

Bhagwat Swaroop Sharma

From: Bhagwat Swaroop Sharma
Sent: Tuesday, May 28, 2024 6:58 AM
To: ecompliance-guj@gov.in; iro.gandhingr-mefcc@gov.in
Cc: ec-rdw.cpcb@gov.in; ro-gpcb-kute@gujarat.gov.in; ms-gpcb@gujarat.gov.in; mefcc.ia3@gmail.com; monitoring-ec@nic.in; direnv@gujarat.gov.in; Anil Trivedi; Sujalkumar Shah
Subject: Half Yearly EC Compliance Report Submission -MPT 1995 Period of Oct.2023 to March 2024
Attachments: EC Compliance Report_MPT_1995_Oct23 to Mar24.pdf



APSEZL/EnvCell/2024-25/006

Date: 25.05.2024

To
The Inspector General of Forest / Scientist C,
Integrated Regional Office (IRO),
Ministry of Environment, Forest and Climate Change,
Aranya Bhawan, A Wing, Room No. 409,
Near CH 3 Circle, Sector – 10A,
Gandhinagar – 382007.
E-mail: ecompliance-guj@gov.in, iro.gandhingr-mefcc@gov.in

Sub : Half yearly Compliance report of Environment and CRZ Clearance for "Handling facility of General Cargo / LPG /Chemicals and their storage terminal at Navinal Island, Mundra taluka of Kutch district, Gujarat"

Ref : Environment and CRZ clearance granted to M/s Adani Ports & SEZ Limited vide letter dated 25th August 1995 bearing no. J-16011/13/95-IA.III

Dear Sir,

Please refer to the above cited reference for the said subject matter. In connection to the same, it is to state that copy of the compliance report for the Environmental and CRZ Clearance for the period of October 2023 to March 2024 is being submitted through soft copy (e-mail communication).

Kindly consider above submission and acknowledge.

Thank you,
Yours Faithfully,
For, **M/s Adani Ports and Special Economic Zone Limited**

A handwritten signature in blue ink, appearing to read "Bhagwat Swaroop Sharma".

Bhagwat Swaroop Sharma
Head – Environment
Mundra & Tuna Port

Encl: As above

Copy to:

- 1) The Director (IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003.
- 2) The Zonal Officer, Regional Office, CPCB – Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara – 390023.
- 3) The Member Secretary, GPCB – Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi Nagar – 382010.
- 4) The Director, Forests & Environment Department, Block – 14, 8th floor, Sachivalaya, Gandhi Nagar – 382010.
- 5) The Regional Officer, Regional Office GPCB (Kutch-East), Gandhidham – 370201.

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Adani Ports and Special Economic Zone Ltd
Adani House,
PO Box No. 1
Mundra, Kutch 370 421
Gujarat, India
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Environmental Clearance Compliance Report



Multi-Purpose Jetty and Storage
Facilities at Navinal Island,
Mundra, Dist. Kutch, Gujarat

of

Adani Ports and Special Economic Zone
Limited

For the Period of:

October-2023 to March-2024

Status of the Conditions Stipulated in Environment and CRZ Clearance

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**Adani Ports and Special Economic
Zone Limited, Mundra.**

**From : Oct'23
To : Mar'24**

Status of the Conditions Stipulated in Environment and CRZ Clearance

- Chronology of company name change from **M/s. Adani Port Limited** to **M/s. Adani Ports and Special Economic Zone Ltd.** was submitted along with half yearly EC Compliance report for the period Oct'20 to Mar'21.

Status of the Conditions Stipulated in Environment and CRZ Clearance

Half yearly Compliance report of Environment and CRZ Clearance for "Handling facility of General Cargo / LPG /Chemicals and their storage terminal at Navinal Island, Mundra taluka of Kutch district, Gujarat" issued vide letter no. J-16011/13/95-IA.III dated 25th Aug., 1995.

Sr. No.	Conditions	Compliance Status as on 31-03-2024
2(i)	All construction designs / drawings relating to various project activities should have the approval of the concerned State Government departments / Agencies.	<p>Complied</p> <p>All construction and operation activities are being carried out in line with the CRZ recommendation and permissions granted.</p>
2(ii)	To prevent discharge of bilge wastes, sewage and other liquid wastes from the oil tankers / ships into marine environment, adequate system for collection, treatment and disposal of liquid wastes including shoreline installation and special hose connections for ships to allow for discharge of sewage must be provided.	<p>Complied</p> <p>Ships berthing at Mundra Port comply with MARPOL regulations.</p> <p>No discharge such as bilge wastes, sewage or any other liquid wastewater is allowed into marine environment inside port limits.</p> <p>APSEZ has adequate Waste Reception facility as per MARPOL and DG Shipping regulations. The port has reception facility for all MARPOL waste streams (Annex-I, Annex-II, Annex-IV & Annex-V) except Annex-VI that is generated from vessels.</p> <p>APSEZL has not received any sewage/liquid waste from ships / vessels till date.</p> <p>As a general practice APSEZ provide facility for receiving slop / waste oil from vessels through hose connection with oil tankers. These tankers divert slop / waste oil to Oil water separator system where water and oil particles are separated. Separated oil is being sold to authorized recycler /re-processor. However, no slope / waste oil was received during the compliance period.</p>
2(iii)	The quality of treated effluents, solid wastes, emissions and noise levels etc. must confirm to the standards laid down by the competent authorities	<p>Complied.</p> <p>ETP is provided to treat the wastewater/wash water. Also the sewage generated from port is being treated in designated ETP. Treated water is used for horticultural purposes. Quality of treated water confirm to the</p>

Status of the Conditions Stipulated in Environment and CRZ Clearance

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	<p>including the central and State Pollution Control Boards under the Environment (Protection) act, 1986 whichever are more stringent.</p>	<p>standard laid down by Gujarat Pollution Control Board.</p> <table border="1" data-bbox="690 451 1461 646"> <thead> <tr> <th>Location</th> <th>Capacity</th> <th>Quantity of Treated Water (Avg. from Oct'23 to Mar'24)</th> <th>Type of ETP / STP</th> </tr> </thead> <tbody> <tr> <td>LT</td> <td>265 KLD</td> <td>93.62 KLD</td> <td>Activated Sludge</td> </tr> </tbody> </table> <p>Entire treated water from ETP / STP is being utilized on land for horticulture purpose within port premises after achieving prescribed permissible limit.</p> <p>Summary of ETP treated water analysis results during compliance period as mentioned below.</p> <p>Frequency of Analysis: Once in a month</p> <table border="1" data-bbox="690 955 1474 1249"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Min</th> <th>Max</th> <th>Average</th> <th>Perm. Limit[§]</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>--</td> <td>6.55</td> <td>7.42</td> <td>7.11</td> <td>6.5 – 8.5</td> </tr> <tr> <td>TSS</td> <td>mg/L</td> <td>26</td> <td>48</td> <td>35</td> <td>100</td> </tr> <tr> <td>TDS</td> <td>mg/L</td> <td>970</td> <td>1184</td> <td>1096</td> <td>2100</td> </tr> <tr> <td>COD</td> <td>mg/L</td> <td>82</td> <td>89</td> <td>87.37</td> <td>100</td> </tr> <tr> <td>BOD</td> <td>mg/L</td> <td>24</td> <td>26</td> <td>24.92</td> <td>30</td> </tr> <tr> <td>Ammonical Nitrogen as NH₃-N</td> <td>mg/L</td> <td>23.8</td> <td>28.4</td> <td>25.8</td> <td>50</td> </tr> </tbody> </table> <p style="text-align: right;">[§] as per CC&A granted by GPCB</p> <p>The quality of marine water, treated effluents, air emissions and noise levels are being regularly analyzed by NABL accredited and MoEF&CC recognized agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Please refer Annexure – 1.</p> <p>Monitoring and analysis of ETP treated waste is also carried out regularly through in-house laboratory for the parameters such as pH, TDS, TSS, COD, Chlorides, and residual chlorine.</p> <p>Please refer Annexure – 1 for detailed analysis reports for the period Oct'23 to Mar'24. Approx. INR 13.37 Lakh is spent for all environmental monitoring activities during the FY 2023-24 for overall APSEZ, Mundra.</p> <p>It is also noted that GPCB is doing regular site inspection</p>				Location	Capacity	Quantity of Treated Water (Avg. from Oct'23 to Mar'24)	Type of ETP / STP	LT	265 KLD	93.62 KLD	Activated Sludge	Parameter	Unit	Min	Max	Average	Perm. Limit [§]	pH	--	6.55	7.42	7.11	6.5 – 8.5	TSS	mg/L	26	48	35	100	TDS	mg/L	970	1184	1096	2100	COD	mg/L	82	89	87.37	100	BOD	mg/L	24	26	24.92	30	Ammonical Nitrogen as NH ₃ -N	mg/L	23.8	28.4	25.8	50
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Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
		<p>along with wastewater sampling and analysis. The last GPCB sample analysis report was submitted as part of compliance report submission for the duration of Apr'21 to Sep'21 which shows all the parameters are well within the permissible limit.</p> <p>Waste Management – APSEZ has adopted 5R concept for environmentally sound management of different types of solid & liquid wastes. Please refer below details about management of each type of waste.</p> <p>Non-Hazardous Solid Waste: A well-established system for segregation of dry & wet waste is in place. All wet waste (Organic waste) is being segregated & utilized for compost manufacturing and/or biogas generation for cooking purpose. The compost is further used by in house horticulture team for greenbelt development. Whereas dry recyclable waste is being sorted in various categories. Presently manual sorting is being done for sorting of different types of solid waste. Segregated recyclable materials such as Paper, Plastic, Cardboard, PET Bottles, and Glasses, etc. are then sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plant (M/s. Ambuja Cement Ltd., Kodinar) for Co-processing as RDF (Refused Derived Fuel).</p> <p>APSEZ, Mundra is certified for Zero Waste to Landfill management system (ZWTL MS 2020) by TUV Rheinland India Pvt. Ltd. (valid up to 31.05.2024). Details of the same were submitted as part of compliance report submission for the duration of Apr'21 to Sep'21.</p> <p>Hazardous & Other Waste:</p> <ul style="list-style-type: none"> • Bio medical waste generated from OHCs and Adani Hospital is being disposed at Common Bio Medical Waste Treatment Facility namely M/s. Distromed Kutch Services Pvt. Ltd., Bhuj. • E – Waste is being sold to GPCB registered recyclers namely M/s. Galaxy Recycling, Rajkot. • Used Batteries are being sold to GPCB registered recyclers namely Sabnam Enterprise, Kutch and S K Metal Industries, Rajkot.

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		<ul style="list-style-type: none"> • Solid Hazardous Waste is being disposed through co-processing / incineration/landfilling through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau, M/s. Safe Enviro Private Limited, Bharuch and/or cement industries of Ambuja Cement Ltd., Kodinar. • Used/Waste Oil is being sold to GPCB authorized recyclers / re-processors namely M/s. Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch & Aroma Petrochem - Bhavnagar. It is also being reused within organization for lubrication purpose. • Discarded drums / barrels are being sold to authorized decontamination facility i.e. M/s. Jawrawala Petroleum, Ahmedabad. It is also being reused within organization for filling hazardous waste. • Solid hazardous waste i.e. Tank bottom sludge is being sold to authorized recycler namely M/s. Mundra Oil Pvt. Ltd., Mundra for recycling. However during the compliance period. • Expired paint materials are being disposed by incineration through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau. However during the compliance period. • Downgrade chemicals generated from cleaning of storage tanks / pipelines are being sold to authorized solvent recovery facilities namely M/s. Acquire Chemicals, Ankleshwar. • Slop Oil received from vessels is treated to separate water and oil particles in Oil Water Separator system. Separated oil from the same is being sold to authorized recycler / reprocessor namely M/s. Western India Petro Chem Ind - Bhavnagar, Aviation Corporation - Kutch & Aroma Petrochem - Bhavnagar and water is sent to ETP for further treatment. However, during the compliance period i.e. Oct'23 to Mar'24. • However during the compliance period, there was no generation and disposal of Sludge & Filters contaminated with oil, Tank Bottom sludge, Asbestos Waste, Glass wool Waste (Thermal Insulation Material), Downgrade Chemicals, Waste Oil and Expired Paint Material. • Horticulture waste is collected from various green belt

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		<p>areas and it is using for making of manure and manure is being utilizing in horticulture purpose within plant premises.</p> <p>Details of permissions / agreements of hazardous waste authorized vendors were submitted along with pervious half yearly EC Compliance Reports. And there is no further change. The LPG Terminal has renewed agreement with Ambuja cement for oily cotton waste disposal. The agreement is valid upto 18.04.2029 and attached as Annexure - ...</p> <p>The following table summarizes the waste management practice (from Oct'23 to Mar'24) for different types of wastes at APSEZ:</p> <table border="1" data-bbox="691 898 1479 1848"> <thead> <tr> <th>Type of Waste</th> <th>Name of Waste</th> <th>Quantity (MT)</th> <th>Disposal Method</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Hazardous Waste</td> <td>Used / Spent / Waste Oil</td> <td>121.93</td> <td>Sell to registered recycler</td> </tr> <tr> <td>Pig Waste</td> <td>8.69</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>Oily Cotton Waste</td> <td>68.67</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>ETP/CETP Sludge</td> <td>19.75</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>Discarded Containers / Barrels</td> <td>3.42</td> <td>Sell to registered recycler</td> </tr> <tr> <td rowspan="5">Non-Hazardous Waste</td> <td>Wet Waste (Food waste + Organic waste)</td> <td>500.32</td> <td>Converted to Manure for Horticulture use / Biogas for cooking purpose</td> </tr> <tr> <td>STP Sludge</td> <td>3</td> <td>Converted to Manure for Horticulture use</td> </tr> <tr> <td>Recyclables Dry Waste / Scrap</td> <td>1211.94</td> <td>After recovery sent for recycling / Reuse within premises</td> </tr> <tr> <td>RDF (Non Recyclable Waste)</td> <td>197.74</td> <td>Co-processing at cement industries</td> </tr> <tr> <td>Horticulture Waste</td> <td>318.44</td> <td>Used for making of manure and utilize for horticulture purpose</td> </tr> <tr> <td rowspan="2">Other Waste</td> <td>E-Waste</td> <td>11.6</td> <td>Sell to registered recycler</td> </tr> <tr> <td>Bio Medical Waste</td> <td>3.72</td> <td>To approved CBWTF Site and registered recyclers</td> </tr> </tbody> </table>	Type of Waste	Name of Waste	Quantity (MT)	Disposal Method	Hazardous Waste	Used / Spent / Waste Oil	121.93	Sell to registered recycler	Pig Waste	8.69	Co-processing at cement industries	Oily Cotton Waste	68.67	Co-processing at cement industries	ETP/CETP Sludge	19.75	Co-processing at cement industries	Discarded Containers / Barrels	3.42	Sell to registered recycler	Non-Hazardous Waste	Wet Waste (Food waste + Organic waste)	500.32	Converted to Manure for Horticulture use / Biogas for cooking purpose	STP Sludge	3	Converted to Manure for Horticulture use	Recyclables Dry Waste / Scrap	1211.94	After recovery sent for recycling / Reuse within premises	RDF (Non Recyclable Waste)	197.74	Co-processing at cement industries	Horticulture Waste	318.44	Used for making of manure and utilize for horticulture purpose	Other Waste	E-Waste	11.6	Sell to registered recycler	Bio Medical Waste	3.72	To approved CBWTF Site and registered recyclers
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Sr. No.	Conditions	Compliance Status as on 31-03-2024			
		Battery Waste	11.94	Sell to registered recycler	
2(iv)	Adequate provision for infrastructure facilities such as water supply, roads, sanitation etc. should be ensured so as to avoid environmental degradation in the surrounding areas. These facilities should be brought into existence during the construction phase and will remain in existence thereafter as part of the infrastructure build up in the area for local developmental purposes.	<p>Complied.</p> <p>Construction activity is already completed. Adequate infrastructure facility was provided to labours during construction phase and those are in existence.</p> <p>The facility for drinking water, toilet and rest shelter were provided for the dignity of operation labours. Photographs of the same were submitted along with the compliance report submission for the period Oct'16 to Mar'17.</p>			

Ambient Air Quality (twice in a week) and **Noise** (once in a month) monitoring are being carried out by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Quality of Ambient Air and Noise level confirm to the standard laid down by SPCB / CPCB. Summary of the same for duration from Oct'23 to Mar'24 is mentioned below.

Total Ambient Air & Noise Sampling Locations: 5 Nos.

Parameter	Unit	Min	Max	Average	Perm. Limit [§]
AAQM					
PM ₁₀	µg/m ³	63.95	87.13	78.78	100
PM _{2.5}	µg/m ³	23.58	38.10	31.82	60
SO ₂	µg/m ³	18.96	33.47	26.17	80
NO ₂	µg/m ³	22.58	38.54	30.55	80
Noise	Unit	Leq Min	Leq Max	Leq Avg.	Leq Perm. Limit*
Day Time	dB(A)	58.7	69.8	64.91	75
Night Time	dB(A)	53.8	64.8	61.05	70

[§] as per NAAQ standards, 2009

* as per CC&A granted by SPCB

Values recorded confirms to the stipulated standards.

Please refer **Annexure – 1** for detailed analysis reports for the period Oct'23 to Mar'24. Approx. INR 13.37 Lakh is spent for all environmental monitoring activities during the FY 2023-24 for overall APSEZ, Mundra.

Status of the Conditions Stipulated in Environment and CRZ Clearance

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2(v)	Adequate noise control measures should be ensured in various project activities and due to increase in the traffic which is likely to take place during construction and operational phases.	<p>Complied. Construction phase is completed.</p> <p>For operation phase, following noise control measures are taken:</p> <ul style="list-style-type: none"> • All Emergency DG sets were installed with acoustic enclosure confirming EPA norms. • Proper maintenance of equipments / plant machineries is being done on regular basis. • Green Belt has been developed at road sides and operational areas. • Traffic control measures such as signage, speed regulation, traffic guides etc. are in place to reduce the unnecessary honking by cargo vehicles.

Status of the Conditions Stipulated in Environment and CRZ Clearance

<p>2(vi)</p>	<p>The water quality parameters such as dissolved oxygen, ammonical nitrogen and other nutrients etc. should be measured at regular intervals to ensure adherence to the prescribed standards of water qualities. Suitable ground water monitoring should also be undertaken around the sludge lagoons and regular reports to be submitted to the Ministry for evaluation.</p>	<p>Complied.</p> <p>ETP having 265 KLD capacity is provided for treatment of wastewater. Treated water is used for horticulture purpose within premises after confirming permissible limit. The watery sludge is transferred to sludge drying bed, where the excess wastewater is recirculated to ETP. Monitoring and analysis of ETP treated waste is also carried out regularly through in-house laboratory for the parameters such as pH, TDS, TSS, COD, Chlorides, and residual chlorine.</p> <p>Third party analysis of the treated water is being carried out once in a month by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration of Oct'23 to Mar'24 is mentioned in compliance condition no. 2(iii) above.</p> <p>Marine Monitoring: Marine monitoring (Surface, Bottom and Sediment) is being carried out once in a month by NABL accredited and MoEF&CC approved agency namely M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi. Summary of the same for duration from Oct'23 to Mar'24 is mentioned below. Monitoring Reports are attached as Annexure - 1 for the same.</p> <p>Total Sampling Locations: 09 Nos.</p> <table border="1" data-bbox="690 1312 1471 1585"> <thead> <tr> <th rowspan="2">Parameter</th> <th rowspan="2">Unit</th> <th colspan="3">Surface</th> <th colspan="3">Bottom</th> </tr> <tr> <th>Min</th> <th>Max</th> <th>Avg.</th> <th>Min</th> <th>Max</th> <th>Avg.</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>--</td> <td>7.99</td> <td>8.24</td> <td>8.17</td> <td>7.86</td> <td>8.12</td> <td>8.01</td> </tr> <tr> <td>BOD (3 Days @ 27 °C)</td> <td>mg/L</td> <td>98</td> <td>152</td> <td>126.91</td> <td>78</td> <td>128</td> <td>106.11</td> </tr> <tr> <td>TSS</td> <td>mg/L</td> <td>2.2</td> <td>3.5</td> <td>3.02</td> <td>BDL(M DL:1.0)</td> <td>BDL(M DL:1.0)</td> <td>BDL(M DL:1.0)</td> </tr> <tr> <td>DO</td> <td>mg/L</td> <td>5.88</td> <td>6.35</td> <td>6.09</td> <td>5.68</td> <td>6.25</td> <td>5.91</td> </tr> <tr> <td>Salinity</td> <td>ppt</td> <td>35.24</td> <td>38.88</td> <td>36.39</td> <td>36.15</td> <td>37.38</td> <td>37.06</td> </tr> <tr> <td>TDS</td> <td>mg/L</td> <td>35864</td> <td>36610</td> <td>36225</td> <td>34500</td> <td>37540</td> <td>37077</td> </tr> </tbody> </table> <p>*BDL – Below Detection Limit *MDL – Minimum Detection Limit</p> <p>Ground Water Monitoring: There are no sludge lagoons however, to monitor the ground water quality, bore wells are provided at various location in the port and SEZ areas. Third party analysis of the ground water is being carried out twice a year by NABL accredited and MoEF&CC approved agency namely</p>	Parameter	Unit	Surface			Bottom			Min	Max	Avg.	Min	Max	Avg.	pH	--	7.99	8.24	8.17	7.86	8.12	8.01	BOD (3 Days @ 27 °C)	mg/L	98	152	126.91	78	128	106.11	TSS	mg/L	2.2	3.5	3.02	BDL(M DL:1.0)	BDL(M DL:1.0)	BDL(M DL:1.0)	DO	mg/L	5.88	6.35	6.09	5.68	6.25	5.91	Salinity	ppt	35.24	38.88	36.39	36.15	37.38	37.06	TDS	mg/L	35864	36610	36225	34500	37540	37077
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Status of the Conditions Stipulated in Environment and CRZ Clearance

M/s. Unistar Environment and Research Labs Private Limited., Vapi. Summary of the same for duration of Oct'23 to Mar'24 is mentioned below.

Sampling Locations: 5 Nos.

Parameters	Unit	Min	Max	Average
pH @ 25 ° C	--	7.45	8.32	7.97
Salinity	ppt	0.99	3.44	2.05
Oil & Grease	mg/L	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)
Hydrocarbon	mg/L	ND*	ND*	ND*
Lead as Pb	mg/L	BDL(MDL:0.01)	0.11	0.03
Arsenic as As	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
Nickel as Ni	mg/L	BDL(MDL:0.02)	BDL(MDL:0.02)	BDL(MDL:0.02)
Total Chromium as Cr	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
Cadmium as Cd	mg/L	BDL(MDL:0.003)	0.02	0.005
Mercury as Hg	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
Zinc as Zn	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
Iron as Fe	mg/L	BDL(MDL:0.1)	1.78	0.65
Insecticides/Pesticides	µg/L	Absent	Absent	Absent
Depth of Water Level from Ground Level	meter	1.90	2.20	2.05

ND*= Not Detectable
*BDL – Below Detection Limit

Please refer **Annexure – 1** for detailed analysis reports for the period Oct'23 to Mar'24. Approx. INR 13.37 Lakh is spent for all environmental monitoring activities during the FY 2023-24 for overall APSEZ.

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
2(vii)	Adequate culverts should be provided for smaller creeks so that breeding grounds for crabs, mud snappers and other marine organisms are not cut off by road construction activities.	<p>Complied.</p> <p>Adequate culverts are provided on prominent creek system named as (1) Kotdi (2) Baradimata (3) Navinal (4) Bocha (5) Mundra (Oldest port (Juna Bandar) leading to Bhukhi river).</p> <p>All above creeks are in existence allowing free flow of water and there is no filling or reclamation of any creek area. APSEZL has so far constructed 19 culverts having total length of approx. 1100 m with total cost of INR 20 Crores. Apart from that three RCC Bridges have been constructed over Kotdi creek with total length of 230 m and cost of INR 10 Crores. Photographs of the same were submitted as part of compliance report submission for the duration of Apr'17 to Sep'17.</p>
2(viii)	A hundred meter wide mangrove belt should be created all along the west of Navinal Creek till its junction up to new road. Green belt of 50 M width should also be provided all along the periphery of the plant site and along the roads, storage tanks etc. at 1500 trees per hectare. All details regarding the Mangrove belt and other afforestation work must be worked out in consultation with the State Forest Department, and details sent to the Ministry.	<p>Complied.</p> <p>24 hectare of Mangrove afforestation was carried out with a cost of INR 25.0 Lac at west of Navinal creek. All Mangrove plantations were done in consultation with Dr. Maity, Mangrove consultant of India.</p> <p>Green belt was developed 72.67 ha. Total 149959 trees were planted with the density of 2060 trees per hectare within the port area. So, far APSEZ has developed 457.99 ha. area as greenbelt with plantation of more than 9.06 Lacs saplings within the APSEZ area.</p> <p>To enhance the marine biodiversity, till date APSEZ has carried out mangrove afforestation in 4140 ha. area across the coast of Gujarat. Total expenditure for the same till date is INR 1592.8 lakh.</p> <p>Details on Mangroves afforestation & Green belt development carried out by APSEZ till date is annexed as Annexure - 2.</p> <p>Other than this Adani Foundation – CSR Arm of Adani Group at Mundra-Kutch has initiated multi-species plantation of mangroves in Luni village in association with GUIDE, Gujarat. During 2018-2019 (Phase-I) multi-species mangrove plantation was carried out in 10 ha,</p>

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
		<p>during Phase-II (2019-2020) it was 02 ha and during Phase III (2020-2021) it is 01 ha. During FY 2021-22, 03 ha area coastal stretches have been planted with species. During current FY 2022-23, 04 Hecter plantation has been planted with various species. Total 20 Ha. multi-species mangrove plantation has been carried out till March-23 association with M/s. GUIDE, Gujarat.</p> <p>These plantations are diligently maintained and continually monitored. Notably, these forests have evolved into a thriving habitat for various marine and migratory bird species, enriching the local ecosystem.</p> <p>Please refer attached Annexure - 3 for CSR activity report carried out by Adani Foundation.</p>
2(ix)	<p>Arrangements should be made for ensuring fresh water availability for various project related activities. Special water harvesting programs should be undertaken in the project impact area. Details of these activities should be reported to the Ministry.</p>	<p>Complied.</p> <p>During the project phase, GWIL was the source of water to ensure freshwater availability.</p> <p>Present source of water for various project activities is desalination plant of APSEZ and/or through Gujarat Water Infrastructure Limited (GWIL). Average water consumption for entire APSEZ area is 5.14 MLD during compliance period i.e. Oct'23 to Mar'24.</p> <p>Groundwater recharge cannot be done at the project site since the entire project is in the intertidal / sub tidal areas. Rainwater within project area is managed through storm water drainage.</p> <p>We have installed Rainwater recharge bore well (4 Nos.) within our township to recharge ground water. Details of the same were submitted along with half yearly EC compliance report for the period Apr'19 to Sep'19. During FY 2023-24 till Sep'23 approx. 4.58 ML of rainwater has been recharged to increase the ground water table.</p> <p>We have also connected roof top rainwater duct of operational building (Tug berth building within MPT) with u/g water tank for utilization of collected rainwater for gardening / horticulture purpose. Details of the same</p>

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
		<p>were submitted along with EC Compliance report for the period Oct'18 to Mar'19.</p> <p>However, Adani Foundation – CSR arm of Adani Group has carried out rainwater harvesting activities in the nearby villages for benefit of the locals.</p> <p>Water conservation Projects i.e. Roof Top Rain Water Harvesting, Desilting of Check dams, Bore Well Recharge and Pond deepening were taken up in past years, review and monitoring of all water harvesting structures had been taken up.</p> <p>To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, this year Adani Foundation launch project "Sanrakshan" in coordination with GUIDE and Sahjeevan. Since 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased as per increased in coastal belt of Mundra as per Government Figures.</p> <p>Our water conservation work is as below. Water Conservation Projects – Below tabulated Water Conservation Projects completed during Compliance period:</p> <p><u>Swajal Project:</u></p> <ul style="list-style-type: none"> ➤ Aim: The Foundation's Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of Kutch district. ➤ Water Security Plan: Due to arid climatic characters of the Kutch region, it is essential to plan for water security drinking and livelihood purposes. Considering weather condition, rainfall characters, geohydrological condition and water demand, water security plan has been prepared forl the Seven villages.

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024																							
		Block Name	Water conservation structure	Total no. of Structure	Total Capacity Created (CUM)																				
		Mundra	Check Dam	23	6,07,332.80																				
			Pond Deepening	66	1,89,121.08																				
			RRWHS	275	2750																				
			Bore & Well	209	-																				
			Percolation Well	24	-																				
		<p>Below tabulated Water Conservation Projects completed during last Compliance period:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Project</th> <th>Unit</th> <th>Outcome</th> <th>Impact</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Check dam Restrengthening-Nana Kapaya</td> <td>1</td> <td>Water Storage Capacity increased by 48000 Cum</td> <td>60 + farmer's 120+Acre Area of Agri land can be Irrigated</td> </tr> <tr> <td>2</td> <td>Borewell Recharge</td> <td>21</td> <td>Reduce Salinity ingress, and preventing water run</td> <td>150+ farmer's 260+ Acre Area of Agri land for Irrigated</td> </tr> <tr> <td>3</td> <td>Pipe Culvert at Checkdamat Bhujpur</td> <td>1</td> <td>prevent water runoff into seaside.</td> <td>35 farmers' 120+Acre Area of Agri land can be Irrigated</td> </tr> </tbody> </table> <p>Earlier Completed Activities/Projects:</p> <ul style="list-style-type: none"> Large number of water harvesting structure (18 Nos. of check dams in coordination with salinity department) and Augmentation of 3 nos. check dams. Ground recharge activities (pond deepening work for 61 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers. New Pond Deepening Under Ajadi ka Amrut Mahotsav done in Goyarsama village Approx Deepening Capacity is 12000 Cum. Roof Top Rainwater Harvesting 145 Nos. (40 Nos. current FY 2022-23) which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family. Recharge Borewell 208 Nos (19 Nos. current FY 2022-23) which is best ever option to direct recharge the soil. 				Sr. No.	Project	Unit	Outcome	Impact	1	Check dam Restrengthening-Nana Kapaya	1	Water Storage Capacity increased by 48000 Cum	60 + farmer's 120+Acre Area of Agri land can be Irrigated	2	Borewell Recharge	21	Reduce Salinity ingress, and preventing water run	150+ farmer's 260+ Acre Area of Agri land for Irrigated	3	Pipe Culvert at Checkdamat Bhujpur	1	prevent water runoff into seaside.	35 farmers' 120+Acre Area of Agri land can be Irrigated
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Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
		<ul style="list-style-type: none"> • Drip Irrigation approx. 1505 Farmers benefitted in coordination with Gujrat Green Revolution Company till date. • Bund construction on way of Nagmati River could save more than 575 MCFT water quantity which recharged in ground due to which borewell depth decreased by 50-100 Ft in Zarpara, Bhujpur and Navinal Vadi Vistar. • Pond Pipeline work at Prasla Vistar Zarpara which increase recharge capacity more than 25% in 100 hector area. • Check dam gate valve construction at Bhujpur which controlled more than 350 MCFT water to go into sea and get recharged current year. <p>With the objective of to preserve the rainwater to reduce the impact of salinity and recharge the ground water (the main source of water) to facilitate the Agricultural activities as well as for drinking water.</p> <p>Please refer Annexure – 3 for full details of CSR activities carried out by Adani Foundation in the Kutch region. Budget for CSR Activity for the FY 2023-24 is to the tune of INR 953.50 lakh. Out of which, Approx. INR 940.52 lakh is spent in FY 2023-24.</p>
2(x)	<p>While filling the storage tanks, compatibility of the chemicals should be ensured for chemical safety. Since 5000 MT capacity is proposed to be created for cryogenic conditions, necessary HAZOP study should be initiated and submitted to the Ministry within three months. Calculations carried out on the basis of EFFECT MODEL for this storage should be rechecked for various accident scenarios. Keeping in view the safety aspects, Horton spheres of 1250 MT</p>	<p>Complied.</p> <p>Risk assessment study was carried out by M/s. Comet Consultancy Services in January 1995 as a part of EIA for storage of various chemicals in tanks for chemical safety and the same was submitted to MoEF&CC while processing EC application.</p> <p>Risk assessment study was carried out by iFluids Engineering for handling and storage of LPG in three parts as mentioned below.</p> <ol style="list-style-type: none"> 1. QRA for LPG Jetty Area 2. QRA for LPG Pipeline 3. QRA for LPG Tank farm <p>A copy of the same was submitted as part of compliance report for the duration of Apr'17 to Sep'17.</p>

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024																				
	capacity each should be preferred.	<p>Recommendations of the risk assessment have been implemented as part of the construction activity and details of the same were submitted along with half yearly compliance report for the period Oct'18 to Mar'19.</p> <p>Implementation report of risk assessment recommendations during operational activity was submitted along with half yearly compliance report for the period Oct'19 to Mar'20.</p>																				
2(xi)	The measures suggested by the Gujarat State Pollution Control Board in February, 1995 while according "No Objection Certificate" should be strictly followed and authorization certificate required for converting NOC into "consent to operate" should be submitted within three months.	<p>Complied.</p> <p>Consent to operate (CC&A) has been renewed from GPCB vide consent no. AWH-117045 valid till 20th November, 2026. The copy of CtO renewal was submitted along with last half yearly compliance report for the period Oct'21 to Mar'22.</p> <p>Consent to Establish (CtE) and Consent to Operate (CtO) are obtained from GPCB and renewed/amended from time to time as per the progress of the project activity. The present in-force CtE / CtO are mentioned below.</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Permission</th> <th>Project</th> <th>Ref. No. / Order No.</th> <th>Valid till</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CtO - Renewal</td> <td>Mundra Port Terminal</td> <td>AWH-117045</td> <td>20.11.2026</td> </tr> <tr> <td>2</td> <td>CtE - Amendment</td> <td>WFDP</td> <td>17739 / 15618</td> <td>18.05.2027</td> </tr> <tr> <td>3</td> <td>CC&A - Correction</td> <td>Mundra Port Terminal</td> <td>PC/CCA-KUTCH-39(8)/GPCB ID 17739/748148</td> <td>20.11.2026</td> </tr> </tbody> </table> <p>The permission mentioned above (Sr. No. 2) was submitted along with earlier compliance report submission. The copy of CtO renewal order was submitted along with last half yearly compliance report for the period Oct'21 to Mar'22. A copy of CCA correction letter was submitted along with last half yearly compliance report for the period Apr'23 to Sep'23.</p>	Sr. No.	Permission	Project	Ref. No. / Order No.	Valid till	1	CtO - Renewal	Mundra Port Terminal	AWH-117045	20.11.2026	2	CtE - Amendment	WFDP	17739 / 15618	18.05.2027	3	CC&A - Correction	Mundra Port Terminal	PC/CCA-KUTCH-39(8)/GPCB ID 17739/748148	20.11.2026
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3	CC&A - Correction	Mundra Port Terminal	PC/CCA-KUTCH-39(8)/GPCB ID 17739/748148	20.11.2026																		
2(xii)	For ensuring the acceptance of the project by the local people, a Resolution of the Official Panchayat of the Region should be obtained offering their concurrence in writing by the project	<p>Complied.</p> <p>Resolution from the Panchayat has been obtained and submitted to the Ministry of Environment, Forest & Climate Change on 31st July, 2012.</p>																				

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
	proponents and submitted to the Ministry by 31st October, 1995.	
2(xiii)	A permanent staff structure should be created with latest R&D facilities and suitable equipments for environmental and forestry activities through creation of Environmental cell. Adequate funds should be earmarked for this cell.	<p>Complied.</p> <p>APSEZL has a well-structured Environment Management Cell, staffed with qualified manpower for implementation of the Environment Management Plan at site. Site environment team direct report to site Chief Executive Officer (CEO) and the CEO directly reports to the top management. Updated Environment Management Cell Organogram is attached as Annexure-4.</p> <p>Budget for environmental management measures (including horticulture) for the FY 2023-24 is to the tune of INR 1536.48 lakh. Out of which, Approx. INR 1366.78 lakh are spent during the year FY 2023-24. Detailed breakup of the expenditures for the past 3 years is attached as Annexure - 5.</p>
2(xiv)	Landsat imagery should be obtained on a continuous basis covering various seasons to study the change in the land use pattern due to the project and project related activities.	<p>Complied.</p> <p>Project is in operation phase since many years and there is no change in the land use pattern.</p>
2(xv)	With a view to providing adequate job opportunities to local people, facilities for technical training and development of skills should be made available in consultation with the state Harbour Department, and to this end it must be ensured that there is allocation of adequate funds. The local people should be involved in the afforestation program proposed for the scheme to ensure public participation and success of vegetation programmes.	<p>Complied.</p> <p>Adani Foundation – CSR Arm of Adani Group is doing following activities as a part of Skill Development in surrounding communities in Kutch area.</p> <ul style="list-style-type: none"> • Adani Skill Development Center (ASDC), Mundra & Bhuj is providing skill development training to the locals for Soft Skill, Technical Training and Career Guidance & knowledge-based training. • Adani Skill Development Centre (ASDC) is playing a pivotal role in implementing sustainable development in the state. ASDC is envisioned to be playing a major role in elevating the socio-economic status of the people belonging to the lowest strata of the society by empowering them with various skill development training for employability and livelihood.

