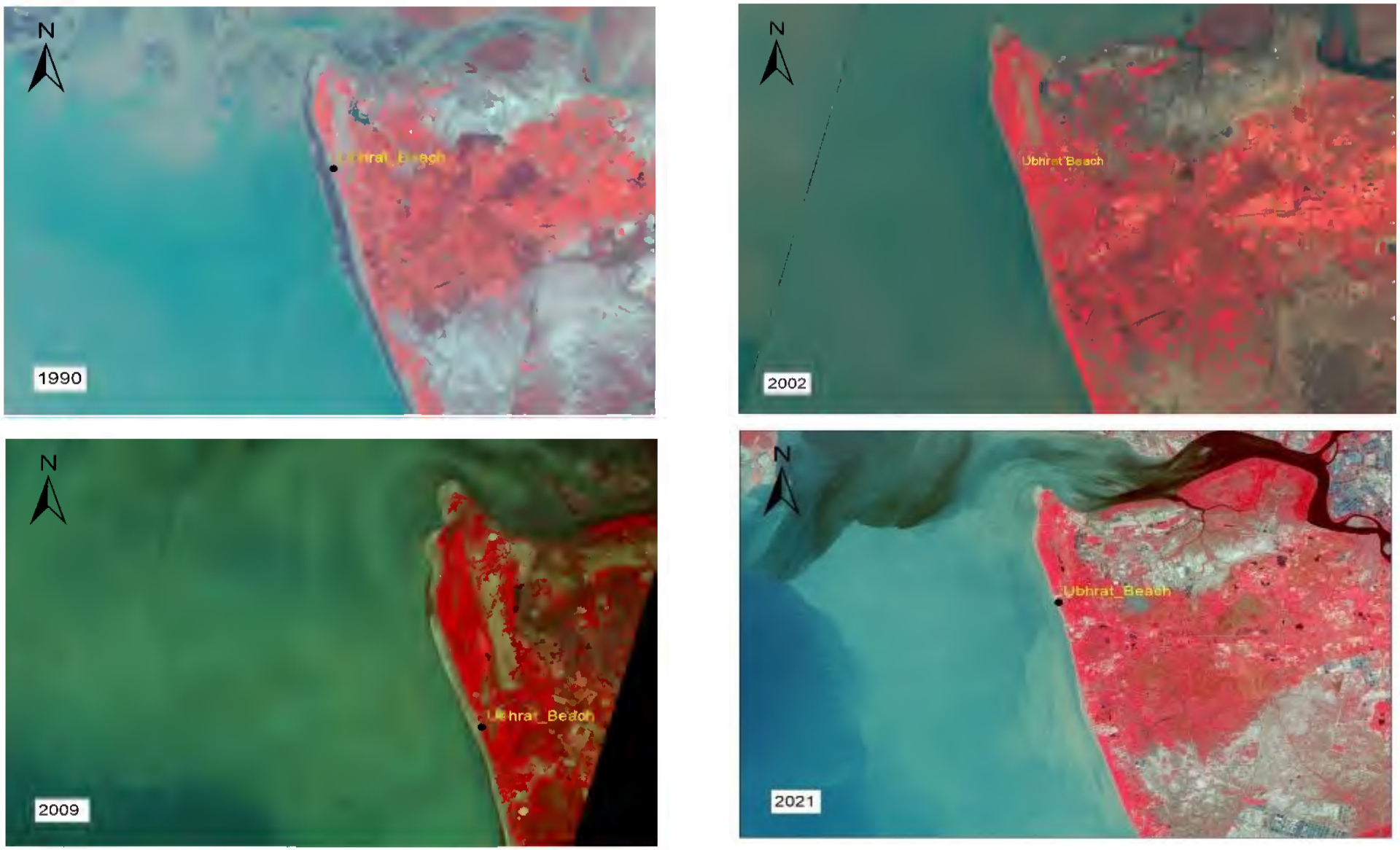

Figure 4.18 : Satellite View of Ubhrat Beach During 1990, 2002, 2009 and 2021

Figure 4.19 :(a) &(b) Northern Part of Suvali Beach, (c) Southern Part of Suvali Beach, (d) North of Adani Port (e)&(f) Southern Hazira Coast.

5. CONCLUSION

5.1. Shoreline Changes

Shoreline change dynamics along the coastal districts of South Gujarat. The present Study confirms the usefulness of image processing techniques and GIS tools applied on multi-temporal and multispectral images of different satellite sensors for assessment of the changes along the shoreline, as the results obtained are fairly in agreement with those of in situ measurements from the analysis of DGPS surveyed and ground truthing data. The Hazira coast has been subjected to a number of significant changes in the last three decades (1990–2021). Within this 20-km coastal strip which includes Ubhrat beach, all possible trends have been observed, ranging from high accretion of 12.7 m/year to severe erosion of up to −54.7 m/year, at few parts of the coast, however, remained stable. Above value for both erosion and accretion may vary ±5m depending upon the time of the satellite imageries taken during high tide and low tide time.

The entire coastal stretch faced erosion during the natural calamities such as cyclone and high wave activities except mouth portion of Tapi estuary. The predominant causes of erosion are both natural as well as anthropogenic including (1) significant reduction of sediment supply to the coast due to the natural shifting of Tapi estuary course and mouth (2) Various construction/infrastructural activities carried out on the mouth of Tapi estuary by various industries disturbing the shoreline stability by inducing down drift accretion and up drift erosion, Conservation Plan indicated in below

5.2. Recommondations

- Erosion, either man-made or natural is a major threat to intertidal habitats in Gulf environment due to altered hydrological regime and other natural causes. Observations carried out during the field surveys revealed those estuarine environments as well as many coastal stretches are facing erosion mainly due to high tidal amplitude. Hence, extensive surveys should be carried out to recommend suitable mitigation measures in this respect.

- Artificial coastal structures help in controlling the coastal erosion and thereby enhance the intertidal and sub-tidal biodiversity as they accelerate the reef-building process.

Artificial reefs tend to last for decades supporting faunal components. Since such structures are built using natural materials (example dead gastropod and bivalves) they are environment-friendly and in due course become natural. They attract diverse marine fauna within short period of time with high potential to enhance biodiversity. The same could be implemented in Adani Hazira Port jurisdiction in consultation with the experts.

- Establishment of facilities and the expansion of infrastructure over the coming years will bring about notable changes in the landscape and seascape in and around the Adani Hazira Port. Long-term human centred/induced activity of this magnitude in any coastal belt will have repercussions on its natural resources and ecosystems. As mangroves, mudflats and tidal creeks are the major ecological entities within the Adani Hazira Port, their conservation and management warrants priority and calls for a holistic approach. Thus, measures should be taken to conserve and preserve the mudflats and mangroves within the Adani Hazira Port to retain their tangible and intangible ecological benefits. The conservation and management plan presented in the proceeding section has the following broad aspects and different activities under each aspect are dealt with.

- Creation of baseline information to track subsequent changes in natural shoreline formation within the Adani Hazira Port through GIS and RS tool is to be done. The GIS maps may be utilized for the purpose which could serve as base map. Changes in creek systems, shoreline configuration and other land use categories could be monitored through this exercise once in two or three years.

- Periodic monitoring, preferably once in 6 months, and comparison of results with baseline data to underline changes will pave way for formulation of mitigation and conservation efforts. Periodic monitoring of shoreline configuration and mudflats will help to assess their health and detect changes in shoreline. Assessment and earlier generated data could be used to check shoreline configuration in terms of short and long- term changes and its succession patterns.

- Mudflats and mangrove conservation and restoration measures could subsequently be undertaken based on the results of the monitoring programs.

- Research needs to be undertaken to assess the economic and ecological benefits through sustainable development of shoreline configuration.

- Awareness should be generated among local people about the shoreline configuration changes in the surrounding areas and the consequences, particularly to the fishermen community