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024
		<ul style="list-style-type: none"> • Over the last few years, ASDC has assessed various aspects of the technical, leadership and soft skills gaps that organizations, in general, face and accordingly focuses on imparting required training in those areas in partnership with various colleges and institutes. • ASDC imparted various soft skilled and technical training to make Atma Nirbhar India. • This year (FY 2023-24), ASDC has trained total 50,00 individuals across Kutch, resulting in 65% livelihood generation. ASDC's vision is to make everyone skilled and employable, meeting industry demands through trained manpower. • Preference is given to local people for employment based on their qualification and experience. • All Mangrove plantations are done in consultation with GUIDE and Local Forest dept. • 24 hectare of mangrove afforestation at Mundra was done through active participation of local fishermen at the cost of INR 25.0 Lac. • Mangrove plantation and Nursery development work has been created a two-facet impact by providing Livelihood to Fisherfolk during two months Fishing during Off season and developing 162 hector dense mangrove afforestation 4445 Men days' work provide to Fisherfolk community of Luni, Sekhdiya and Bhadreshwar Villages in coordination with Horticulture Department during the FY 22-23 <p>Details on skill development training imparted during compliance period i.e. Oct'23 to Mar'24 by Adani Foundation are available in CSR report enclosed as Annexure - 3.</p>
2(xvi)	<p>Prior clearance must be taken under the Hazardous Chemicals (manufacture, import and storage) Rules 1989, as amended up to date, from the competent authority. Such clearance will have to be taken prior to the commissioning of the project.</p>	<p>Complied.</p> <p>Permissions for storage of Hazardous Chemicals were obtained from MSIHC against the application made on 01.05.1999 through letter reference no. Kutch-HAZ/CHEM-23(2)/9713 while chemical storage permission against application made on 18.09.1999 was provided through letter reference no. Kutch-HAZ/CHEM-23(2)/9711.</p> <p>Approval from the PESO is obtained for import of</p>

Status of the Conditions Stipulated in Environment and CRZ Clearance

Sr. No.	Conditions	Compliance Status as on 31-03-2024																					
		<p>hazardous chemicals as per License No. P/HQ/GJ/15/2050 (P12369) dated 18/07/2016 which is valid up to 31/12/2024 for Class A & Class C petroleum. A copy of the same was submitted along with the compliance report submission for the period of Oct'16 to Mar'17 and there is no further change. Please refer point no. 2 (xi) regarding GPCB permissions.</p> <p>License under Factories Act is taken dated 07.10.1998 and last renewed vide license no. 0017 and is valid up to 31.12.2027. The copy of renewed License under Factories Act is attached as Annexure-6.</p>																					
2(xvii)	<p>A detailed progress report should be submitted to the Ministry on each of the conditions stipulated above in respect of the follow-up action taken every six months. The first of these two reports should be sent in by 31.3.1996.</p>	<p>Complied.</p> <p>Compliance report of EC conditions is uploaded regularly. A soft copy of last compliance report including results of monitoring data for the period of Apr'23 to Sep'23 was submitted through e-mail to Regional Office of Integrated Regional Office (IRO) @ Gandhinagar, Zonal Office of CPCB @ Baroda, GPCB @ Gandhinagar & Gandhidham and Dept. of Forests & Env., Gandhinagar on dated 29.11.2023. Copy of the same is also available on our web site https://www.adaniports.com/ports-downloads. Please refer below for the details regarding past six compliance submissions.</p> <table border="1" data-bbox="704 1283 1458 1514"> <thead> <tr> <th>Sr. No.</th> <th>Compliance period</th> <th>Date of submission</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Oct'20 to Mar'21</td> <td>25.05.2021</td> </tr> <tr> <td>2</td> <td>Apr'21 to Sep'21</td> <td>30.11.2021</td> </tr> <tr> <td>3</td> <td>Oct'21 to Mar'22</td> <td>30.05.2022</td> </tr> <tr> <td>4</td> <td>Apr'22 to Sep'22</td> <td>30.11.2022</td> </tr> <tr> <td>5</td> <td>Oct'22 to Mar'23</td> <td>30.05.2023</td> </tr> <tr> <td>6</td> <td>Apr'23 to Sep'23</td> <td>29.11.2023</td> </tr> </tbody> </table>	Sr. No.	Compliance period	Date of submission	1	Oct'20 to Mar'21	25.05.2021	2	Apr'21 to Sep'21	30.11.2021	3	Oct'21 to Mar'22	30.05.2022	4	Apr'22 to Sep'22	30.11.2022	5	Oct'22 to Mar'23	30.05.2023	6	Apr'23 to Sep'23	29.11.2023
Sr. No.	Compliance period	Date of submission																					
1	Oct'20 to Mar'21	25.05.2021																					
2	Apr'21 to Sep'21	30.11.2021																					
3	Oct'21 to Mar'22	30.05.2022																					
4	Apr'22 to Sep'22	30.11.2022																					
5	Oct'22 to Mar'23	30.05.2023																					
6	Apr'23 to Sep'23	29.11.2023																					
2(xviii)	<p>Financial requirements for implementation of the above indicated environmental mitigative measures should be worked out and included in the total cost of the project. Provision for enhancing this allocation in future should also be made.</p>	<p>Complied.</p> <p>Separate budget for the Environment protection measures is earmarked every year. All the expenses are recorded in advanced accounting system of the organization. Details regarding environmental expenditures are as per compliance condition no. 2(xiii) above.</p>																					

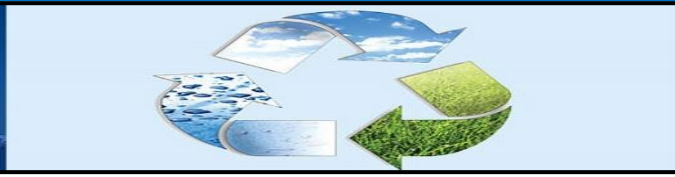


**Adani Ports and Special Economic
Zone Limited, Mundra.**

**From : Oct'23
To : Mar'24**

Status of the Conditions Stipulated in Environment and CRZ Clearance

Annexure – 1



“Half Yearly Environmental Monitoring Reports “

For,
adani
Ports and
Logistics

M/S.ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.

PLOT NO. 169/P, AT - NAVINAL ISLAND, TAL. - MUNDRA, DIST. - KUTCH - 370421.

Monitoring Period: October - 2023 to March - 2024

Submitted By



UniStar Environment & Research Labs Pvt. Ltd.

White House, Near GIDC Office, Char Rasta, Vapi, Gujarat, India – 396195



MARINE WATER MONITORING SUMMARY REPORT

RESULTS OF MARINE WATER [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.11	7.94	8.21	8.06	8.18	8.12	8.17	8.05	8.12	7.98	8.14	8.02	IS 3025 (Part11)1983
2.	Temperature	°C	29.8	29.7	29.7	29.6	29.6	29.5	29.5	29.4	29.6	29.5	29.7	26.6	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	132	94	144	116	132	108	124	112	132	112	142	124	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.6	BDL	2.5	BDL	2.3	BDL	2.4	BDL	2.9	BDL	3.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.08	5.78	6.08	5.88	6.22	5.92	6.17	5.97	6.12	5.92	6.25	6.05	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.84	36.15	36.12	36.38	36.34	36.88	36.32	37.14	36.12	37.18	36.19	37.24	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO ₃	µmol/L	3.23	3.06	3.39	3.23	3.06	2.9	2.42	2.26	2.24	2	3.23	2.9	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.348	0.326	0.304	0.261	0.348	0.326	0.261	0.217	0.543	0.5	0.522	0.5	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.74	3.59	4.22	4.11	4.16	4.11	4.06	3.95	3.95	3.8	4.11	4.06	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	1.47	1.26	1.37	1.16	1.16	1.05	1.26	1.05	2.32	2.11	1.58	1.47	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	7.318	6.976	7.914	7.601	7.568	7.336	6.741	6.427	6.733	6.3	7.862	7.46	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	35864	36890	36110	36910	36180	37120	35980	37060	36120	36980	36328	37118	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	32	12	24.29	8.1	28.25	12.11	20.38	4.08	24.1	8	28.03	12.01	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m ³	3.05	2.65	2.36	2.15	2.41	2.36	3.01	2.44	2.66	2.44	3.05	3.25	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	2.1	0.96	1.4	0.86	1.61	1.25	1.79	2	1.79	1.66	2	1.56	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	125	142	111	98	124	100	106	96	120	84	109	90	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Coscinodiscus</i>	<i>Odontella</i>	<i>Nitzschia</i>	<i>Biddulphia</i>	<i>Nitzschia</i>	<i>Biddulphia</i>	<i>Thalassiothrix</i>	<i>Dinophysis</i>	<i>Thalassiothrix</i>	<i>Dinophysis</i>	<i>Thalassiothrix</i>	<i>Dinophysis</i>	APHA (23rd Ed. 2017)10200 F
			<i>Diploneis</i>	<i>Rhizosolenia</i>	<i>Diploneis</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Rhizosolenia</i>	<i>Surirella</i>	<i>Pinnularia</i>	<i>Surirella</i>	<i>Pinnularia</i>	<i>Biddulphia</i>	<i>Pinnularia</i>	
			<i>Rhizosolenia</i>	<i>Coscinodiscus</i>	<i>Rhizosolenia</i>	<i>Coscinodiscus</i>	<i>Rhizosolenia</i>	<i>Coscinodiscus</i>	<i>Navicula</i>	<i>Thalassiothrix</i>	<i>Navicula</i>	<i>Thalassiothrix</i>	<i>Navicula</i>	<i>Thalassiothrix</i>	
			<i>Dinophysis</i>	<i>Grammatophora</i>	<i>Dinophysis</i>	<i>Grammatophora</i>	<i>Dinophysis</i>	<i>Grammatophora</i>	<i>Thalassiosira</i>	<i>Grammatophora</i>	<i>Nitzschia</i>	<i>Grammatophora</i>	<i>Nitzschia</i>	<i>Grammatophora</i>	
			<i>Thalassionema</i>	<i>Thalassiosira</i>	<i>Biddulphia</i>	<i>Navicula</i>	<i>Biddulphia</i>	<i>Navicula</i>	<i>Skeletonema</i>	<i>Ceratium</i>	<i>Skeletonema</i>	<i>Ceratium</i>	<i>Skeletonema</i>	<i>Ceratium</i>	
B			Zooplankton												
1	Abundance(Population)	noX103/ 100 m ³	52		50		46		50		41		55		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Crustacean Larvae</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		
			<i>Egg(Fish and Shrimps)</i>		<i>Pinnularia</i>		<i>Pinnularia</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		
			<i>Copepods</i>		<i>Copepods</i>		<i>Copepods</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		
			<i>Crustacean</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Crustacean</i>		
			<i>Bivalve Larvae</i>		<i>Thalassionema</i>		<i>Thalassionema</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		
3	Total Biomass	ml/100 m ³	15.63		14.25		15.44		15.26		14.78		13.69		

Continue...

RESULTS OF MARINE WATER [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C	Microbiological														
1	Total Bacterial Count	CFU/ml	244		214		230		242		96		102		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	56		44		41		39		10		14		APHA 23 rd Ed.2017,9222-B
3	Ecoli	/100ml	32		30		22		19		8		10		IS :15185:2016
4	Enterococcus	/100ml	19		22		14		12		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



Mr. Nilesh Patel
Sr. Chemist




Mr. Nitin Tandel
Technical Manager

RESULTS OF SEDIMENT ANALYSIS [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.53	0.46	0.42	0.48	0.44	0.41	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	494.2	510.3	514.8	532.2	542.2	549.3	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.02	3.92	3.96	3.98	4.02	4.06	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	124.9	110.3	115.4	121.2	124.4	130.8	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	627.3	644.8	622.5	618.2	612.4	618.3	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	3.97	4.06	4.09	4.11	4.15	4.08	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	38.62	42.28	42.44	41.08	42.02	41.88	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	37.19	40.25	40.86	41.12	42.11	42.32	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	132.2	124.3	119.2	116.34	112.5	118.2	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.44	2.49	2.44	2.38	2.32	2.36	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

Continue...

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024)

QCI-NABET Accredited EIA & GW Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

ISO 9001 : 2015 Certified Company

ISO 45001 : 2018 Certified Company

RESULTS OF SEDIMENT ANALYSIS [M1 LEFT SIDE OF BOCHA CREEK - N 22°45'183" E 069°43'241"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D	Benthic Organisms								
1	Macrobenthos	--	<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	APHA (23rd Ed. 2017)10500 C
			<i>Polychates</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	
			<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Amphipods</i>	<i>Gastropods</i>	<i>Gastropods</i>	
			<i>Amphipods</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Polychates</i>	
2	MeioBenthos	--	<i>Herpectacoids</i>	<i>Gastropods</i>	Herpectacoids	Turbellarians	<i>Turbellarians</i>	<i>Turbellarians</i>	
			<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	
3	Population	no/m ²	318	303	347	356	289	368	



Mr. Nilesh Patel
Sr. Chemist




Mr. Nitin Tandel
Technical Manager

RESULTS OF MARINE WATER [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.17	7.94	8.14	7.89	8.16	7.94	8.21	8.08	8.18	8.06	8.15	8.02	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.6	29.5	29.5	29.4	29.4	29.3	29.5	29.4	29.6	29.5	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	136	114	122	108	128	114	134	112	142	118	136	120	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.9	BDL	2.8	BDL	2.5	BDL	2.2	BDL	2.6	BDL	2.8	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.88	5.68	5.98	5.78	6.12	5.82	6.17	5.87	6.12	5.82	6.25	5.95	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.24	36.41	35.62	36.55	35.98	36.84	36.22	37.15	36.25	37.18	36.32	37.24	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO ₃	µmol/L	2.9	2.58	3.06	2.74	3.39	3.23	2.74	2.58	2.9	2.58	3.55	3.23	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.413	0.391	0.37	0.348	0.348	0.304	0.326	0.304	0.478	0.435	0.522	0.478	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.59	3.48	3.95	3.8	3.9	3.85	3.85	3.74	3.9	3.74	4.16	4.11	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	1.68	1.58	1.47	1.37	1.37	1.26	1.47	1.37	2.32	2.21	1.9	1.68	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	6.903	6.451	7.38	6.888	7.638	7.384	6.916	6.624	7.278	6.755	8.232	7.818	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36124	36960	36206	36988	36220	37110	36124	37104	36150	37110	36222	37180	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	36	16	32.38	4.05	32.29	16.14	16.3	4.08	20.1	4.1	24.02	12.01	APHA 23 rd Ed.,2017, 5220-B

RESULTS OF MARINE WATER [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
Phytoplankton															
1.	Chlorophyll	mg/m ³	3.15	3.56	3.02	2.88	3.12	3.04	3	2.56	3.21	3.11	2.98	2.69	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	2.31	2.47	2.63	1.96	2.41	2.33	2.22	2.09	2.01	2.44	2.09	2.06	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	108	127	142	102	125	127	120	132	100	125	95	147	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Thalassiothrix</i>	<i>Pinnularia</i>	<i>Thalassiothrix</i>	<i>Pinnularia</i>	<i>Dinophysis</i>	<i>Pinnularia</i>	<i>Navicula</i>	<i>Thalassiothrix</i>	<i>Surirella</i>	<i>Thalassiothrix</i>	<i>Surirella</i>	<i>Thalassiothrix</i>	APHA (23rd Ed. 2017)10200 F
			<i>Surirella</i>	<i>Biddulphia</i>	<i>Surirella</i>	<i>Biddulphia</i>	<i>Surirella</i>	<i>Biddulphia</i>	<i>Skeletonema</i>	<i>Surirella</i>	<i>Pinnularia</i>	<i>Surirella</i>	<i>Pinnularia</i>	<i>Surirella</i>	
			<i>Navicula</i>	<i>Navicula</i>	<i>Navicula</i>	<i>Navicula</i>	<i>Nitzschia</i>	<i>Navicula</i>	<i>Rhizosolenia</i>	<i>Navicula</i>	<i>Rhizosolenia</i>	<i>Navicula</i>	<i>Melosira</i>	<i>Navicula</i>	
			<i>Thalassiosira</i>	<i>Rhizosolenia</i>	<i>Cyclotella</i>	<i>Rhizosolenia</i>	<i>Cyclotella</i>	<i>Rhizosolenia</i>	<i>Dinophysis</i>	<i>Thalassiosira</i>	<i>Dinophysis</i>	<i>Thalassiosira</i>	<i>Dinophysis</i>	<i>Thalassiosira</i>	
			<i>Skeletonema</i>	<i>Skeletonema</i>	<i>Skeletonema</i>	<i>Thalassiosira</i>	<i>Skeletonema</i>	<i>Thalassiosira</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	

Zooplankton															
1	Abundance (Population)	noX10 ³ / 100 m ³	44		57		38		41		52		47		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		
			<i>Copepods</i>		<i>Oikoplura</i>		<i>Nitzschia</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		
			<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods</i>		<i>Copepods</i>		<i>Copepods</i>		
			<i>Crustacean</i>		<i>Crustacean</i>		<i>Pinnularia</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Copepods nauplii</i>		
3	Total Biomass	ml/100 m ³	17.36		15.36		13.25		14.13		14.39		15.78		
			<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		

Continue...

RESULTS OF MARINE WATER [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	200		188		200		222		144		120		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	42		30		36		40		36		30		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	20		24		21		22		18		12		IS :15185:2016
4	Enterococcus	/100ml	18		10		18		15		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF SEDIMENT ANALYSIS [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.46	0.43	0.48	0.46	0.42	0.44	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	582.2	588.4	546.2	538.4	550.2	561.4	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.07	4.16	4.09	4.02	4.11	4.03	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	162.4	156.8	148.2	142.2	134.5	142.2	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	684.4	702.2	686.5	644.4	652.2	644.5	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	4.02	4.11	4.08	4.03	4.09	4.02	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	40.39	40.88	41.05	42.12	42.84	42.52	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	40.28	40.62	41.12	42.35	42.66	42.15	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	144.8	148.9	152.24	148.6	150.24	149.62	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.18	2.24	2.18	2.24	2.33	2.28	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

Continue...

RESULTS OF SEDIMENT ANALYSIS [M2 MOUTH OF BOCHA & NAVINAL CREEK - N 22°44'239" E 069°43'757"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	Decapods Larvae	Polychates	Polychates	Foraminiferan	Foraminiferan	Foraminiferan	APHA (23rd Ed. 2017)10500 C
			Isopods	Isopods	Isopods	Gastropods	Gastropods	Gastropods	
			Amphipods	Amphipods	Gastropods	Isopods	Isopods	Isopods	
			Sipunculids	Sipunculids	Sipunculids	Sipunculids	Amphipods	Amphipods	
2	MeioBenthos	--	Foraminiferan	Foraminiferan	Decapods Larvae	Herpectacoids	Sipunculids	Sipunculids	
			Herpectacoids	Herpectacoids	Herpectacoids	Polychates	Polychates	Polychates	
3	Population	no/m ²	256	350	321	308	254	307	



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RESULTS OF MARINE WATER [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.12	8.02	8.18	8.04	8.24	8.11	8.16	7.98	8.12	7.89	8.16	7.99	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.6	29.5	29.5	29.4	29.3	29.2	29.4	29.3	29.5	29.4	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	111	84	118	92	126	98	130	104	136	110	144	120	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.2	BDL	3.1	BDL	2.9	BDL	3.1	BDL	3.3	BDL	3.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.18	6.08	5.98	5.88	5.92	5.72	5.97	5.77	5.92	5.72	6.05	5.85	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.78	36.35	36.24	36.68	36.68	37.16	36.74	37.22	36.77	37.28	36.84	37.32	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO ₃	µmol/L	3.06	2.74	3.55	3.39	3.23	2.9	3.06	2.9	2.74	2.42	3.06	2.9	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.435	0.391	0.456	0.413	0.391	0.348	0.326	0.304	0.348	0.326	0.391	0.37	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.69	3.48	4.01	3.9	3.74	3.69	3.69	3.59	3.74	3.59	4.06	4.01	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	1.79	1.68	1.58	1.47	1.37	1.26	1.58	1.37	1.47	1.26	1.58	1.37	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	7.185	6.611	8.016	7.703	7.361	6.938	7.076	6.794	6.828	6.336	7.511	7.28	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	35880	36744	35970	36790	36130	36860	36080	36780	36210	37050	36320	37180	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	32	8	28.34	16.19	28.25	16.14	12.03	4.08	16.1	8	20.02	12.01	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD		
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
A																	
Phytoplankton																	
1.	Chlorophyll	mg/m ³	3.11	2.83	3.11	3.04	2.98	3.26	2.45	3.08	2.74	2.56	2.47	2.47	APHA (23rd Ed. 2017)10200 H		
2.	Phaeophytin	mg/m ³	1.65	1.52	1.65	2.01	2.01	2.18	2.06	2.41	1.87	1.45	1.66	1.47	APHA (23rd Ed. 2017)10200 H		
3.	Cell Count	No. x 10 ³ /L	147	109	147	110	148	135	132	125	154	88	140	98	APHA (23rd Ed. 2017)10200 F		
4	Name of Group Number and name of group species of each group	--	<i>Pinnularia</i>	<i>Coscinodiscus</i>	<i>Pinnularia</i>	<i>Coscinodiscus</i>	<i>Pinnularia</i>	<i>Coscinodiscus</i>	<i>Melosira</i>	<i>Cyclotella</i>	<i>Melosira</i>	<i>Cyclotella</i>	<i>Melosira</i>	<i>Cyclotella</i>	APHA (23rd Ed. 2017)10200 F		
			<i>Biddulphia</i>	<i>Pinnularia</i>	<i>Biddulphia</i>	<i>Pinnularia</i>	<i>Biddulphia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>		<i>Pinnularia</i>	
			<i>Navicula</i>	<i>Rhizosolenia</i>	<i>Navicula</i>	<i>Rhizosolenia</i>	<i>Navicula</i>	<i>Rhizosolenia</i>	<i>Skeletonema</i>	<i>Skeletonema</i>	<i>Rhizosolenia</i>	<i>Skeletonema</i>	<i>Rhizosolenia</i>	<i>Skeletonema</i>		<i>Rhizosolenia</i>	<i>Skeletonema</i>
			<i>Thalassiosira</i>	<i>Dinophysis</i>	<i>Thalassiosira</i>	<i>Dinophysis</i>	<i>Thalassiosira</i>	<i>Dinophysis</i>	<i>Thalassiosira</i>	<i>Thalassiosira</i>	<i>Thalassiosira</i>	<i>Thalassiosira</i>	<i>Thalassiosira</i>	<i>Thalassiosira</i>		<i>Thalassiosira</i>	<i>Thalassiosira</i>
			<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Thalassionema</i>	<i>Thalassionema</i>	<i>Thalassionema</i>	<i>Thalassionema</i>		<i>Thalassionema</i>	<i>Thalassionema</i>
B																	
Zooplankton																	
1	Abundance (Population)	noX10 ³ / 100 m ³	63		55		50		38		30		65		APHA (23rd Ed. 2017)10200 G		
2	Name of Group Number and name of group species of each group		<i>Copepods</i>		<i>Copepods</i>		<i>Rhizosolenia</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Crustacean</i>				
			<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Crustacean Larvae</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>				
			<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>				
			<i>Crustacean</i>		<i>Pinnularia</i>		<i>Oikoplura</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Egg(Fish and Shrimps)</i>				
<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Thalassionema</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>					
3	Total Biomass	ml/100 m ³	15.69		16.35		14.23		17.12		15.47		15.47				

Continue...

RESULTS OF MARINE WATER [M3 EAST OF BOCHASLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	178		164		188		198		132		128		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	33		28		30		42		24		26		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	23		20		24		20		10		20		IS :15185:2016
4	Enterococcus	/100ml	17		12		20		19		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF SEDIMENT ANALYSIS [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.43	0.47	0.46	0.41	0.44	0.45	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	564.2	570.3	580.4	584.6	602.2	612.4	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.08	4.14	4.09	4.13	4.15	4.09	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	124.6	121.2	125.4	132.2	142.2	138.6	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	624.2	633.4	621.2	614.4	618.2	622.5	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	4.12	4.15	4.08	4.01	4.06	4.12	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	44.28	48.2	46.4	44.8	42.9	42.5	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	38.2	40.3	38.5	38.95	40.12	41.08	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	117.4	120.2	118.4	120.2	124.5	132.1	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.44	2.51	2.46	2.38	2.44	2.38	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

Continue...

RESULTS OF SEDIMENT ANALYSIS [M3 EAST OF BOCHAISLANOT DETECTED - N 22°46'530" E 069°41'690"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23 SEDIMENT	Nov-23 SEDIMENT	Dec-23 SEDIMENT	Jan-24 SEDIMENT	Feb-24 SEDIMENT	Mar-24 SEDIMENT	TEST METHOD
D	Benthic Organisms								
1	Macrobenthos	--	Polychates	<i>Polychates</i>	<i>Amphipods</i>	<i>Gastropods</i>	<i>Gastropods</i>	<i>Decapods Larvae</i>	APHA (23rd Ed. 2017)10500 C
			<i>Gastropods</i>	<i>Gastropods</i>	<i>Gastropods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	
			<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Amphipods</i>	<i>Amphipods</i>	<i>Amphipods</i>	
			<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	
2	MeioBenthos	--	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Foraminiferan</i>	
			<i>Polychates</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	
3	Population	no/m ²	284	303	247	268	287	296	



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RESULTS OF MARINE WATER [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.19	8.06	8.24	8.09	8.17	8.12	8.22	8.09	8.19	8.04	8.24	8.05	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.7	29.6	29.5	29.4	29.4	29.3	29.5	29.4	29.6	29.5	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	146	118	134	112	128	110	142	118	136	122	152	128	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.4	BDL	3.2	BDL	3.1	BDL	3	BDL	3.4	BDL	3.2	BDL	IS 3025(Part 4)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.18	5.98	5.88	5.68	6.22	6.12	6.27	6.18	6.22	6.12	6.35	6.25	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.27	36.83	36.54	37.02	36.74	37.19	36.66	37.34	36.84	37.32	38.88	37.34	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd.2
8.	Nitrate as NO ₃	µmol/L	2.74	2.42	2.9	2.74	2.74	2.58	3.06	2.9	3.23	3.06	3.06	2.9	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.478	0.435	0.5	0.478	0.478	0.435	0.391	0.37	0.522	0.478	0.478	0.456	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.9	3.74	3.85	3.69	3.8	3.74	4.16	4.11	3.85	3.64	4.01	3.9	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	2.32	2.21	1.79	1.68	1.47	1.37	1.37	1.16	2.53	2.42	2.32	2.11	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	7.118	6.595	7.25	6.908	7.018	6.755	7.611	7.38	7.602	7.178	7.548	7.256	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36220	37120	36290	37140	36330	37210	36228	37120	36340	37150	36460	37240	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	32	20	12.14	4.05	32.29	20.18	20.38	4.08	24.1	8	28.03	12.01	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M4 JUNA BANOT DETECTEDAR N 22°47'57" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
Phytoplankton															
1.	Chlorophyll	mg/m ³	3.42	3.55	3.22	2.86	3.08	2.56	2.88	3.04	2.9	3.14	2.36	3.14	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	1.36	1.35	1.58	1.87	2.33	1.88	1.98	1.56	2.03	1.65	2.69	2	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	109	188	110	142	125	139	99	126	108	145	154	88	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Coscinodiscus</i>	<i>Surirella</i>	<i>Surirella</i>	<i>Surirella</i>	<i>Coscinodiscus</i>	<i>Surirella</i>	<i>Thallassiosira</i>	<i>Coscinodiscus</i>	<i>Thallassiosira</i>	<i>Coscinodiscus</i>	<i>Thallassiosira</i>	<i>Coscinodiscus</i>	APHA (23rd Ed. 2017)10200 F
			<i>Diploneis</i>	<i>Biddulphia</i>	<i>Diploneis</i>	<i>Biddulphia</i>	<i>Diploneis</i>	<i>Biddulphia</i>	<i>Melosira</i>	<i>Diploneis</i>	<i>Melosira</i>	<i>Diploneis</i>	<i>Melosira</i>	<i>Diploneis</i>	
			<i>Rhizosolenia</i>	<i>Navicula</i>	<i>Thalassiothrix</i>	<i>Coscinodiscus</i>	<i>Skeletonema</i>	<i>Coscinodiscus</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	
			<i>Dinophysis</i>	<i>Thallassiosira</i>	<i>Navicula</i>	<i>Thallassiosira</i>	<i>Navicula</i>	<i>Thallassiosira</i>	<i>Rhizosolenia</i>	<i>Dinophysis</i>	<i>Rhizosolenia</i>	<i>Dinophysis</i>	<i>Rhizosolenia</i>	<i>Dinophysis</i>	
			<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Thalassionema</i>	<i>Skeletonema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	

Zooplankton															
1	Abundance (Population)	noX10 ³ / 100 m ³	48		63		49		50		36		40		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		
			<i>Copepods nauplii</i>		<i>Rhizosolenia</i>		<i>Rhizosolenia</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Egg(Fish and Shrimps)</i>		
			<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Egg(Fish and Shrimps)</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		
			<i>Crustacean Bivalve Larvae</i>		<i>Crustacean Bivalve Larvae</i>		<i>Crustacean Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Copepods nauplii</i>		
3	Total Biomass	ml/100 m ³	17.58		16.55		16.25		15.26		14.25		14.23		

Continue...

RESULTS OF MARINE WATER [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	258		248		280		258		90		88		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	44		46		62		56		30		42		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	24		32		35		29		14		18		IS :15185:2016
4	Enterococcus	/100ml	14		21		23		15		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF SEDIMENT ANALYSIS [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.52	0.49	0.44	0.48	0.52	0.49	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	648.1	640.2	610.5	612.2	625.4	611.1	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.01	4.08	4.11	4.08	4.12	4.09	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	142.7	146.4	138.5	132.5	135.2	141.3	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	604.5	610.2	594.5	580.5	594.2	602.4	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	4.06	4.12	4.15	4.1	4.12	4.05	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	52.37	54.36	55.08	49.38	50.12	49.54	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	42.24	44.28	44.62	42.33	44.25	44.63	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	122.3	126.4	124.2	122.4	136.4	130.1	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.64	2.71	2.64	2.58	2.45	2.36	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

Continue...

RESULTS OF SEDIMENT ANALYSIS [M4 JUNA BANOT DETECTEDAR N 22°47'577" E 069°43'620"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23 SEDIMENT	Nov-23 SEDIMENT	Dec-23 SEDIMENT	Jan-24 SEDIMENT	Feb-24 SEDIMENT	Mar-24 SEDIMENT	TEST METHOD
Benthic Organisms									
1	Macrobenthos	--	<i>Foraminiferan</i>	<i>Amphipods</i>	<i>Amphipods</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	APHA (23rd Ed. 2017)10500 C
			<i>Gastropods</i>	<i>Gastropods</i>	<i>Gastropods</i>	<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	
			<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Polychates</i>	
			<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Turbellarians</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Foraminiferan</i>	
2	MeioBenthos	--	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Turbellarians</i>	<i>Gastropods</i>	<i>Gastropods</i>	
			<i>Polychates</i>	<i>Turbellarians</i>	<i>Decapods Larvae</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	
3	Population	no/m ²	322	341	288	304	308	300	



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RESULTS OF MARINE WATER [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.15	8.01	8.12	8.05	8.18	8.08	8.18	8.01	8.24	8.06	8.15	8.01	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.6	29.5	29.5	29.4	29.3	29.2	29.4	29.3	29.5	29.4	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	104	82	124	98	142	122	134	108	138	112	126	108	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.8	BDL	3.1	BDL	3.5	BDL	3.4	BDL	3.2	BDL	2.9	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.08	5.88	6.18	5.78	6.22	6.02	6.27	6.07	6.22	6.02	6.35	6.15	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.18	36.71	36.46	37.12	36.65	37.33	36.84	37.28	36.74	37.25	36.79	37.31	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd.2
8.	Nitrate as NO ₃	µmol/L	2.58	2.42	3.23	3.06	3.06	2.74	2.9	2.74	3.39	3.23	3.71	3.55	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.348	0.326	0.37	0.348	0.413	0.37	0.391	0.37	0.348	0.326	0.391	0.37	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.48	3.32	3.9	3.8	4.01	3.95	4.32	4.22	3.74	3.59	4.06	3.85	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	1.9	1.68	1.79	1.58	1.68	1.58	1.79	1.68	1.47	1.26	1.68	1.47	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	6.408	6.066	7.5	7.208	7.483	7.06	7.611	7.33	7.478	7.146	8.161	7.77	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36233	37080	36274	37112	36320	37140	36120	37060	36140	37100	36186	37260	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	40	28	20.24	8.1	24.22	20.18	20.38	8.15	24.1	12.1	28.03	16.02	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD		
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
A			Phytoplankton														
1.	Chlorophyll	mg/m ³	3.47	2.96	3.45	2.68	2.36	2.76	3.05	3.14	3.14	3.1	3.14	3.09	APHA (23rd Ed. 2017)10200 H		
2.	Phaeophytin	mg/m ³	1.63	1.75	2.14	2.07	1.23	1.66	1.68	2.03	2.11	2.66	2.45	1.22	APHA (23rd Ed. 2017)10200 H		
3.	Cell Count	No. x 10 ³ /L	100	109	152	132	110	157	105	106	1422	141	110	109	APHA (23rd Ed. 2017)10200 F		
4	Name of Group Number and name of group species of each group	--	<i>Diploneis</i>	<i>Navicula</i>	<i>Diploneis</i>	<i>Navicula</i>	<i>Navicula</i>	<i>Navicula</i>	<i>Navicula</i>	<i>Navicula</i>	<i>Pinnularia</i>	<i>Navicula</i>	<i>Pinnularia</i>	<i>Navicula</i>	<i>Pinnularia</i>	APHA (23rd Ed. 2017)10200 F	
			<i>Rhizosolenia</i>	<i>Skeletonema</i>	<i>Rhizosolenia</i>	<i>Skeletonema</i>	<i>Biddulphia</i>	<i>Skeletonema</i>	<i>Biddulphia</i>	<i>Biddulphia</i>	<i>Biddulphia</i>	<i>Biddulphia</i>	<i>Biddulphia</i>	<i>Biddulphia</i>	<i>Rhizosolenia</i>		
			<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Navicula</i>	<i>Nitzschia</i>	<i>Navicula</i>	<i>Nitzschia</i>	<i>Navicula</i>	<i>Odontella</i>		<i>Dinophysis</i>
			<i>Cyclotella</i>	<i>Dinophysis</i>	<i>Cyclotella</i>	<i>Biddulphia</i>	<i>Cyclotella</i>	<i>Biddulphia</i>	<i>Cyclotella</i>	<i>Thalassiosira</i>	<i>Cyclotella</i>	<i>Thalassiosira</i>	<i>Cyclotella</i>	<i>Thalassiosira</i>	<i>Cyclotella</i>		<i>Coscinodiscus</i>
			<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Skeletonema</i>	<i>Pleurosigma</i>	<i>Skeletonema</i>	<i>Pleurosigma</i>		<i>Skeletonema</i>

B			Zooplankton												
1	Abundance (Population)	noX10 ³ / 100 m ³	52	44	36	44	48	41							APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Copepods nauplii</i>		<i>Nitzschia</i>		<i>Nitzschia</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		
			<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		
			<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Copepods</i>		<i>Copepods</i>		<i>Copepods nauplii</i>		
			<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Crustacean</i>		
			<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		
3	Total Biomass	ml/100 m ³	14.6	13.52	14.23	14.52	15.36	14.68							

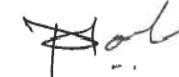
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RESULTS OF MARINE WATER [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	286		256		242		244		140		140		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	50		38		33		42		28		28		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	28		25		26		31		15		16		IS :15185:2016
4	Enterococcus	/100ml	14		14		21		25		4		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF SEDIMENT ANALYSIS [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.57	0.53	0.48	0.45	0.48	0.52	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	562.4	570.5	765.2	738.6	744.1	721.4	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.04	4.13	4.11	4.04	4.08	4.11	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	138.2	136.2	130.5	134.6	142.2	136.5	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	627.8	633.2	624.4	621.5	626.4	618.2	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	4.09	4.12	4.08	3.98	4.12	3.96	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	46.97	48.23	46.85	46.12	45.98	45.36	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	42.38	44.28	45.21	45.58	45.96	45.82	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	118.2	123.4	119.6	119	124.1	118.2	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.41	2.46	2.35	2.27	2.24	2.11	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

Continue...

RESULTS OF SEDIMENT ANALYSIS [M5 TOWARDS WESTERN SIDE OF EAST PORT – N 22°46'041" E 069°47'296"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	<i>Amphipods</i>	<i>Amphipods</i>	<i>Amphipods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	APHA (23rd Ed. 2017)10500 C
			<i>Polychates</i>	<i>Sipunculids</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Gastropods</i>	
			<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	
			<i>Gastropods</i>	<i>Gastropods</i>	<i>Gastropods</i>	<i>Amphipods</i>	<i>Amphipods</i>	<i>Amphipods</i>	
2	MeioBenthos	--	Decapods Larvae	Decapods Larvae	Foraminiferan	Polychates	Herpectacoids	<i>Herpectacoids</i>	
			<i>Herpectacoids</i>	<i>Gastropods</i>	<i>Herpectacoids</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	<i>Polychates</i>	
3	Population	no/m ²	336	247	256	264	298	302	



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Technical Manager

RESULTS OF MARINE WATER [M7 EAST PORT N 22°47'120" E 069°47'110"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.17	7.99	8.21	7.96	8.24	8.12	8.19	8.02	8.14	7.88	8.09	7.91	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.6	29.5	29.5	29.4	29.3	29.2	29.4	29.3	29.5	29.4	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	112	88	128	104	110	94	124	110	130	114	124	98	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.3	BDL	3.5	BDL	3.4	BDL	3.2	BDL	3.1	BDL	3.3	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.98	5.78	6.08	5.78	6.12	5.92	6.07	5.97	6.02	5.92	6.15	6.05	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.29	36.64	36.41	36.98	36.52	37.17	36.44	37.25	36.35	37.18	36.41	37.22	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39)1991, Amd. 2
8.	Nitrate as NO ₃	μmol/L	2.9	2.74	3.06	2.58	3.55	3.23	3.39	3.06	3.23	2.9	3.39	3.06	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	μmol/L	0.522	0.478	0.435	0.413	0.456	0.435	0.435	0.413	0.435	0.391	0.478	0.435	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	μmol/L	3.85	3.64	4.11	3.95	4.06	3.95	3.95	3.85	3.69	3.48	3.95	3.85	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	μmol/L	2.53	2.42	2.11	2	1.9	1.79	1.58	1.47	1.79	1.68	2.11	1.9	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	μmol/L	7.272	6.858	7.605	6.943	8.066	7.615	7.775	7.323	7.355	6.771	7.818	7.345	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	μg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36122	37148	36180	37180	36240	37210	36124	37180	36220	37090	36340	37230	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	28	8	36.43	16.19	36.32	24.22	16.3	4.08	20.1	8	24.02	12.01	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M7 EAST PORT N 22°47'120" E 069°47'110"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
Phytoplankton															
1.	Chlorophyll	mg/m ³	2.98	3.35	3.08	3.35	3.25	3.65	3.12	2.88	2.96	3	3.09	2.49	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	1.36	2.47	2	1.78	2.44	2.44	2.14	2.04	2.14	1.25	2.19	1.78	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	106	160	108	158	156	137	128	100	120	96	87	121	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Nitzschia</i>	<i>Thalassiothrix</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Diploneis</i>	<i>Coscinodiscus</i>	<i>Diploneis</i>	<i>Coscinodiscus</i>	<i>Diploneis</i>	<i>Coscinodiscus</i>	APHA (23rd Ed. 2017)10200 F
			<i>Pinnularia</i>	<i>Surirella</i>	<i>Pinnularia</i>	<i>Surirella</i>	<i>Odontella</i>	<i>Surirella</i>	<i>Rhizosolenia</i>	<i>Diploneis</i>	<i>Rhizosolenia</i>	<i>Diploneis</i>	<i>Rhizosolenia</i>	<i>Diploneis</i>	
			<i>Odontella</i>	<i>Navicula</i>	<i>Dinophysis</i>	<i>Navicula</i>	<i>Dinophysis</i>	<i>Navicula</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	<i>Nitzschia</i>	<i>Rhizosolenia</i>	
			<i>Dinophysis</i>	<i>Thalassiosira</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Thalassiothrix</i>	<i>Dinophysis</i>	<i>Thalassiothrix</i>	<i>Dinophysis</i>	<i>Thalassiothrix</i>	<i>Dinophysis</i>	
			<i>Surirella</i>	<i>Skeletonema</i>	<i>Surirella</i>	<i>Skeletonema</i>	<i>Cyclotella</i>	<i>Skeletonema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Thalassionema</i>	<i>Cyclotella</i>	<i>Thalassionema</i>	

Zooplankton															
1	Abundance (Population)	noX10 ³ / 100 m ³	50		48		53		41		25		38		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Nitzschia</i>		<i>Nitzschia</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		<i>Egg(Fish and Shrimps)</i>		
			<i>Pinnularia</i>		<i>Pinnularia</i>		<i>Coscinodiscus</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		
			<i>Odontella</i>		<i>Odontella</i>		<i>Odontella</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		<i>Copepods nauplii</i>		
			<i>Dinophysis</i>		<i>Dinophysis</i>		<i>Dinophysis</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Crustacean</i>		
3	Total Biomass	ml/100 m ³	<i>Surirella</i>		<i>Surirella</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		
			16.33		16.25		17.35		16.23		13.56		16.58		

Continue...

RESULTS OF MARINE WATER [M7 EAST PORT N 22°47'120" E 069°47'110"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	186		200		202		260		86		96		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	33		41		36		46		12		27		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	30		31		24		36		5		14		IS :15185:2016
4	Enterococcus	/100ml	21		19		22		23		Absent		Absent		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF MARINE WATER [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.21	8.04	8.18	8.08	8.16	8.06	8.09	7.96	7.99	7.86	8.06	7.88	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.6	29.5	29.5	29.4	29.4	29.3	29.5	29.4	29.6	29.5	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	102	78	112	84	98	84	106	88	112	90	122	98	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.4	BDL	3.1	BDL	3.4	BDL	3.1	BDL	3.3	BDL	2.8	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.98	5.88	5.88	5.68	6.02	5.82	6.07	5.87	6.02	5.82	6.15	5.95	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.02	36.76	36.27	36.88	36.44	37.09	36.38	37.24	36.22	37.14	36.38	37.09	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO ₃	µmol/L	3.23	2.9	3.39	3.06	3.71	3.39	3.55	3.23	3.23	3.06	3.55	3.06	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.543	0.5	0.522	0.478	0.478	0.456	0.456	0.435	0.435	0.391	0.543	0.478	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.95	3.8	4.16	4.01	4.11	4.06	3.74	3.64	3.85	3.64	4.06	3.95	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	2.32	2.11	2.21	2	2.11	1.9	2.21	2	2.53	2.32	2.32	2.21	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	7.723	7.2	8.072	7.548	8.298	7.906	7.746	7.305	7.515	7.091	8.153	7.488	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36268	37350	36302	37410	36380	34500	36410	37320	36540	37410	36610	37540	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	24	12	28.34	8.1	32.29	28.25	20.38	12.23	24.1	16.1	28.03	20.02	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
Phytoplankton															
1.	Chlorophyll	mg/m ³	2.68	2.47	2.36	2.85	2.3	2.88	2.95	3.04	2.36	3.01	3	3.01	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	0.99	2.03	1.06	1.88	2.03	1.78	2.36	1.55	1.88	1.63	1.88	1.36	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	78	156	86	145	97	148	100	85	123	96	106	106	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Odontella</i>	<i>Cyclotella</i>	<i>Odontella</i>	<i>Cyclotella</i>	<i>Odontella</i>	<i>Cyclotella</i>	<i>Nitzschia</i>	<i>Diploneis</i>	<i>Nitzschia</i>	<i>Diploneis</i>	<i>Nitzschia</i>	<i>Diploneis</i>	APHA (23rd Ed. 2017)10200 F
			<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Grammatophora</i>	<i>Rhizosolenia</i>	<i>Grammatophora</i>	<i>Rhizosolenia</i>	<i>Grammatophora</i>	<i>Rhizosolenia</i>	
			<i>Coscinodiscus</i>	<i>Skeletonema</i>	<i>Coscinodiscus</i>	<i>Skeletonema</i>	<i>Coscinodiscus</i>	<i>Skeletonema</i>	<i>Diploneis</i>	<i>Nitzschia</i>	<i>Diploneis</i>	<i>Nitzschia</i>	<i>Diploneis</i>	<i>Nitzschia</i>	
			<i>Grammatophora</i>	<i>Thalassiosira</i>	<i>Grammatophora</i>	<i>Thalassiosira</i>	<i>Grammatophora</i>	<i>Thalassiosira</i>	<i>Thalassiothrix</i>	<i>Cyclotella</i>	<i>Thalassiothrix</i>	<i>Cyclotella</i>	<i>Thalassiothrix</i>	<i>Grammatophora</i>	
			<i>Thalassiosira</i>	<i>Thalassionema</i>	<i>Thalassiosira</i>	<i>Thalassionema</i>	<i>Thalassiosira</i>	<i>Thalassionema</i>	<i>Pleurosigma</i>	<i>Pleurosigma</i>	<i>Pleurosigma</i>	<i>Pleurosigma</i>	<i>Pleurosigma</i>	<i>Pleurosigma</i>	

Zooplankton															
1	Abundance (Population)	noX10 ³ / 100 m ³	41	52	60	49	49	49							APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Coscinodiscus</i>	<i>Coscinodiscus</i>	<i>Odontella</i>	<i>Oikoplura</i>	<i>Oikoplura</i>	<i>Oikoplura</i>							
			<i>Diploneis</i>	<i>Egg(Fish and Shrimps)</i>	<i>Egg(Fish and Shrimps)</i>	<i>Copepods nauplii</i>	<i>Copepods nauplii</i>	<i>Egg(Fish and Shrimps)</i>							
			<i>Rhizosolenia</i>	<i>Rhizosolenia</i>	<i>Rhizosolenia</i>	<i>Crustacean Larvae</i>	<i>Crustacean Larvae</i>	<i>Crustacean Larvae</i>							
			<i>Dinophysis</i>	<i>Bivalve Larvae</i>	<i>Bivalve Larvae</i>	<i>Crustacean</i>	<i>Crustacean</i>	<i>Crustacean</i>							
3	Total Biomass	ml/100 m ³	<i>Thalassionema</i>	<i>Thalassionema</i>	<i>Thalassionema</i>	<i>Bivalve Larvae</i>	<i>Bivalve Larvae</i>	<i>Bivalve Larvae</i>							
			16.45	15.44	17.68	15.44	15.44	14.78							


Continue...

RESULTS OF MARINE WATER [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	202		274		250		266		98		98		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	30		39		35		32		20		14		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	22		30		26		27		14		10		IS :15185:2016
4	Enterococcus	/100ml	17		18		20		16		10		8		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF SEDIMENT ANALYSIS [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
1.	Organic Matter	%	0.43	0.42	0.46	0.41	0.42	0.43	IS: 2720 (Part 22):1972 RA.2015, Amds.1
2.	Phosphorus as P	µg/g	580.4	594.2	580.3	582.8	580.5	574.2	IS: 10158 :1982, RA.2009 Method B
3.	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy	Lab SOP No. UERL/CHM/LTM/108
4.	Petroleum Hydrocarbon	µg/g	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23rd ED,2017,5520 F
5.0	Heavy Metals								
5.1	Aluminum as Al	%	4.11	4.16	4.11	4.15	4.16	4.12	IS3025(Part 55)2003
5.2	Total Chromium as Cr+3	µg/g	134.1	128.5	122.6	121.2	120.4	116.2	EPA 3050B/7190 (Extraction &Analytical Method): 1986
5.3	Manganese as Mn	µg/g	621.2	630.4	624.2	618.4	620.5	624.2	EPA 3050B/7460 (Extraction &Analytical Method): 1986
5.4	Iron as Fe	%	4.14	4.12	4.08	4.02	4.11	4.02	EPA 3050B/7380 (Extraction &Analytical Method): 1986
5.5	Nickel as Ni	µg/g	46.92	42.85	42.22	41.23	42.35	41.86	EPA 3050B/7520 (Extraction &Analytical Method): 1986
5.6	Copper as Cu	µg/g	47.79	46.57	45.88	45.27	45.39	45.21	EPA 3050B /7210 (Extraction &Analytical Method):1986
5.7	Zinc as Zn	µg/g	122.2	114.2	119.4	112.2	114.5	110.6	EPA 3050B/7950 (Extraction &Analytical Method): 1986
5.8	Lead as Pb	µg/g	2.41	2.32	2.18	2.1	2.3	2.41	EPA 3050B /7420 (Extraction &Analytical Method):1986
5.9	Mercury as Hg	µg/g	BDL	BDL	BDL	BDL	BDL	BDL	EPA 7471B (Extraction &Analytical Method) :2007

Continue...

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024)

QCI-NABET Accredited EIA & GW Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

ISO 9001 : 2015 Certified Company

ISO 45001 : 2018 Certified Company

RESULTS OF SEDIMENT ANALYSIS [M8 RIGHT SIDE OF BOCHA CREEK N 22°45'987" E 069°43'119"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	TEST METHOD
			SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	
D			Benthic Organisms						
1	Macrobenthos	--	<i>Polychates</i>	<i>Gastropods</i>	<i>Gastropods</i>	<i>Polychates</i>	<i>Polychates</i>	<i>Polychates</i>	APHA (23rd Ed. 2017)10500 C
			<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	<i>Decapods Larvae</i>	<i>Amphipods</i>	<i>Amphipods</i>	<i>Amphipods</i>	
			<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Isopods</i>	<i>Sipunculids</i>	
			<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Sipunculids</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	
2	MeioBenthos	--	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Herpectacoids</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	<i>Foraminiferan</i>	
			<i>Turbellarians</i>	<i>Turbellarians</i>	<i>Turbellarians</i>	<i>Turbellarians</i>	<i>Turbellarians</i>	<i>Turbellarians</i>	
3	Population	no/m ²	240	307	335	333	300	366	



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Sr. Chemist




Mr. Nitin Tandel
Technical Manager

RESULTS OF MARINE WATER [M11 MPT T1 JETTY N 22°42'278" E 069°43'450"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.16	8.02	8.19	8.06	8.22	8.1	8.14	7.99	8.12	7.86	8.18	8.02	IS 3025 (Part11)1983
2.	Temperature	°C	29.7	29.6	29.7	29.6	29.6	29.5	29.3	29.2	29.4	29.3	29.5	29.4	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	134	106	126	114	122	110	118	106	124	108	138	112	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	3.2	BDL	2.9	BDL	2.6	BDL	2.8	BDL	2.9	BDL	2.8	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	5.88	5.68	6.18	6.08	6.02	5.92	6.07	5.97	6.02	5.92	6.15	6.05	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	35.89	37.06	36.21	37.14	36.39	37.31	36.44	37.38	36.33	37.32	36.31	37.18	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO ₃	µmol/L	3.39	3.23	3.55	3.23	3.39	3.06	3.55	3.23	2.74	2.42	2.9	2.58	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.435	0.391	0.413	0.391	0.5	0.478	0.522	0.478	0.609	0.543	0.609	0.522	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.85	3.64	4.22	4.06	4.27	4.22	4.43	4.32	3.74	3.53	4.27	4.16	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	2.53	2.32	2.32	2.21	2.21	2.11	2	1.79	2.11	1.9	2.32	2.11	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	7.675	7.261	8.183	7.681	8.16	7.758	8.502	8.028	7.089	6.493	7.779	7.262	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36210	37132	36340	37150	36400	37210	36104	36940	36220	37124	36310	37220	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	28	8	20.24	8.1	28.25	24.22	16.3	8.15	20.1	12.1	24.02	16.02	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M11 MPT T1 JETTY N 22°42'278" E 069°43'450"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m ³	3.05	3.07	2.36	2.85	3.68	3.54	3.06	3.11	3.09	2.63	2.98	2.5	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	1.11	1.88	1.06	1.88	2.57	2.67	2.47	2.44	2.55	1.45	1.55	1.87	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	109	134	86	145	187	174	148	64	122	117	122	114	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Dinophysis</i>	<i>Navicula</i>	<i>Odontella</i>	<i>Cyclotella</i>	<i>Cyclotella</i>	<i>Surirella</i>	<i>Odontella</i>	<i>Nitzschia</i>	<i>Odontella</i>	<i>Nitzschia</i>	<i>Odontella</i>	<i>Nitzschia</i>	APHA (23rd Ed. 2017)10200 F
			<i>Pinnularia</i>	<i>Skeletonema</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Pinnularia</i>	<i>Skeletonema</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	<i>Rhizosolenia</i>	<i>Pinnularia</i>	
			<i>Thalassiothrix</i>	<i>Rhizosolenia</i>	<i>Coscinodiscus</i>	<i>Skeletonema</i>	<i>Thalassiothrix</i>	<i>Rhizosolenia</i>	<i>Coscinodiscus</i>	<i>Odontella</i>	<i>Coscinodiscus</i>	<i>Odontella</i>	<i>Coscinodiscus</i>	<i>Odontella</i>	
			<i>Grammatophora</i>	<i>Dinophysis</i>	<i>Grammatophora</i>	<i>Thalassiosira</i>	<i>Rhizosolenia</i>	<i>Cyclotella</i>	<i>Grammatophora</i>	<i>Dinophysis</i>	<i>Grammatophora</i>	<i>Dinophysis</i>	<i>Pleurosigma</i>	<i>Dinophysis</i>	
			<i>Ceratium</i>	<i>Thalassionema</i>	<i>Thalassiosira</i>	<i>Thalassionema</i>	<i>Ceratium</i>	<i>Thalassionema</i>	<i>Thalassiosira</i>	<i>Surirella</i>	<i>Thalassiosira</i>	<i>Surirella</i>	<i>Thalassiosira</i>	<i>Surirella</i>	

B			Zooplankton											TEST METHOD
SR. NO.	TEST PARAMETERS	UNIT	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	
1	Abundance (Population)	noX10 ³ / 100 m ³	40	60	42	51	51	43						APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Diploneis</i>	<i>Diploneis</i>	<i>Diploneis</i>	<i>Decapoda</i>	<i>Decapoda</i>	<i>Decapoda</i>						
			<i>Rhizosolenia</i>	<i>Rhizosolenia</i>	<i>Rhizosolenia</i>	<i>Copepods</i>	<i>Copepods</i>	<i>Oikoplura</i>						
			<i>Nitzschia</i>	<i>Nitzschia</i>	<i>Nitzschia</i>	<i>Crustacean Larvae</i>	<i>Crustacean Larvae</i>	<i>Crustacean Larvae</i>						
			<i>Thalassiothrix</i>	<i>Coscinodiscus</i>	<i>Coscinodiscus</i>	<i>Crustacean</i>	<i>Crustacean</i>	<i>Bivalve Larvae</i>						
			<i>Pleurosigma</i>	<i>Pleurosigma</i>	<i>Pleurosigma</i>	<i>Oikoplura</i>	<i>Oikoplura</i>	<i>Oikoplura</i>						
3	Total Biomass	ml/100 m ³	15.47	17.45	15.24	16.02	16.02	15.23						


Continue...

RESULTS OF MARINE WATER [M11 MPT T1 JETTY N 22°42'278" E 069°43'450"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
C			Microbiological												
1	Total Bacterial Count	CFU/ml	222		221		222		212		212		222		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	40		39		28		33		33		40		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	33		30		26		28		28		30		IS :15185:2016
4	Enterococcus	/100ml	24		16		14		21		21		18		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF MARINE WATER [M12 SPM N 22°40'938" E 069°39'191"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
1.	pH	--	8.16	7.94	8.12	7.88	8.19	7.98	8.24	8.08	8.19	8.04	8.14	7.98	IS 3025 (Part11)1983
2.	Temperature	°C	29.8	29.7	29.7	29.6	29.6	29.5	29.4	29.2	29.5	29.3	29.6	29.4	IS 3025 (Part 9)1984
3.	Total Suspended Solids	mg/L	118	98	132	110	124	108	116	102	112	108	134	120	APHA 23 rd Ed.,2017,2540- D
4.	BOD (3 Days @ 27°C)	mg/L	2.7	BDL	3.4	BDL	2.8	BDL	3.1	BDL	3.4	BDL	3.1	BDL	IS 3025(Part 44)1993Amd.01
5.	Dissolved Oxygen	mg/L	6.18	5.78	6.18	5.98	5.92	5.82	5.97	5.87	5.92	5.82	6.05	5.95	APHA 23 rd Ed.,2017,4500-O, B
6.	Salinity	ppt	36.08	36.74	36.22	36.97	36.34	37.11	36.48	37.38	36.44	37.32	36.48	37.35	By Calculation
7.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025(Part39) 1991, Amd. 2
8.	Nitrate as NO ₃	µmol/L	3.23	2.9	3.39	3.06	3.23	3.06	3.39	3.06	2.9	2.74	3.23	2.9	APHA 23 rd Ed., 2017,4500 NO3-B
9.	Nitrite as NO ₂	µmol/L	0.609	0.543	0.565	0.522	0.522	0.5	0.5	0.456	0.522	0.478	0.565	0.543	APHA 23 rd Ed.,2017,4500NO ₂ B
10.	Ammonical Nitrogen as NH ₃	µmol/L	3.74	3.53	4.27	4.16	4.01	3.95	4.22	4.06	3.85	3.64	4.32	4.22	APHA 23 rd Ed., 2017,4500- NH3 B
11.	Phosphates as PO ₄	µmol/L	2.11	1.9	2	1.79	2.32	2.21	1.68	1.58	2.53	2.42	2.32	2.11	APHA 23 rd Ed.,2017,4500-P, D
12.	Total Nitrogen	µmol/L	7.579	6.973	8.225	7.742	7.762	7.51	8.11	7.576	7.272	6.858	8.115	7.663	APHA 23 rd Ed., 2017,4500 NH3 - B
13.	Petroleum Hydrocarbon	µg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	APHA 23 rd ED,2017,5520 F
14.	Total Dissolved Solids	mg/L	36138	37122	36210	37140	36270	37180	36120	37090	36324	37210	36410	37390	APHA 23 rd Ed.,2017, 2540- C
15.	COD	mg/L	24	12	36.43	16.19	24.22	20.18	8.15	4.08	12.1	8	16.02	12.01	APHA 23 rd Ed.,2017, 5220-B

Continue...

RESULTS OF MARINE WATER [M12 SPM N 22°40'938" E 069°39'191"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	
A			Phytoplankton												
1.	Chlorophyll	mg/m ³	2.22	3.26	2.35	3	2.58	2.98	2.58	3.07	2.64	3.07	2.58	2.87	APHA (23rd Ed. 2017)10200 H
2.	Phaeophytin	mg/m ³	0.85	1.63	1.05	1.77	1.44	2.06	2	2.63	1.74	2.4	1.09	1.44	APHA (23rd Ed. 2017)10200 H
3.	Cell Count	No. x 10 ³ /L	90	145	101	123	129	152	162	111	135	102	74	124	APHA (23rd Ed. 2017)10200 F
4	Name of Group Number and name of group species of each group	--	<i>Ceratium</i>	<i>Melosira</i>	<i>Ceratium</i>	<i>Rhizosolenia</i>	<i>Surirella</i>	<i>Rhizosolenia</i>	<i>Skeletonema</i>	<i>Odontella</i>	<i>Skeletonema</i>	<i>Odontella</i>	<i>Skeletonema</i>	<i>Odontella</i>	APHA (23rd Ed. 2017)10200 F
			<i>Pinnularia</i>	<i>Dinophysis</i>	<i>Pinnularia</i>	<i>Dinophysis</i>	<i>Pinnularia</i>	<i>Dinophysis</i>	<i>Grammatophora</i>	<i>Rhizosolenia</i>	<i>Grammatophora</i>	<i>Rhizosolenia</i>	<i>Grammatophora</i>	<i>Rhizosolenia</i>	
			<i>Odontella</i>	<i>Skeletonema</i>	<i>Odontella</i>	<i>Skeletonema</i>	<i>Grammatophora</i>	<i>Skeletonema</i>	<i>Nitzschia</i>	<i>Coscinodiscus</i>	<i>Nitzschia</i>	<i>Coscinodiscus</i>	<i>Nitzschia</i>	<i>Coscinodiscus</i>	
			<i>Thalassiothrix</i>	<i>Thalassiosira</i>	<i>Thalassiothrix</i>	<i>Thalassiosira</i>	<i>Thalassiothrix</i>	<i>Thalassiosira</i>	<i>Thalassiothrix</i>	<i>Grammatophora</i>	<i>Thalassiothrix</i>	<i>Grammatophora</i>	<i>Coscinodiscus</i>	<i>Pinnularia</i>	
			<i>Thalassiosira</i>	<i>Thalassionema</i>	<i>Thalassiosira</i>	<i>Melosira</i>	<i>Rhizosolenia</i>	<i>Melosira</i>	<i>Pleurosigma</i>	<i>Thalassiosira</i>	<i>Pleurosigma</i>	<i>Thalassiosira</i>	<i>Pleurosigma</i>	<i>Thalassiosira</i>	

B			Zooplankton												
1	Abundance (Population)	noX10 ³ / 100 m ³	39		41		55		49		49		32		APHA (23rd Ed. 2017)10200 G
2	Name of Group Number and name of group species of each group		<i>Nitzschia</i>		<i>Nitzschia</i>		<i>Nitzschia</i>		<i>Copepods</i>		<i>Copepods</i>		<i>Copepods</i>		
			<i>Grammatophora</i>		<i>Grammatophora</i>		<i>Grammatophora</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		<i>Oikoplura</i>		
			<i>Diploneis</i>		<i>Diploneis</i>		<i>Egg(Fish and Shrimps)</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		<i>Crustacean Larvae</i>		
			<i>Thalassiothrix</i>		<i>Thalassiothrix</i>		<i>Thalassiothrix</i>		<i>Crustacean</i>		<i>Crustacean</i>		<i>Crustacean</i>		
3	Total Biomass	ml/100 m ³	<i>Pleurosigma</i>		<i>Pleurosigma</i>		<i>Pleurosigma</i>		<i>Bivalve Larvae</i>		<i>Bivalve Larvae</i>		<i>Egg(Fish and Shrimps)</i>		
			14.56		15.15		16.23		15.23		15.23		14.56		

Continue...