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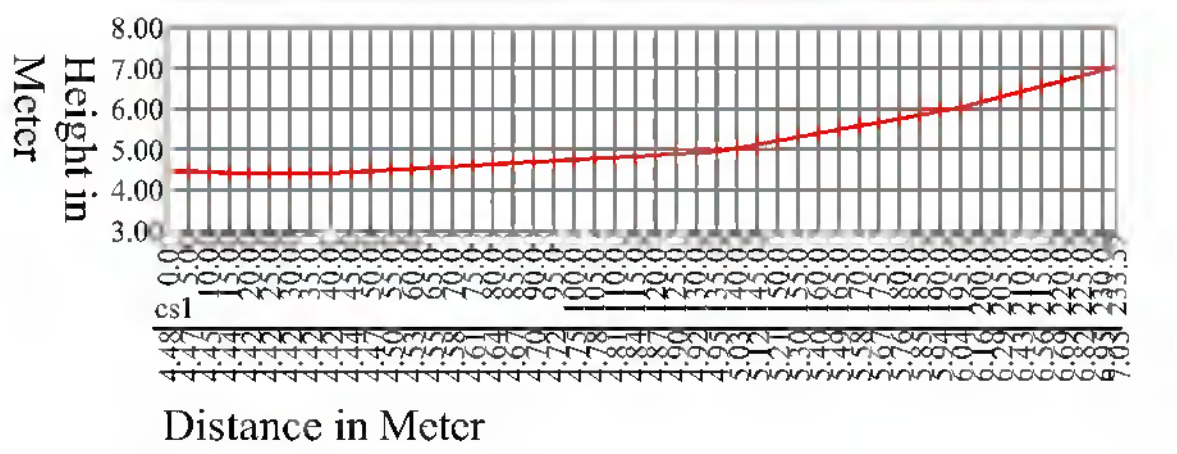
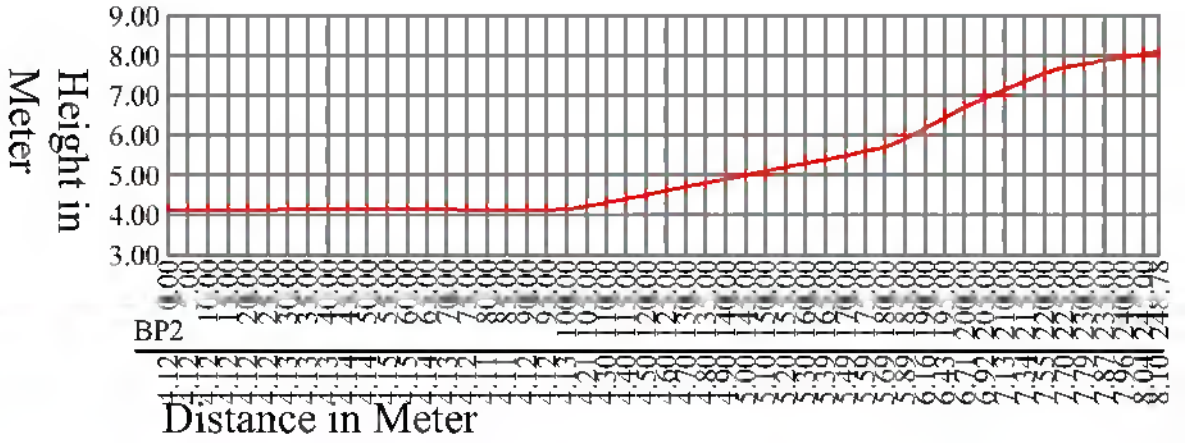
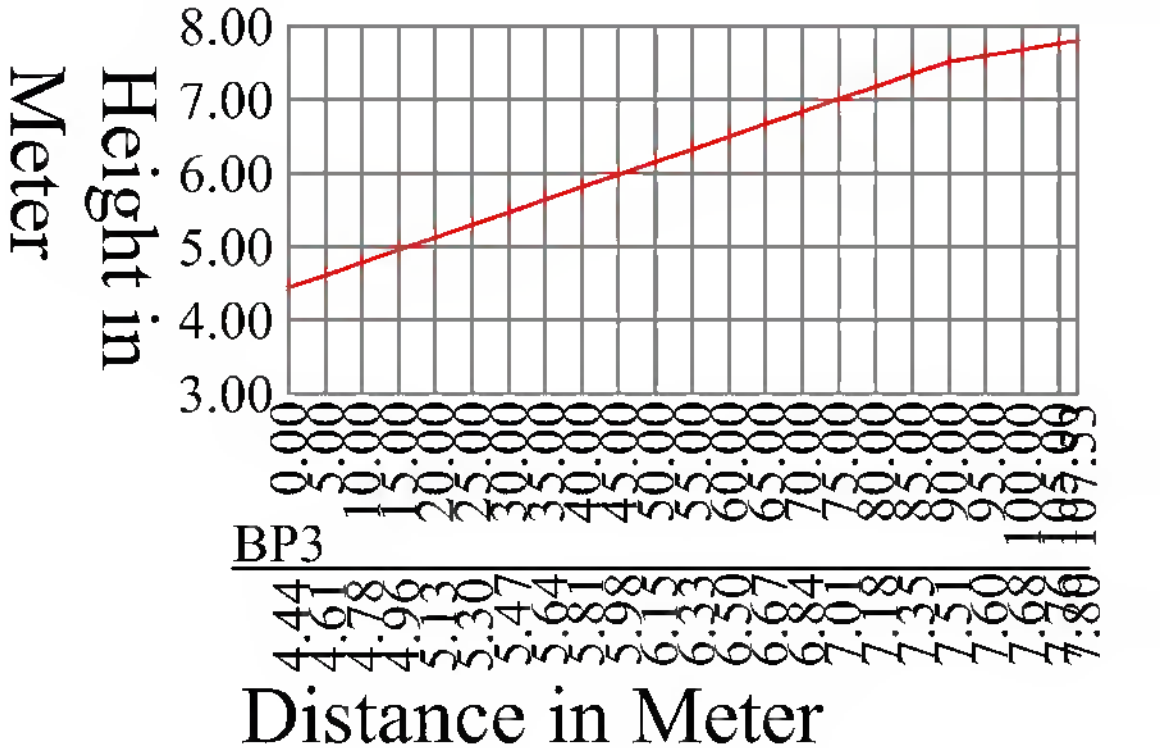
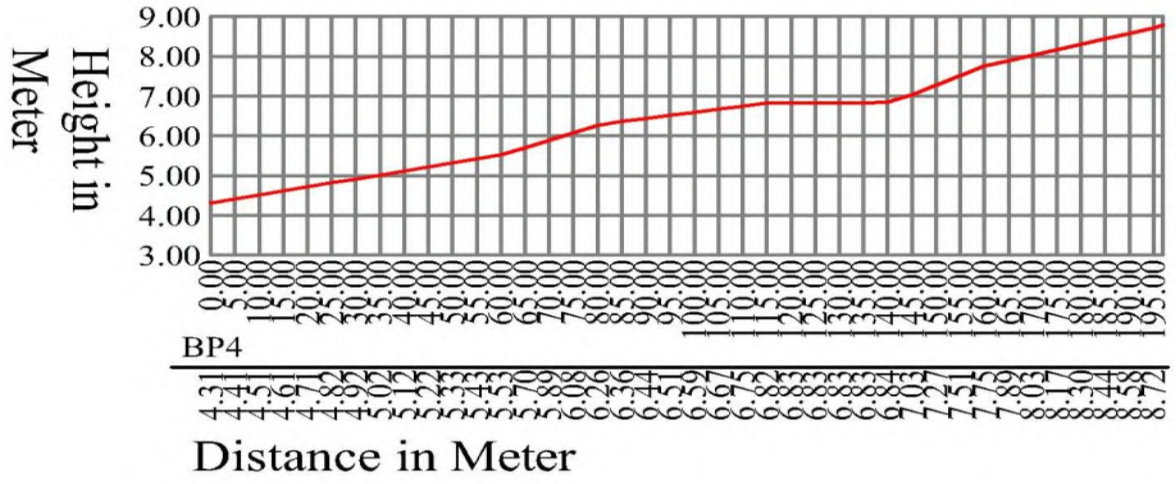
ANNEXURES