RESULTS OF MARINE WATER [M12 SPM N 22°40'938" E 069°39'191"]

SR. NO.	TEST PARAMETERS	UNIT	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		TEST METHOD
			SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM	SURFACE	BOTTOM			
C			Microbiological												
1	Total Bacterial Count	CFU/ml	202		240		256		288		288		248		APHA 23 rd Ed.2017,9215-C
2	Total Coliform	/100ml	50		50		44		43		43		52		APHA 23 rd Ed.2017,9222-B
3	E.coli	/100ml	42		33		32		36		36		41		IS :15185:2016
4	Enterococcus	/100ml	19		21		17		26		26		31		IS:15186:2002
5	Salmonella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS:15187:2016
6	Shigella	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		APHA 23 rd Ed.2017,9260-E
7	Vibrio	/100ml	Absent		Absent		Absent		Absent		Absent		Absent		IS: 5887 (Part V):1976



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RESULTS OF ETP OUTLET WATER

SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL						GPCB Limit	TEST METHOD
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
			21-04-2023	29-05-2023	29-06-2023	25-07-2023	25-08-2023	14-09-2023		
1.	Colour	Pt. Co. Scale	50	40	50	40	50	50	100	IS 3025(Part 4)
2.	pH @ 27 ° C	--	7.41	6.74	7.26	7.36	7.44	7.52	6.5 to 8.5	APHA 23 rd Ed.,2017,4500-H ⁺ B
3.	Temperature	°C	30	31	30.5	30	30	30	40	IS 3025(Part 9)1984
4.	Total Suspended Solid	mg/L	22	24	26	24	18	32	100	APHA 23 rd Ed.,2017,2540 –D
5.	Total Dissolved Solids	mg/L	1106	732	804	810	822	840	2100	APHA 23 rd Ed.,2017,2540- C
6.	COD	mg/L	72.6	76.2	74.3	89.4	80.9	83.6	100	IS 3025(Part 58)2006
7.	BOD (3 days at 27 °C)	mg/L	20	23	25	27	24	23	30	IS 3025(Part 44)1993Amd.01
8.	Chloride (as Cl) -	mg/L	480.9	332.5	420.1	411.5	391	337.3	600	IS 3025(PART 32) 1988
9.	Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	10	IS 3025(Part39)1991, Amd. 2
10.	Sulphate (as SO ₄)	mg/L	102	43.3	40.2	36.6	42.2	46.4	1000	IS 3025(Part 24)1986
11.	Ammonical Nitrogen	mg/L	22.2	28.4	24.2	22.8	20.6	28.8	50	IS 3025(Part 34)1988,
12.	Phenolic Compound	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	1	IS 3025(Part 43)1992, Amd.2
13.	Copper as Cu	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	3	IS 3025(Part 42)1992amd.01,
14.	Lead as Pb	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	0.1	APHA 23 rd Ed.,2017,3111-B

Continue...

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024)

QCI-NABET Accredited EIA & GW Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

ISO 9001 : 2015 Certified Company

ISO 45001 : 2018 Certified Company

SR.NO.	TEST PARAMETERS	UNIT	LIQUID TERMINAL						GPCB Limit	TEST METHOD
			Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
			21-04-2023	29-05-2023	29-06-2023	25-07-2023	25-08-2023	14-09-2023		
15.	Sulphide as S	mg/L	0.62	BDL	BDL	BDL	BDL	BDL	2	APHA 23 rd Ed.,2017,4500 S ⁻² F
16.	Cadmium as Cd	mg/L	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	2	APHA 23 rd Ed.,2017,3111-B
17.	Fluoride as F	mg/L	1.03	0.82	0.94	0.86	0.74	0.66	2	APHA 23 rd Ed.,2017,4500 F, D
18.	Residual Chlorine	mg/L	0.74	0.88	0.78	0.64	0.94	0.82	0.5 Min.	APHA 23 rd Ed.,2017,4500-Cl-B
19.	Percent Sodium	%	48.51	48.05	46.74	45.72	46.93	46.94	60	By Calculation
20.	Sodium Absorption ratio	--	3.51	3.09	2.67	2.86	2.64	2.61	26	By Calculation



Mr. Nilesh Patel
Sr. Chemist




Mr. Nitin Tandel
Technical Manager

Results of Ambient Air Quality Monitoring

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	02-10-2023	84.39	36.85	28.57	32.39	0.92	--	NOT DETECTED
2.	05-10-2023	80.25	35.79	31.12	34.85	1.06	4.74	NOT DETECTED
3.	09-10-2023	85.20	37.85	32.02	35.76	0.97	4.29	NOT DETECTED
4.	12-10-2023	79.36	35.13	29.41	33.64	1.00	4.57	NOT DETECTED
5.	16-10-2023	83.56	38.10	31.54	36.83	1.05	4.87	NOT DETECTED
6.	19-10-2023	84.84	34.37	28.59	32.16	0.95	4.74	NOT DETECTED
7.	23-10-2023	80.93	36.73	30.16	35.74	1.00	4.98	NOT DETECTED
8.	26-10-2023	83.79	33.91	26.84	31.83	0.94	4.52	NOT DETECTED
9.	30-10-2023	85.47	36.94	27.89	31.25	1.00	4.23	NOT DETECTED
10.	02-11-2023	80.12	34.23	26.96	31.28	1.00	5.13	NOT DETECTED
11.	06-11-2023	83.51	36.58	28.42	33.88	1.05	5.25	NOT DETECTED
12.	09-11-2023	81.33	35.05	26.13	30.97	1.02	4.86	NOT DETECTED
13.	13-11-2023	78.49	33.64	24.85	29.60	0.97	4.53	NOT DETECTED
14.	16-11-2023	80.94	35.26	26.62	31.78	1.00	4.76	NOT DETECTED
15.	20-11-2023	84.63	37.89	28.76	33.52	1.04	5.29	NOT DETECTED

Continue...

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
16.	23-11-2023	81.76	35.25	27.10	31.49	1.00	4.88	NOT DETECTED
17.	27-11-2023	74.68	32.09	24.95	29.18	0.95	4.49	NOT DETECTED
18.	30-11-2023	76.29	34.41	26.37	32.51	0.98	4.64	NOT DETECTED
19.	02-12-2023	78.36	32.19	25.75	30.21	1.11	5.10	NOT DETECTED
20.	06-12-2023	80.96	34.52	27.13	31.98	1.14	5.26	NOT DETECTED
21.	09-12-2023	83.56	36.91	30.6	34.69	1.16	5.59	NOT DETECTED
22.	13-12-2023	81.10	34.31	28.74	32.58	1.13	5.42	NOT DETECTED
23.	16-12-2023	83.92	36.42	29.59	32.05	1.15	5.79	NOT DETECTED
24.	20-12-2023	80.46	33.87	26.43	30.91	1.12	5.62	NOT DETECTED
25.	23-12-2023	82.63	35.29	27.55	32.4	1.14	5.92	NOT DETECTED
26.	27-12-2023	84.10	37.33	29.15	34.62	1.16	6.12	NOT DETECTED
27.	01-01-2024	80.74	37.29	30.74	35.62	1.17	--	NOT DETECTED
28.	04-01-2024	83.15	35.61	27.42	31.81	1.14	5.35	NOT DETECTED
29.	08-01-2024	81.49	32.27	26.12	30.11	1.12	5.2	NOT DETECTED
30.	11-01-2024	84.56	34.2	28.62	32.54	1.15	5.26	NOT DETECTED
31.	15-01-2024	80.77	31.63	25.91	30.73	1.12	4.97	NOT DETECTED

Continue...

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
32.	18-01-2024	84.26	35.27	30.46	35.67	1.18	5.42	NOT DETECTED
33.	22-01-2024	82.52	32.84	28.71	33.41	1.16	5.36	NOT DETECTED
34.	25-01-2024	83.79	36.41	31.11	36.07	1.20	5.74	NOT DETECTED
35.	29-01-2024	84.57	34.62	29.88	34.28	1.17	5.52	NOT DETECTED
36.	01-02-2024	83.55	35.07	32.23	36.14	1.20	5.94	NOT DETECTED
37.	05-02-2024	80.49	33.84	29.87	34.52	1.16	5.62	NOT DETECTED
38.	08-02-2024	82.62	31.29	31.41	35.86	1.15	5.77	NOT DETECTED
39.	12-02-2024	77.21	29.74	28.95	32.72	1.12	5.41	NOT DETECTED
40.	15-02-2024	80.73	31.82	29.38	33.64	1.16	5.59	NOT DETECTED
41.	19-02-2024	84.65	34.83	31.26	36.10	1.22	5.88	NOT DETECTED
42.	22-02-2024	79.19	32.5	27.89	32.76	1.19	5.34	NOT DETECTED
43.	26-02-2024	76.53	30.48	27.15	32.91	1.13	5.13	NOT DETECTED
44.	29-02-2024	81.92	33.46	29.21	33.89	1.17	5.47	NOT DETECTED
45.	04-03-2024	83.38	33.56	29.13	34.82	1.16	5.27	NOT DETECTED
46.	07-03-2024	80.63	29.86	27.67	31.90	1.15	4.96	NOT DETECTED
47.	11-03-2024	73.85	28.76	24.91	29.74	1.12	4.83	NOT DETECTED

Continue...

Name of Location		CT3 RMU-2						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
48.	14-03-2024	83.47	32.25	28.83	32.38	1.17	5.31	NOT DETECTED
49.	18-03-2024	76.58	30.13	26.48	30.65	1.14	5.10	NOT DETECTED
50.	21-03-2024	79.62	33.78	28.85	33.27	1.11	5.25	NOT DETECTED
51.	25-03-2024	74.38	29.42	25.56	30.17	1.10	4.89	NOT DETECTED
52.	28-03-2024	77.81	32.39	28.12	31.84	1.15	5.13	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part-23	UERL/AIR/SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS - 5182, Part - 11



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	02-10-2023	79.31	32.15	27.81	30.99	0.91	--	NOT DETECTED
2.	05-10-2023	83.28	33.51	26.94	32.54	0.87	3.46	NOT DETECTED
3.	09-10-2023	85.10	32.56	30.12	35.47	0.95	3.25	NOT DETECTED
4.	12-10-2023	78.14	35.73	28.15	33.37	1.00	3.34	NOT DETECTED
5.	16-10-2023	75.84	37.47	30.23	34.92	1.00	3.16	NOT DETECTED
6.	19-10-2023	79.62	34.59	28.53	32.57	1.04	3.47	NOT DETECTED
7.	23-10-2023	74.22	36.64	26.99	35.98	1.05	3.48	NOT DETECTED
8.	26-10-2023	81.26	33.38	28.85	33.47	0.93	3.26	NOT DETECTED
9.	30-10-2023	84.79	31.72	26.43	31.85	0.90	3.10	NOT DETECTED
10.	02-11-2023	80.53	34.36	26.58	33.63	0.95	3.58	NOT DETECTED
11.	06-11-2023	84.92	37.26	28.92	35.26	1.00	3.70	NOT DETECTED
12.	09-11-2023	83.46	36.52	27.86	34.10	0.97	3.64	NOT DETECTED
13.	13-11-2023	81.82	34.40	26.31	32.55	0.95	3.42	NOT DETECTED
14.	16-11-2023	78.63	33.16	25.47	30.41	0.90	3.30	NOT DETECTED
15.	20-11-2023	75.41	31.73	24.75	29.99	0.86	3.26	NOT DETECTED

Continue...

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
16.	23-11-2023	77.35	34.62	27.32	32.76	0.92	3.49	NOT DETECTED
17.	27-11-2023	72.86	30.91	24.59	29.74	0.85	3.15	NOT DETECTED
18.	30-11-2023	75.63	32.5	26.35	30.52	0.91	3.37	NOT DETECTED
19.	02-12-2023	75.36	30.59	25.12	30.94	0.84	3.51	NOT DETECTED
20.	06-12-2023	73.69	29.46	24.62	28.65	0.80	3.28	NOT DETECTED
21.	09-12-2023	78.25	31.62	26.35	31.26	0.88	3.60	NOT DETECTED
22.	13-12-2023	80.42	33.56	28.64	32.49	0.91	3.64	NOT DETECTED
23.	16-12-2023	84.30	34.89	29.44	34.71	0.94	3.70	NOT DETECTED
24.	20-12-2023	83.02	34.81	29.02	33.86	0.89	3.66	NOT DETECTED
25.	23-12-2023	80.15	32.41	27.52	32.48	0.80	3.47	NOT DETECTED
26.	27-12-2023	78.63	30.96	25.48	30.26	0.78	3.30	NOT DETECTED
27.	01-01-2024	76.51	29.18	25.69	29.37	0.81	--	NOT DETECTED
28.	04-01-2024	79.62	31.43	27.50	31.86	0.86	3.76	NOT DETECTED
29.	08-01-2024	81.59	33.52	28.97	32.06	0.89	3.89	NOT DETECTED
30.	11-01-2024	75.92	28.45	25.26	28.42	0.76	3.52	NOT DETECTED
31.	15-01-2024	77.57	30.91	26.48	30.29	0.78	3.67	NOT DETECTED

Continue...

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
32.	18-01-2024	79.65	32.46	28.54	32.11	0.85	3.76	NOT DETECTED
33.	22-01-2024	82.73	33.47	29.26	33.56	0.90	3.85	NOT DETECTED
34.	25-01-2024	78.26	30.55	26.42	30.64	0.82	3.71	NOT DETECTED
35.	29-01-2024	75.37	29.93	24.35	28.63	0.77	3.39	NOT DETECTED
36.	01-02-2024	78.32	28.61	26.35	28.94	0.75	3.53	NOT DETECTED
37.	05-02-2024	81.56	32.11	29.54	32.29	0.83	3.86	NOT DETECTED
38.	08-02-2024	79.48	30.26	28.09	31.74	0.78	3.47	NOT DETECTED
39.	12-02-2024	75.73	28.91	26.62	30.11	0.74	3.38	NOT DETECTED
40.	15-02-2024	72.58	27.73	25.42	29.59	0.7	3.24	NOT DETECTED
41.	19-02-2024	75.16	29.1	26.85	29.13	0.76	3.40	NOT DETECTED
42.	22-02-2024	80.29	32.46	30.13	33.40	0.81	3.81	NOT DETECTED
43.	26-02-2024	73.84	28.38	26.91	31.42	0.72	3.42	NOT DETECTED
44.	29-02-2024	76.52	30.21	28.79	32.47	0.79	3.68	NOT DETECTED
45.	04-03-2024	71.94	27.79	25.37	29.52	0.69	3.07	NOT DETECTED
46.	07-03-2024	74.35	29.84	28.12	32.57	0.73	3.15	NOT DETECTED
47.	11-03-2024	70.54	27.27	25.94	28.77	0.67	3.24	NOT DETECTED

Continue...

Name of Location		Near Fire Station						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
48.	14-03-2024	72.95	30.71	27.47	32.81	0.70	3.42	NOT DETECTED
49.	18-03-2024	79.13	32.47	24.81	28.67	0.75	3.68	NOT DETECTED
50.	21-03-2024	75.46	30.68	28.45	33.13	0.78	3.52	NOT DETECTED
51.	25-03-2024	77.93	32.57	25.89	29.93	0.72	3.40	NOT DETECTED
52.	28-03-2024	81.24	27.83	27.64	32.28	0.79	3.57	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part-23	UERL/AIR/SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS - 5182, Part - 11



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	02-10-2023	84.63	34.59	26.58	30.15	1.00	--	NOT DETECTED
2.	05-10-2023	82.39	32.65	25.97	29.76	0.97	3.86	NOT DETECTED
3.	09-10-2023	80.98	36.74	28.47	31.83	1.00	4.37	NOT DETECTED
4.	12-10-2023	76.84	34.10	30.26	33.94	1.05	4.50	NOT DETECTED
5.	16-10-2023	78.63	34.90	28.57	32.69	1.09	4.56	NOT DETECTED
6.	19-10-2023	85.70	36.85	29.98	32.46	1.10	4.10	NOT DETECTED
7.	23-10-2023	80.25	34.75	27.68	30.05	1.07	4.63	NOT DETECTED
8.	26-10-2023	84.64	32.39	26.14	29.65	1.03	4.21	NOT DETECTED
9.	30-10-2023	85.36	34.52	25.45	27.86	1.00	3.86	NOT DETECTED
10.	02-11-2023	82.26	35.65	28.27	32.18	0.99	4.13	NOT DETECTED
11.	06-11-2023	79.65	33.42	26.19	30.48	0.95	3.89	NOT DETECTED
12.	09-11-2023	83.16	36.48	29.62	33.55	1.02	4.35	NOT DETECTED
13.	13-11-2023	80.75	32.10	25.47	29.73	1.00	3.76	NOT DETECTED
14.	16-11-2023	82.92	36.83	28.24	31.92	1.05	4.50	NOT DETECTED
15.	20-11-2023	78.85	31.93	26.82	30.13	0.98	4.19	NOT DETECTED

Continue...

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
16.	23-11-2023	80.20	33.52	28.76	33.38	1.00	4.36	NOT DETECTED
17.	27-11-2023	73.86	31.49	24.84	28.40	0.92	3.76	NOT DETECTED
18.	30-11-2023	78.58	32.73	26.13	29.62	0.95	3.97	NOT DETECTED
19.	02-12-2023	76.35	31.84	25.13	30.58	0.95	3.95	NOT DETECTED
20.	06-12-2023	81.63	33.29	27.86	31.96	1.00	4.32	NOT DETECTED
21.	09-12-2023	78.91	32.10	25.32	31.42	0.98	4.12	NOT DETECTED
22.	13-12-2023	80.53	33.75	27.43	31.77	1.00	4.36	NOT DETECTED
23.	16-12-2023	83.62	35.46	29.31	33.72	1.03	4.59	NOT DETECTED
24.	20-12-2023	81.96	32.79	28.16	32.63	1.00	4.37	NOT DETECTED
25.	23-12-2023	83.67	34.99	29.92	34.59	1.06	4.46	NOT DETECTED
26.	27-12-2023	80.49	31.26	27.51	31.25	1.00	4.25	NOT DETECTED
27.	01-01-2024	82.22	34.59	29.14	34.49	1.08	--	NOT DETECTED
28.	04-01-2024	79.62	32.18	26.54	31.52	1.05	3.87	NOT DETECTED
29.	08-01-2024	84.61	35.62	30.43	34.72	1.10	4.06	NOT DETECTED
30.	11-01-2024	80.74	32.14	28.69	32.87	1.06	3.91	NOT DETECTED
31.	15-01-2024	82.90	34.82	29.31	34.09	1.09	3.98	NOT DETECTED

Continue...

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
32.	18-01-2024	77.29	31.71	26.84	31.27	1.00	3.74	NOT DETECTED
33.	22-01-2024	80.25	33.06	28.42	33.72	1.05	3.87	NOT DETECTED
34.	25-01-2024	84.36	35.13	30.21	34.43	1.11	4.26	NOT DETECTED
35.	29-01-2024	81.73	33.59	28.94	34.67	1.08	4.12	NOT DETECTED
36.	01-02-2024	80.96	33.31	28.42	33.21	1.12	4.25	NOT DETECTED
37.	05-02-2024	77.64	30.72	26.84	31.43	1.07	3.86	NOT DETECTED
38.	08-02-2024	81.29	32.88	29.13	34.57	1.15	4.12	NOT DETECTED
39.	12-02-2024	84.38	35.62	31.46	36.91	1.18	4.39	NOT DETECTED
40.	15-02-2024	82.05	33.73	29.85	34.56	1.12	4.30	NOT DETECTED
41.	19-02-2024	79.63	32.47	28.38	33.17	1.10	3.87	NOT DETECTED
42.	22-02-2024	75.15	30.26	26.92	31.60	1.06	3.75	NOT DETECTED
43.	26-02-2024	80.31	33.59	30.64	35.73	1.11	4.18	NOT DETECTED
44.	29-02-2024	77.39	31.47	28.73	33.42	1.08	3.91	NOT DETECTED
45.	04-03-2024	80.63	31.36	30.11	35.47	1.10	4.46	NOT DETECTED
46.	07-03-2024	76.27	29.84	28.35	32.73	1.04	4.15	NOT DETECTED
47.	11-03-2024	81.73	33.11	29.74	34.12	1.07	4.63	NOT DETECTED

Continue...

Name of Location		ADANI PORT – TUG Berth 600 KL Pupm House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
48.	14-03-2024	84.12	35.62	32.17	37.65	1.14	4.76	NOT DETECTED
49.	18-03-2024	80.93	32.19	30.42	35.34	1.10	4.32	NOT DETECTED
50.	21-03-2024	84.31	33.65	33.47	38.54	1.13	4.19	NOT DETECTED
51.	25-03-2024	82.17	31.74	30.85	38.42	1.08	4.35	NOT DETECTED
52.	28-03-2024	86.42	34.17	32.75	36.13	1.12	4.64	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part-23	UERL/AIR/SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS – 5182, Part – 11



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	02-10-2023	71.26	28.95	21.30	24.58	0.75	--	NOT DETECTED
2.	05-10-2023	68.79	26.35	20.57	23.97	0.70	2.56	NOT DETECTED
3.	09-10-2023	73.24	26.36	20.75	25.62	0.68	2.87	NOT DETECTED
4.	12-10-2023	76.48	29.60	22.42	27.25	0.70	2.74	NOT DETECTED
5.	16-10-2023	81.63	30.12	21.87	25.64	0.80	2.97	NOT DETECTED
6.	19-10-2023	78.42	28.79	23.55	28.10	0.77	2.87	NOT DETECTED
7.	23-10-2023	75.11	25.38	20.32	25.86	0.71	2.58	NOT DETECTED
8.	26-10-2023	80.65	29.81	22.58	26.84	0.78	3.10	NOT DETECTED
9.	30-10-2023	77.26	27.44	22.93	26.76	0.75	2.89	NOT DETECTED
10.	02-11-2023	74.17	29.55	23.31	28.29	0.78	2.60	NOT DETECTED
11.	06-11-2023	72.35	27.42	22.50	26.95	0.72	2.45	NOT DETECTED
12.	09-11-2023	75.67	29.93	24.82	28.43	0.80	2.76	NOT DETECTED
13.	13-11-2023	78.15	31.48	25.63	30.15	0.85	2.85	NOT DETECTED
14.	16-11-2023	74.51	29.20	23.26	28.73	0.81	2.65	NOT DETECTED
15.	20-11-2023	72.88	27.41	21.85	26.38	0.76	2.46	NOT DETECTED

Continue...

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
16.	23-11-2023	75.63	30.19	24.48	29.83	0.80	2.71	NOT DETECTED
17.	27-11-2023	70.11	26.54	21.10	26.55	0.72	2.40	NOT DETECTED
18.	30-11-2023	73.26	28.79	23.92	28.37	0.76	2.53	NOT DETECTED
19.	04-12-2023	72.47	27.91	21.82	25.73	0.70	2.39	NOT DETECTED
20.	07-12-2023	76.29	30.31	23.58	28.19	0.75	2.45	NOT DETECTED
21.	11-12-2023	80.53	30.95	24.04	28.97	0.81	2.61	NOT DETECTED
22.	14-12-2023	82.65	31.10	25.31	30.26	0.82	2.78	NOT DETECTED
23.	18-12-2023	78.71	28.27	23.98	28.21	0.79	2.65	NOT DETECTED
24.	21-12-2023	75.20	27.52	21.93	25.67	0.72	2.58	NOT DETECTED
25.	25-12-2023	68.93	26.69	20.86	24.79	0.69	2.36	NOT DETECTED
26.	28-12-2023	71.38	28.61	23.13	28.45	0.73	2.51	NOT DETECTED
27.	01-01-2024	74.54	30.13	22.46	26.21	0.79	--	NOT DETECTED
28.	04-01-2024	77.37	32.59	25.03	29.17	0.84	3.12	NOT DETECTED
29.	08-01-2024	75.19	31.63	23.84	26.96	0.80	2.94	NOT DETECTED
30.	11-01-2024	72.84	28.16	21.69	25.32	0.74	2.8	NOT DETECTED
31.	15-01-2024	76.25	30.54	24.98	28.73	0.83	2.89	NOT DETECTED

Continue...

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
32.	18-01-2024	69.98	28.63	21.00	25.37	0.73	2.76	NOT DETECTED
33.	22-01-2024	67.37	27.57	20.69	24.15	0.70	2.62	NOT DETECTED
34.	25-01-2024	71.83	30.49	21.76	26.33	0.74	2.78	NOT DETECTED
35.	29-01-2024	73.24	32.73	23.54	28.16	0.77	2.82	NOT DETECTED
36.	01-02-2024	76.57	32.81	23.12	27.37	0.79	2.98	NOT DETECTED
37.	05-02-2024	73.16	30.26	21.68	25.42	0.74	2.86	NOT DETECTED
38.	08-02-2024	70.62	28.96	20.21	24.38	0.69	2.71	NOT DETECTED
39.	12-02-2024	75.84	30.42	22.38	26.71	0.77	2.88	NOT DETECTED
40.	15-02-2024	72.68	29.82	21.45	24.60	0.69	2.64	NOT DETECTED
41.	19-02-2024	66.43	27.19	19.87	22.59	0.68	2.51	NOT DETECTED
42.	22-02-2024	69.15	28.79	20.62	23.10	0.70	2.69	NOT DETECTED
43.	26-02-2024	73.54	31.56	22.84	26.62	0.79	2.82	NOT DETECTED
44.	29-02-2024	70.69	30.11	20.03	24.27	0.72	2.73	NOT DETECTED
45.	04-03-2024	67.50	28.42	20.84	24.15	0.60	2.69	NOT DETECTED
46.	07-03-2024	65.84	25.73	19.87	22.58	0.68	2.45	NOT DETECTED
47.	11-03-2024	63.95	26.45	22.27	26.42	0.60	2.41	NOT DETECTED

Continue...

Name of Location		PUB / Adani House						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
48.	14-03-2024	67.35	29.13	20.57	24.48	0.65	2.68	NOT DETECTED
49.	18-03-2024	69.54	30.26	22.85	25.92	0.59	2.74	NOT DETECTED
50.	21-03-2024	74.13	27.41	23.36	26.10	0.70	2.85	NOT DETECTED
51.	25-03-2024	70.54	25.95	22.48	24.65	0.67	2.53	NOT DETECTED
52.	28-03-2024	65.48	27.30	19.84	23.39	0.61	2.49	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part-23	UERL/AIR/SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS - 5182, Part - 11



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		CT-4 RMU-1						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	02-11-2023	76.42	28.27	23.65	28.37	0.90	4.26	NOT DETECTED
2.	06-11-2023	72.59	26.92	21.37	26.55	0.84	4.05	NOT DETECTED
3.	09-11-2023	67.73	30.76	24.68	29.81	1.00	4.38	NOT DETECTED
4.	13-11-2023	74.25	33.13	26.72	31.64	1.05	4.76	NOT DETECTED
5.	16-11-2023	87.13	28.64	23.13	28.72	0.95	4.52	NOT DETECTED
6.	20-11-2023	84.25	26.49	22.51	26.94	0.88	4.36	NOT DETECTED
7.	23-11-2023	82.64	25.20	21.35	25.46	0.85	4.14	NOT DETECTED
8.	27-11-2023	76.37	23.58	18.96	23.89	0.76	3.96	NOT DETECTED
9.	04-12-2023	82.75	30.41	25.13	29.85	0.94	4.62	NOT DETECTED
10.	07-12-2023	78.38	27.53	22.96	25.27	0.82	4.41	NOT DETECTED
11.	11-12-2023	80.16	29.37	25.12	28.76	0.86	4.73	NOT DETECTED
12.	14-12-2023	84.48	33.81	27.64	32.49	0.98	4.89	NOT DETECTED
13.	18-12-2023	82.31	31.26	24.94	28.51	0.90	4.75	NOT DETECTED
14.	21-12-2023	76.47	27.83	23.46	27.25	0.81	4.52	NOT DETECTED

Continue...

Name of Location		CT-4 RMU-1						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
15.	25-12-2023	73.59	24.57	20.13	24.81	0.74	4.36	NOT DETECTED
16.	28-12-2023	79.11	29.32	22.53	26.76	0.79	4.48	NOT DETECTED
17.	01-01-2024	81.42	31.86	24.28	28.17	0.97	--	NOT DETECTED
18.	04-01-2024	84.26	34.48	26.84	31.46	1.00	4.82	NOT DETECTED
19.	08-01-2024	79.82	28.91	22.86	27.52	0.92	4.53	NOT DETECTED
20.	11-01-2024	82.57	31.49	25.22	29.35	1.00	4.68	NOT DETECTED
21.	15-01-2024	78.84	27.59	22.12	26.89	0.87	4.41	NOT DETECTED
22.	18-01-2024	80.64	29.17	23.79	27.42	0.91	4.65	NOT DETECTED
23.	22-01-2024	83.49	32.72	26.31	30.58	1.05	4.73	NOT DETECTED
24.	25-01-2024	85.27	35.49	29.32	33.24	1.10	4.82	NOT DETECTED
25.	29-01-2024	80.65	30.16	24.05	29.13	0.95	4.70	NOT DETECTED
26.	01-02-2024	78.62	28.96	22.10	26.93	0.82	4.45	NOT DETECTED
27.	05-02-2024	82.36	30.19	24.56	29.31	0.93	4.62	NOT DETECTED
28.	08-02-2024	84.16	32.46	27.84	33.46	0.97	4.87	NOT DETECTED
29.	12-02-2024	80.43	31.46	25.63	29.70	0.89	4.70	NOT DETECTED
30.	15-02-2024	77.29	29.66	22.38	27.62	0.76	4.62	NOT DETECTED

Continue...

Name of Location		CT-4 RMU-1						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
31.	19-02-2024	75.73	27.43	20.96	25.17	0.70	4.39	NOT DETECTED
32.	22-02-2024	79.37	30.11	22.16	26.93	0.78	4.53	NOT DETECTED
33.	26-02-2024	82.64	32.83	25.31	29.62	0.86	4.81	NOT DETECTED
34.	29-02-2024	79.55	29.89	23.72	27.53	0.77	4.68	NOT DETECTED
35.	04-03-2024	85.13	34.25	25.81	28.47	0.79	4.85	NOT DETECTED
36.	07-03-2024	80.74	31.48	22.57	26.35	0.64	4.71	NOT DETECTED
37.	11-03-2024	78.93	28.52	21.76	26.11	0.57	4.52	NOT DETECTED
38.	14-03-2024	75.38	30.86	23.29	27.46	0.52	4.68	NOT DETECTED
39.	18-03-2024	81.52	33.47	24.92	29.53	0.76	4.82	NOT DETECTED
40.	21-03-2024	86.14	37.35	27.11	32.42	0.82	4.97	NOT DETECTED
41.	25-03-2024	83.74	34.68	25.24	30.48	0.73	4.72	NOT DETECTED
42.	28-03-2024	86.85	31.57	26.86	29.62	0.87	4.82	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part-23	UERL/AIR/SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS - 5182, Part - 11

MoEF&CC (GOI) Recognized Environmental
Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024)

QCI-NABET Accredited EIA & GW
Consultant Organization

GPCB Recognized Environmental
Auditor (Schedule-II)

ISO 9001 : 2015
Certified Company

ISO 45001 : 2018
Certified Company



Nikunj D. Patel
(Chemist)



Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		CT3 RMU-2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		12-10-2023	13-11-2023	14-12-2023	11-01-2024	12-02-2024	14-03-2024
1	06:00 to 07:00	64.8	64.5	65.5	66.3	65.6	65.8
2	07:00 to 08:00	69.2	66.9	63.5	62.4	63.6	63.7
3	08:00 to 09:00	65.4	65.2	67.3	66.6	65.7	67.5
4	09:00 to 10:00	66.8	69.6	64.3	65.2	63.8	64.7
5	10:00 to 11:00	64.1	61.2	63.8	62.6	64.1	66.8
6	11:00 to 12:00	68.9	65.7	66.7	64.9	65.8	64.3
7	12:00 to 13:00	65.3	68.8	66.5	66.5	66.1	62.3
8	13:00 to 14:00	68.3	67.5	64.7	64.7	65.3	66.7
9	14:00 to 15:00	61.8	65.2	66.4	65.3	66.9	63.5
10	15:00 to 16:00	64.3	68.6	65.4	65.4	66.3	64.9
11	16:00 to 17:00	69.4	65.2	68.1	68.5	67.5	65.8
12	17:00 to 18:00	63.9	68.2	65.8	65.8	64.2	65.6
13	18:00 to 19:00	67.5	67.4	64.8	63.8	64.8	62.3
14	19:00 to 20:00	66.4	63.9	62.8	64.3	66.1	65.4
15	20:00 to 21:00	63.4	60.7	63.4	62.8	62.8	63.8
16	21:00 to 22:00	65.1	63.8	61.7	60.7	61.3	63.2
Day Time		<75 dB (A)					

Continue...

Location Name		CT3 RMU-2					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		12-10-2023	13-11-2023	14-12-2023	11-01-2024	12-02-2024	14-03-2024
1	22:00 to 23:00	59.6	63.7	64.1	64.3	63.8	63.5
2	23:00 to 24:00	61.6	61.8	63.9	63.9	62.5	62.6
3	24:00 to 01:00	60.6	59.4	62.4	62.6	64.1	63.1
4	01:00 to 02:00	57.9	60.3	62.8	63.4	62.9	63.9
5	02:00 to 03:00	55.8	62.7	63.9	63.9	64.1	64.7
6	03:00 to 04:00	61.3	60.9	61.8	61.8	63.2	63.2
7	04:00 to 05:00	60.3	57.5	59.2	59.2	61.8	60.1
8	05:00 to 06:00	61.1	59.9	58.3	59.7	60.3	61.3
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		Near Fire Station					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		05-10-2023	06-11-2023	07-12-2023	04-01-2024	05-02-2024	07-03-2024
1	06:00 to 07:00	63.4	64.4	62.7	64.3	65.1	64.1
2	07:00 to 08:00	66.4	67.3	64.8	64.8	63.2	65.3
3	08:00 to 09:00	69.3	65.7	66.4	65.8	66.2	65.8
4	09:00 to 10:00	61.3	62.8	63.7	64.8	65.3	67.1
5	10:00 to 11:00	63.1	65.5	67.1	65.2	67.2	65.4
6	11:00 to 12:00	68.3	63.6	65.7	66.7	65.3	63.8
7	12:00 to 13:00	65.7	64.2	66.4	65.1	64.8	65.2
8	13:00 to 14:00	66.7	67.4	68.3	68.3	67.3	66.5
9	14:00 to 15:00	60.4	61.2	65.2	66.3	65.5	66.9
10	15:00 to 16:00	67.5	64.8	63.8	62.9	63.8	65.2
11	16:00 to 17:00	64.7	62.8	61.3	61.3	63.6	64.4
12	17:00 to 18:00	67.1	60.1	63.5	64.7	65.2	63.7
13	18:00 to 19:00	63.2	64.9	66.4	66.4	65.7	62.8
14	19:00 to 20:00	66.8	61.3	63.8	64.6	63.6	64.6
15	20:00 to 21:00	64.2	64.5	62.4	63.8	64.1	63.6
16	21:00 to 22:00	61.3	60.7	62.1	63.1	63.6	62.4
Day Time		<75 dB (A)					

Continue...

Location Name		Near Fire Station					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		05-10-2023	06-11-2023	07-12-2023	04-01-2024	05-02-2024	07-03-2024
1	22:00 to 23:00	59.9	58.8	60.2	59.9	61.4	62.7
2	23:00 to 24:00	58.4	61.6	63.8	62.6	63.6	61.8
3	24:00 to 01:00	62.4	62.3	64.6	64.6	62.5	62.3
4	01:00 to 02:00	57.5	58.4	62.3	62.3	63.1	64.4
5	02:00 to 03:00	61.7	61.3	61.3	62.8	61.6	62.3
6	03:00 to 04:00	60.1	60.6	59.1	59.1	58.9	60.8
7	04:00 to 05:00	61.3	59.3	58.5	58.5	58.5	61.5
8	05:00 to 06:00	58.2	57.6	58.1	59.6	57.8	60.4
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		ADANI PORT – TUG Berth 600 KL Pump House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		09-10-2023	09-11-2023	11-12-2023	08-01-2024	08-02-2024	11-03-2024
1	06:00 to 07:00	60.5	63.8	64.2	63.1	62.8	63.4
2	07:00 to 08:00	65.4	65.4	66.1	65.3	64.8	63.8
3	08:00 to 09:00	68.9	62.6	64.8	63.7	64.9	65.2
4	09:00 to 10:00	65.3	67.4	66.4	66.4	65.3	66.5
5	10:00 to 11:00	67.3	63.3	66.3	64.9	65.6	65.2
6	11:00 to 12:00	65.3	68.4	67.4	65.2	66.2	67.4
7	12:00 to 13:00	67.4	67.2	64.8	63.7	63.9	65.7
8	13:00 to 14:00	69.2	63.8	62.5	61.9	63.1	64.2
9	14:00 to 15:00	67.3	66.3	68.2	68	67	66.7
10	15:00 to 16:00	69.8	60.4	63.5	64.5	65.3	63.5
11	16:00 to 17:00	68.2	63.5	65.7	65.7	63.8	64.1
12	17:00 to 18:00	64.3	67.9	65.9	64.6	63.4	62.4
13	18:00 to 19:00	65.4	68.1	62.6	62.6	63.8	64.5
14	19:00 to 20:00	63.6	65.2	64.1	62.5	64.2	65.1
15	20:00 to 21:00	66.1	64.1	61.7	61.7	60.8	64.5
16	21:00 to 22:00	62.8	62.3	63.5	62.5	61.8	61.9
Day Time		<75 dB (A)					

Continue...

Location Name		ADANI PORT – TUG Berth 600 KL Pump House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		09-10-2023	09-11-2023	11-12-2023	08-01-2024	08-02-2024	11-03-2024
1	22:00 to 23:00	62.7	61.4	62.3	63.1	62.5	61.2
2	23:00 to 24:00	62.3	63.5	60.5	61.3	60.7	60.7
3	24:00 to 01:00	56.8	64.1	62.3	63.7	63.5	62.7
4	01:00 to 02:00	60.1	62.7	64.6	64.6	63.6	63.4
5	02:00 to 03:00	56.5	60.6	63.2	63.2	64.5	63.8
6	03:00 to 04:00	57.5	59.4	61.7	62.5	63.1	62.6
7	04:00 to 05:00	60.7	58.7	60.3	60.3	59.6	61.3
8	05:00 to 06:00	59.5	56.4	57.4	57.9	59.2	58.7
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		PUB/Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		02-10-2023	02-11-2023	04-12-2023	01-01-2024	01-02-2024	04-03-2024
1	06:00 to 07:00	64.2	62.5	63.1	62.5	63.5	61.9
2	07:00 to 08:00	62.8	65.1	66.3	65.7	65.4	63.2
3	08:00 to 09:00	58.7	68.2	64.8	64.8	64.7	65.7
4	09:00 to 10:00	61.8	63.9	65.3	66.1	65.9	64.3
5	10:00 to 11:00	68.7	67.8	68.2	67.2	66.5	65.7
6	11:00 to 12:00	63.4	65.2	66.5	66.5	67.2	66.3
7	12:00 to 13:00	68.3	61.3	63.7	64.3	65.3	63.7
8	13:00 to 14:00	63.9	65.9	67.4	67.4	66.8	64.2
9	14:00 to 15:00	62.5	62.6	64.6	65.9	66.1	64.8
10	15:00 to 16:00	62.9	63.7	65.1	65.1	66.9	65.7
11	16:00 to 17:00	65.5	65.4	66.4	67.1	67.5	67.9
12	17:00 to 18:00	63.3	65.3	67.3	65.7	64.3	66.2
13	18:00 to 19:00	61.8	69.1	65.9	64.2	63.8	64.6
14	19:00 to 20:00	68.3	65.2	63.2	63.2	62.7	63.8
15	20:00 to 21:00	64.2	63.8	62.6	62.6	63.9	62.3
16	21:00 to 22:00	63.6	61.2	60.8	61.2	62.3	60.8
Day Time		<75 dB (A)					

Continue...

Location Name		PUB/Adani House					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		02-10-2023	02-11-2023	04-12-2023	01-01-2024	01-02-2024	04-03-2024
1	22:00 to 23:00	57.4	60.5	59.7	58.6	59.2	60.7
2	23:00 to 24:00	55.8	63.2	61.3	61.7	60.3	58.4
3	24:00 to 01:00	53.9	61.4	62.3	63.3	62.9	60.7
4	01:00 to 02:00	58.6	64.8	61.9	61.9	60.3	62.1
5	02:00 to 03:00	59.3	60.1	59.7	59.5	57.8	60.5
6	03:00 to 04:00	53.8	58.2	57.6	57.4	56.3	61.3
7	04:00 to 05:00	56.3	57.5	56.3	56.3	56.8	58.6
8	05:00 to 06:00	55.6	59.3	57.5	58.1	57.3	58.1
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		CT-4 RMU-1				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time				
		22-11-2023	18-12-2023	15-01-2024	15-02-2024	18-03-2024
1	06:00 to 07:00	62.2	63.7	62.8	64.2	63.3
2	07:00 to 08:00	65.2	66.4	65.3	64.9	65.2
3	08:00 to 09:00	63.8	68.9	68.9	67.8	66.3
4	09:00 to 10:00	66.8	65.4	64.1	65.3	67.2
5	10:00 to 11:00	64.1	66.3	65.8	63.8	65.4
6	11:00 to 12:00	63.4	65.6	66.7	65.2	66.8
7	12:00 to 13:00	65.3	64.3	65.3	62.3	65.1
8	13:00 to 14:00	68.1	67.2	67.5	66.8	65.4
9	14:00 to 15:00	64.9	65.2	64.2	63.8	64.3
10	15:00 to 16:00	66.3	67.8	66.8	64.9	66.1
11	16:00 to 17:00	64.8	65.1	66.2	66.3	64.8
12	17:00 to 18:00	65.3	64.5	64.5	65.1	63.7
13	18:00 to 19:00	66.2	67.4	67.4	66.7	65.2
14	19:00 to 20:00	64.8	65.3	64.37	65.2	64.8
15	20:00 to 21:00	63.2	64.7	64.7	63.7	61.7
16	21:00 to 22:00	60.6	62.5	62.4	63.1	62.7
Day Time		<75 dB (A)				

Continue...

Location Name		CT-4 RMU-1				
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time				
		22-11-2023	18-12-2023	15-01-2024	15-02-2024	18-03-2024
1	22:00 to 23:00	60.4	62.8	63.6	62.9	61.8
2	23:00 to 24:00	63.2	60.5	61.4	63.2	64.3
3	24:00 to 01:00	60.1	64.3	64.3	63.4	62.7
4	01:00 to 02:00	58.4	61.6	62.8	64.3	64.3
5	02:00 to 03:00	60.2	62.4	62.4	63.8	62.4
6	03:00 to 04:00	57.4	64.1	63.8	64.6	64.1
7	04:00 to 05:00	56.2	62.6	63.7	62.4	63.4
8	05:00 to 06:00	57.3	60.1	60.3	58.6	60.2
Day Time		<70 dB (A)				

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Stack Monitoring

Sr. No.	Parameter	Unit	Hot Water System-1 (Liquid Terminal)	Hot Water System-2 (Liquid Terminal)	Thermic Fluid Heater (Bitumin-1)	Thermic Fluid Heater (Bitumin-2)	GPCB LIMIT	Method of Test
Oct-23								
1	Particulate Matter	mg/Nm ³	20.16	20.53	23.28	22.45	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	7.41	6.74	8.32	9.75	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	23.68	20.38	20.61	23.18	50	IS 11255 (Part - 7)
Nov-23								
1	Particulate Matter	mg/Nm ³	21.45	19.86	22.51	20.69	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	7.86	6.13	7.89	8.92	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	24.15	19.87	19.60	21.45	50	IS 11255 (Part - 7)
Dec-23								
1	Particulate Matter	mg/Nm ³	21.87	20.31	22.98	21.47	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	7.91	6.80	8.03	9.28	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	24.43	20.12	20.50	22.13	50	IS 11255 (Part - 7)
Jan-24								
1	Particulate Matter	mg/Nm ³	22.11	20.74	23.11	22.17	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	8.12	6.96	8.27	9.49	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	24.73	20.62	21.06	22.86	50	IS 11255 (Part - 7)

Continue...

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024)

QCI-NABET Accredited EIA & GW Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

ISO 9001 : 2015 Certified Company

ISO 45001 : 2018 Certified Company

Sr. No.	Parameter	Unit	Hot Water System-1 (Liquid Terminal)	Hot Water System-2 (Liquid Terminal)	Thermic Fluid Heater (Bitumin-1)	Thermic Fluid Heater (Bitumin-2)	GPCB LIMIT	Method of Test
Feb-24								
1	Particulate Matter	mg/Nm ³	21.87	20.52	23.84	21.96	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	7.78	7.10	8.11	9.17	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	24.10	21.11	20.89	22.49	50	IS 11255 (Part - 7)
Mar-24								
1	Particulate Matter	mg/Nm ³	22.43	21.19	22.95	23.41	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	8.12	6.74	8.34	8.57	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	22.97	20.13	21.37	21.15	50	IS 11255 (Part - 7)



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Stack Monitoring

Sr. No.	Parameter	Unit	D.G. Set-6, 7 & 8 (1250 KVA - CT2) Common Stack	D.G. Set-9 (1500 KVA - CT3)	D.G. Set-10 (1500 KVA - CT3)	D.G. Set-11 (1500 KVA - CT3)	GPCB LIMIT	Method of Test
			Mar-24	Mar-24				
			23-03-2024	21-02-2024	21-02-2024	21-02-2024		
1	Particulate Matter	mg/Nm ³	22.46	16.27	19.72	17.11	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	8.18	12.86	15.49	14.53	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	16.92	25.43	27.64	20.39	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm ³	1.7	1.64	1.26	0.95	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27
Sr. No.	Parameter	Unit	D.G. Set-12 (1500 KVA) - CT4	D.G. Set-13 (1500 KVA) - CT4	D.G. Set-14 (1500 KVA) - CT4	D.G. Set-1 (500 KVA) - DG House - MPT	GPCB LIMIT	Method of Test
			Feb-24			Dec-22		
			24-02-2024	24-02-2024	24-02-2024	25-02-2024		
1	Particulate Matter	mg/Nm ³	22.65	25.29	19.98	20.43	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	8.12	8.91	8.56	7.28	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	20.37	22.13	18.11	26.86	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm ³	1.12	1.87	1.51	1.13	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27

Continue...

Sr. No.	Parameter	Unit	D.G. Set-2 (500 KVA) - DG House - MPT	D.G. Set-3 (500 KVA) - DG House - MPT	D.G. Set-4 (500 KVA) - DG House - MPT	D.G. Set-5 (500 KVA) - DG House - MPT	GPCB LIMIT	Method of Test
			Feb-24					
			25-02-2024	25-02-2024	25-02-2024	25-02-2024		
1	Particulate Matter	mg/Nm ³	24.69	22.36	27.11	22.1	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	7.00	9.24	8.96	8.87	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	28.37	28.39	27.88	27.26	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm ³	1.53	1.72	1.97	1.45	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	Not Detected	Not Detected	Not Detected	--	UERL/AIR/SOP/27



Nikunj D. Patel
(Chemist)



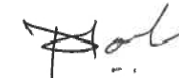

Jaivik S. Tandel
(Manager - Operations)

RESULTS OF BORE HOLE WATER

SR.NO.	TEST PARAMETERS	UNIT	Pump House-1	Pump House-2	Pump House-3	Near Unloading bays	Near ETP	TEST METHOD
			12-02-2024	12-02-2024	12-02-2024	12-02-2024	12-02-2024	
1.	pH @ 25 ° C	--	7.81	7.45	8.03	8.32	8.23	IS 3025(Part 11)1983
2.	Salinity	ppt	1.07	0.99	1.76	3.44	3	APHA 23 rd Ed.,2017,2520 B
3.	Oil & Grease	mg/L	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	BDL(MDL:5.0)	IS 3025(Part39)1991, Amd. 2
4.	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	GC/GCMS
5.	Lead as Pb	mg/L	BDL(MDL:0.01)	0.022	BDL(MDL:0.01)	0.109	BDL(MDL:0.01)	IS 3025 (PART 47) 1994
6.	Arsenic as As	mg/L	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	APHA 23 rd Ed.,2017,3114-C
7.	Nickel as Ni	mg/L	BDL(MDL:0.02)	BDL(MDL:0.02)	BDL(MDL:0.02)	BDL(MDL:0.02)	BDL(MDL:0.02)	IS 3025 (PART 54) 2003
8.	Total Chromium as Cr	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 52) 2003
9.	Cadmium as Cd	mg/L	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	0.015	0.008	IS 3025(PART 41) 1992
10.	Mercury as Hg	mg/L	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	APHA 23 rd Ed.,2017, 3112-B
11.	Zinc as Zn	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025(PART 49) 1994
12.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	IS 3025 (PART 42) 1992
13.	Iron as Fe	mg/L	1.236	1.776	BDL(MDL:0.1)	0.114	0.115	IS 3025(PART 53) 2003
14.	Insecticides/Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	USEPA 8081 B
15.	Depth of Water Level from Ground Level	meter	1.9	2.1	1.95	2.2	2.1	--



Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

Minimum Detection Limit

Ambient Air Quality Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Particulate Matter (PM10)	µg/m ³	5 µg/m ³
2	Particulate Matter (PM2.5)	µg/m ³	5 µg/m ³
3	Sulphur Dioxide (SO ₂)	µg/m ³	4 µg/m ³
4	Nitrogen Dioxide (NO ₂)	µg/m ³	5 µg/m ³
5	Carbon Monoxide (CO)	mg/m ³	0.01 mg/m ³
6	Ammonia (NH ₃)	µg/m ³	5 µg/m ³
7	Ozone (O ₃)	µg/m ³	5 µg/m ³
8	Lead (Pb)	µg/m ³	0.5 µg/m ³
9	Nickle (Ni)	ng/m ³	1 ng/m ³
10	Arsenic (As)	ng/m ³	1 ng/m ³
11	Benzene	µg/m ³	1µg/m ³
12	Benzo(o)Pyrene	ng/m ³	0.1 ng/m ³
14	Hydro Carbon	µg/m ³	1 µg/m ³

Stack Emission Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Suspended particulate matter	mg/Nm ³	2 mg/Nm ³
2	Sulphur Dioxide SO _X	mg/Nm ³	4 mg/Nm ³
3	Oxides of Nitrogen NO _X	mg/Nm ³	5 mg/Nm ³

ETP Water

Sr. No.	Test Parameter	Unit	MDL
1	Colour	Pt. Co. Scale	5
2	pH @ 27 ° C	--	2
3	Temperature	0C	5
4	Total Suspended Solids	mg/L	4
5	Total Dissolved Solids	mg/L	4
6	COD	mg/L	2
7	BOD (3 days at 27 0C)	mg/L	1
8	Chloride (as Cl) -	mg/L	1
9	Oil & Grease	mg/L	2
10	Sulphate (as SO4)	mg/L	1
11	Ammonical Nitrogen	mg/L	2
12	Phenolic Compound	mg/L	0.1
13	Copper as Cu	mg/L	0.05
14	Lead as Pb	mg/L	0.01
15	Sulphide as S	mg/L	0.05
16	Cadmium as Cd	mg/L	0.003
17	Fluoride as F	mg/L	0.2
18	Residual Chlorine	mg/L	0.1
19	Percent Sodium	%	--
20	Sodium Absorption ratio	--	--

MARINE WATER

Sr. No.	Test Parameter	Unit	MDL
1	pH	--	5
2	Temperature	oC	5
3	Total Suspended Solids	mg/L	4
4	BOD (3 Days @ 27oC)	mg/L	1
5	Dissolved Oxygen	mg/L	0.2
6	Salinity	ppt	0.01
7	Oil & Grease	mg/L	2
8	Nitrate as NO ₃	μmol/L	0.4
9	Nitrite as NO ₂	μmol/L	0.04
10	Ammonical Nitrogen as NH ₃	μmol/L	0.8
11	Phosphates as PO ₄	μmol/L	0.4
12	Total Nitrogen	μmol/L	2.2
13	Petroleum Hydrocarbon	μg/L	0.1
14	Total Dissolved Solids	mg/L	4
15	COD	mg/L	2

Sea SEDIMENT

Sr. No.	Test Parameter	Unit	MDL
1	Organic Matter	%	0.5
2	Phosphorus as P	µg/g	1
3	Texture	--	--
4	Petroleum Hydrocarbon	µg/g	0.1
5	Aluminum as Al	%	0.1
6	Total Chromium as Cr+3	µg/g	2
7	Manganese as Mn	µg/g	1
8	Iron as Fe	%	0.1
9	Nickel as Ni	µg/g	1
10	Copper as Cu	µg/g	1
11	Zinc as Zn	µg/g	1
12	Lead as Pb	µg/g	1
13	Mercury as Hg	µg/g	0.05

BORE HOLE WATER

Sr. No.	Test Parameter	Unit	MDL
1	pH @ 25 ° C	--	5
2	Salinity	ppt	--
3	Oil & Grease	mg/L	2
4	Hydrocarbon	mg/L	0.1
5	Lead as Pb	mg/L	0.01
6	Arsenic as As	mg/L	0.01
7	Nickel as Ni	mg/L	0.02
8	Total Chromium as Cr	mg/L	0.05
9	Cadmium as Cd	mg/L	0.003
10	Mercury as Hg	mg/L	0.001
11	Zinc as Zn	mg/L	0.05
12	Copper as Cu	mg/L	0.05
13	Iron as Fe	mg/L	0.1
14	Insecticides/Pesticides	µg/L	0.1
15	Depth of Water Level from Ground Level	meter	--

Annexure – 2

Details of Greenbelt Development at APSEZ, Mundra

	Total Green Zone Detail till Up to March 2024				
LOCATION	Area (In Ha.)	Trees (Nos.)	Palm (Nos.)	Shrubs (SQM)	Lawn (SQM)
SV COLONY	72.29	34920.00	7962.00	69696.00	100646.00
PORT & NON SEZ	81.61	149359.00	19220.00	75061.78	62966.38
SEZ	115.70	226120.00	20489.00	220583.60	28162.03
MITAP	2.47	8113.00	33.00	3340.00	4036.00
WEST PORT	104.29	248074.00	66816.00	24112.00	16369.00
AGRI PARK	8.94	17244.00	1332.00	5400.00	2121.44
SOUTH PORT	14.45	27530.00	3470.00	3882.00	3327.26
Samundra Township	58.26	63722.00	11834.00	23908.89	47520.07
Productive Farming (Vadala Farm)	0.00	0.00	0.00	0.00	0.00
TOTAL (APSEZL)	457.99	775082.00	131156.00	425984.27	265148.18
		<i>906238.00</i>			

Details of Mangrove Afforestation done by APSEZ

Sl. no.	Location	District	Area (Ha)	Duration	Species	Implementation agency
1	Mundra Port	Kutch	24	-	Avicennia marina	Dr. Maity, Mangrove consultant of India
2	Mundra Port	Kutch	25	-	Avicennia marina	Dr. Maity, Mangrove consultant of India
3	Luni/Hamirmora (Mundra)	Kutch	160.8	2007 - 2015	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GUIDE, Bhuj
4	Kukadsar (Mundra)	Kutch	66.5	2012 - 2014	Avicennia marina	GUIDE, Bhuj
5	Forest Area (Mundra)	Kutch	298	2011 - 2013	Avicennia marina	Forest Dept, Bhuj
6	Jangi Village (Bhachau)	Kutch	50	2012 - 2014	Avicennia marina	GUIDE, Bhuj
7	Jakhau Village (Abdasa)	Kutch	310.6	2007-08 & 2011-13	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GUIDE, Bhuj
8	Sat Saida Bet	Kutch	255	2014-15 & 2016-17	Avicennia marina & Biodiversity	GUIDE, Bhuj
9	Dandi Village	Navsari	800	2006 - 2011	Avicennia marina, Rhizophora mucronata, Ceriops tagal	GEC, Gandhinagar
10	Talaja Village	Bhavnagar	50	2011-12	Avicennia marina	Forest Dept, Talaja
11	Narmada Village	Bhavnagar	250	2014 - 2015	Avicennia marina	GEC, Gandhinagar
12	Malpur Village	Bharuch	200	2012-14	Avicennia marina	SAVE, Ahmedabad
13	Kantiyajal Village	Bharuch	50	2014-15	Avicennia marina	SAVE, Ahmedabad
14	Devla Village	Bharuch	150	210-16	Avicennia marina	SAVE, Ahmedabad
15	Village Tala Talav (Khambhat)	Anand	100	2015 - 2016	Avicennia marina	SAVE, Ahmedabad
16	Village Tala Talav (Khambhat)	Anand	38	2015 - 2016	Avicennia marina	GEC, Gandhinagar
17	Aliya Bet, Village Katpor (Hansot)	Bharuch	62	2017-18	Avicennia marina & Rhizophora spp.	GEC, Gandhinagar
18	Kukadsar- (Bhadeswar- Mundra)	Kutch	250	2021-22	Avicennia marina	Shreeji Enterprise, Amreli
19	Kukadsar- (Bhadeswar- Mundra)	Kutch	750	2022-23	Avicennia marina	Shreeji Enterprise, Amreli
20	Kukadsar- (Bhadeswar- Mundra)	Kutch	250	2023-24	Avicennia marina	Shreeji Enterprise, Amreli
Total			4140			

Annexure – 3

CSR Gujarat

Kutch – Hazira – Dahej

adani
Foundation

pond deepening

A N N U A L R E P O R T 2 0 2 3 - 2 4

Adani Foundation
Adani House, Port Road, Mundra – Kutch 370 421
[info@adanifoundation.com] [www.adanifoundation.com]



Our Journey by Mr. Rakshit Shah, Executive Director APSEZ



From Pledge to Progress Further,

I am happy to share that Adani Foundation continued to make significant strides to elevate the sustainability of our CSR operations. This year We prioritize capacity building and awareness on ESG, as evidenced in 8 employees completing training modules that raise awareness about best practices in ESG. We raised the bar through our environmental initiatives, Water Conservation, Terrestrial and Coastal Biodiversity. We are also spreading awareness for reducing paper usage, Reducing emissions through firewood cooking, diesel free village drive at Surat district and increasing the green cover by planting trees. We enhanced the impact of our social initiatives by empowering women through Enhancing skill and Livelihood, increasing gender diversity and improving inclusivity. We are working for socio economic upliftment marginalized community i.e. Primitive Tribes at Bharuch and Surat district and fisherman at Kutchh district.

Our commitment to sustainable CSR operations has earned the trust of our stakeholders and contributed to our success. It has also helped us build a more resilient, sustainable and profitable business. I thank our Adani Foundation Team for their continued support and dedication to our commitment to sustainable CSR practices, as we remain focused on driving long-term value for our stakeholders, and the communities in which we operate.

With best wishes,

Rakshit Shah

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CSR KUTCH

The Adani group plans to invest over two lakh crore rupees in Kutch over the next five years, creating around 100,000 jobs. The investment is expected to contribute to a Vikshit Gujarat, with the group constructing a world-largest green energy park in Khavda, Kutch, and expanding its green supply chain. Kutch Copper Ltd, a subsidiary of Adani Enterprises Ltd (AEL), the world's largest single-location copper manufacturing plant at Mundra in Gujarat, will start operations of the first phase by March-end and full-scale 1 million tonnes capacity by FY29. Mundra Port, Adani Power Plant, Adani Wilmar and Mundra Solar is reached to remarkable development ! Adani Foundation is instrumental in Mundra from 25 years but for last 3 years, started CSR at Khavda, Nakhtranana, Lakhpat and Abdasa Taluka in Community health care, Women Empowerment and Water conservation core.



Demographic Details

Block	Villages	No. of HHs	Population
Mundra	61 Villages	35192	153179
Anjar	6 Villages	5350	28500
Nakhtrana	22 Villages	14093	36373
Lakhpat	20 Villages	8092	18976
Khavda	22 Villages	8450	35200
Rapar	3 Villages	345	12450
Mandvi	8 Villages	2780	14560
Abdasa	12 Villages	2415	9660

1. Adani Ports and SEZ Limited
2. Adani Power Mundra Limited
3. Adani Wilmar Limited
4. Adani Wilmar – Caster Limited
5. Kutchh Copper Limited
6. Mundra Solar PV Ltd
7. Mundra Petrochem Ltd
8. Adani Kandla Bulk Terminal Private Limited
9. Adani Solar Limited – Bitta, Abdasa
10. Adani Green Energy Limited – Nakhtrana
11. Adani Green Energy Limited - Khavda
12. Adani Energy Solution Limited – Rapar

Environment Sustainability



Water Conservation 

Soil Conservation 

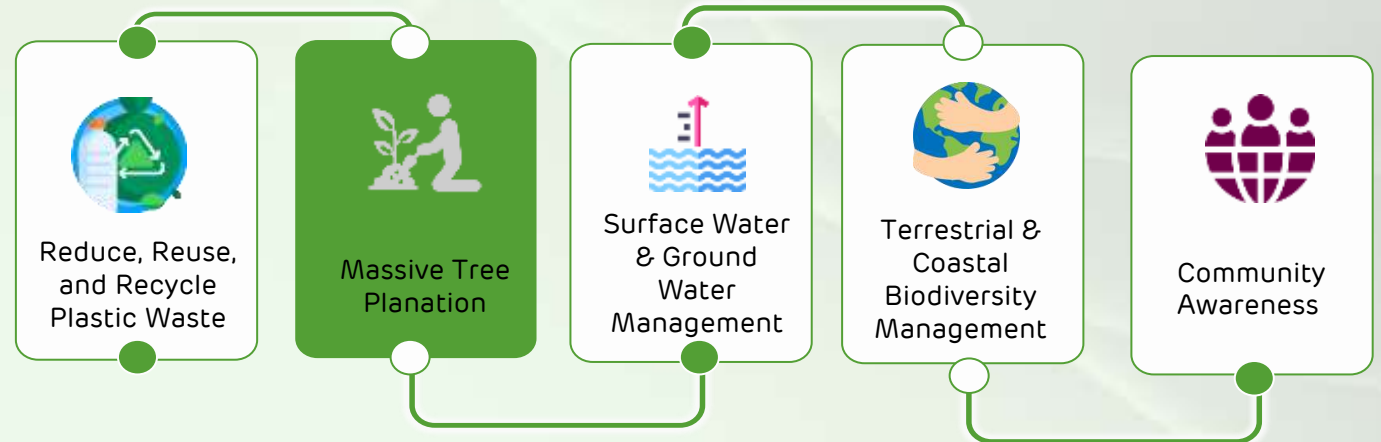
Terrestrial Biodiversity 

Coastal Biodiversity 

Plastic Free Drive 

Environment Sustainability

As per UN Sustainable Development Goal. 13 - The environment and biodiversity serve as the lifeblood of our planet, playing a crucial role in maintaining ecological balance and sustaining life in all its diverse forms. Preserving them is more than a necessity; it is a shared responsibility to secure the health and well-being of both present and future generations. Adani Foundation embodies this commitment through its varied environmental projects. These range from extensive tree plantation and mangrove restoration to innovative biogas provision, drip irrigation, Plastic Free Drive, groundwater recharging, and water conservation.



Action to environment Sustainability



Swajal Project



AIM:

The Foundation's Water Conservation program, SWAJAL, is aimed at addressing the alarming depletion of groundwater levels and reduction in water sources in various parts of Kutch district.

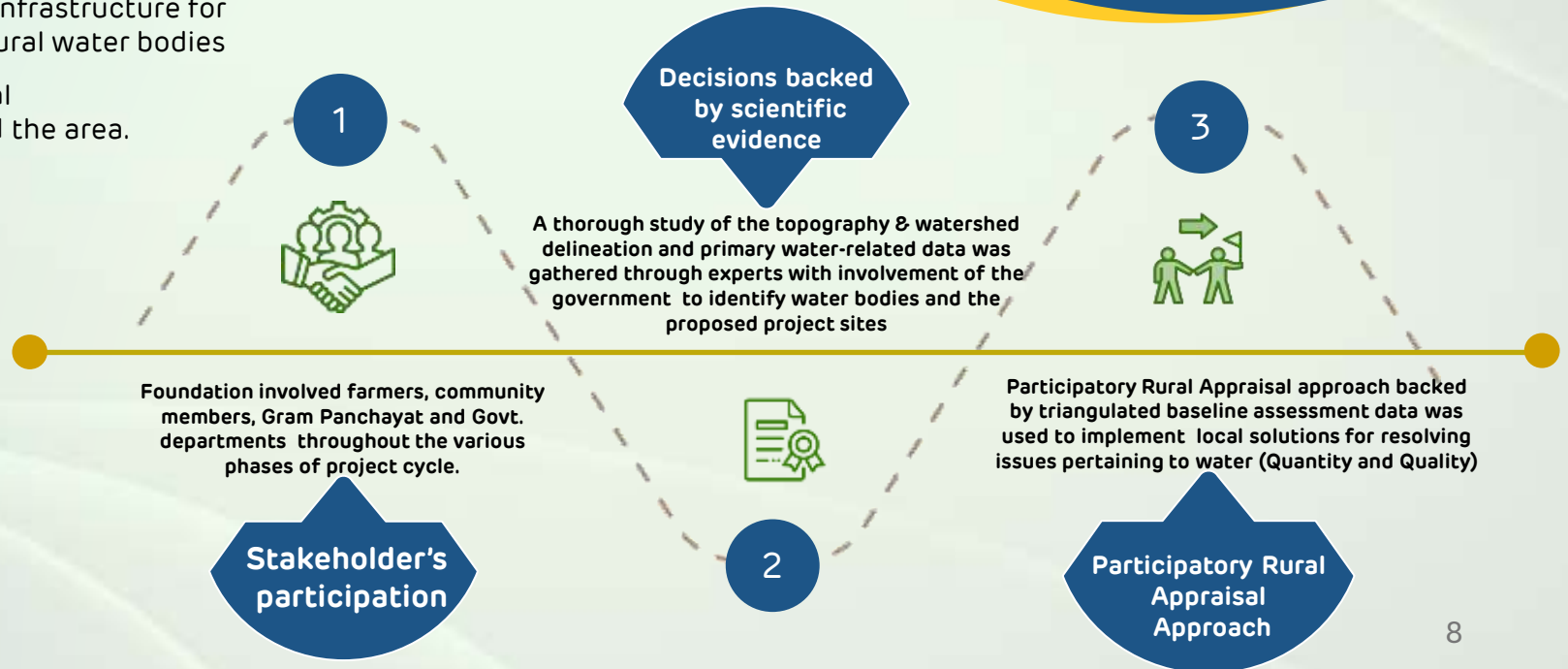


Vision:

Devising eco-friendly and cost-efficient methods of water body rejuvenation, the project works

1. To revive existing water resources,
2. Plan sustainable infrastructure for protection of natural water bodies
3. Improve ecological conditions around the area.

Process:





Water Security Plan

Due to arid climatic characters of the Kutch region, it is essential to plan for water security drinking and livelihood purposes. Considering weather condition, rainfall characters, geohydrological condition and water demand, water security plan has been prepared for all the Seven villages.

To prepare water security plan following method has been adopted:

1. Overview of the Project villages through primary field visit and reference of prestudied and reports.
2. Survey of existing surface water resources to assess the potential and further scope of development.
3. Groundwater monitoring in term of storage and quality assessment.
4. Water balance calculation considering water supply and demand estimation.
5. Integrated water resource development and management plan for each village.

Swajal in Kutch – Block wise:

Sr. No.	Block Name	Water conservation structure	Total no. of Structure	Total Capacity Created (CUM)
1	Mundra	Check Dam	23	6,07,332.80
		Pond Deepening	66	1,89,121.08
		RRWHS	275	2750
		Percolation Well	24	-
		Bore & Well Recharge	209	-
2	Dayapar	Pond Deepening	2	9,200
		Check Dam	1	18,000.00
3	Khavda	Pond Deepening	1	2,000
		Check Dam	1	16,000.00
4	Abdasa	Pond Deepening	1	22,000
5	Lakhpatt	Check Dam	1	21,237.64

Swajal - Impact:



28,000
farmers Benefited



7.2%
Increase Revenue



17% TDS reduced



Rs. 1150
Reduce in health expenses/month



Total Water capacity increased

8,87,641 Cum
= 31.35 MCFT

Water Conservation Structure:



Soil Conservation

1250 Farmers	07 exposure	857 Farmers	258 Gobardhan	35 Farmers	Rs.9.88 Lacs RG
•Awareness Sessions at Village Level: Spreading awareness on natural farming benefits and address their concerns.	•Hands-On Training & Exposures : Arranged Workshop and training to emphasizing on real-world techniques.	•Link with Government Scheme: facilitation of govt. Cow Nurturing scheme to promote eco-friendly farming practices.	•Bio-gas Support: Link with Gov Gobar Dhan Biogas Unit Nutrient-rich slurry serves as an essential organic fertilizer for natural farming	•Natural Farming Certification Process to obtain natural farming certification through the GOPCA for the 35 Farmers who are Members of Raj shakti Sahakrai Mandali.	•Marketing Assistance: Provide platforms and resources ensuring fair prices and broader consumer reach.