Annexure 1: Beach Profile at each Locations





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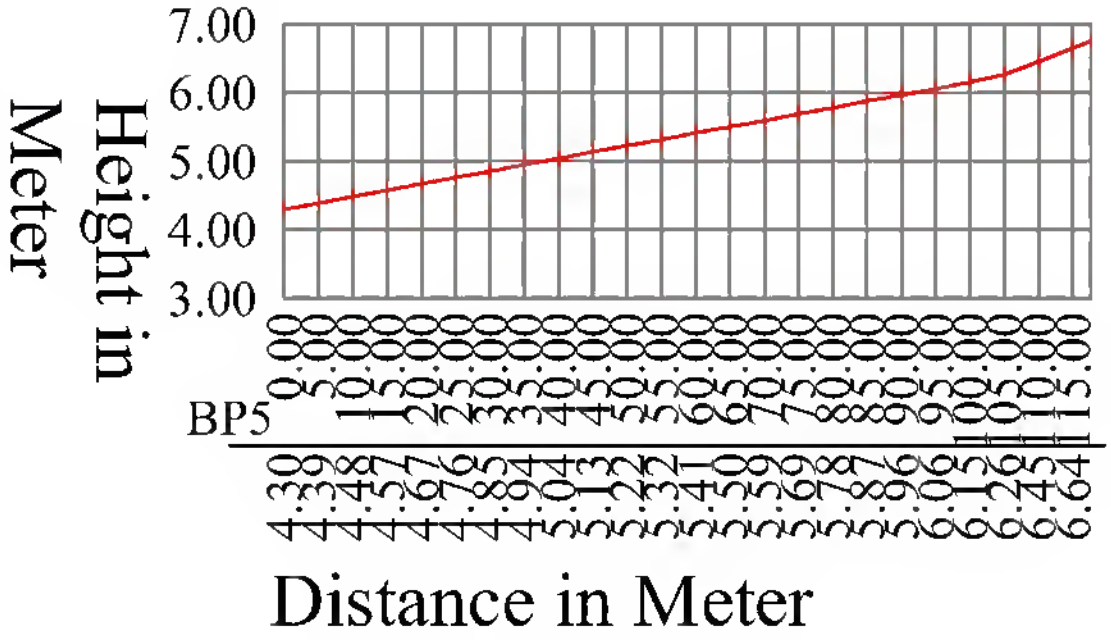
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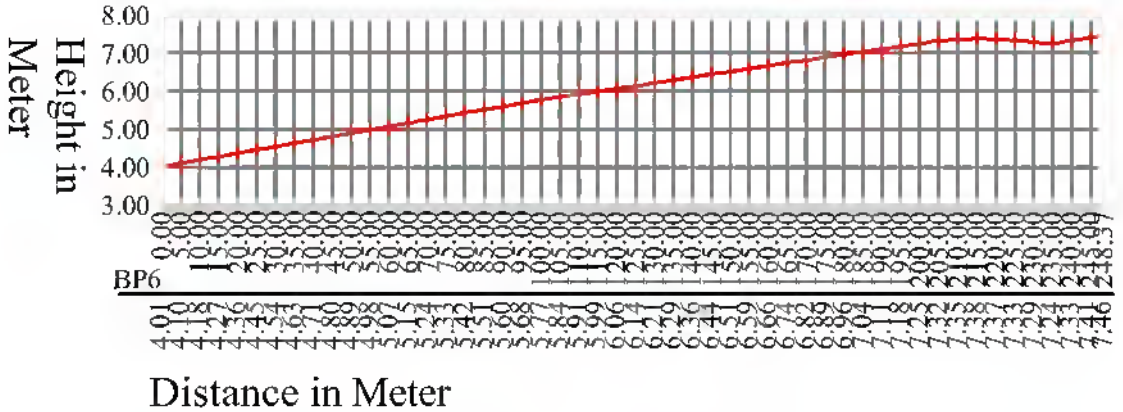
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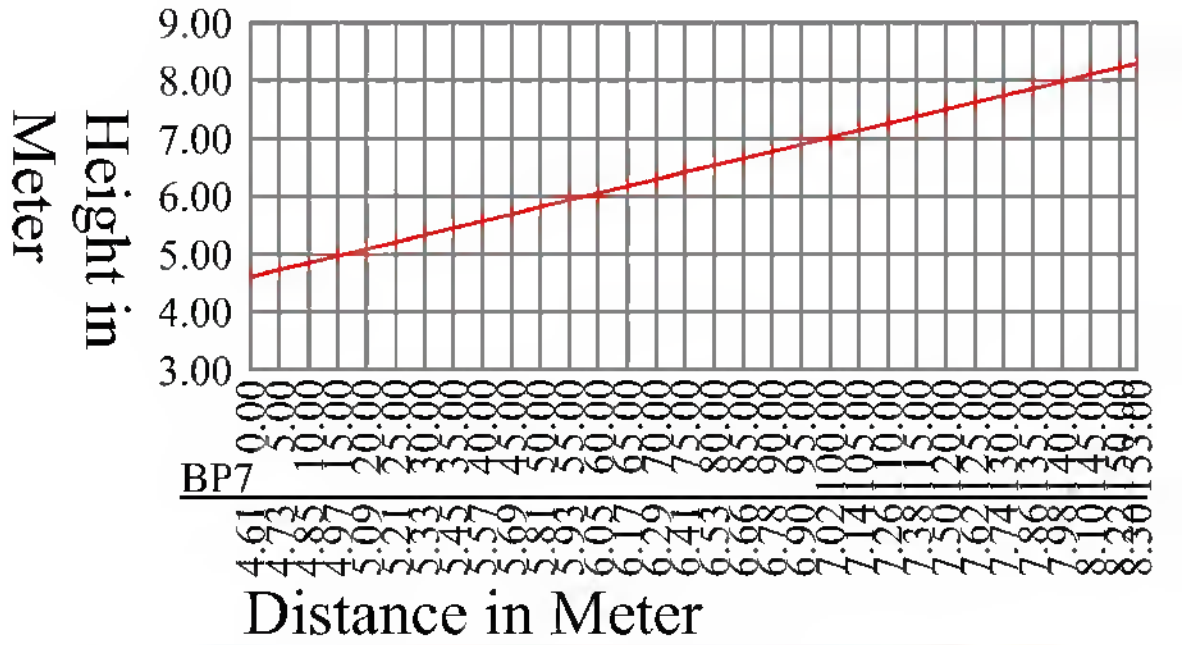
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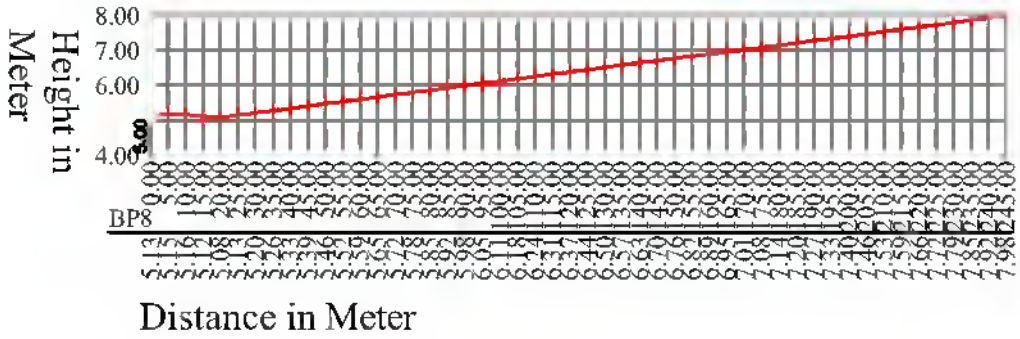
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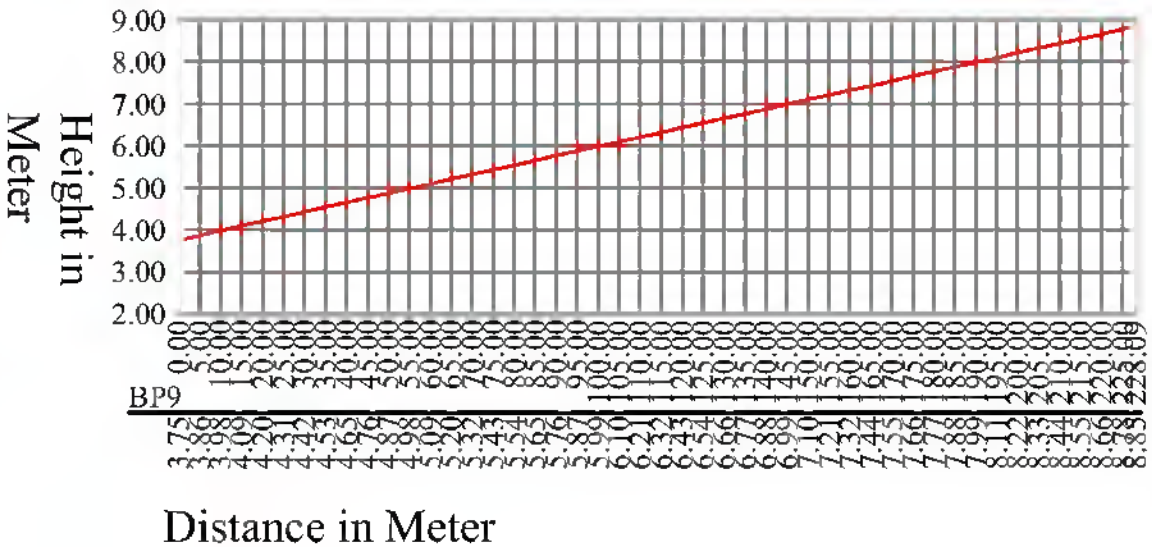
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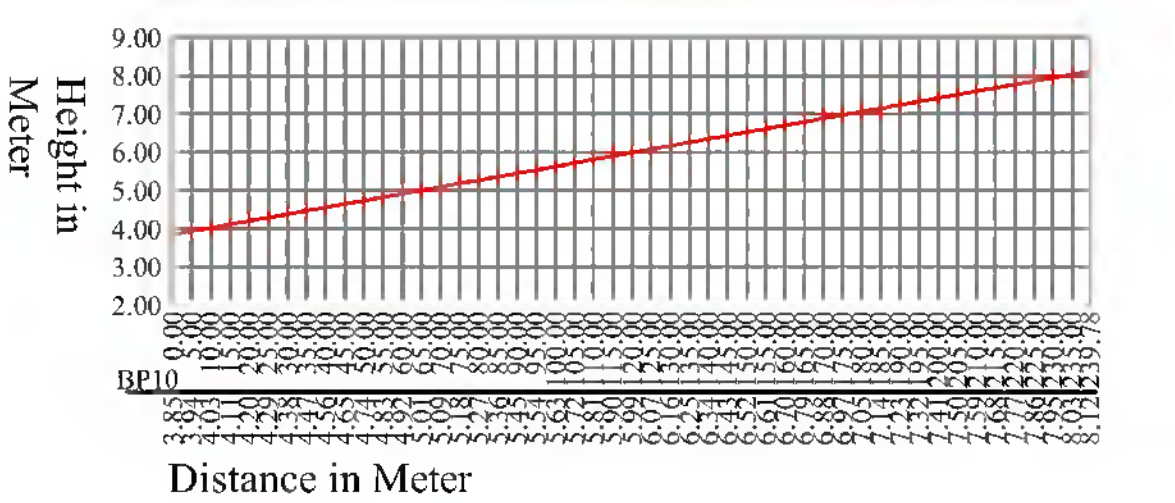
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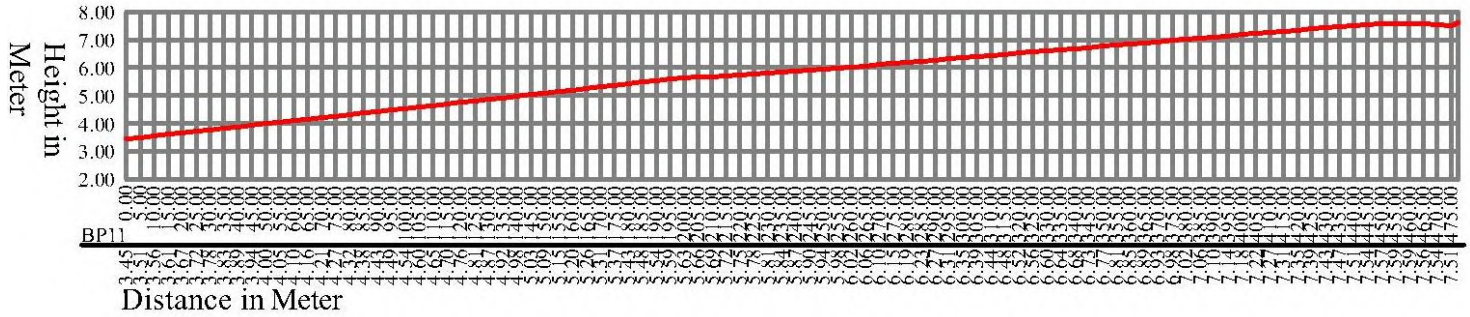
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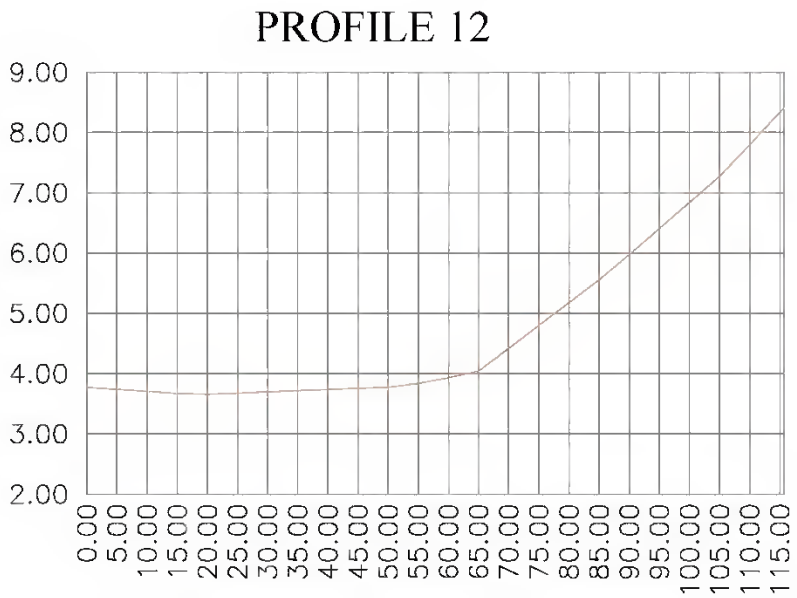
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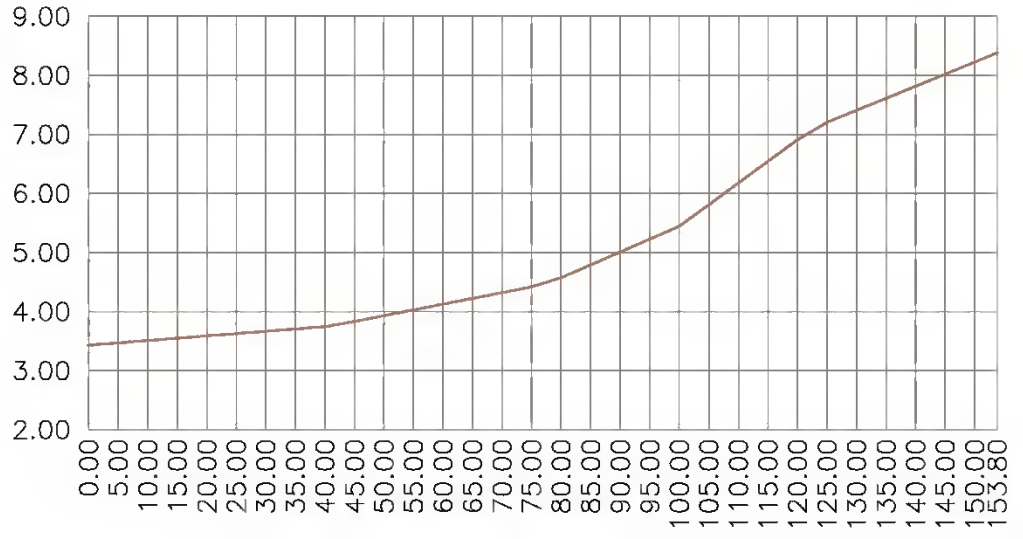

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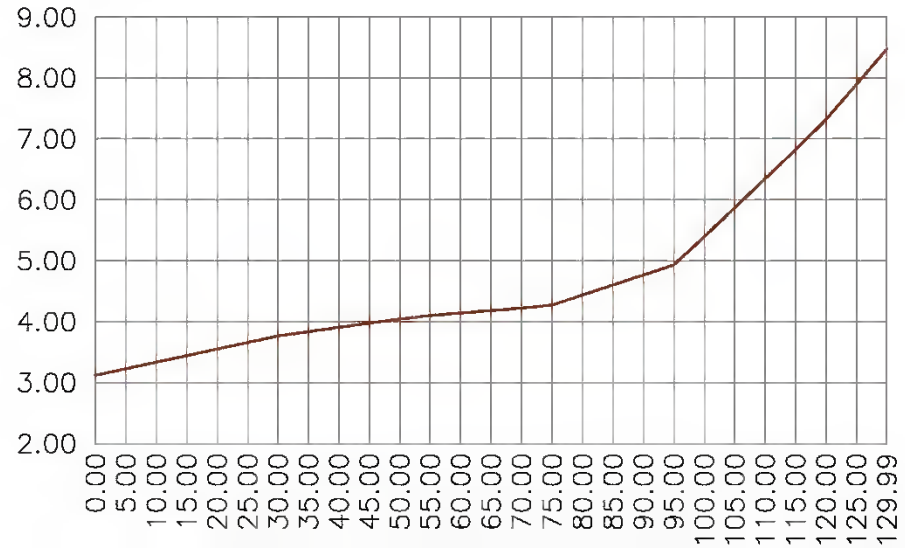

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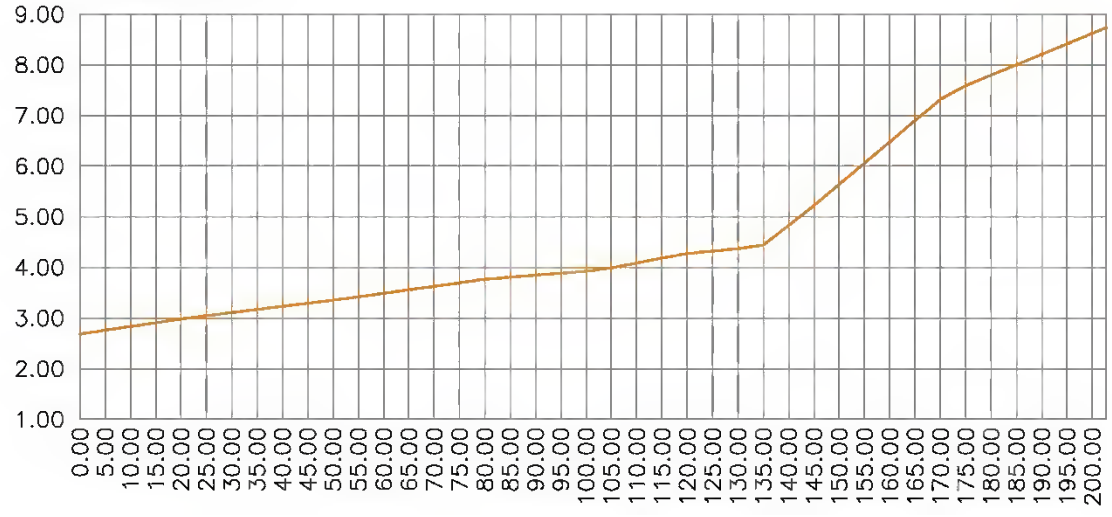

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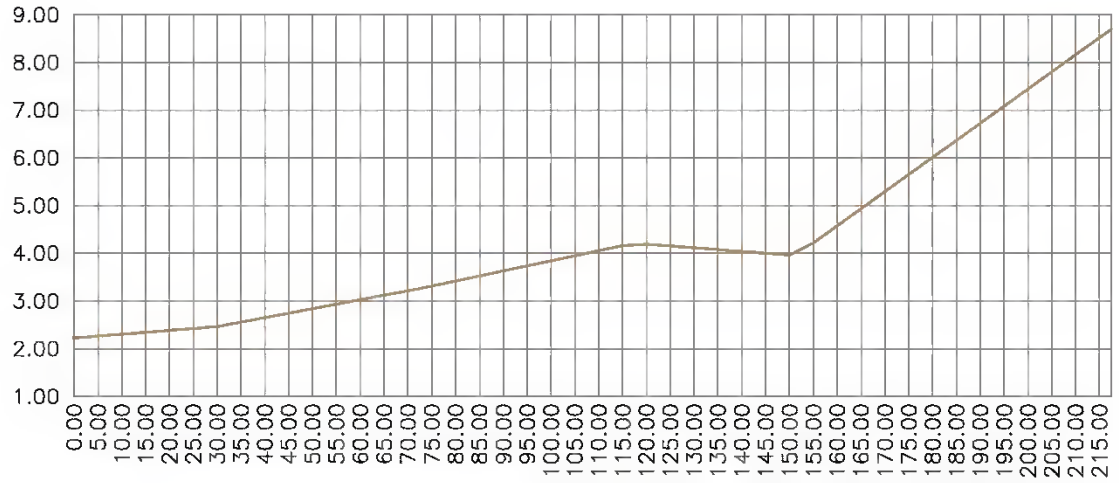

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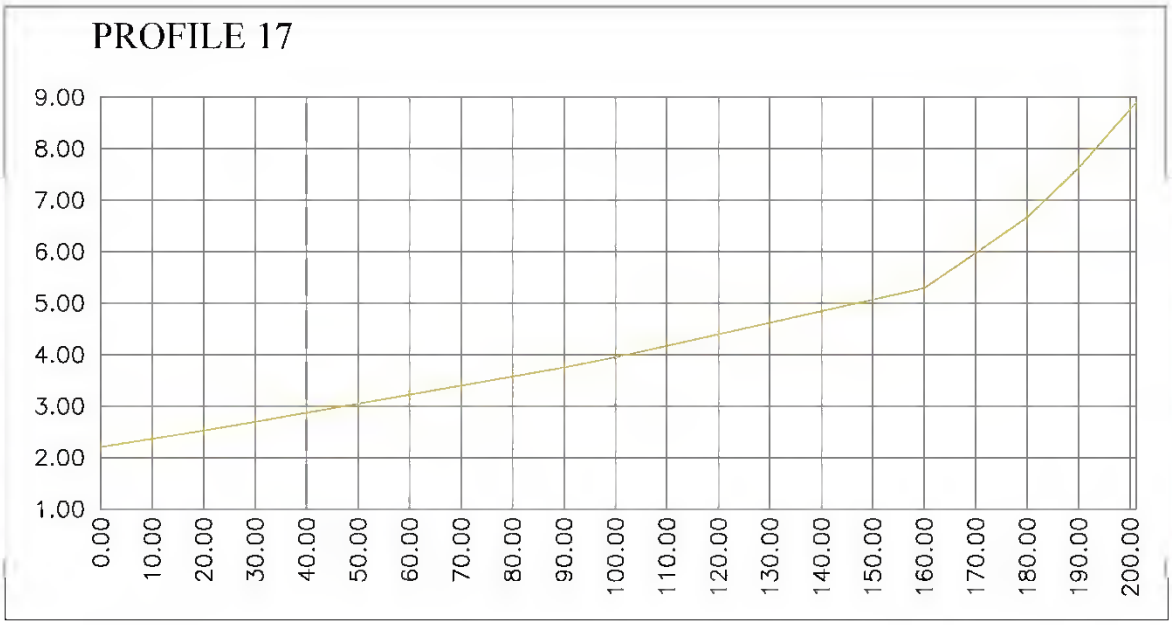


ANNEXURE-6

Photographs of Air Pollution Control Measures and Green Belt Area

Closed Conveyor System

Wind Shield

Dust Suppression System Installed in Conveyor System

Mist Canyon for Dust Suppression

Coal Chute point having water Sprinkling System

Water Sprinklers installed for Dust Suppression

Road Sweeping Machines

Dry Bulk Cargo Covered with Tarpaulin to avoid dust generation

Coal Transporting Trucks Covered with Tarpaulin to avoid dust generation

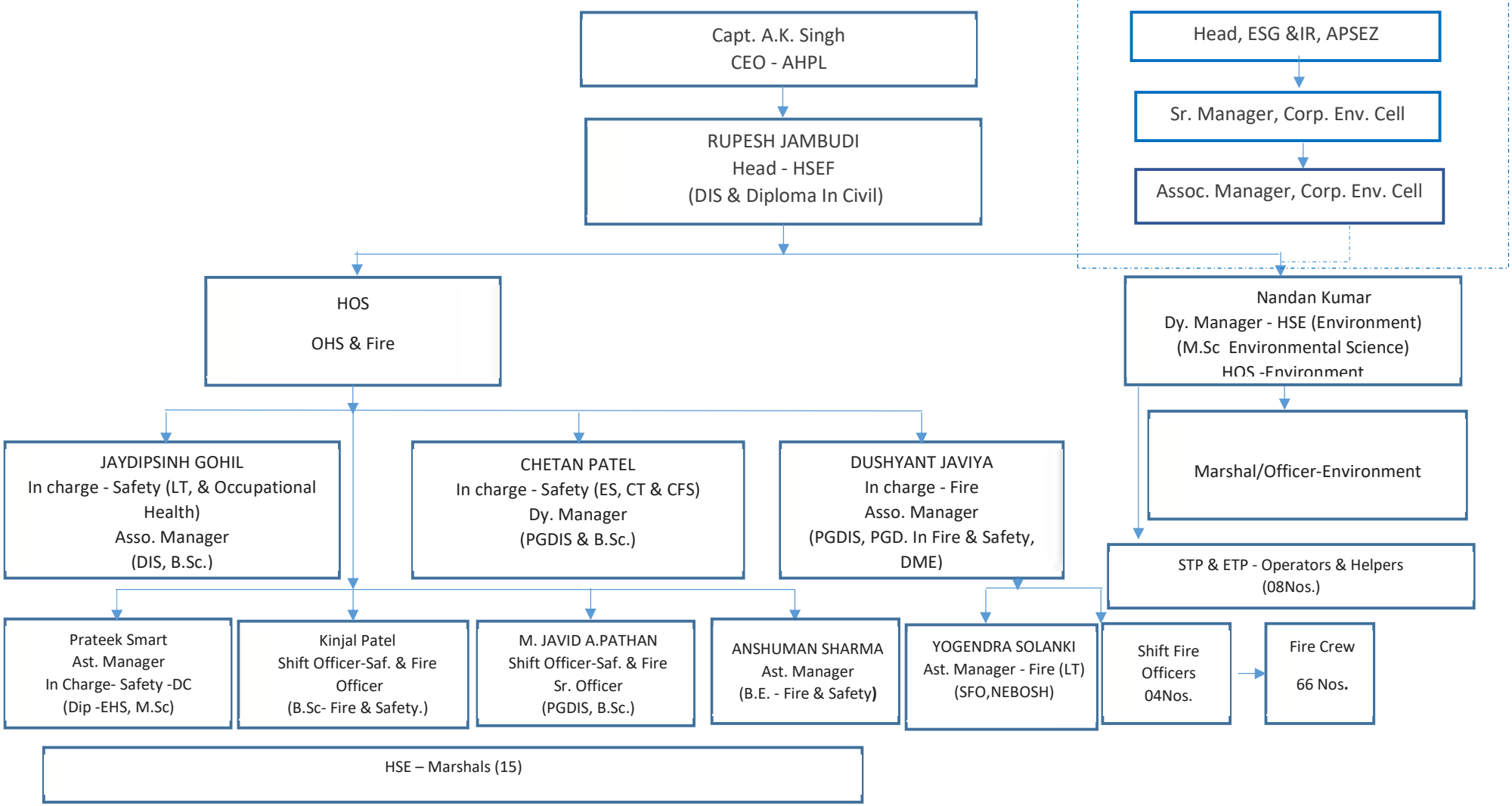
Recent Photographs of Green Belt Area


Shot on One Plus

ANNEXURE-7

DETAILS OF ENVIRONMENTAL MANAGEMENT CELL

Details of Environment Management Cell



Annexure 8

Details of Environment Budget & Expenditure of Compliance Period (April-September 2022)

Environment Budget & Expenditure of FY 2022-23

Sr No	Activities	Budget for FY 2022-23	Expenditure (April-Sept 22)
		(In Lacs INR)	(In Lacs INR)
1	Environmental Study/Audit/Survey/Consultancy Services	32	0
2	Legal and Statutory Charges	10	7.75
3	Environmental Monitoring Services	21.04	4.3
4	Hazardous Waste Management	33.2	14.23
5	Horticulture Development – Greenery and Plantation	169	54.23
6	O&M of Sewage Treatment Plant and Effluent Treatment Plant	18	8.07
7	Disposal of Bio medical Waste	1.8	0.9
8	Water Sprinkling for dust suppression	250	124.28
9	Miscellaneous Environmental Initiatives and Salary of Environmental Professionals	20	9.5
10	ISO 14001:2015 (EMS) audit, certification, and internal audit training	3	0
Total		558.04	223.26

Expenditure of last three Years

Year	Budget	Expenditure (In Lacs INR)
2019-20	363.80	326.76
2020-21	479.63	418.11
2021-22	571.80	443.70

Annexure 9

Copy of Renewed CC&A

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in
By R.P.A.D

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule 6(2) of the Hazardous And Other Waste (Management and Transboundary) Rules, 2016 framed under the Environmental (Protection) Act-1986. This Board is empowered to Grant CC&A.