Natural Farming

Natural farming is an urgent need of the hour, We have initiated a comprehensive approach to promote natural farming practices through a variety of activities aiming to minimize pesticides and chemicals uses ,lead to produce , nutritious, chemical-free produce which is benefitting both farmers and consumers by providing healthier and more sustainable food options as well as plays significant role to flourishing environment and balanced ecosystem.



Home Biogas

Phase	unit	Unit Cost In Rs.	AF in Lac	Support Beneficiaries Contribution in Lac	Gov. Convergence in Lac	Total in Lac
Phase -1	125	23200	29	3.75	0	32.75
Phase -2	100	42000	42.0	5.0	0	47
Phase -3	100	42000	0	5.0	37	42
Phase -4	258	42000	6.45	6.45	95.46	108.36
Total	583	149200	77.45	20.2	132.46	230.11

Home biogas systems, adept at converting organic waste into renewable energy, present a sustainable and eco-friendly solution for cooking. We have started this project in 2020, with farmers contributing 10% towards the cost, that persisted till 2022. Since then, we have scaled our initiative by aligning with government home biogas schemes to amplify the reach and adoption of this eco-friendly technology in wider rural regions.

The deployment of home biogas has been particularly transformative for women, offering a healthier, smoke-free cooking environment reducing greenhouse gas emissions.

Current year we process to facilitate 258 Gobardhan unit through Gov.



Natural farming Workshop with Governor of Gujarat

- To promote natural farming, the Adani Foundation and Shri Rajshakti Natural Farming Cooperative Society Ltd. are making numerous efforts in kutch. In our endeavor to motivate and raise awareness among farmers, we recently organized a significant event inviting the Governor of Gujarat, Shri Acharya Devrath, Mr. V.S. Gadhavi, Executive Director of the Adani Foundation, and other distinguished guests. Addressing a gathering of 2000 farmers, Shri Acharya Devvrat aimed to inspire and enlighten them about the benefits and importance of adopting natural farming practices.
- "The foundation of people's well-being and health lies in the health of the land. Natural farming is the only way for this," said Acharya Devvratji, emphasizing that microscopic organisms in the soil nourish crops with essential elements, providing healthy and nutritious food. Devvratji highlighted the harmful effects of chemical fertilizers and pesticides on the land and urged farmers to adopt natural farming practices.





Revival of Date Palm destroyed by **BIPORJOY** Cyclone



Dates Tree -Restoration

Biparjoy cyclone has damaged huge number plants of Dates, Mango, Sapota. In coordination with Kutch Crop Services and Krishi Vigyan Kendra – more than 615 plants are restored till date and continue. This initiative has created trust and credibility in farmers of Mundra. As for one date tree Average revenue is 25000 INR – this initiative revenue generation will be 1.53 Cr per year which is remarkable.



Go Green – Horticulture Saplings Distribution to Farmers



Objective :

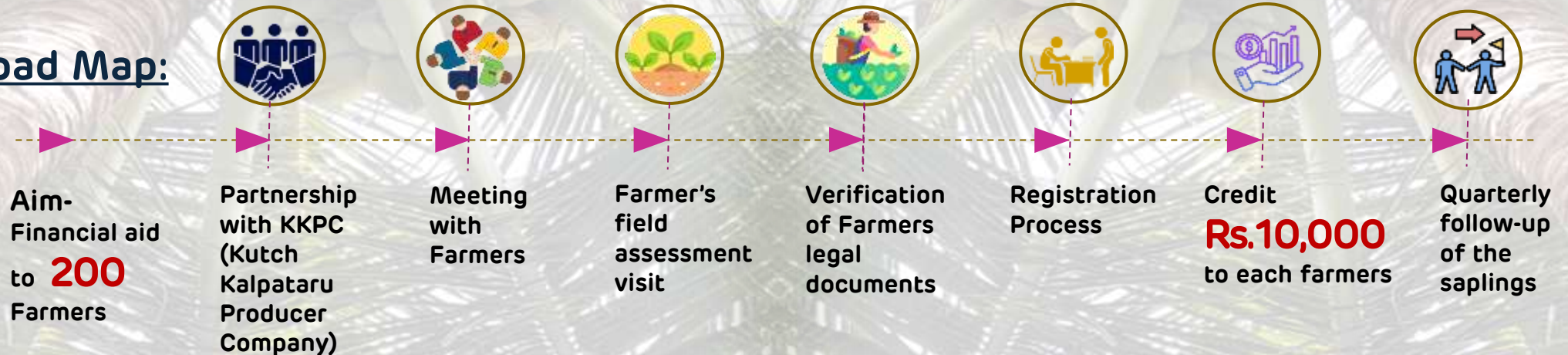
In alignment with a vision for sustainable agriculture and environmental stewardship, MPL aims to empower local farmers and contribute to larger environmental goals. The initiative focuses on providing financial assistance to 200 farmers for cultivating horticultural saplings.



Impacts :

- Environmental sustainability
- Carbon sequestration
- Soil conservation
- Combat climate change
- A healthier ecosystem
- Contributing to a cleaner atmosphere

Road Map:



Go Green – Horticulture Saplings Distribution to Farmers



Carbon sequestration Value :

Supported the plantation of 53,136 fruit bearing trees.

These plants will sequester 1,465.00 MT of CO2 after 5 years as per calculation in Mundra Petrochem villages

Name of Fruit bearing Tree	Co2 Sequ Kg	No of Plants	Total Co2 Seq - Kg
Mango	41.47	33,780	1,400,856.6
Custard Apple	4	1,300	5,200
Dates	12.8	15,856	2,02,956.8
Coconut	26.87	2,200	59,114
Total		53,136	1,465,170.6



Event: Horticulture Sapling Distribution and No Plastic Drive

Noteworthy event unfolded at the serene Sonal Mata Ji Temple in Vakrai - Moti Bhujpur, organized by Adani Foundation and Adani Petrochemicals. The focus of this gathering was giving away horticulture saplings through financial assistance, a symbolic step towards fostering a cleaner and sustainable environment.

Our esteemed guests for this event include R N Parmar, RO GPCB; Javed Sindhi, Mamlatdar Mundra; Vinay Kumar Singh, Head ESG MPL; Bhagwat Swaroop Sharma, Head Environment; Panktiben Shah, Head CSR Gujarat; Vishnu Patidar, ESG expert; and Laxmiben Ninjan, Sarpanch Bhujpur.

Mr. R.N. Parmar addressed the imperative need for cultivating a green and healthy environment for current and future generations. Additionally, he praised the efforts of Adani Petrochemicals and Adani Foundation, emphasizing the importance of sustainable practices.

The primary objective of the event was to extend financial support to 200 farmers, each receiving Rs. 10,000, a transaction gracefully facilitated by Mr. R. N. Parmar, virtually transferring funds to their bank accounts, funded by Adani Petrochemicals. Presently, MPL is aiding over 300 farmers in planting a total of 53,136 fruit-bearing plants.

The event further shone a spotlight on past beneficiaries of drip irrigation and tissue dates distribution, who took the stage to share their experiences and express gratitude for the transformative support received. Adding a touch of artistry, small Utthan students staged a captivating environment protection act.

As the event wrapped up, a strong commitment was made to keep supporting and assessing efforts for a greener environment, contributing to carbon sequestration.



Terrestrial Biodiversity

Vruksh Se Vikas – Massive Drive

Since 2014, we have embarked on a transformative journey to execute a wide range of tree plantation drives in collaboration with local communities and forestry departments.

1. Miyawaki Forest Development: Native species plantation in the 2-acre area at Nana Kapaya village creating a flourishing mini-forest with 5,508 trees.

2. "Adani Van": Barren spaces were transformed into lush green havens through our massive public plantation drives. One notable example is the Bhupur Visri Mata Temple, where 23,000 trees were planted. Second example Momai Mata temple, Desalpar 10,000 trees were planted. Third Example Matiyadada at Bhujpur 8000 trees were planted. Fourth example Rasha pir, Dhruv 2-acre 5000 trees planted. Thus, in PPP Model 4 Adani Van were developed where 46,000 trees were planted.

Prakruti Rath: This initiative goes beyond just planting trees; it is about fostering a sense of responsibility towards our environment. Through 46,750 sapling distribution to individuals, we have empowered communities to take ownership of their surroundings, leading to a heightened consciousness about the environment's significance.

Till the date Total 1.49 Lac tree plantation have been done that has enriched the local ecosystem and significantly contributed to carbon sequestration

Completed the plantation of 1,49,889 trees. These plants will sequester 3180.00 MT of CO₂ after 5 years as per calculation in Mundra Petrochem villages

1.49
Lac tree
plantation





Coastal Biodiversity

Mangrove Biodiversity



In 2010, we initiated a mangrove plantation project at Luni coastal belt, ultimately leading to 162 hectares of dense mangrove forests. Subsequently, we expanded our efforts by planning and implementing a multi-species mangrove plantation across an additional 20 hectares. These plantations are diligently maintained and continually monitored. Notably, these forests have evolved into a thriving habitat for various marine and

migratory bird species, enriching the local ecosystem.. Since PhD scholars and students frequently visit this area for study, we plan to establish it as a Center of Excellence, serving as a hub to create awareness among students and facilitating research activities for scientist

Mangrove Plantation Work Detail				
Sr. No	Year	Number	Person days	Remarks
1	2011-12	50000	3000	
2	2012-13	125000	6943	
3	2013-14	60000	1480	
4	2014-15	125000	6501	
5	2015-16	65000	3533	
6	2016-17	20000	3125	
7	2017-18	100000	3666	
8	2018-19		7539	Algal Removal work
9	2019-20		6261	Algal Removal work
10	2020-21		4830	Algal Removal work
11	2021-22	97000	5200	
12	2022-23	100000	4445	
Total		742000	56523	

4+

Spices of Mangroves

60+

Coastal Spices as habitat preservation

160+

Hector Avicennia marine plantation

20+

Hector Biodiversity park

Plastic Free Drive

Objective:

The central aim of the Plastic-Free Drive is to empower and enlighten students as key agents of change, enabling them to disseminate awareness and instill the practice of reducing single-use plastics within their community.

1. Educate: Spread awareness about the harmful effects of plastic on the environment, marine life, soil health, and human well-being.

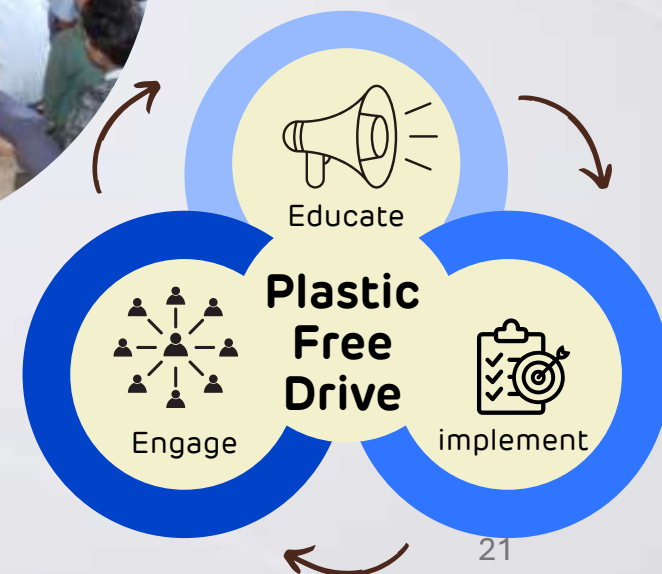
2. Engage: Mobilize community members, especially the youth and family members to actively participate in plastic waste reduction activities.

3. Implement: Introduce sustainable alternatives to ensure proper disposal and recycling. As of now we supply plastic to one NGO to prepare Garden benches. .

Outreach :-

12000 Students of Primary Schools.

990 Students of Secondary Schools of Mundra Block.





5 Years

उत्थाव

2018-2023

adani
Foundation

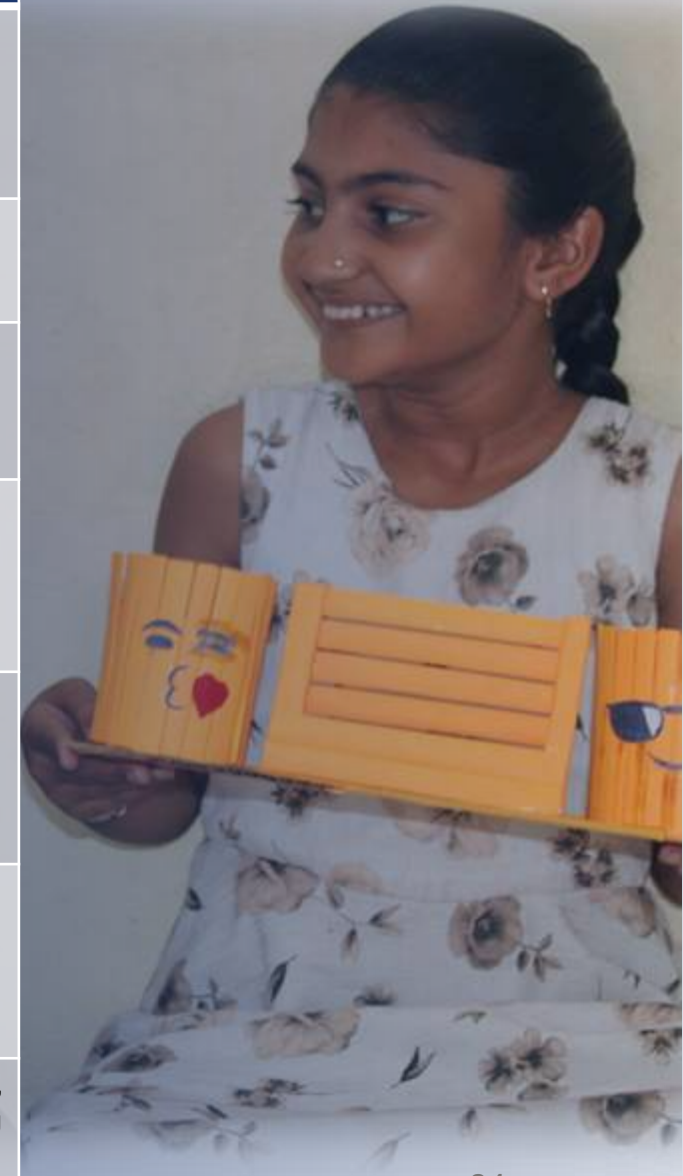


Education: Utthan

Project Utthan, an innovative initiative by the Adani Foundation by Mou with DEO, which aligns seamlessly with both the National Education Policy 2020 and the Sustainable Development Goal. By adopting government primary schools, Utthan fostering community engagement, it aims to create model schools that empower students and elevate education quality. By providing dedicated teachers and essential facilities, Utthan strive to enhance the Gunotsav results of primary schools and improve the Board results of 10th standard students. Project Utthan takes the lead in initiating various co-curricular activities to ensure the holistic development of students. Through capacity-building programs and collaborative efforts, we envision a future where every child receives holistic and empowering education, paving the way for a brighter tomorrow.



Utthan Initiative	SDG 4	NEP 2020	Benefited
Strengthening government Primary & High schools	Target 4.1.0 suggest to contributes to providing quality education for all.	4.1 and 4.2 - improving primary education.	31 Villages, 77 Schools, 12000+ Students, Efforts for Increase Gunotsav result & Board result.
Appointing an Utthan sahayak	Target 4.1.1 suggest to support students.	5.2 - focus on capacity building and support systems	70+ Utthan sahayak works as catalyst. Students: Teacher ration decrease.
Mainstreamed Progressive learner	Target 4.6.1 suggest fixed level of proficiency in functional	2.1 and 2.2 Mainstream students from progressive learners	Assessment : 6982, Progressive learners : 2541 Mainstreamed : 1278.
Providing required resources and facilities	Target 4.2.1 Suggest the necessary resources for effective learning.	7.4 and 7.5 emphasis on infrastructure development and resource availability.	Sports Kit, Music Kit, TLM Kit, Science Kit provided in schools.
Enabling joyful learning spaces	Target 5.1.2 Suggest positive and engaging learning environments	5.9 & vision of NEP suggest experiential learning to encourages creativity.	Smart Class with Navneet software+ Bala painting + Activity base learning.
Adani Students Development Center (ASDC)	Target 6.1.2 Suggest preparing students for future opportunities.	20.1 and 20.2 NEP's It resonates with the NEP's focus on holistic development and skill-building.	2 Adani Evening Education Center, 5 Adani Competitive Coaching Center, 5 Adani English Coaching Center
Introducing English as a Third Language	Target 5.1.2 Suggest other language learning.	4.13 emphasizes multilingualism and language learning.	Students: 5000+ Classes 1-4, Curriculum, Every Friday morning assembly in English



Utthan Initiative	SDG 4	NEP 2020	Benefited
Enhancing Reading Habits	Target 7.1.2 Promote literacy and a love for reading.	2.8 Supports the NEP's goal of enhancing reading & comprehension skills.	Reading corner , 1000+ Oasis workshop , 162780 Books CICO, 100+ Schools partner from 10+ Country in International school library month(ISLM)
IT on Wheels	Target 4.2.3 Promotes Digital literacy.	5.9 focuses on integrating technology in education.	2 dedicative van, 2 IT instructors, 55 laptops, 34 schools, Empowering 4170 students , 200+ High schools' students
Promote sports	Target 6.1.2 Suggest preparing students for future opportunities	4.8 promoting physical fitness and sports.	6 Students selected in District level sports school, Inspiring more 100 Students. Khel Maha Kumbh : 2000+
Teachers' & Sahayak Capacity Building	Target 4 C Suggest to qualified teachers by cooperation	2.6 emphasizing teacher training and professional development.	3500+ Hours Capacity building program + Webinar + Diksha + 10 full days training.
Formation of Eco Club	Target 5.1.2 Suggest to increase awareness of Environment.	4.44 Promoting environmental awareness.	Plastic free village workshop : 1250+ Students, Environment Awareness program & Tree plantation in schools.
Day Celebrations & Collaboration with GoG	Target 4.2.1 Suggest to inspire Holistic development of students	7.1 children of all ages should learn about arts, sports and careers.	Summer Camp : 6000+ Students Diwali Mela : 5500+ Students. 1400+ Parents participated.
Mothers as catalyst in transformation	Target 4.1.1 Suggest to inspire parents in growth of students	Aligned with NEP's Principles. Page No.6	Mothers meet : 700+ Mothers Joined: 15000+ this year. (Meetings + Home Visit)
Strengthening Stakeholders	Target 4.1.0 suggest to work	Aligned with NEP's Preface, Page No. 4	Support in Taluka, District & state level various initiative with DIRT, BRC, Strengthening SMC Committee.



Utthan Marks 5-Year Milestone

Celebrating the extraordinary five-year journey of Utthan in Mundra, we hosted a remarkable event graced by the presence of distinguished individuals. Among them, the Director of Primary Education, Gujarat, Mr. M. I. Joshi, brought with him not only wisdom but also a sense of grace that elevated the occasion. Standing alongside were the District Development Officer, Mr. Prajapati, and the District Primary Education Officer, Mr. Sanjay Parmar.

Yet, beyond the notable dignitaries, the event witnessed the convergence of more than 2000 students, 416 school principals and teachers, and 145 School Management Committee Members. Their collective presence bore witness to a significant milestone in the enduring journey of Utthan, leaving an indelible mark on our hearts and memories.

In this gracious event, we commend the outstanding contributions of the Principal, Utthan Sahayak, and students who have excelled over the past five years.

During the event, the children showcased their incredible talents. They enthralled the audience with mesmerizing performances, including folk songs, classical dances, and vibrant folk Garba dance. The young talents also graced the stage with captivating dramas and much more.

The event was a true celebration of their skills and abilities, and it was executed with utmost dedication and excellence.





Mother's Meet – Promoting Community Bond

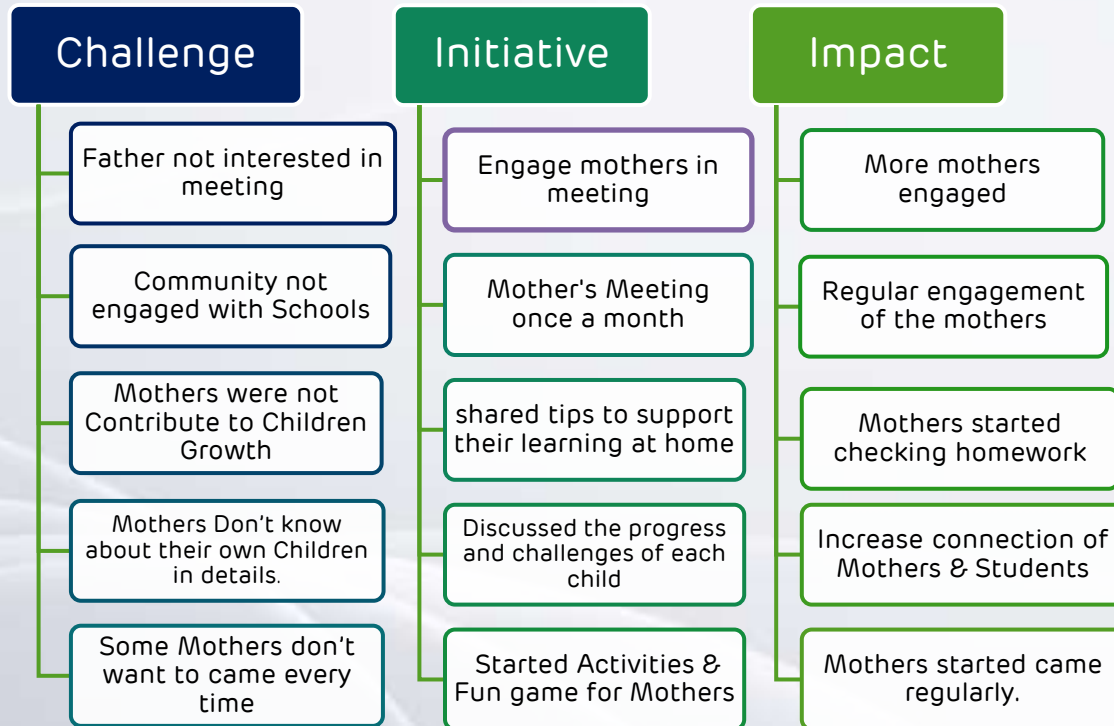
Mothers meet is special intervention of Utthan, This year, more than 15000+ Mothe's Joined in 700+ Mothers meet. Some of the challenges and impact of this initiative through out the year is as bellow:



700+
Mother's meet



15,000+
mother participated

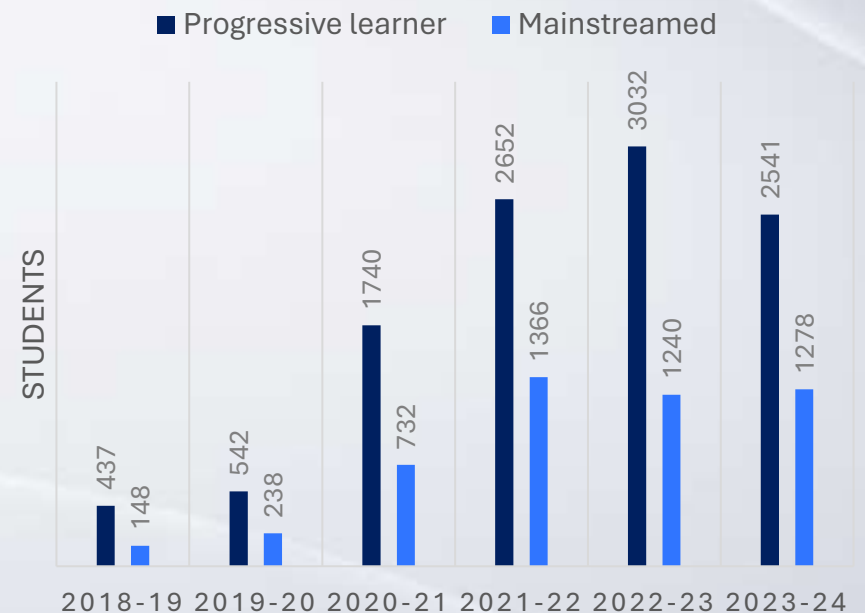


Mainstreaming Progressive learners

Utthan, through its assessment, has identified over 2541 Progressive students out of 6459 from 3rd to 7th standard . Among them, 1278 students have been successfully mainstreamed. The key role played by Utthan Sahayak has been instrumental in achieving this success. Utthan's approach includes a customized syllabus, activity-based learning, and teaching at the right level. Additionally, Utthan actively involves mothers and members of the School Management Committee (SMC) in strengthening progressive learners. Below is the yearly outcome of our hard work:

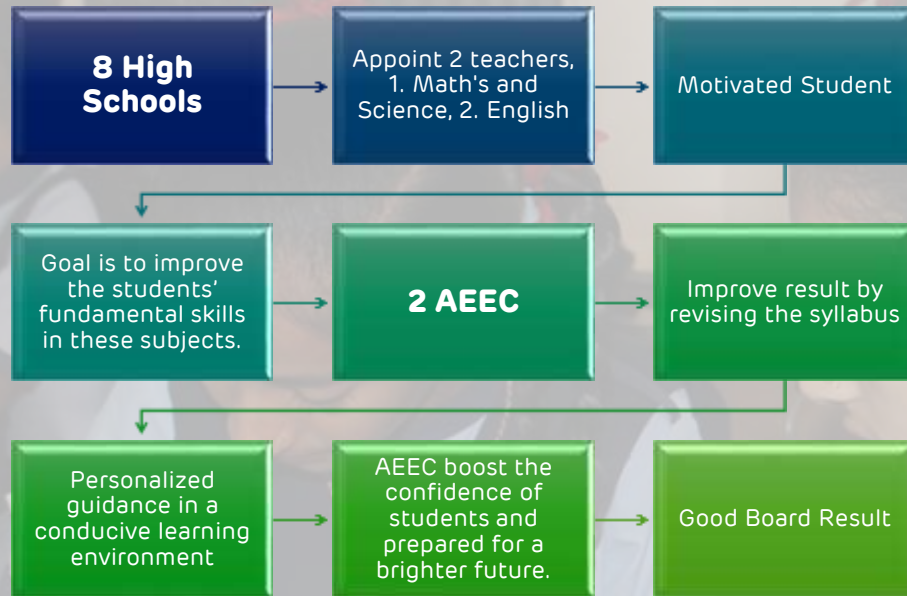


1278 students
mainstreamed

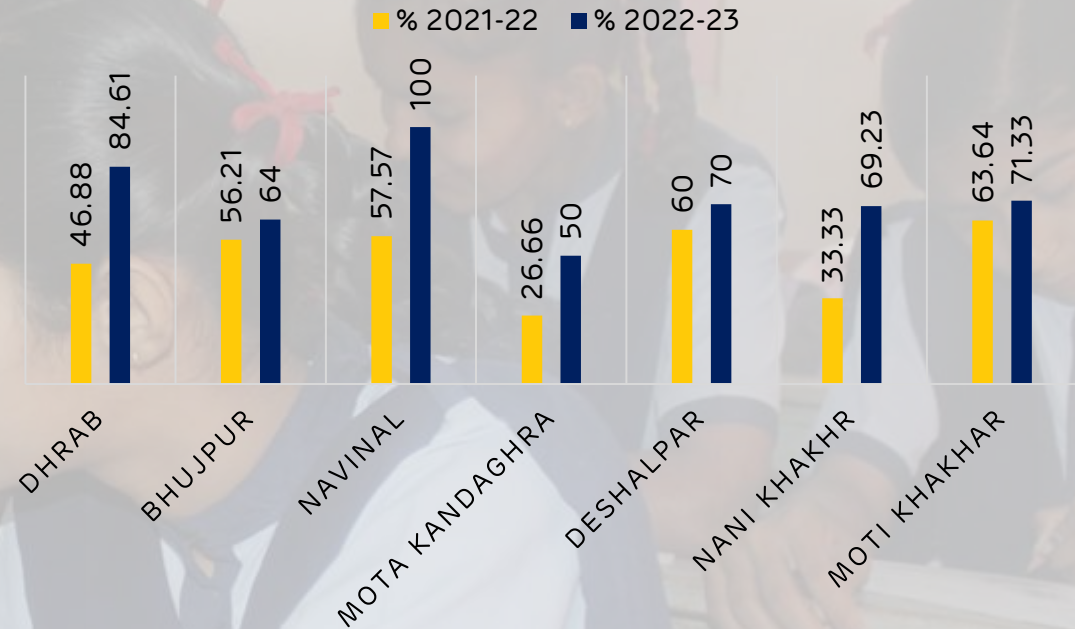




Utthan in High Schools



UTTHAN HIGH SCHOOL RESULT COMPARISON



Utthan other various initiatives & Achievements

- ✓ Utthan won FOKIA Award under the category "Excellence in collaborative CSR Project.
- ✓ Utthan created special syllabus of Maths, Science & English to achieve good result in board exam.
- ✓ The Kutch University has conducted an impact assessment of IT on Wheels, which has been evaluated and certified by the DEO Office.
- ✓ Career Counselling in Utthan High Schools same remedial classes during summer break.
- ✓ Health awareness programs in schools, children of class 6 to 8 were made aware about health.
- ✓ High school girls' students celebrated Rakshabandhan with Shoulder at Boarder.
- ✓ 1000+ Students are preparing for competitive exam. Its more than double from last year.

Adani Vidya Mandir, Bhadreshwar

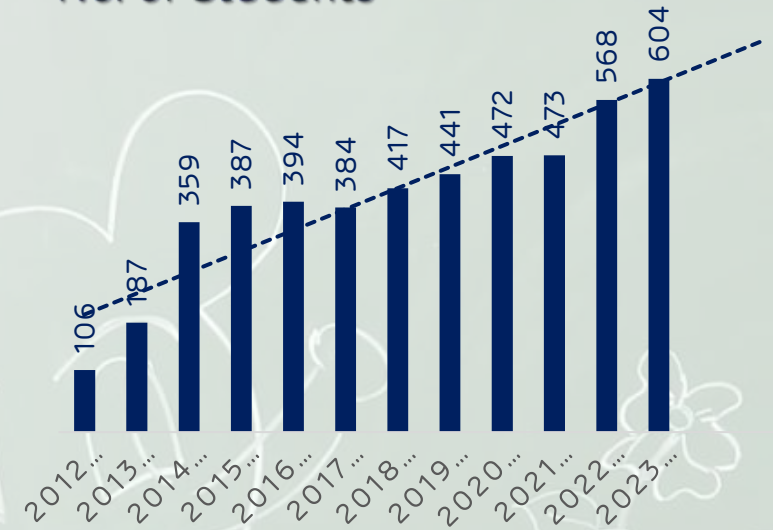
Empowering Communities through Free and Compulsory Education

- Established in June 2012, school is a Gujarati Medium, Co-educational institution that adheres to the Gujarat State Board curriculum. It is a school for the students of KG to Class X. Starting its journey in a rented house in Bhadreshwar village, the school commenced operations with 80 students in class-I. Guided by a committed team of six teachers. In the academic year 2023-24, it proudly serves a student population of 604, with 174 students hailing from fisher-folk communities. 24 dedicated teachers are there in school. Committed to providing comprehensive and quality education, the school operates with a unique approach – offering education at no cost. Furthermore, the school extends support by providing complimentary uniforms, books, and stationery. It's noteworthy that all the students belong to the Economically Weaker Sections (EWS), emphasizing dedication to inclusivity and accessible education.
- School stands as a trailblazer, being the first state board school in Gujarat to receive accreditation from NABET under the Quality Council of India.



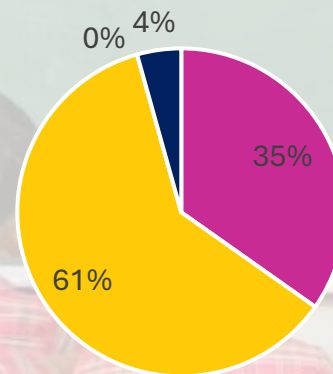
Adani Vidya Mandir, Bhadreshwar

No. of Students



Achievement in sports

- In August 2023, students of AVMB engaged in block-level sports competitions, excelling in Athletics, Kho-Kho, and Yoga. Team of AVMB: U14 & U17 boys secured 1st place in Kho-Kho and progressed to the district level.
- Notably, Abzal Reliva, a Class X student, clinched 1st position in Shot Put, and Hardev Jadeja from Class IX achieved 1st rank in Long Jump earning the opportunity to represent Mundra block at the district level.



■ Distriction ■ First Class
■ Second Class ■ Pass Class

AVMB STD 10 – SSC Board Result (2022-23)		
Sr. No.	Grade	Student
1	Above 80%	8
2	Above 70%	8
3	Above 60%	6
4	Above 50%	0
5	Above 40%	1
Total Students		23



100%

**Success in Gujarat Board
Standard 10th Examination.** 30

Achievement in Arts:

- An Essay and Quiz Competition arranged by TATA BUILDING INDIA was organized on the theme of "Recycle". 81 students of AVMB participated. Winners were recognized and rewarded by Tata Group, Rajkot. Winner students received medals.
- School orchestrated a special moment. Parents were invited to the school where they had the honor of presenting medals and certificates to the winning students. Notably, Ms. Manjaliya Najirhussain Hasam hails from the fisherman community.
- 06 Students of Class VI to VIII appeared in PRARAMBHIK VISHARAD examination conducted by BRIHAD GUJARAT SANGIT SAMITI on 14/12/2023, School is waiting for the result.
- 19 Students of Class V to IX wrote inspirational stories in Gujarati language all the stories were submitted to a publisher name: Jagdish Jepu, among them 01 story of Maheshwari Raj of Class IX title: Importance of Every individual" published in "GULSHAN" magazine in 10th edition on 11/10/2023.



Annual Function in AVMB

- On 5 March 2024, the school celebrated its 12th annual day with a pledge to plant over 25000+ saplings over 3 years in the school premises and in the surroundings, including mangroves in the coastline. The annual day named Utkarsh was aptly linked with the United Nation's Sustainable Development Goals, especially highlighting environmental consciousness.
- Utkarsh gave these students a platform to celebrate the ethos of environmental conservation with a lot of take aways in terms of showcasing learning through models based on SDGs and working models on environment and water conservation. The students presented various sustainability goals through skits, songs, and poetry narration in an enthralling event in AVMB.
- The highlight of Utkarsh 2024 was a pledge that students have taken to plant 25000+ saplings towards greening the region. The fishermen community also came forward to support the children in achieving this pledge. AVMB is committed towards contributing to a secure world. At the event, all 17 SDGs were presented in two sections – 1) Exhibition – through models, charts, and painting and 2) Drama, dance, and songs. The carefully curated event by the teachers under the guidance of the Adani Foundation sensitized the guests on the seriousness of causes, especially the importance of preserving the coastal biodiversity.
- Mr. Jugeshinder ('Robbie') Singh, CFO of Adani Group, chaired the program. He was impressed by the state-of-the-art facilities of the school and especially by the knowledge showcased by the children on the topics which are generally taken up and discussed in higher academics, policy roundtables and corporate chambers. He said, "I am humbled to be here and seeing fantastic knowledge and models presented by these young children. I am sure each of them will make great progress in their lives, become financially independent and help their families, communities and our great nation."







Natural Farming (Cow based Farming):

Adopting sustainable practices i.e., organic pesticides/bio enzymes, Jivamrut, Vermi compost, and bacterial culture to enhance Agri yield.

- First and Second phase Training given to 2200+ Farmers to motivate for Natural Farming
- 2500+ Farmers supported by 25000+ Fruit bearing Saplings. Natural Farming Training will result in 15-20% increase in income after 3 years.



Udaan GET INSPIRED Inspiring Minds



About Project

Udaan is a special project inspired by the life-changing story of Mr. Gautam Adani. As a child, he had visited the Kandla port in Gujarat, and after looking at the expanse of the port, he dreamt of having his own port one day. The rest is history. Under this project, exposure tours are organized wherein school, college students, faculties, employees from corporates are given a chance to visit the Adani Group facilities. Under this project, services are absolutely-free of cost for government schools.

Vision

To create a pool of inspired young minds for nation building at a global scale.

Mission

To motivate young students to dream big by exposing them to world-class industrial facilities.



Total no. of visits

7019

Total no. of participants

447541





Project Site
Mundra, Gujarat
 (Site commenced on Dec 2010)

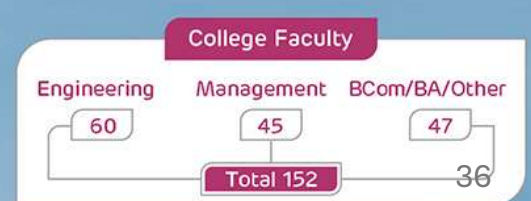
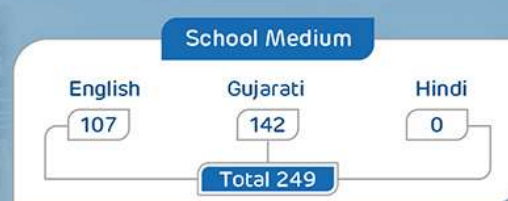
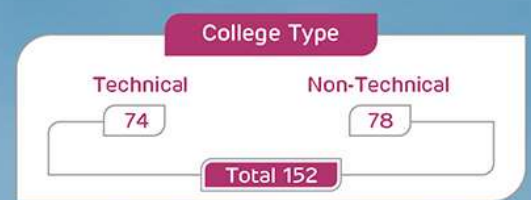
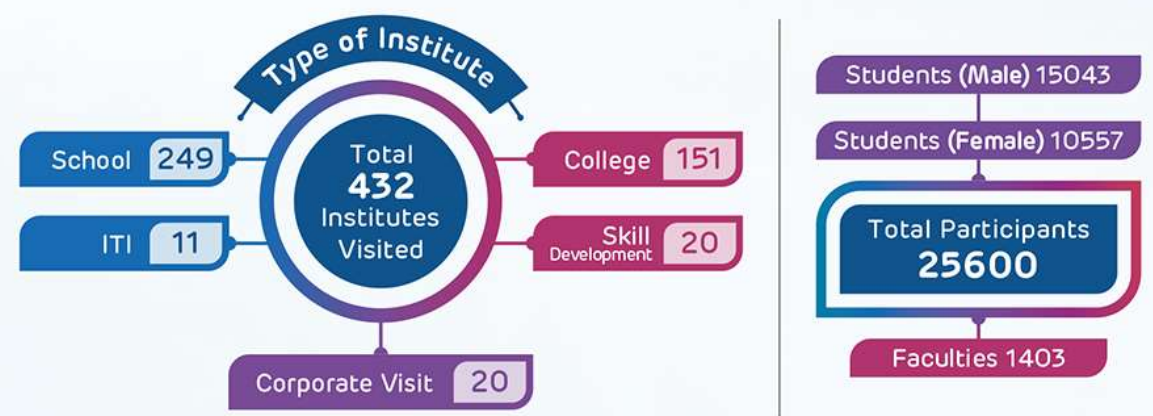
Adani Ports and Special Economic Zone Limited (APSEZ)
 India's largest port operator and SEZ

Adani Power Mundra Limited (APMuL)
 India's largest single location coal based private power plant

Adani Wilmar Limited (AWL)
 Asia's largest single location edible oil refinery

MSPVL - Adani Mundra Solar PhotoVoltaic Limited
 India's first and largest vertically integrated solar company

Mundra Windtech Ltd
 A wind turbine taller than the world's tallest Statue of Unity.





Sustainable Livelihood Projects

Sustainable Livelihood - Animal Husbandry

In the face of dwindling rainfall and increasing salinity in groundwater, agriculture is under threat. Recognizing this challenge, the Adani Foundation has initiated various interventions to foster the holistic development of agriculture and animal husbandry.

Pashudhan initiative:

Two vital pillars of this initiative:

Preventive Health Care & Fodder Support Program

Preventive Health Care: Cattle Health camp

The Adani Foundation, in collaboration with the Animal Husbandry department, organizes cattle health awareness and vaccination programs in 24 villages surrounding our area. These camps bring together government veterinary doctors who conduct check-ups and administer treatments for common ailments. The remaining medicines and vaccines are provided by the Adani Foundation.

These programs are highly effective in maintaining the optimal health of livestock and safeguarding them against deadly diseases like Foot-and-Mouth Disease (FMD) and Clostridial infections. The vaccines used are specifically designed to offer long-lasting immunity against specific diseases, ensuring the continued health of the animals even in harsh environmental conditions.



Fodder Support:

Our Fodder Support Program is dedicated to assisting our neighboring villages during the challenging seasons of summer, drought, and crop failures. Through this program, we have provided a significant amount of Green and dry Fodder to ensure the well-being of both the communities.

Adani Foundation provides good quality dry and green fodder to 24 villages in our vicinity, covering 15,005 cattle of 2070 Cattel owners.

Grass Land development:

AF converted 18 acres of denuded village common pastureland (Gauchar) into fertile and productive grassland in Zarpara and siracha village to transform into Fodder Sustain village with Community participation and responsibility for maintain and Monitoring.

Among that 18 Acre of Gauchar land is fenced and sowed with Multispecies Green Fodder with Having Good nutritive value. More than 1500 Cattle will sustain with Improving quality and quantity of milk.

1500 cattle get benefitted by green fodder for 30 days – which increase 0.5-liter milk quantity of 50% cattle.

(750 cattle x 0.5-liter milk quantity Increase x 40 INR per liter=Rs.15,000/day).

This Intervention could benefit ₹ 4,50,000.

14,38,163 Kg Dry Fodder Support
45,85,278 Kg Green Fodder Support
24 Beneficiary Villages
15005 Cattle Benefitted
2070 Cattle Owner Benefitted

“It would be highlighted as best Demonstration and replicate in the other villages as sustainable fodder development project”

* Funded by - Kutch Copper Limited



Sustainable Livelihood - Fisherfolk Community

Persistent efforts for Fisherman development:

598 Education Kit Support

273 Fisherman Shelter Support

1,247 Vehicle transportation
support

106 Cycle Support to high school
going students

613 Scholarship Support

419 Youth Employment

195 Linkages with Fisheries Scheme

3,534 Ramatotsav Community
Engagement

56,523 Man days Mangroves
Plantation

Empowering Fisherfolk Communities through Education



Vehicle Transportation Facilities:

Ensure seamless access to education for school-going children from Luni, Randh and Juna Bandar Fisherfolk Students in reaching the nearest School, eliminating barriers to regular attendance.

146 Students supported Mundra Taluka

58 Students supported at Mandvi Taluka



Educational Awareness Sessions:

Through targeted awareness sessions in Fisherfolk Vasahats, we promote the transformative power of education, with a particular focus on advancing girl-child education.

487 Students motivated for high school Education



Cycle Support:

Overcoming transportation obstacles, our cycle support initiative enables six 9th standard fisherfolk students from Juna Bandar to continue their education with ease.



Scholarship Support:

Provide scholarship support to 31 deserving students, covering their higher secondary school fees. Emphasizing gender equality, we offer 100% fee support to female candidates and 80% to male candidates.



Education Kits Support:

Equipping fisherfolk students in grades 9 to 12 with essential tools for academic success, including notebooks, guides, and study bags, we empower them to pursue their educational aspirations with confidence.

15 Students supported at Mundra

42 Students supported by Mandvi



Assisting During Emergencies:

Fisherfolk Home were significantly damaged by the Biporjoy Cyclone. In response to that we provided 2696 cement sheets to 336 fisherfolk households of Juna Bandar, Luni, and Randh Bandar to support their recovery.

336 Fisherfolk house benefited



Fostering Youth Employment:

At APSEZ Mundra, our mission revolves around providing sustainable employment opportunities for the local fishing community. We serve as a bridge between industries and Fisherfolk youth, facilitating job placements to enhance livelihoods. This year, we have successfully engaged 115+ Fisherfolk youth, paving the way for a brighter future.

115+ Fisherfolk youth employed



Strengthening Fisherfolk women:

Through comprehensive health and hygiene initiatives, we empower Fisherfolk women. Our programs include family planning resources, menstrual hygiene workshops, nutrition advocacy, and health awareness sessions covering vaccinations, clean water access, and mental health support.

449 Women benefited



Potable Water Distribution:

Providing potable water facilities to 9 Fisherfolk Vasahats daily, either through water tankers or by establishing linkages with the nearest Gram Panchayat. This initiative benefits over 5000 Fisherfolk, significantly improving their health and productivity.

5000+ Population benefited





Sustainable Livelihood - Agriculture

Sustainable agriculture is a powerful force for good, safeguarding our environment, public health, communities, and the welfare of animals.

Through practices like soil enrichment, diverse crop patterns, eco-friendly cover crops, natural farming methods, orchard development, tissue culture, and water harvesting, sustainable agriculture ensures the well-being of our ecosystem while replacing harmful chemicals with healthier alternatives.

This year, the Adani Foundation continued its strong commitment to advancing natural farming in Mundra. Through various initiatives and partnerships, we provided crucial support to local farmers, empowering them with knowledge and resources to transition to sustainable practices.



2200+

Farmers
educated in
natural
farming

800+

Farmers
embracing
natural farming
methods

200

Farmers got
financial
assistance of
Rs. 10,000

3

District
level
exposure
visit

₹ 36.7 lakh

Business done
by our
benefited
Farmers

*It's more than just a farming practice;
it's a commitment to nurturing our
planet and enhancing lives.*

Promoting Natural Farming

The Adani Foundation is dedicated to advancing natural farming through a cow-based farming initiative. Our interconnected techniques aim to boost farmer yields, with a primary focus on enhancing soil quality. We conduct pre-testing and post-testing to manage soil carbon content effectively. These are our endeavor for promoting natural farming this year:

Training

Conducted training for **1250 farmers in 16 villages**, enlightening them about the harmful effects of chemical fertilizers. Demonstrated how to produce organic fertilizer using household products, emphasizing its benefits and cost-effectiveness. After adopting it, they witnessed its positive effects on their fields.



Kitchen Garden Kit

We have supported vegetable kitchen garden kits to 500 farmers with the aim to enable them to grow fresh and nutritious, chemical-free vegetables. This will enhance their food security and promote self-reliance.



Empowering Farmers

This year, amidst the aftermath of the cyclone, we stood by our farmers and held dedicated meetings with KVK, KCS, and DRC to restore the fallen date trees. Collaboratively, provided JCB, technical support, organic fertilizer etc. Successfully restored **615 trees**. **Each Date trees is projected to yield approximately Rs. 25,000, Total Yield in Next Season:- Rs.1.53 Cr.**

Financial Assistance

Extend financial support to 200 farmers, each receiving Rs. 10,000, a transaction gracefully facilitated by Mr. R. N. Parmar, virtually transferring funds to their bank accounts, funded by Adani Petrochemicals. This fund will help farmers in planting a total of **53,136 fruit-bearing plants**.



Raj Shakti Prakrutik Kheti Sahkari Mandali

The Adani Foundation has taken a proactive step by organizing awakening and awareness sessions to promote natural farming practices in Mundra block Villages. These efforts led to the formation of the "Raj Shakti Prakrutik Kheti Sahkari Mandali," comprised of 35 dedicated farmers who are deeply committed to natural farming. These are the activities done assisting the Mandali this year:

Interaction with Governor

Rajshakti Prakrut sahakari Mandali had Opportunity to meeting with honorable Governor of Gujarat Achrya devvrat at Gandhinagar. They got the valuable knowledge by the him on Natural Farming and gave their farm's vegetables to sir.



Appreciation by Governor

Governor of Gujarat, Shree Acharya Devvratji, encouraged 25 of our farmers practicing natural farming at the Krushi and Dairy Expo event in Bhuj. He motivating them to continue their commendable work for our mother earth.



Exposure Visits

Our farmers embarked on three eye-opening exposure visits to Gautech-2023, Bansi Gir Gaushala, and Narayan Dev Dwisatabdi Mahotsav, where they learned about new agricultural tools, various seeds, organic products, and making of Gau Krupa Amrutam organic fertilizer

Certification by GOPCA

We have successfully **certified 28 farmers** under the Gujarat Organic Products and Certification Agency (GOPCA). Now, they have authentic validation as organic farmers, ensuring they receive the best prices for their farm products.



Kutch Kalptaru FPO (KKPC) and Prakrutik Mandli

To promote horticulture, the Kutch Kalptaru FPO (KKPC) was established in 2020 by farmers from Mundra Block to address various challenges they faced. With an initial 350 shares held by 280 shareholders, the company is now expanding to include up to 5000 farmers and 537 registered share holders.

In the current year, KKPC began selling 10kg capacity packaging boxes at a minimal profit margin of Rs. 29 per box, resulting in a turnover of Rs. 10.5 lakh and a profit of Rs. 75 thousand. This initiative has indirectly supported over 800 farmers.

Regular director board meetings and capacity-building training sessions have been arranged to ensure effective management and growth. Total Turn over is Rs. 33.67 Lacs current year which is four times higher than last year which shows remarkable progress of FPO.



800
Farmers
benefited

₹ 33.67 lacs
Turn over



Green Carnival

Today, finding truly natural, chemical-free food has become a challenge. Our fruits and vegetables are often processed with chemicals, stripping them of their nutritional value. But there's hope. For years, the Adani Foundation has been supporting farmers practicing natural farming methods. However, these farmers lacked a platform to sell their produce. That's why AF has launched the Green Carnival. At Shantivan, Samudra colonies in Mundra, and KCL's Mandvi colony, we've provided a marketplace for these farmers to showcase and sell their agricultural bounty. The response has been overwhelming.

Encouraged by the positive feedback, these farmers have even established an organic produce shop in Mundra, setting an example for sustainable agriculture. Today, over **302 farmers** are part of this initiative.

Previously, these farmers sold their harvest in bulk to vendors. Now, by connecting directly with consumers, they've seen a remarkable **35% increase in their income**.

The communities of both colonies are delighted and eagerly anticipate the Green Carnival every Sunday. Together, we're not just changing food habits, but also supporting the livelihoods of those who cultivate our food, and nurturing a healthier, more sustainable future.

Total Green Carnivals = 37

Total Sell = 8,623 kg

Revenue = ₹ 3,01,805





Sustainable Livelihood - Women Empowerment

Women's empowerment holds a significant place within the Adani Foundation. Since its inception, the foundation has been dedicated to strengthening women by providing training, essential materials, and creating platforms for them to sell their products. Additionally, the foundation collaborates with the government to establish Self-Help Group (SHG) initiatives, enabling women to conduct their

businesses more effectively and encouraging savings. Through various training programs, the Adani Foundation empowers women, fostering their growth and self-reliance. Moreover, the foundation is acutely aware of hygiene and health, actively involving women in initiatives related to these crucial aspects. The holistic development of women is at the core of the foundation's approach and strategy.

We dedicated to empowering women both financially and socially. To that end, a comprehensive training program that has reached 850 women across 82+ Self Help Groups with 35+ Lacks saving Corpus, out of which 5 groups have outstanding revenue generation.

About - Project Saheli



Self Help Groups

- ✓ 82 Self Help Groups in coordination with National Rural Livelihood Mission.
- ✓ 850+ Members
- ✓ Over Rs.35 Lacs Saving Amount Corpus



Job Sourcing - Govt

- ✓ 11 Women supported for application and process of Gram Rakshak Dal, Bank Sakhi, Bima Sakhi and Professional Resource Person.
- ✓ Average income Rs.4200 Per Month



Making SHG Self Reliant

- ✓ 16 SHG are making strides towards self-reliance.
- ✓ Various handicraft, dry and fresh food making, stitching, tie and die etc.
- ✓ 175+ women - Monthly average income @ Rs.7000 of each member/Month



Social Empowerment

- ✓ 2 Livelihood Enhancement Training through RSETI
- ✓ Financial support for business set up
- ✓ Legal rights and domestic violence workshops
- ✓ Family counselling for Job sourcing



Job Sourcing - Private

- ✓ Coordination for Job by Unnati Portal with Adani Group company companies, Britania, B Medical and Emphazer company
- ✓ 398 Women supported till date for job sourcing.
- ✓ Average income Rs.10200 Per Month

Revenue of each SHG in the FY 2023-24

Name of IG activity of SHG's/JLG/FPC's	Income 2023-24 (INR)	Cumulative income (INR)
Sonal Saheli	480250	3027450
Jay Adhar Saheli	26,500	252,066
Tejasvi Saheli	325000	3,390,150
Umang Saheli	76500	225800
Vishvas Saheli	26300	511400
Jay Momay Saheli	21000	151500
Meghadhanush Saheli	116950	597450
Sanitary Pad Group	71300	746300
Radhe Saheli	31000	870418
Shrddha Saheli	486580	1107580
Chamunda Saheli	21900	1726400
Jay shakti Saheli	2500	605500
Food Sister Sahlei	898250	898250
Jyot Saheli	40800	40800
Pantjanpir gau Saheli	412000	412000
Total	3036830	14563064

Highlights of the Work done by our SHG!



Australia 29th PM visit: Exhibition in Adani Solar

The 29th PM of Australia, Mr. Malcolm Bligh Turnbull and his wife Lucinda Mary Turnbull visited Adani, Mundra. At Adani Solar, they saw our 20+ SHG exhibition stall and interacted with over 180 working women from SHGs. Mr. Turnbull was genuinely thrilled to see women stepping out of their homes, crafting beautiful pieces, and supporting their families. Mr. Malcolm Bligh Turnbull – “It’s empowering to witness women taking charge of their livelihoods and making a difference.”



Sathwara Mela 2023-24

The event unfolded with the captivating theme of 'Powering Art Empowering Women,' setting the stage for an extraordinary celebration. Held at the prestigious Adani Corporate House in Ahmedabad, the inauguration was graced by the esteemed presence of the Honorable Chairperson of AF, Dr. Preeti G Adani, Mrs. Shilin R Adani, and Shri V.S. Gadhvi. We were delighted to welcome over 500 enthusiastic visitors to our stall, contributing to the resounding success of the event. **Notably, SHG Groups earned a remarkable income of over Rs. 75,000.**



Switzerland delegate visits SHG

Switzerland delegates made a memorable visit to Adani Solar to witness the exceptional craftsmanship showcased by our SHG exhibition. Captivated by the intricate artwork, they engaged with the women, gaining a profound understanding of their skills and purchasing a significant quantity of goods. **Overwhelmed by the quality of workmanship, they graciously extended their support by sponsoring \$100 (90,000 INR) towards our SHG.** This monumental gesture marks a historic milestone for our group.



Handicraft Day Celebration

After 3-day training from Shrujan, hosted an exhibition showcasing handmade crafts by women, alongside interactive workshops on handicraft techniques.



Workshop on Women Health

Aware the women connected to our SHG about mental and menstrual health care, benefited over 130 women, especially those neglecting personal well-being during menstruation.



Gauchar Cleaning Abhiyan

At Bujpur, 31 women initiated the 'Gauchar Cleaning Abhiyan,' with support from AF's Loader Machine. This collaboration aims to enhance environmental preservation and community development.



Women's Day celebration

Celebrated Women's Day with entrepreneur training and mental peace awareness sessions, attracting over 100 participants.



Community Health




Ensuring good health is not just a priority; it's the cornerstone of a thriving community. At the heart of Kutch, the Adani Foundation is dedicated to nurturing well-being and facilitating access to expert medical care. Collaborating closely with G.K General Hospital in Bhuj and Adani Hospital in Mundra, we tirelessly strive to enhance community health standards.

For over a decade, our commitment to community care has been unwavering, manifested through our Mobile Health Care Units, Rural Clinics, and Ayushman Cards linkages with the beneficiaries and THO. In recent years, a concerning trend of Viral, kidney and ortho related diseases has emerged due to salinity ingress. In response, we have orchestrated a series of specialized health camps to address these issues, offering essential treatment support while fostering awareness about preventive measures.

We firmly believe that both preventive and curative healthcare are fundamental pillars for sustaining community well-being and fostering economic prosperity. Our aim is to strike a harmonious balance, paving the way for a journey of longevity, vitality, and fulfilment for all those under the care of the Adani Foundation.

Summary of Healthcare Initiatives for the Year

This year, we provided **41,546** medical health services and conducted health awareness camps for **763 High school students**. Our annual medical facilities have made a significant impact in improving healthcare access and awareness. Here are the direct beneficiaries of our endeavor:


 **2,108** Medical Support to needy patients


 **118** Dialysis Support


 **10,477** Mobile Van

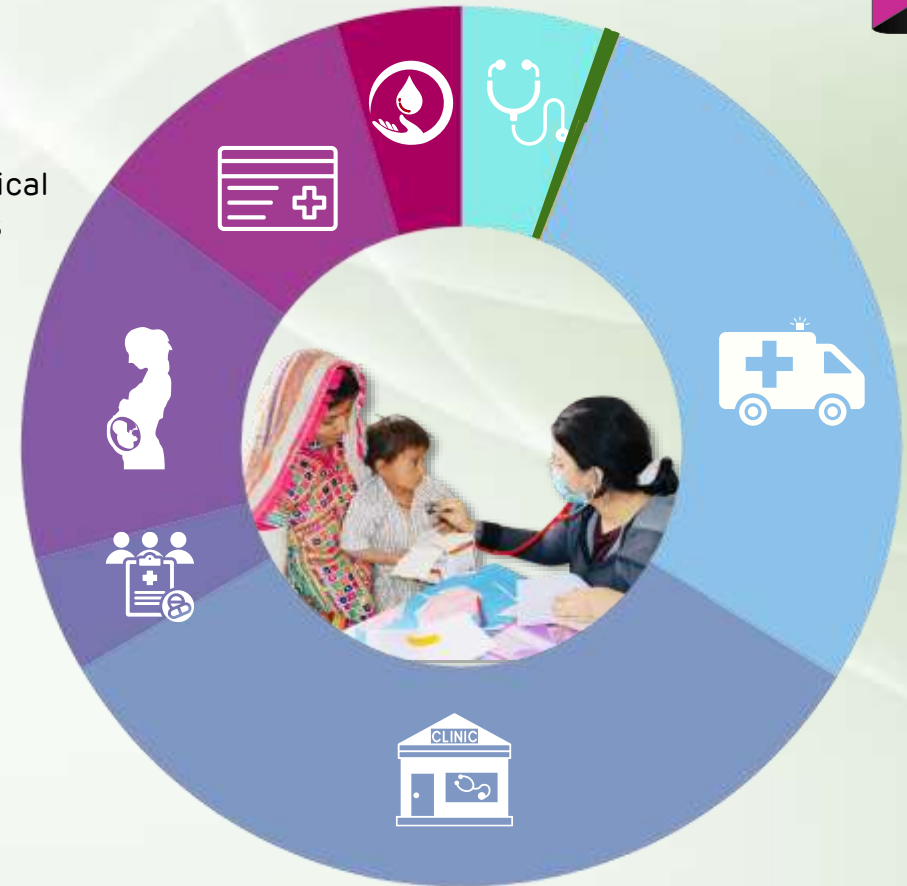
 **12,850** Rural Clinic

 **1,618** Health Camp

 **5,795** Specialty Health Camp

 **6,865** Ayushman Card till date

 **1,715** Blood Donation Camp



- Medical Support – 5.5%
- Dialysis Support – 0.3%
- Mobile Van – 27.2%
- Rural Clinic – 33.3%
- Health Camp – 4.3%
- Specialty Health Camp – 15%
- Ayushman Card – 10.02%
- Blood Donation Camp – 4.5%



Rural Clinic & Mobile Health Care Unit

Health stands as the cornerstone for community development, and to revolutionize rural healthcare, the Adani Foundation has launched the 'Mobile Health Care' and 'Rural Clinic Service'. These initiatives aim to offer primary, preventive, and curative healthcare services accessible in remote and inaccessible areas, a commitment upheld for over a decade.

Rural Clinic



Rural clinics extend their services to 5 villages in Mundra and 2 villages of Mandavi Block. The services of both MHCU and Rural Clinics are accessible to patients at token charges of Rs. 20 per visit.



Mobile Healthcare Unit

MHU is equipped with a range of integrated medical devices enabling staff to conduct preliminary check-ups. With over 90 types of essential lifesaving medicines available, the Mobile Health Care Unit covers 29 villages with 7 fishermen settlements. Services provided include blood pressure checking, sugar testing, and ECG assessments.



Ayushman card facilitation

In a world where medical costs are overwhelming, the Ayushman Card offers hope by providing affordable access to quality healthcare. The Adani Foundation bridges the gap between the government and those in need ensuring that 3865 people received this vital resource. Ayushman Bharat PM-JAY provides Rs. 10 lakhs per card owner for secondary and tertiary care, Adani Foundation is aiming to achieve 100% coverage in Mundra's villages.

25 Village

6,865

Ayushman cards Issued

686.50 Cr

Health insurance

** Funded by - Kutch Copper Limited*



Supporting Individuals



The Adani Foundation extends financial assistance to the most economically challenged patients facing life-threatening diseases such as those related to the heart, liver, kidney, and cancer. This support comes with minimum participation requirements, ensuring access to crucial medical care.

In the current year, a total of 2,108 patients from Mundra, Mandavi, and Anjar Block have received support at Adani Hospital, Mundra. This assistance underscores our commitment to providing essential healthcare services to those in need, regardless of economic status. The medical staff of GKGH stood with us in these endeavors.

Dialysis Support



In the arid region of Kutch, particularly in Mundra where saline drinking water is prevalent, cases of urinary stones and kidney failure are significant. To address this issue, a dialysis support project has been initiated to provide essential dialysis treatment to the most vulnerable patients, enabling them to lead healthier lives.

This year, a total of 2 patients have been supported with regular dialysis sessions, twice a week. Regular dialysis sessions have notably improved the patients' conditions, extended their life expectancy and enhanced their quality of life.

Special Camp

Cataract-Free Mundra

The initiative is a dedicated effort to eradicate cataract-related vision impairments specially focused on Senior citizen through Meticulous planning as below.

Lives Impacted :- 1131

- Comprehensive Eye Screenings at Village level
 - Cataract Surgeries to GKGH ,Bhuj
 - Post-Operative Care and Follow-up
 - 5 successful Operation



This year Adani Foundation organized numerous special health camps, such as blood donation camps where 1715 donors contributed, helping save countless lives.



Conducted health programs for students, engaging 763 participants, and held sessions on Personal Health & Hygiene Awareness, addressing critical health issues and promoting overall well-being.



Our camps for pregnant women provided essential prenatal care, ensuring healthier pregnancies and safer deliveries. It benefited 809 pregnant women.



Conducted a pediatric health camp, nurturing the health of 628 children and ensuring their well-being.

GKGH medical staff support in all camps.

Preventive health Campaign

The Adani Foundation is focusing on providing preventive healthcare to women and adolescent girls, raising awareness of Physical and Mental health issues, promoting healthy behaviors, implementing Menstrual hygiene initiatives and Millet consumption for healthy body.

Sample Survey Report 2023-24

- 55%** Never heard about Menstrual hygiene
- 60%** Are using cloths on regular basis
- 36%** Had never used sanitary pads
- 68%** Had no information about UTI
- 30%** Never used millets in their diet
- 60%** Never heard about millets or it's benefits.



Menstrual & Mental Health Awareness Drive:



We organized impactful awareness camps in various villages, empowering women and adolescent girls with knowledge about menstrual hygiene, ensuring both physical and mental fitness.

Impact:

- 36%** Growing usage of sanitary napkins
- 22%** reduction in UTI
- 2610** women & girls benefited

International year of Millets – 2023



To promote millet culture and raise awareness about its benefits in Mundra, we organized a Millet Competition across nine villages. **Over 715 women took part in the competition, while 2200 benefited from awareness sessions. Through this initiative, 300 indigenous millet recipes were showcased**, highlighting the potential for sustainable and nutritious dishes in our daily diets.

Impact:

- 65%** of women are using millet in their regular diet.
- 17%** Women grappling with obesity and diabetes are experiencing positive transformations in their health, evident in significant weight loss.

Millets Food Festival

In the wake of the "International Year of Millet" in 2023, KCL took decisive steps to promote the nutritional and empower women from remote area of Mundra Taluka.

Across the villages of Mundra Taluka, KCL organized a series of millet awareness camps and a thrilling millet food competition. The response was nothing short of remarkable, with 715 women actively participating and sharing 300 indigenous millet recipes. To commemorate this achievement, we hosted a grand millet festival at Adani House, in which 120 women showcased a diverse array of millet dishes, each one bursting with flavor and nutritional value.

But the significance of the event extended beyond mere culinary delight. Women spoke of how millets had become integral to their lives, aiding them in combating long-term ailments. They are very much grateful for these awareness camps and look forward to such health-promoting events.

At this event, we had the privilege of welcoming esteemed guests, including Mr. Sujal Shah (CEO, APSEZ), Mrs. Rachna Joshi (President, Mundra Nagar Palika), Mr. Pandya (Program officer, ICDS), Mr. Saurabh Shah (Head Corporate Affairs, APSEZ), and Mrs. Nehalben (Nutrition expert). Their presence added immense value to our gathering.



Community Infrastructure Development

Adani Foundation is dedicated to enhancing the quality of life of communities under the Community Infrastructure Development Initiative. It acknowledges the government's role in providing fundamental infrastructure facilities and strives to bridge gaps, ensuring its activities are tailored to meet specific needs and responsive to grassroots requirements.

Some of the initiatives include constructing check dams, deepening ponds to augment water storage capacity, infrastructure support to fisherfolk communities, developing secure education premises and facilitating access to clean drinking water for villagers.



CID endeavor of FY 2023-24



Renovation Check dam and CC road work at Nani Khakhar – 200+ benefited



Renovation of High School at Zaarapa – 2200+ Benefited



Construction of Pipe Culvert – 400+ Benefited



Construction of chain-link fencing at Mangra village – 300 people benefited



Gaushala Shed at Zarapara village – 400 cattle benefited



195 Stall – Vegetable market– 900+ Vegetable vendor benefited



Renovation of approach road, Zarapara – benefiting 400 villagers



Renovation of Civil and Electrical Work at ITI, Mundra - 500 students benefited

CID endeavor of FY 2023-24



Construction of 21 Borewell Recharge in Nagmati River - 150+ farmer benefited



Check dam Desilting and restoration at Nana Bhadiya – 100+ farmers benefited



Renovation of Check dam at Pavadiyara village - 300 people benefited



Renovation of Balwadi at Juna bandar & Luni bandar



185 RRWS construction is ongoing in various villages - will benefit 1300+ residents



Supply & installation of Solar panel (3.25 KV) at CGP, Mundra – benefiting 1200 people



Development of Model Farm in Zarpara, Siracha & Mangra – Benefiting 300 people



Renovation of approach road at various fisherfolk vasahat

Community Resource Centre



Government Scheme Facilitation				
Sr. No	Scheme Detail	Gov. Support Rs/Month.	Total Beneficiaries	Total Amount per Month (INR)
1	Widow Pension	1250	674	28323150
2	Bal seva Ayog	2000	49	3430000
3	Divyang pension	1000	27	586000
5	Niradhar Pension	1000	126	5178000
6	Palak Mata Pita	3000	5	696000
Total			1439	38213150



Community resource Centre is the bridge between Government Schemes and real Beneficiaries. It is situated at Adani Field Office, Baroi with the motive to be Single window point solution (Online Application & Documentation) to Facilitate Government Schemes leveraged to needy and Eligible people.