And whereas Board has received consolidated consent application letter no. **213029 dated 18-03-2022** for the **Consolidated Consent and Authorization** (CC & A) of this Board under the provisions / rules of the aforesaid Acts. Consents & Authorization are hereby granted as under:

CONSENTS AND AUTHORISATION:
(Under the provisions /rules of the aforesaid environmental acts)
To,
M/s. Adani hazira Port Pvt. Ltd.
Near Hazira LNG Pvt. Ltd.,
Hazira:- 394270,
Tal: Chorasi, Dist:- Surat.

1. **Consent Order No. AWH-118804 Date of issue: 18-05-2022.**

2. The consents shall be **valid upto 12-07-2027** for the use of outlet for the discharge of treated effluent and emission due to operation of industrial plant for manufacturing of the following items/ products:

Sr. No.	Product	Quantity as per CCA
Multi Cargo Port		
1	Containers	36 MMTPA
2	Coal - Local & Others	10.40 MMTPA
3	Steel	6.20 MMTPA
4	Other Dry Bulk	
5	Automobiles	0.1 MMTPA
6	Liquid Bulk	5.0 MMTPA
Total		57.7 MMTPA

Subject to specific condition:

1. **Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).**
2. **To do retrofitting at D.G.Set for emission control and unit shall submit compliance with respect to Board circular No. GPCB/Air Action-03(1)(E)/599145/, dated: 27/08/2021 in the matter of NGT O.A. No. 681/2018.**
3. **You shall strictly comply with condition of Environmental Clearance issued by MOEF vide order no: 11-150/2010-IA-III, dated:- 23/06/2020.**

4. **You shall strictly comply with condition of Environmental Clearance issued by MOEF vide order no: 11-150/2010-IA-III, dated:- 03/05/2013.**
5. **You shall strictly comply with condition of Environmental Clearance issued by MOEF vide order no: 11-150/2010-IA-III, dated:- 29/09/2020.**
6. **To phase out FO and submit action plan for the phase in out.**

3. CONDITIONS UNDER THE WATER ACT:

3.1. Source of Water:- tankers, treated water from KRIBHCO..

3.2. The quantity of the water consumption for industrial purpose shall not exceed 15,515 KL/Day. (14,500 KL/Day+ 1000 KL/Day from KRIBHCO industry shall provide fix pipeline for raining of treated industrial effluent from KRIBHCO with flow meter & maintain it's record.

3.3. The quantity of the fresh water consumption for domestic purpose shall not exceed 985 KL/Day.

3.4. The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 10,190 KL/Day.

3.5. The quantity of domestic waste water shall not exceed 950 KL/Day.

3.6. Domestic effluent shall be disposed off through septic tank/soak pit system.

3.7. The applicant shall provide adequate effluent treatment system in order to achieve the quality of the treated effluent as per GPCB norms mentioned below:-

S. No.	Parameters	GPCB Norms
1.	pH	6.5 to 8.5
2.	Temperature	40°C
3.	Colour	100 Units
4.	Suspended Solids	100 mg/l
5.	Oil & Grease	10 mg/l
6.	Phenolic Compound	1.0 mg/l
7.	Sulphide as S	2.0 mg/l
8.	Ammonical Nitrogen as NH_3	50 mg/l
9.	Total Chromium as Cr^{+3}	2.0 mg/l
10.	Hexavalent Chromium as Cr^{+6}	0.1 mg/l
11.	BOD (3 Days @ 27 °C)	30 mg/l
12.	COD	250 mg/l
13.	Total Dissolved Solids	2100 mg/l
14.	Percentage Sodium as Na	60%

Effluent having quality as above shall be conveyed through pipeline & shall be discharged at designated point as recommended by NIO.

3.8. Domestic effluent confirming to the below mentioned standards shall be reused for gardening/plantation within the port premises.

S. No.	Parameters	GPCB Norms
1.	BOD (3 Days @ 27°C)	20 mg/l

GPCB

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2.	Suspended Solids	30 mg/l
3.	Residual Chlorine	Minimum 0.5 ppm

All efforts shall be made to remove colour & unpleasant odour as far as practicable.

3.9. Industry shall provide fixed pipeline with flow meter for the reuse of treated effluent and maintain its records.

3.10. Domestic effluent shall be disposed off through septic tank/soak pit system.

4. CONDITIONS UNDER THE AIR ACT:

4.1. The following shall be used as a fuel in D.G. Sets (Stand by) and HWG respectively.

Sr. No.	Fuel	Total
1)	Diesel	33596 lit/day
2)	FO/HSD	2208 lit/day

4.2. The applicant shall install & operate comprehensive adequate air pollution control system in order to achieve prescribed norms.

4.3. The flue gas emission through stack attached to D.G. Sets (Stand by) and HWG shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Parameters	Permissible Limit
1	DG Sets - 3 Nos. (Stand by - 1500 KVA each)	30	Particulate Matter SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm
2	DG Sets - 2 Nos. (325 KVA & 100 KVA) Stand by	11 (Each)	Particulate Matter SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm
3	DG Sets - 3 Nos. (Stand by) (625 KVA, 380 KVA, 200 KVA)	11 (Each)	Particulate Matter SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm
4	2 Nos. Hot Water Generated (HWG)(4,00,000 Kcal/Hr. each)	30	Particulate Matter SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm
5	DG Sets - 1 Nos. (750 KVA) Stand by	11	Particulate Matter SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm
6	DG Sets - 1 Nos. (200 KVA) Stand by	11	Particulate Matter SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm

4.4. There shall be no process emission from the manufacturing process as well as any other ancillary process.

4.5. Industry shall take adequate measure to control dusting due to storage, transportation & handling of Coal/Lignite & fly ash.

4.6. Industry shall comply with Coal handling guideline of the Board.

4.7. Industry shall comply with fly ash notification 1999 as amended from time to time.

4.8. Applicant shall comply with National Ambient Air Quality Standards notified by Central Pollution Control Board, New Delhi time to time under the provision of the Environment (Protection) Act-1986 for all the parameters. The concentration of all parameters in the ambient air within the premises of the industry and a distance of 10 meters from the sources (other than the stack/vent) shall not exceed than the permissible limit. Standards are as per Annexure.

4.9. The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/displayed to facilitate identification.

4.10. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and70 dB (A) during night time. Daytime is reckoned in between 6a.m. and10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

4.11. D.G. SETS CONDITIONS

The D.G. Set shall have acoustic enclosure and shall comply sith the standards specified at Sr. no. 95 of Schedule-I of the rule-3 of E.P. Rules -1986 and Noise pollution level as per the Air Act-1981.

D.G. Sets standards:-

The flue gas emission through stack attached to D.G. Sets shall conform to the following standards.

a) The minimum height of stack to be provided with each of the generator set shall be H=h + 0.2 (KVA) $^{1/2}$, where H= Total stack height in meter, h= height of the building in meters where or by the side of which the generator set is installed.

a) Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end.

b) The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/ acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the night time). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure/room, and the averaged.

c) The D.G. Set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).

d) All efforts shall be made to bring down the noise level due to the D.G.Set, outside the premises, within the ambient noise requirements by proper siting and control measures.

e) Installation of a D.G. Sets must be strictly in compliance with the recommendations of the D.G.Set manufacturer.

f) A proper routine and preventive maintenance procedure for the D.G.Set should be set and followed in consultation with the DG Set manufacture which would help prevent noise levels of the DG Set from deteriorating with use.

GPCB

GUJARAT POLLUTION CONTROL BOARD
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Sector-10-A, **Gandhinagar**-382 010
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5. **AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]**
Form for grant of authorization for occupier or operator handling Hazardous waste
5.1 Authorization order No:- **AWH-118804** date of Issue: **18-05-2022.**
5.2 **M/s. Adani hazira Port Pvt. Ltd.,** is hereby granted an authorization to operate facility of below for following hazardous wastes on the premises situated at **Near Hazira LNG Pvt. Ltd., Hazira:- 394270, Tal:- Chorasi, Dist:- Surat.**

Sr no	Waste	Quantity MT/Year	Schedule-I/ Category	Facility
1	Oil-Containing Cargo Residue, Washing Water And Sludge / Cargo residue, washing water and sludge containing oil	6000	3.1	This shall be treated to meet GPCB norms & then REUSE within the premises for green belt development in an area of 69.88 Ha, and also for fire fighting.
2	Chemical Containing Cargo Residue And Sludge / Cargo residue and sludge containing chemicals	240 MT/Year	3.2	Collection, Storage, Transportation for recycling to 1) M/s. Amidhara(ID-33739), Dist: Kheda, Authorization No: AWH-85333, valid upto- 27/02/2022. 2) M/s. Daxesh Petrochem Pvt. Ltd, (ID-15625), Dist-Bharuch, Authorization No: H-91610, valid upto- 27/11/2021. 3) Yash Enterprise (ID-3686) Dist-Valsad-Sarigam, Authorization No: AWH-92657, valid upto- 18/01/2023.
3	Sludge and filters contaminated with oil	18	3.3	Collection, Storage, Transportation and disposal by incineration in the approved CHWIF. RECEPTION from ships coming to the port only
4	Ballast/Bilge/Slop Water Containing With Oil From Ship/Tag	60	3.4	Collection, Storage, Transportation and disposal by incineration in the approved CHWIF. This shall be treated to meet GPCB norms & then REUSE within the premises for green belt development in an area of 69.88 Ha, and also for firefighting
5	Used / Spent Oil	120	5.1	Collection, storage, transportation and disposal by selling to Registered re-refiners. RECEPTION from ships coming to the port only
6	Wastes Residues Containing Oil	180	5.2	Collection, Storage, Transportation and disposal by incineration in the approved CHWIF. CO-PROCESSING/ RECOVERY may be explored.

7	Contaminated Cotton Rags or Other Cleaning Materials	180	33.2	Collection, Storage, Transportation and disposal by incineration in the approved CHWIF.
8	Oil and Grease Skimm ng	12	35.4	Collection, Storage, Transportation and disposal by incineration in the approved CHWIF.

5.3 The authorization shall be valid up to **12-07-2027**.

5.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

5.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.5.2 to the industry having valid CCA of this Board.

6. TERMS AND CONDITIONS OF AUTHORISATION

1. The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
3. The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
7. It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

15. Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.
16. In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
17. As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
18. Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
19. In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
20. Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
21. Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
22. Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

7. SPECIFIC CONDITIONS:-

7.1. The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.
7.2. Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.
7.3. In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.
7.4. The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.
7.5. Unit shall comply provisions of E-Waste Management Rules-2016.
7.6. The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.
7.7. The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding **ninety days**. Prior permission of the Board shall be obtained for extension of the storage period.
7.8. The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.
7.9. The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.

8. GENERAL CONDITIONS: -

8.1. Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.

8.2. Applicant shall also comply with the general conditions given in annexure I.

8.3. Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives. Inspectorate of Factories and local body.

8.4. In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.

8.5. The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.

8.6. The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.

For and on behalf of
Gujarat Pollution Control Board

(Smt) S. V. Bhargava)
Unit Head, Surat

NO: GPCB/CCA-SRT-1314(10)/ID_35352/ **Date:-**

Issued to:
M/s. Adani hazira Port Pvt. Ltd.
Near Hazira LNG Pvt. Ltd.,
Hazira:- 394270,
Tal:- Chorasi, Dist:- Surat.

GPCB

GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

"CCA – Correction"

BY R.P.A.D.

NO: GPCB/CCA-SRT-1314(10)/ID_35352/ **Date:**

To,
M/s. Adani Hazira Port Ltd.
Near Hazira LNG Pvt. Ltd.
Hazira - 394270
Tal: Chorasi, Dist: Surat.

SUB: Correction in the consolidated consent & Authorization of the Board.

REF: 1) This office CCA order No: AWH-118804 Dated: 08/06/2022 under various Environmental Acts/Rules.

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974 and under section-21 of the Air (Prevention and Control of Pollution)-1981. The Board has granted CTE vide this office letter no: CCA-SRT-1314(10)/ID-35352/674464 dated 08/06/2022, valid upto 12/07/2027.

The Board has right to review and amend/correct the conditions of the said CCA.

The said CCA order is further corrected as below:

1. The name the unit shall be read as issued to **M/s. Adani Hazira Port Ltd. in place of** M/s. Adani Hazira Port Pvt. Ltd. in CCA order No. AWH-118804.

2. **Condition no. 6.2 (Table Point No.: 2) mentioned under the head "6. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]" of the said CCA order is corrected as below:**

M/s. Adani Hazira Port Pvt. Ltd. is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at **Near Hazira LNG Pvt. Ltd., Hazira – 394270, Tal: Chorasi, Dist: Surat.**

Sr. No	Waste	Quantity MT/Year	Schedule-I/ Category	Facility
2	Chemical Containing Cargo Residue And Sludge / Cargo residue and sludge containing chemicals	240 MT/Year	3.2	Reception from ships coming to the port and Collection, Storage, Transportation and disposal by incineration in approved CHWIF and or send for recycling to 1) M/s. Amidhara (ID-33739), Dist: Kheda, Authorization No: AWH-85333, valid upto- 27/02/2022. 2) M/s. Daxesh Petrochem Pvt. Ltd., (ID-15625), Dist: Bharuch, Authorization No: H-91610, valid upto- 27/11/2021. 3) Yash Enterprise (ID-3686) Dist: Valsad-Sarigam, Authorization No: AWH-92657, valid upto- 18/01/2023.

3. The rest of the conditions of the above referred CCA order AWH-118804 order shall remain unchanged. You are directed to comply with these conditions.

For and on behalf of
Gujarat Pollution Control Board

(M. R. Macwana)
Unit Head, Surat

Annexure 10

Copy of Public Liability Insurance of AHPL

IFFCO-TOKIO
GENERAL INSURANCE
Muskurate Raho

CONTRACT OF INSURANCE

INSURED NAME: ADANI HAZIRA PORT LIMITED.

INSURER: IFFCO TOKIO General Insurance Company Limited

Policy Type - Public Liability - Act

Policy Period - (01/04/2022 to 31/03/2023)

Servicing Branch :	AHMEDABAD
Policy Issuing Office :	IFFCO TOKIO GEN INSU. CO. LTD. Ground Floor, IFFCO Bhavan Bh Maruti Arcade, Shivranjani Cross Rd, Satellite AHMEDABAD , GUJARAT - 380015
Issuing Office GSTIN :	24AAACI7573H1ZI
Corporate Office :	IFFCO TOKIO GEN INSU. CO. LTD.4th - 5th Floor, IFFCO TowersPlot No 3, Sector 29, GURGAON (HARYANA) - 122001
Policy No :	41068925
Unique Invoice No :	41068925
Invoice Date :	22/04/2022
SAC :	997139
Intermediary Details :	ACE INSURANCE BROKERS PVT LTD

10 Attaching & forming Part of policy no. 41068925

IFFCO-TOKIO

Muskurate Raho!

POLICY SCHEDULE CUM TAX INVOICE

Insured	ADANI HAZIRA PORT LIMITED,
GSTIN	24AAICA0970E1Z1
Address	Adani House, Nr Mithakhali Six Road, Navrangpura Ahmadabad (m Corp.) India Pin Code 380009
Place of Supply	GUJARAT
Business Description	Port Operation, Cargo handling, stevedoring
Policy Period	01/04/2022- 31/03/2023
Co Insurance Details	NA
Limit of Liability	Cover 50,000,000 per occurrence and 150,000,000 in the aggregate
Deductible	NA
Territorial Limits	INDIA
Jurisdiction	INDIA
Turnover Details	INR 14,600,000,000
Policy Type	Occurrence Based
Premium	Premium Excluding Taxes: INR 5,875.00 CESS (0%): INR 0.00 GST - SGST (9%): INR 528.75 - UGST (0%): INR 0.00 - CGST (9%): INR 528.75 - IGST (0%): INR 0.00 ERF Amount: INR 5,875.00 Total Premium / Invoice Value : INR 12,808.00
GST Related Declarations	**Whether GST is Payable on Reverse Charge Basis- No**
Other Terms and Conditions	All Other terms & conditions as per Policy Wordings attached.

Toll Free: 1-800-103-5499; SMS "claim" to 56161
SAC Code: 9971
Regd. Office: IFFCO SADAN, C1 Distt Centre, Saket, New Delhi -110017
Corporate Identification Number (CIN) U74899DL2000PLC107621, IRDA Reg. No. 106
Consolidated Stamp Duty Deposited as per the order of Government of National Capital Territory of Delhi

For IFFCO-Tokio General Insurance Company Ltd

Authorised Signatory

Regd. Office : IFFCO Sadan
C-1 Distt. Centre, Saket,
New Delhi-110017
CIN :U74899DL2000PLC107621

Signature Not Verified
Digitally signed by SUBRATA MONDAL
Date: 2022.04.22 14:53:14 IST
Reason: Valid Policy Copy
Location: IFFCO Tokio General Insurance Company Ltd, India

Attaching & forming Part of policy no. 41068925

IFFCO-TOKIO

Muskurate Raho

POLICY FORM
(PUBLIC LIABILITY INSURANCE -- ACT ONLY POLICY)

1. OPERATIVE CLAUSE

Whereas the Insured Owner, named in the Schedule hereto and carrying on business described in the said Schedule, has applied to IFFCO-TOKIO General Insurance Co. Ltd. (hereinafter called the Company) for the indemnity hereinafter contained and has made a written proposal and declaration which shall be the basis of this contract and is deemed to be incorporated herein and has paid the premium and statutory contribution towards the Environment Relief Fund as per the provisions of the Public Liability Insurance Act and the rules framed thereunder.

NOW THIS POLICY WITNESSETH that subject to the terms, exceptions and conditions contained herein or endorsed hereon , the company will indemnify the insured owner against the statutory liability arising out of accidents occurring during the currency of the policy due to handling hazardous substances as provided for in the said act and the rules framed thereunder.

2. DEFINITIONS

a) "Act" unless otherwise specifically mentioned shall mean the Public Liability Insurance Act, 1991.

b) "Accident" means an accident involving a fortuitous or sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of, or injury to any person or damage to any property but does not include an accident by reason only of war or radio-activity.

c) "Handling" in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance.

d) "Hazardous Substance" means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986, and exceeding such quantity as may be specified, by notification, by the Central Government.

e) "Owner" means a person who owns, or has control over handling any hazardous substance at the time of accident and includes:-

(i) in the case of a firm, any of its partners;

(ii) in the case of an association, any of its members, and

(iii) in the case of a company, any of its directors, managers, secretaries or other officers who is directly in-charge of and is responsible to the company for the conduct of the business of the company.

(f) "Turnover" shall mean –

i) Manufacturing units – Annual Gross Sales including all levies and taxes.

ii) Godown/warehouse owners – Annual rental receipts.

iii) Transport Operators – Annual freight receipts

iv) Others – Annual gross receipts

3. EXCLUSIONS

This Policy does not cover liability:

(1) arising out of willful or intentional non-compliance of any Statutory Provisions.

(2) in respect of fines, penalties, punitive and/or exemplary damages.

(3) arising under any other legislation except in so far as is provided for in Section 8 Sub-Section (1) and (2) of the Act.

(4) arising out of damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the Insured's control, care or custody.

(5) directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power.

(6) directly or indirectly caused by or contributed to by

a) ionizing radiations or contamination by radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel.

b) the radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof.

4. CONDITIONS

(1) The Insured Owner shall give written notice to the Company as soon as reasonably practicable of any claim made against the Insured Owner or any specific event or circumstance that may give rise to a claim. The Insured shall immediately give to the Company copies of notice of application(s) forwarded by the Collector and all such additional information and or assistance that the Company may require.

(2) No admission, offer, promise or payment shall be made or given by or on behalf of the Insured owner under this policy without the written consent of the Company.

(3) The Company shall not be liable for any claims for relief made after five years from the date of occurrence of the accident.

(4) The Insured Owner shall keep record of annual turnover, and at the time of renewal of insurance declare such turnover and all other details as may be required by the Company. The Company shall at all reasonable times have full rights to call for and examine such records.

(5) If at the time of happening of any accident, resulting in a claim under this policy, there be any other insurance covering the same liability, then the Company shall not be liable to pay or contributes more than its ratable proportion of such liability.

(6) This Policy may be cancelled by the Insured Owner by giving 30 days notice in writing to the Company in which event the Company will reta. premium at short period scale subject to there not having occurred an accident during the policy period which may give rise to a claim(s), failing which no refund of premium shall be allowable.

(7) This Policy may also be cancelled by the Insurer by giving 30 days notice in writing to the Insured Owner in which event the Company shall be liable to repay on demand a rateable proportion of the premium for the unexpired term from the date of cancellation.

(8) If the Company shall disclaim liability to the Insured Owner for any claim hereunder and such claim shall not within 12 calendar months from the date of such disclaimer have been made the subject matter of a suit in a competent court of law, then the claim for all practicable purposes shall be deemed to have been abandoned and shall not thereafter be recoverable hereunder or be made the subject matter of any suit.

(9) The Company shall not be liable to make any payment in respect of any claim if such claim shall be in any manner fraudulent or supported by any person on behalf of the Insured and/or if the insurance has been continued in consequence of any material mis-statement or non-disclosure of any material information by or on behalf of the Insured. In such a case, if the Company pays any amount to the claimant due to any statutory provisions, such amount shall be recoverable from the Insured.

(10) The Policy and the Schedule shall be read together as one contract and any word or expression to which a specific meaning has been assigned in the Act and the Rules framed thereunder or this Policy shall bear such specific meaning.

(11) Any dispute regarding interpretation of the terms, conditions and exceptions of this Policy shall be determined in accordance with the law and practice of a court of competent jurisdiction within India.

Annexure 11

Copy of Environment Statement of FY 2021-22

O/E

adani

Ports and
Logistics

AHPL/GPCB/2022-23/03

Date: 28.06.2022
GPCB ID: 35352

To
The Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10A,
Gandhinagar-382 010 (Gujarat)

30/6/2022
Gujarat Pollution Control Board
Head Office
Sector No. 10-A,
Gandhinagar-382010

Dear Sir,

Sub.: Environmental Statement in **Form-V** for the financial year 2020-21 of **M/s. Adani Hazira Port Ltd.**

Ref.: I. Consolidated consent and authorization (CC&A) vide consent order no. AWH-87176 dated 17.07.2017 and its subsequent amendments AW-104319, Ref. No.: GPCB/CCA-SRT-1314(8)/ ID_35352/528583 dated 02.12.2019 and CCA order No: H- I 11966, Dated-16/04/2021.
II. Consolidated consent and authorization (CC&A) vide consent order no. AWH-118804 dated 18.05.2022

With reference to above subject matter, please find enclosed herewith **Environmental Statement - Form-V** prescribed under *Rule, 14 of the Environment (Protection) Rules, 1986* of **M/s. Adani Hazira Port Ltd.,** At & PO: Hazira, Taluka: Choryasi, District: Surat (Gujarat) for the financial year 2021-22.

This is for your kind reference and record please.
Thanking You,
For **Adani Hazira Port Ltd.**

(Anil Kishore Singh)
Authorized Signatory

Encl.: - Environmental Statement in Form-V for the Financial Year: 2021-22

Cc to: - The Regional Officer, Gujarat Pollution Control Board, 338, Belgium Square, Opp. Linear Bus Stand, Ring Road, Surat-364 002 (Gujarat)

Adani Hazira Port Ltd
At & PO Hazira
Choryashi
Surat 394 270
Gujarat, India
CIN: U45209GJ2009PTC058789

Tel +91 261 220 7780
Fax +91 261 220 7777
info@adani.com
www.adaniports.com

adani

Ports and
Logistics

AHPL/GPCB/2022-23/03

Date: 28.06.2022
GPCB ID: 35352

To
The Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10A,
Gandhinagar-382 010 (Gujarat)

Dear Sir,

Sub.: Environmental Statement in **Form-V** for the financial year 2020-21 of **M/s. Adani Hazira Port Ltd.**

Ref.: I. Consolidated consent and authorization (CC&A) vide consent order no. AWH-87176 dated 17.07.2017 and its subsequent amendments AW-104319, Ref. No.: GPCB/CCA-SRT-1314(8)/ ID_35352/528583 dated 02.12.2019 and CCA order No: H- I 11966, Dated-16/04/2021.
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This is for your kind reference and record please.
Thanking You,
For **Adani Hazira Port Ltd.**

(Anil Kishore Singh)
Authorized Signatory

Encl.: - Environmental Statement in Form-V for the Financial Year: 2021-22

Cc to: - The Regional Officer, Gujarat Pollution Control Board, 338, Belgium Square, Opp. Linear Bus Stand, Ring Road, Surat-364 002 (Gujarat)

Adani Hazira Port Ltd
At & PO Hazira
Choryashi
Surat 394 270
Gujarat, India
CIN: U45209GJ2009PTC058789

Tel +91 261 220 7780
Fax +91 261 220 7777
info@adani.com
www.adaniports.com

Environment Statement In (Form-V) For The FY: 2021-22 Of M/s. Adani Hazira Port Ltd.

FORM - V

(See Rule 14)

Environmental Statement for the Financial Year ending 31st March, 2022

PART – A

(i)	Name and address of the Owner/ Occupier of the Industry Operation or Process	:	**Anil Kishore Singh,** **Chief Executive Officer,** M/s. Adani Hazira Port Ltd., At & Post: Hazira, Taluka: Choryashi, District: Surat (Gujarat)
(ii)	Industry Category Primary (STC Code) Secondary (STC Code)	:	**Red - Large** Not Applicable Not Applicable
(iii)	Production Capacity	:	57.7 MMTPA (Total Cargo Handling Capacity)
(iv)	Year of Establishment	:	2010
(v)	Date of Last Environment Statement Submitted	:	25th June 2021

PART - B

Water and Raw Material Consumption

(i) Water Consumption:

Water Consumption Cu. Mtr./Day	
Process	Approx. 1464.68 m^3/day in Firefighting, Dust Suppression, Sprinkling Washing Activities, and horticulture etc.
Cooling	
Domestic	Approx. 220.38 m^3/day in Domestic Purpose

Name of Products	**Process Water Consumption Per Unit Of Product Output**	
	During the Previous Financial Year	**During the Current Financial Year**
Handling and Storage of General Dry Cargo, Liquid Cargo and Containers*	Total Water Consumption during the FY: 2020-21 is 720665.52 m^3 in the Dust Suppression, Fire Fighting, Cooling, LT - Washing Activities, Horticulture and Domestic purpose etc.	Total Water Consumption during the FY: 2021-22 is 615045.19 m^3 in the Dust Suppression, Fire Fighting, Cooling, LT - Washing Activities, Horticulture and Domestic purpose etc.

	The Water consumption per unit of cargo handling is 0.032 m^3/MT.	The Water consumption per unit of cargo handling is 0. 0.0247 m^3/MT.

* **The Unit does not carry out any manufacturing process. The water consumed was mainly in Firefighting, Dust Suppression, Water Sprinkling, Washing Activities and Horticulture & Domestic Purpose etc.**

(ii) Raw Material Consumption:

Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of output	
		During the previous Financial Year	During the current Financial Year
Not Applicable	Not Applicable	Not Applicable	Not Applicable

* Unit does not carry out any manufacturing process.

PART - C

Pollutants discharged to Environment/ Unit of Out ut
(Parameters as specified in consent issued)

Pollutants	Quantity of pollutants discharged (Mass/day)	Concentrations of pollutants in discharges (Mass/Volume)	Percentage of variation from prescribed standards with reasons
(a) Water	Nil*		
(b) Air	• DG sets are provided as standby power source and used during power failure. • The height of DG stacks as per CPCB/GPCB standards. All the monitored parameters are found within prescribed limits.		
Particulate Matter (mg/Nm^3)	DG set emission report is enclosed as **Annexure-1.**		Nil
Sulphur Dioxide (ppm)			Nil
Nitrogen Oxide (ppm)			Nil

* The Unit does not carry out any manufacturing process, as it is a service industry i.e. Port engaged in Handling and Storage of General Dry Cargo, Liquid Cargo and Containers. The source of effluent/ waste water generation is washing activities of liquid tanks, pipelines and floor washing during any spillage and/or leakage of liquid cargo and other domestic activities. During the Financial Year: 2021-22. There is no discharge of treated effluent / water discharged to the environment. All the treated Effluents and Sewage are utilized in horticulture purpose.

There was approx. 59.75 KL/Day Sewage Generation. The sewage was treated in the Sewage Treatment Plants (STP's) and treated water confirming to prescribe standards was reused in gardening and plantation activities. There was approx. 80.88 KL/Day of Effluents generation, and all of the generated effluents were treated in Effluents Treatment Plant and utilized in Horticulture Purpose.

PART - D

Hazardous Wastes

(as specified under Hazardous waste (Management and Handling) Rules 2016

Hazardous Wastes	Total Quantity (Kg.)	
	During the Previous Financial Year	During the Current Financial Year
a) From Process	Quantity of Hazardous Waste generated is given below: Cat.-3.2: 101860 Kg. of cargo residue containing chemicals. Cat.-3.3: 1840 Kg. of Used Oil Filters. Cat.-5.1: 44800 Kg. of Used/Spent Oil/Bilge. Cat.-5.2: 38770 Kg. of Oily Contaminated Foam Pigs. Cat.-21.1: 8970 Kg. of Empty Paint Drums/ Tins. Cat 33.2: 10260 Kg of oily Cotton rags Cat 35.1: Approx. 5000 Kg of gas cleaning residues CMS	Quantity of Hazardous Waste generated is given below: Cat.-3.2: 87730 Kg. of cargo residue containing chemicals. Cat.-3.3: 1090 Kg. of Used Oil Filters. Cat 3.4: 4200 Kg of Bilge water Containing oils Cat-33.11: 2960 Kg of contaminated empty barrel Cat 33.2: 5850 Kg of oily Cotton rags Cat.-5.1: 19440 Kg. of Used/Spent Oil. Cat.-5.2: 18830 Kg. of Oil Contaminated Foam Pigs. Cat 35.1: 2400 Kg of gas cleaning residues CMS.
b) From Pollution Control facilities	Nil	Nil

PART - E

Solid Waste

Solid Waste	Total Quantity (MT/Annum)	
	During the Previous Financial Year	During the Current Financial Year
(a) From Process (Ash)		
(b) From Pollution Control facilities		
(C-1) Quantity recycled or reutilized within the unit	7.59 MT (Kitchen & Food Waste was Converted in to Manure through Organic Waste Converter)	5.772 MT (Kitchen & Food Waste was Converted in to Manure through Organic Waste Converter)
(C-2) Sold		
(C-3) Disposed	Approx. 182.139 MT (Garbage Wastes)	Approx. 222.14 MT (Garbage Wastes) processed through Solid Waste Management Facility of Surat Municipal Corporation

Note: Scrap is collected in designated scrap yard at Central Store and sold to scrap vendor.

PART - F

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

- Total quant hazardous waste disposed off during the financial year 2021-22 is 142.50 MT. Out of which 115.90 MT of Incinerable hazardous waste was disposed off through GPCB authorized CHWIF M/s Saurashtra Enviro Projects Pvt Ltd Kutch. Approx. 26.6 MT of recyclable hazardous waste are sent to GPCB registered recyclers.

- Approx. 23.64 MT Used/Spent Oil/Bilge Water were generated (including opening were sold out to GPCB registered recycler/refiner at M/s. Unity Petroleum Co., Ahmedabad. The Waste Oils were stored in barrels in hazardous waste storage shed.

- Approx. 2.96 MT - Empty Paint Drums/Tins were sold out to GPCB registered recycler at M/s Shahara Enterprises Ahmedabad.
- Oily Cotton rags were generated from various maintenance and operational activities, which were kept in covered hazardous waste storage area. 5.85 MT of oily cotton rags Wastes were disposed off through GPCB authorized CHWIF Saurashtra Enviro Projects Pvt Ltd Kutch and 18.830 MT of Oil

contaminated Foam pigs was disposed off through GPCB authorized CHWIF Saurashtra Enviro Projects Pvt Ltd Kutch.

- Used Oil filters of 1.09 MT was disposed off through GPCB authorized CHWIF Saurashtra Enviro Projects Pvt Ltd Kutch

- Cargo residue containing chemicals of 87.73 MT was disposed off through GPCB authorized CHWIF Saurashtra Enviro Projects Pvt Ltd Kutch

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production: -

- Unit has installed **Sewage Treatment Plants of 75 KLD capacity and Effluent Treatment Plant (ETP) of 90 KLD Capacity** for treatment of the Sewage water and Effluent being generated at site. The treated water is being reused within port premises.

- Unit has installed **Organic Waste Converter (OWC)** to convert the organic wastes into organic manure i.e.: Kitchen/Food Waste and Horticultural Waste being generated at site. The manure is being reused within port premises.

- M/s. AHPL has developed mangrove afforestation on an area 200 hectares i.e.: 20 hectares near Village: Kantiyajal, Sea coast area and 180 hectares near Village: Nada-Devla, District: Bharuch (Gujarat).

- M/s. AHPL has developed a Bio-Shield Pilot Project on an area of 18 hectares at near Village: Tankari Bandar, Taluka: Jambusar, District: Bharuch (Gujarat).

- The Unit has been used recycled water i.e. treated sewage of KRIBHCO for industrial used which caters more than 80% of total water consumption.

- The Unit has installed Photo voltaic Solar Panel of 3.5 MW and reduced its grid Power consumption and 2 MW of Wind mills at Rojmal near Rajkot for renewal energy generation.

- During the financial year: 2021-22, the total cost incurred on environmental protection measures is enclosed as **Annexure-2**.

Environment Statement In (Form-V) For The FY: 2021-22 Of M/s. Adani Hazira Port Ltd.

PART - H

Additional measures /investment/ proposal for environmental protection including abatement of pollution, prevention of pollution.

- Unit is carrying out regular environmental monitoring within the Port and surrounding area through reputed MoEF&CC and NABL accredited laboratory. All the environmental parameters are found well within specified limits and the details of monitored data is regularly submitting to GPCB, CPCB, MoEF&CC and other concerned authorities.
- Unit has installed STP's and ETP for the treatment of the domestic waste water and effluent being generated at site and the treated water is being used for horticulture (plantation & gardening) purpose. Unit has also provided dump pond and conveyance channel for collection of runoff generated from Coal Yard.
- Unit has provided sprinklers at coal yard & conveyer system and carrying out regular water spreading to control the dust exposure. Wind breaking shield is provided around the periphery of Coal Yard.
- Unit has a dedicated horticulture department & developing green belt within port premises.
- Unit uses mist canon to suppress the fugitive coal dust at coal yard.
- Unit has deployed four road sweeping machines to control the fugitive dust emissions.
- Unit has installed wind break shield around coal yard and Rock Phosphate Yard to suppress dust emission.
- Unit has laid 1.7 km of closed conveyor system having dust suppression system for handling of coal from Jetty to coal yard.
- Unit has laid approx. 17 km of underground of pipeline for receiving treated wastewater from KRIBHCO and all the industrial requirement of water is being fulfilled through the recycled water.
- Unit has developed greenbelt area of 78.49 hectare till March, 2022.

Environment Statement In (Form-V) For The FY: 2021-22 Of M/s. Adani Hazira Port Ltd.

PART - I

Any other particulars for improving the quality of environment:

- Trainings on Environment Management and Waste Management were organized for employees, associates and contractual workers.
- Environmental awareness programs have been conducted during the year for employees, contractual employees, school children and local community of nearby villages.
- Integrated housekeeping management is undertaken on top priority to maintain neat and clean working environment in the port premises.
- World Environment Day and other important environment related days are being celebrated to raise awareness among employees, associates and contractor's workmen, The participants of the programs organized on these days were motivated by providing prizes and certificates.
- The Port has initiated "Single Use Plastic Free Port" initiative and Confederation of Indian Industry has been engaged for certifying the protocol and implementation of the same.
- The Port has an ISO 14001:2015 certified system for Environment Management System, ISO 19001:2015 certified system for Quality Management System, ISO 45001: 2018 certified system for Occupational Health and Safety Management System and ISO 50001: 2018 certified system for Energy Management System.
- 200 ha of Mangrove plantation and 18 ha of Bio shield development carried out in Tankari Village of Jambusar taluka, district- Bharuch, Gujarat and these are being maintained and monitored through one NGO and SHG.

Date: 27.06.2022

(Authorized Signatory)

Name: **Anil Kishore Singh**

Designation: **Chief Executive Officer (CEO)**

Address: **At & Post: Hazira, Taluka: Choryashi, District: Surat (Gujarat)**

Environment Statement In (Form-V) For The FY: 2021-22 Of M/s. Adani Hazira Port Ltd.

ANNEXURE-1

DG SETS STACK EMISSION AND NOISE LEVEL MONITORING: -

Note: DG sets are provided as standby power source and used during power failure.

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4G. DG SETS STACK EMISSION AND NOISE LEVEL MONITORING: -

Table-1.25: DG Sets Stack Monitoring Results for the period: October, 2021 to March, 2022

Table-1.25 (a): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	DG SET TOYO DENKI -1		DG SET TOYO DENKI -2		DG SET TOYO DENKI -3	
			25/11/2021	25/02/2022	25/11/2021	25/02/2022	25/11/2021	25/02/2022
1	Particulate Matter	mg/Nm³	29.41	26.33	25.35	23.76	27.55	24.56
2	Sulphur Dioxide	ppm	4.53	5.34	6.83	4.52	7.75	6.46
3	Oxide of Nitrogen	ppm	36.68	34.35	34.78	31.51	38.7	36.4
4	Carbon Monoxide (CO)	mg/m³	17.92	22.90	15.75	20.91	17.87	23.90
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.25 (b): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	SS-1 LT DG -320 KVA		SS3 -DG -200 KVA		LT Phase-1 (625 KVA)	
			25/11/2021	25/02/2022	25/11/2021	25/02/2022	25/11/2021	25/02/2022
1	Particulate Matter	mg/Nm³	25.65	22.45	26.33	28.33	32.41	24.51
2	Sulphur Dioxide	ppm	7.97	6.48	6.80	4.64	8.85	7.12
3	Oxide of Nitrogen	ppm	32.46	35.63	38.47	34.59	39.43	35.41
4	Carbon Monoxide (CO)	mg/m³	16.03	14.99	14.09	12.60	12.60	20.61
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.25 (c): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	LT Phase -2 (750 KVA)		ER-1 (100 KVA)	
			25/11/2021	25/02/2022	25/11/2021	25/02/2022
1	Particulate Matter	mg/Nm³	36.34	32.45	30.23	28.42
2	Sulphur Dioxide	ppm	5.33	5.21	7.51	5.23
3	Oxide of Nitrogen	ppm	34.48	37.6	33.76	37.55
4	Carbon Monoxide (CO)	mg/m³	20.61	22.90	9.16	11.45
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected

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Table-1.25 (d): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	NDG Building (380 KVA)		Custom Building (320 KVA)	
			25/11/2021	25/02/2022	25/11/2021	25/02/2022
1	Particulate Matter	mg/Nm³	20.37	22.66	22.61	19.55
2	Sulphur Dioxide	ppm	5.84	6.44	6.26	7.00
3	Oxide of Nitrogen	ppm	30.18	28.65	34.59	32.42
4	Carbon Monoxide (CO)	mg/m³	11.45	16.03	13.74	13.74
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.26: DG Sets Noise Level Monitoring Results for the period: October, 2021 to March, 2022

Sr. No.	DG Set Average Noise Level In Leq. dB(A)		
	Sampling Location	At 1 M Distance From The Enclosure	
	Sampling Date	25/11/2021	25/02/2022
1.	DG SET TOYO DENKI - 1	66.8	67.4
2.	DG SET TOYO DENKI - 2	65.4	63.2
3.	DG SET TOYO DENKI -3	63.1	66.5
4.	SS-1 LT DG -320 KVA	66.5	69.3
5.	SS3 -DG -200 KVA	64.4	62.5
6.	LT PHASE -1 (625 KVA)	64.2	58.4
7.	LT PHASE -2 (750 KVA)	60.3	60.1
8.	ER-1 (300 KVA)	60.8	66.7
9.	NDG BUILDING (380 KVA)	63.8	58.5
10.	CUSTOM BUILDING (320 KVA)	62.2	61.5

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46. DG SETS STACK EMISSION AND NOISE LEVEL MONITORING: -

Table-1.22: DG Sets Stack Monitoring Results for the period: April, 2021 to September, 2021

Table-1.22 (a): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	DG SET TOYO DENKI -1		DG SET TOYO DENKI -2		DG SET TOYO DENKI -3	
			30/06/2021	30/08/2021	30/05/2021	30/08/2021	30/05/2021	30/08/2021
1	Particulate Matter	mg/Nm³	22.6	24.3	20.3	22.59	28.49	23.4
2	Sulphur Dioxide	ppm	6.68	5.47	5.6	4.56	7.87	6.34
3	Oxide of Nitrogen	ppm	30.2	33.54	34.5	29.4	37.49	35.57
4	Carbon Monoxide (CO)	mg/m³	21.86	17.18	19.63	16.8	14.94	29.42
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.22 (b): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	SS-1 LT DG -320 KVA		SS3 -DG -200 KVA		LT Phase -1 (625 KVA)	
			30/05/2021	30/08/2021	26/05/2021	30/08/2021	25/05/2021	31/08/2021
1	Particulate Matter	mg/Nm³	15.59	22.41	19.27	21.68	26.52	30.53
2	Sulphur Dioxide	ppm	5.07	6.28	6.13	6.06	8.06	7.27
3	Oxide of Nitrogen	ppm	37.21	35.43	31.54	35.61	37.59	34.56
4	Carbon Monoxide (CO)	mg/m³	11.45	13.74	8.02	6.87	13.74	14.89
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.22 (c): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	LT Phase -2 (750 KVA)		EP-1 (100 KVA)	
			25/05/2021	31/08/2021	25/05/2021	30/08/2021
1	Particulate Matter	mg/Nm³	26.52	32.45	24.52	27.53
2	Sulphur Dioxide	ppm	7.05	6.91	5.23	6.3
3	Oxide of Nitrogen	ppm	39.52	36.32	33.41	36.37
4	Carbon Monoxide (CO)	mg/m³	11.45	17.18	9.16	12.6
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected

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Table-1.22 (d): DG Sets Stack Monitoring Results:

Sr. No.	Parameters	Unit	NDG Building (380 KVA)		Custom Building (320 KVA)	
			25/05/2021	31/08/2021	25/05/2021	30/08/2021
1	Particulate Matter	mg/Nm³	21.57	17.52	17.61	19.54
2	Sulphur Dioxide	ppm	7.33	6.95	4.35	5.32
3	Oxide of Nitrogen	ppm	36.27	33.5	33.41	31.57
4	Carbon Monoxide (CO)	mg/m³	10.31	9.16	13.74	11.45
5	Non Methyl Hydro Carbon (NMHC)	mg/m³	Not Detected	Not Detected	Not Detected	Not Detected

Table-1.23: DG Sets Noise Level Monitoring Results for the period: April, 2021 to September, 2021

Sr. No.	DG Set Average Noise Level In Leq. dB(A)		
	Sampling Location	At 1 M Distance From The Enclosure	
	Sampling Date	25 & 20/05/2021	30 & 31/08/2021
1	DG SET TOYO DENKI - 1	65.6	67.5
2	DG SET TOYO DENKI - 2	64.8	66.4
3	DG SET TOYO DENKI -3	64.2	65.8
4	SS-1 LT DG -320 KVA	66.4	64.2
5	SSJ -DG -320 KVA	65.1	67.2
6	LT PHASE -1 (625 KVA)	70.4	68.8
7	LT PHASE -2 (750 KVA)	63.2	66.4
8	ER-1 (100 KVA)	67.8	65.1
9	KDG BUILDING (380 KVA)	65.6	62.3
10	CUSTOM BUILDING (320 KVA)	64.2	62.8

Authorised Signatory

Environment Statement In (Form-V) For The FY: 2021-22 Of M/s. Adani Hazira Port Ltd.

ANNEXURE - II

Environment Budget & Expenditure of FY 2021-22

Sr No	Activities	Budget for FY 2021-22 (In Lacs INR)	Expenditure (In Lacs INR)
1	Environmental Study/Audit/Survey/Consultancy Services	50	25.78
2	Legal and Statutory Charges	15	19.75
3	Environmental Monitoring Services	22	17.07
4	Hazardous Waste Management	33	6.97
5	Horticulture Development – Greenery and Plantation	160	137.58
6	O&M of Sewage Treatment Plant and Effluent Treatment Plant	18	13.91
7	Disposal of Bio medical Waste	1.8	1.92
8	Water Sprinkling for dust suppression	250	202.52
9	Miscellaneous Environmental Initiatives and Salary of Environmental Professionals	20	17.00
10	ISO 14001:2015 (EMS) audit, certification, and internal audit training	2	1.2
Total		**571.80**	**443.70**

Expenditure of last three Years

Year	Budget	Expenditure (In Lacs INR)
2018-19	270.69	1344.71
2019-20	363.80	326.76
2020-21	479.63	418.11

Annexure 12

Details of Liquid/Wastes Collection & Disposed off from Vessels by GPCB Approved Third Party During compliance period from April 2022 to September 2022

	ADANI HAZIR PORT LIMITED	From: April 2022 to September 2022

Details of Liquid/Wastes Collection & Disposed off from Vessels by GPCB Approved Third Party During period April 2022 to September 2022

Detail of Wastes Collection & Disposed Off From Vessels				
SR No.	**Date**	**Vessel Name**	**Party Name**	**Quantity (CBM)**
1	07.05.2022	MT.ARCTOS	HARISH A. PANDYA	2.740 CBM
2	18.05.2022	MT DVINA GULF	HARISH A. PANDYA	4.000 CBM
3	22.05.2022	MV.ANGLO ALEXANDRIA	HARISH A. PANDYA	3.000 CBM