Till Date 1439 beneficiaries are getting aid of Widow Pension scheme, Senior Citizen and Divyang pension scheme and Palak Mata Pita Scheme 3.81 Crore Monthly by procedure support of AF.

Key Achievements of Community Resource Center

One time

Sr.No	Gove Scheme one Time	Gov. Support	Total Beneficiaries	Total Amount/Year
1	Covid Support One Time	50000	12	600000
2	Vahali Dikri @ 18 Year	110000	113	12430000
3	Divayang Sadhan Sahay one time	5000	176	880000
4	Manrega (NB21)	22000	32	704000
5	Pagadiya Sadhan Sahay Yojana	9000	9	81000
6	Gau Dattak Yojana	10800	857	9255600
7	Gobardhan Yojana	42000	100	4200000
8	Fishermen Shram Yojna		163	
			1487	28150600





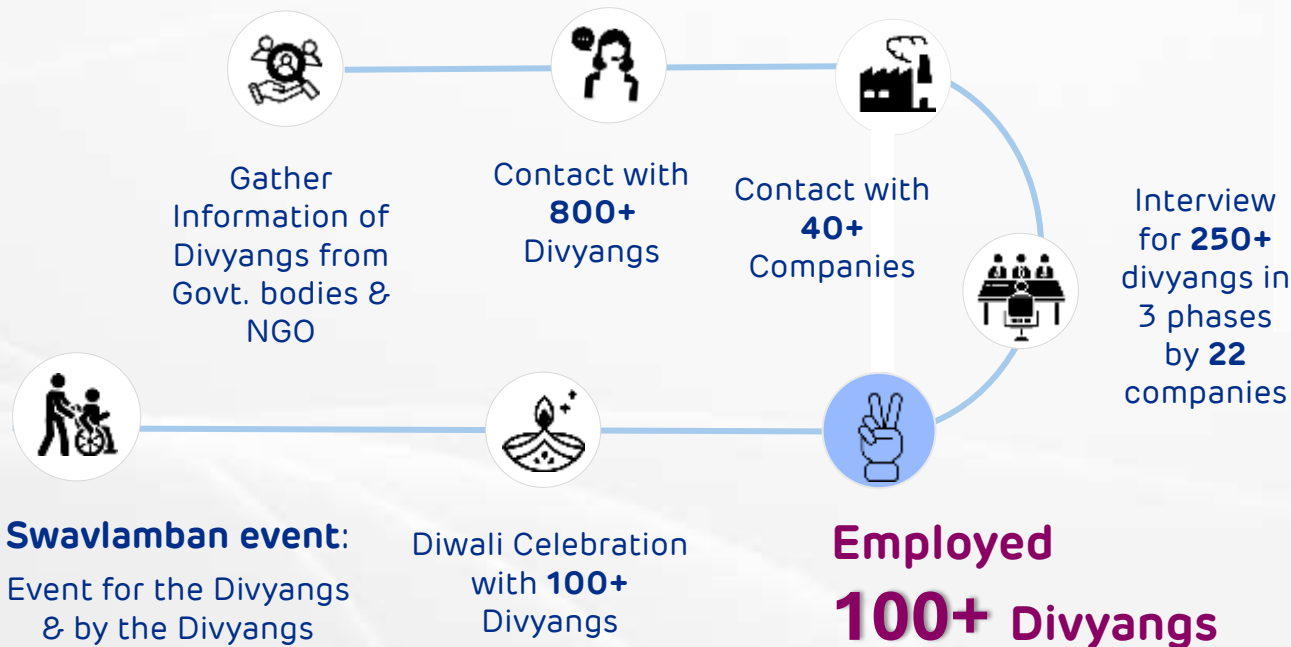
Swavlamban - Project for Divyangs

Adani Foundation's vision extends beyond Aid, focusing on dignity and sustainability through meaningful employment. While equipment support offers mobility, employment bestows the dignity to stand tall in society.

With noble intentions in mind, this year, we organized a mega employment drive. Our goal is to provide job opportunities to over 100 disabled individuals.

We've conducted interviews in three phases, for 250+ divyang candidates engaging 22 companies from Adani Groups and other reputed firms in Mundra.

➤ Roadmap of this incredible vision:



* Funded by - Kutch Copper Limited

Diwali Celebration

After the successful completion of the 1st phase of the Divyang Employment Fair on November 8th, we gathered to share the joy of Diwali with over 100 remarkable divyangs.

In the spirit of uplifting divyangs, we have also invited advocates dedicated to the well-being of disabled people. Mrs. Anni Rakshit Shah and Mrs. Rupa Kapoor graced us with their presence as chief guests. Our invitation also extended to the HR representatives of Adani Group and SEZL companies.

On this auspicious occasion, we **equipped 32 divyangs with essential tools such as wheelchairs, tricycles, harmoniums, and facilitated 10 divyangs through government schemes.**

To express our gratitude to those who have dedicated their lives to improving the lives of disabled individuals, we honored them with certificates and mementos.

Just as we light up our homes with glowing diyas during Diwali, the smiling faces of these divyang individuals illuminated our Adani House during this event. It was a celebration that went beyond the ordinary, leaving a lasting impression of compassion and unity.



Swavlamban Event

In the spirit of hard work and dedication, the Adani Foundation concluded its Divyang Employment Fair, marking a significant milestone in transforming lives. Through three phases of dedicated effort, the Foundation successfully secured over 100 employments, providing a newfound sense of self-reliance to individuals with disabilities.

Notably, 35 divyangs were equipped with essential employment tools, fostering self-sufficiency. To commemorate this achievement and honour the divyangs, companies, and advocates of inclusivity, the Foundation organized the Swavlamban event on December 5th at GAIMS, Bhuj.

The event garnered the presence of esteemed personalities, including Jeet Adani, Director of Adani Group, V.J. Rajput, Commissioner for Persons with Disabilities, and Nimesh Pandya, Ed. of Kutch collector, among others.

This celebration was a testament to the Foundation's commitment to redefining the narrative around disability and employment.

As the Adani Foundation rejoices in this achievement, it reaffirms its commitment to ongoing efforts that positively impact the lives of differently-abled individuals, embodying a vision of a more inclusive and empowered society.



Our Pride from Divyang Employment Fair !



Bhimaji Maheswari
DEO, Mundra Windtech Ltd



Patani Govind Babu
Document Officer, KCL, Mundra



Arjan Gadhavi
DEO, Adani Solar, Mundra



Govind Maheswari
DEO, Mundra Windtech Ltd



Devangh Gadhavi
DEO, Adani Solar, Mundra



Jadeja Natubha Gangji
KCRC NGO, Bhuj



Arti Nilesh Jethva
Trainer, ASDC, Mundra



Bharat Makwana
CMR, Admin, Adani house

Adani Skill Development

Adani Skill Development Centre (ASDC) is dedicated to enhancing employability and entrepreneurship. This year, ASDC has trained 50,00 individuals across Kutch, resulting in 65% livelihood generation. Their innovative courses cover diverse sectors, and they have played a significant role in empowering marginalized communities in places like Mundra and Bhuj, Gujarat. ASDC's vision is to make everyone skilled and employable, meeting industry demands through trained manpower.



ASDC Mundra Center

Course Name	Gender Category		Total
	Female	Male	
Digital Literacy	04	03	07
Mud Work	180	00	180
JOC (RTG Crane Operator)	00	79	79
Hydrography	00	03	03
Advance Excel	00	18	18
Domestic data entry operator	23	30	53
Tally with GST	02	00	02
Hand Embroidery	170	00	170
Dori/ Macramé Work	90	00	90
Food & Beverage	20	12	32
General Housekeeper	60	00	60
Beauty Therapist	40	00	40
Total	589	145	734

ASDC Bhuj Center

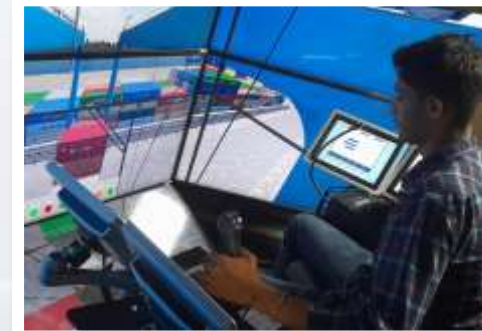
Course Name	Gender Category		Total
	Female	Male	
General duty Assistant	84	20	104
Digital literacy	46	16	62
Hydrography	9	0	09
Industrial Safety	1	0	01
5S	1	0	01
Entrepreneurship Development program	60	0	60
Domestic data entry operator	25	0	25
Financial Literacy	64	0	64
Diet and Nutrition	50	0	50
First aid	18	0	18
Interview skills	11	0	11
Total	369	36	405

ASDC Mundra Center

At Mundra Center ASDC, our mission is to equip young individuals with the skills necessary for success. In the current year, a remarkable 734 youth have undergone comprehensive skill training. Our unwavering commitment extends to ensuring that every aspiring professional receives an opportunity for growth and development. Almost 99% of our fees are tied up with various companies, allowing students to access high-quality training without financial barriers.

Other Activities & Achievements

- i. Women Empowerment through Skill Training: Provided Mud work training to 180 women in Mundra taluka villages supported by MPL.
- ii. RTG Crane Operator Training: Collaborated with APSEZ HR Team to train 79 students.
- iii. Dori Work and Hand Embroidery Training: Benefited 90 women in various Mundra villages supported by MPL.
- iv. Health Awareness and Career Sessions: 108 Ambulance Department enlightened GDA trainees at Adani Institute of Medical Sciences. Guest session on career advancement led by Mr. Kapil Goswami.
- v. Exposure Visit for Women: Women trained in Mud Work, Dori Work, and Hand Embroidery showcased their skills during a visit by foreign delegates to the Solar Plant.
- vi. Women's Related Training Seminar: Held at Matr Vandana College, Bidada, Mandvi.



ASDC Bhuj Center

ASDC Bhuj, established following successful skill development initiatives, is a beacon for aspiring professionals. Driven by youth demand, this center plays a pivotal role in providing crucial training for self-development and enhancing personality traits.

Our mission is clear: to equip young individuals with essential skills that position them for success in the job market. With almost 58% of fees tied up by ASDC through strategic partnerships and 42% of fees contributed by students, we ensure that financial barriers do not hinder skill acquisition.

Other Activities & Achievements

- i. Commendation from Shree Jeet Adani: Received appreciation for supporting the Divyang job fair.
- ii. Employee Development Initiatives: Conducted Advanced Excel training for 18 Sumitomo India Ltd employees
- iii. Entrepreneurship Development Program: Organized a comprehensive 12-day program with 60 diverse candidates.
- iv. New Trainee Orientation: Conducted sessions about SAKSHAM center and LMS registration at the Bhuj Centre.
- v. Civil Defense Training (5 days): Covered essential topics including Disaster Management, First Aid, 181 Mahila Helpline, 108 Emergency Services, and Fire Safety.
- vi. F&B & Housekeeping Batch Inauguration: 92 students trained to enhance employability.
- vii. Indo-Euro Project Seminar: Arranged at various Nursing Colleges in Kutch District. Focused on German Language training and job placements.
- viii. Crucial Meeting with ISAR & UNICEF: Discussed future skill development challenges and transgender equality on 9th December 2023.



AKBPTL - TUNA



CID:

The paver block work at Vandi and Tuna Common Gathering which enhances their usability and convenience for the community. Community hall Room construction at Rampar is completed. It will benefit 1010 fishermen.



Potable Water Distribution:

Potable water (17.5 KL per Day) Distribution to Vandi, Vira and Dhavar varo Bandar on regular base through Water tanker Regularly through **AKBTPL and GWIL**. This initiative **benefited 2230 Fishermen**.



Prakrut Rath -Tree Plantation:

Total 3000 Tree sapling were distributed to individual, And 500 tree have planted at Common place and school with ensure their responsibility for watering and caring.



Fodder Support:

Support of Dry & Green Fodder to Tuna and Rampar Village and Gaushala during Scarcity. That impacted on Cattle health and Milk Productivity.

7410 kg Dry fodder

4,47,473 kg Green fodder

1228 Cattle Benefited



3000 Tree plantation



193 Benefited by Mobile Van

56 Benefited by Medical support

AGEL – Khavda

Adani Green Energy Ltd. Khavda renewable solar plant is a hybrid power project that will use both solar and wind energy to generate electricity. It will be built in the Khavda desert along the Indo-Pak border in Kutch district of Gujarat, having a total capacity of 20,000 megawatts (MW), making it the world's largest hybrid renewable energy park and will be cover an area of 72,600 hectares of waste land. It is expected to play a major role in fulfilling India's vision of generating 450 gigawatts (GW) of renewable power by 2030.

Our Vision for Khavda:



Empowering through Education: Elevate overall academic results, champion girl child education, and ignite a passion for technical streams. We aspire to pave the way for stable employment, fostering a prosperous livelihood for the youth.



Empowering Khavda's Women: Empower 1000+ women socially, economically, and financially through the establishment of a strong federation "Sarhadi Mahila Vikas Sangathan"



Elevating Healthcare: Provide quality healthcare services in 22 villages of Khavda, with a primary focus on enhancing women and child health.



Water Positive Villages: Achieve water positivity in 8 villages of Khavda through our dedicated water conservation structures. We aim to create sustainable solutions for water availability, ensuring a secure and flourishing future for these communities.



Transforming lives in Khavda!

Nestled deep within the remote borderlands of Kutchh, Khavda grapples with the harsh reality of limited access to fundamental necessities: education, healthcare, clean water, and crucial preventive care for women. In response to these pressing challenges, the Adani Foundation has embarked on a transformative journey, launching four visionary projects aimed at illuminating hope and progress across Khavda and its surrounding villages.

Recently, luminaries including Mr. Amit Arora, the Collector of Kutchh, Mr. Verma, Plant Head of AGEL, and Mr. Sanjay Avinash, BSF Head Bt.72, convened with local leaders from 26 villages to honor the Foundation's unwavering commitment.

Amidst accolades and appreciation, Mr. Amit Arora lauded the Foundation's healthcare initiatives and advocated for further support, proposing the launch of an "Arogya Van" to bridge the gap in access.

Echoing this sentiment, Mr. Sanjay Avinash championed the pursuit of higher education, heralding a beacon of hope for the community. As the event culminated with the felicitation of five specialist doctors by the District Collector, it underscored the profound impact of the Adani Foundation's endeavors, igniting a flame of optimism that illuminates the path towards a brighter tomorrow.



Endeavor In Core Areas:



Education – Project Utthan:

Through our Utthan project, we've embraced 8 high schools.

Our mission: Elevate 10th board results, boost attendance, slash dropout rates, promote girls' education, and uplift education quality in Khavda.

At this high schools, we've enlisted 8 dedicated Utthan Sahayaks, equipped with specialized training. They're laser-focused on bolstering core subjects such as Math, Science, and English. Additionally, we've brought on board 2 community mobilizers, tasked with persuading parents to prioritize their children's education, particularly for girls.

Fostering ambition & motivation by facilitating with Industrial visit & notebook distribution



Empowering 364 Students



Health Care:

The community struggles with limited healthcare resources, including just one CHC with a single general doctor, no specialized care for women and children, and insufficient diagnostic equipment. Financial constraints further hinder access to medical services.

To improve healthcare, we're tackling diseases in two ways: through health camps and Adani Arogya Karyakram Khavda CHC for treatment, and dedicated awareness camps for prevention.

Curative Health Camp:

Adani Arogya Karyakram Khavda CHC:

Gynec	Pedia	Physi	Ortho	Optho
555	640	283	206	197

Health Camp:

Gynec	Pedia	Physi	Ortho	Optho
278	455	579	61	139



42 Villages benefited



3433 patients benefited

Preventive Health Camp:

Actively promoting preventive health awareness through family planning education, menstrual hygiene workshops, nutrition advocacy, mental health awareness sessions. Conducted 49 training in 38 villages.



1453 Women Benefited



1300 Pad Distributed

Endeavor In Core Areas:



CID – Water Conservation

In Khavda, water scarcity is critical: supply is weekly, groundwater levels are low, and villagers and animals share a single pond. Students drink unfiltered water at school, and rainwater flows away, unused.

1. Kuran village – Pond deepening & Filter well
2. Tuga village - Check dam maintenance



15 lakh cum



3600+ villagers benefited

Other CID work

1. Roof Shed in khavda High school
2. RO plant in 5 High school

350+ students benefited



Farmer welfare:

In Khavda, agriculture struggles due to limited knowledge and challenges like water scarcity and soil fertility issues, despite 80% of the population being engaged in dairy farming.

To educate farmers we organized an awareness camp for **275 farmers**, encouraging them to join the **ATMA Government Sanstha**. This initiative aims to provide guidance on conventional agriculture techniques and exposure to modern farming methods and tools.



Women Empowerment:

Women empowerment initiatives are underway, emphasizing financial independence and self-reliance.

Conducting awareness camps across 38 villages, we're educating women about the importance of having Saving Accounts, Through awareness camps, established Saving Account Groups, forming 7 SHG with 150 women.



15 SHG formed



150+ Women Economically Empowered

Green Energy



AGEL – Dayapar & Mandvi



Dayapar Adani Wind Energy project is a large-scale wind power project located in the Kutch district of Gujarat, India. It is one of the biggest wind farms in the country, with a total capacity of 575 MW. The project was developed by Adani Group and Inox Wind, its project was commissioned in April 2019 and supplies clean energy to various states in India through power purchase agreements with Maharashtra State Electricity Distribution, NTPC and PTC India.

Our Vision for Dayapar & Mandavi:



Water Positive Villages: Achieve water positivity in 42 villages of Dayapar through our dedicated water conservation structures. We aim to stablish sustainable solutions ensuring reliable water availability.



Improve Animal Husbandry: Focus on the health of cattle by providing vaccinations, medical treatment, and highly nutritious food to cattle. Helping Cattle owners to generate good revenue and sustain their livelihoods.



Enhance Education: Enhance the school's infrastructure and financially support students for educational equipment, providing them with a modern classroom environment equipped with the modern technology.



Health Services: Provide medical services to 3500 people of Dyapar and connect them with government medical schemes.



Endeavor In Core Areas:



CID – Water Conservation

Kutch suffers from a water shortage, particularly in the Dayarpar region, which receives the least amount of rainfall and has high TDS groundwater. To conserve as much water as possible in the AGEL Dayarpar region, the Adani Foundation has initiated various pond deepening and check dam restoration projects.

Sustainable Water Management projects:

1. Pond deepening in 8 Villages
2. Check Dam renovation & deepening in 2 villages
3. Over Head Portable Water Tank in 1 village

10.4 lakh cum
Water capacity

985 acers
Water rich land

1500+
Farmers Benefited

50,000/Ltr
Capacity of Over head water tank



SLD - Kamdhenu:

The Dayapar people rely largely on animal husbandry as their second most important income source, after agriculture. But villagers lack in sufficient knowledge on the dietary needs and vaccinations for cattle.

To educate them we are organizing cattle treatment and vaccination program, workshop on Animal Husbandry, and participating in Krushi Mela providing cattle owners mineral mixers to improve animal health and milk production.

455
cattle owners
provided Mixture
Mineral

1500
cattle Vaccination

Endeavor In Core Areas:



CID - Education:

Committed to improving educational infrastructure to ensure every student in Dayapar has access to safe and quality education environment. Through smart classes and material support, we're easing financial burdens and creating engaging learning environments. For good health of students ensuring portable water facility and tree plantation drive in schools.

Support	School
LED TV for smart class	3
Morden Education tools	2
Education kit support	2
Portable water facility	3
Eco club	1
School renovation	2



Health Care:

In AGEL Dayapar region, the health condition is concerning with major diseases like kidney stones and arthritis are prevalent in the villages. To battle this situation we are conducting health camps and organized Ayushman Bharat card camps. During these events, we distributed medicine free of cost to patients and provided recommendations for optimal treatment to those in need.

AGEL/ Adani foundation have supported 20 different equipment like Cardiac Machine, Semi auto analyzer, and other medical tools at CHC Dayapar which is going to facilitate 56 villages benefiting 62,500+ population.



618 Health camp Beneficiaries

86 Ayushman card Beneficiaries

₹8.6 Cr. Medical Coverage



13
Schools
Benefited



1500+
Students
Empowered

Adani Cement - Sanghi



Adani Cement Plant, prominently located near Moti Ber Village in the Abdasa block of Kutch, Gujarat, stands as a distinguished entity in the cement industry. Our facility is not just a cornerstone of the local economy, but also a pivotal contributor to the community's development. With a robust and integrated manufacturing infrastructure, we boast:

- A 6.6 MMTPA (Million Metric Tones Per Annum) capacity Clinker Plant
- A 6.1 MMTPA capacity Cement Plant
- Power generation facilities with a capacity of 143 MW.

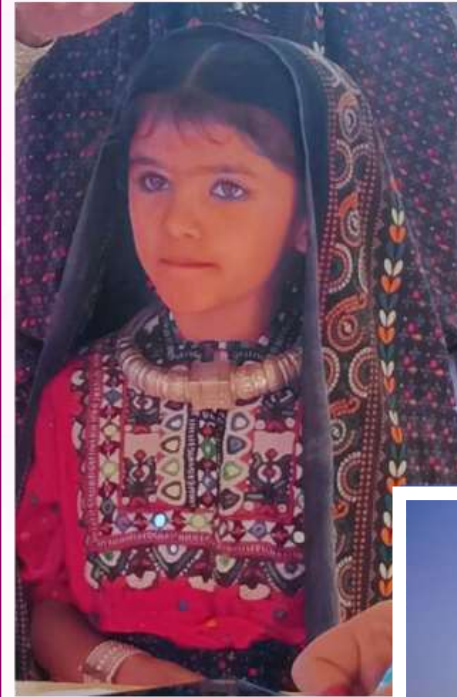
About Abdasa:

Abdasa is a region of Gujarat's Kutch district, defined by its diverse geography and rich cultural tapestry, influenced by different communities, agriculture crops and livestock rearing, particularly cattle and camel husbandry, is integral to the region's livelihoods.

The coastal areas support fishing communities, despite progress in infrastructure and development, Abdasa faces challenges related to water scarcity, education, and healthcare, while its diverse culture and unique landscapes continue to define its identity.

Our vision:

To foster and create a sustainable future for all by providing affordable and accessible facilities at the core of health, education, livelihood, and infrastructure.



Endeavor In Core Areas:



Joyful Beginnings:

Our CSR journey in Sanghi commenced with a joyous Christmas celebration at Adani Cement Abdasa on December 24th. The event, attended by over 500 students and parents, featured cultural performances and dance competitions, spreading festive cheer. Esteemed guests, including Mr. Vivek Misra, Head of Adani Cement Plant, Sanghipuram, Mr. Pushkar Chaudhry, HR Head, and Mrs. Pankti Shah, Gujarat CSR Head, graced the occasion.



Health:



Addressing the pressing healthcare needs of residents near Adani Cement Sanghipuram, a series of specialty health camps were launched. These camps, featuring Pediatric, Gynecological, Ophthalmic, and General medical services, aimed to bridge the gap in access to specialized healthcare. Previously, locals had to travel long distances to Naliya or Bhuj for medical care. By bringing essential health services directly to the communities, these camps have made a significant impact, offering health check-ups, consultations, and treatment for various illnesses and conditions, ensuring better healthcare accessibility for all.



1200 patients benefited



11 Villages benefited

Endeavor In Core Areas:



Road Superheroes:

Introducing the "Road Superheroes" Health Care Program, tailored specifically for the drivers of

Adani Cement Abdasa, dedicated to promoting health awareness and preventive care within our driving community.

This holistic initiative comprises five vital stages:

1. Health Screening
2. Telehealth Services
3. De-addiction Awareness
4. Stress Management & Yoga
5. Regular Health Tracking

A two-day health screening camp held at Adani Cement, offered comprehensive health assessments, including vision tests, blood pressure measurements, ECG, diabetes screenings, and BMI evaluations, alongside expert consultations.

150
Drivers Benefited
& Receive Health Card



Tree Plantation Initiative:

Adani Cement Campus hosted a remarkable tree planting drive as part of our employee volunteer program. More than 50 enthusiastic employees joined forces to plant trees, showcasing our dedication to a greener future. This collective effort exemplifies our commitment to environmental conservation and responsible corporate citizenship.





adani
Cement

NDTV

adani
Foundation

અદાણી ફાઉન્ડેશન દ્વારા
અબડાસા વિસ્તારમાં સામાજિક ઉત્તરદાયિત્વના ભાગરૂપે
શૈક્ષણિક કાર્યનો શુભારંભ

adani
Foundation

અદાણી ફાઉન્ડેશન
આપનું હાર્દિક સ્વાગત કરે છે.



NDTV, or New Delhi Television Limited, stands as one of India's premier news networks, renowned for its steadfast commitment to journalistic integrity and comprehensive coverage. Founded in 1988 by Radhika Roy and Prannoy Roy, NDTV has emerged as a trusted source of news and analysis, shaping public discourse on critical issues both within India and around the world.

At the heart of NDTV's ethos lies an unwavering dedication to delivering unbiased, credible, and impactful journalism



Empowerment through Education:

In Abdasa Block, the AF, partnering with NDTV, is revolutionizing education through CSR initiatives. Faced with low literacy rates and infrastructure challenges, the Foundation conducted a thorough needs analysis. This led to targeted interventions, including:

1. **Smart Classes: Implemented in 10 primary schools for interactive learning.**
2. **School Building & Bala Painting: Creating vibrant learning spaces.**
3. **Educational Kits Distribution: Providing 1,150 students in 15 schools with essential learning materials.**

A momentous **Handing Over Ceremony** unfolded in Moti Ber Village, Abdasa, marking the debut of Smart Classes and vibrant Bala Painting in 15 primary schools.

A notable announcement by Mr. Vivek Mishra, Plant head, Adani cement, Sanghipuram unveiled plans for a forthcoming hospital within Sangji premises, promising enhanced community healthcare access.

In this overwhelming event **1,150 students facilitated with essential education kits** and teachers were honored with memento.



Shree Renuka Sugar Ltd.

Shree Renuka Sugars Limited stands as a globally recognized agribusiness and bio-energy corporation, covering the entire sugar value chain.

As one of India's largest producers of sugar and green energy, Renuka is at the forefront of sugar manufacturing. With eight cutting-edge sugar mills, many equipped with ethanol and power co-generation capabilities, Renuka leads the industry. Additionally, Renuka operates two of India's largest port-based refineries.



Education:

Committed to improving educational infrastructure to ensure every student has access to safe and quality education environment; we are committed to do following work:

- Renovation of 15 Anganwadi in Kidana, Bharapar, Tuna, Rapar and Wandi village benefiting **600+ students**. Also, supporting primary schools with smart class education equipment.
- Bala Panting and construction of stage in Primary school, Rapar.



Water Conservation Project

To support the community with secure and safe water we are dedicated in implementing water project.

Sustainable Water Management projects:

1. **Pond deepening work in Kidana, Bharapar and Tuna Villages. It will benefit 600+ villagers and will have 24,000 CUM water holding capacity.**
2. **Construction of RO plant room with installation of 1000 ltr./ hr RO System.**



AESL



Adani Energy Solutions Ltd, formerly known as Adani Transmission Ltd, is an electric power transmission company.

ATL is the country's largest private transmission company, with a presence across 16 states of India and a cumulative transmission network of 19,800 ckm and 53,000 MVA transformation capacity.

In its distribution business, AESL serves more than 12 million consumers in metropolitan Mumbai and the industrial hub of Mundra SEZ. AESL is ramping up its smart metering business and is on course to become India's leading smart metering integrator.

Course of Action in ATL's Villages:

Upon receiving the CSR responsibility for villages under ATL, the Adani Foundation embarked on a mission to address community challenges. Recognizing the pressing issue of increased salinity affecting water availability for daily needs and agriculture, we initiated work on water conservation structures as a sustainable solution to alleviate the villagers' hardships.

- **Initiated Pond deepening and Check dam restrengthening work in 5 villages of Rapar and Mandvi Taluka.**

- **Additionally, started working for Cattle Health Camp and tree plantation drive.**



27,200 cum
Water Capacity



17,000+ villagers
benefited



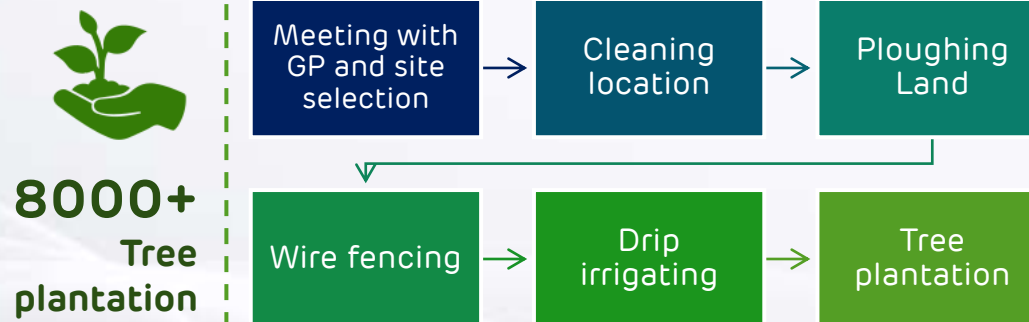
CER – APSEZ



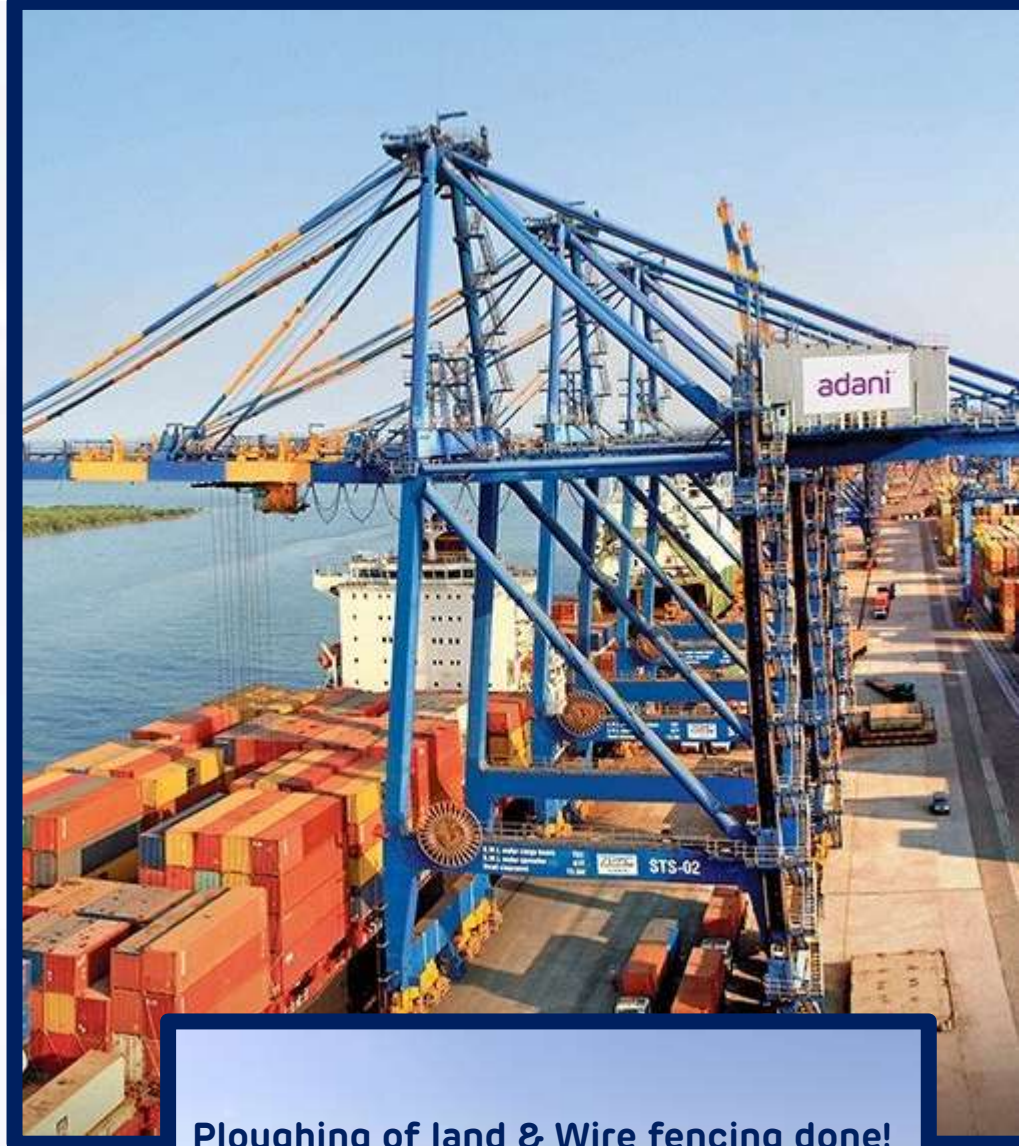
Adani Ports and Special Economic Zone Limited, a subsidiary of Adani Group, is India's largest private port Operator, operating 12 ports and terminals, including India's first deep water Transshipment Port Vizhinjam International Seaport Thiruvananthapuram and India's first port-based SEZ at Mundra.

Course of Action:

Taking on the CER responsibility from APSEZ, the Adani Foundation has undertaken a massive tree plantation drive in Moti Bhujpar. To ensure its success, we have devised a comprehensive six-step plan.



Our initiative represents a sustainable approach to addressing environmental challenges and reducing carbon emissions.



Ploughing of land & Wire fencing done!





Work done during Biparjoy Cyclone

Cyclone Biparjoy caused huge losses in Mundra and nearby villages. Adani Foundation's worked for relief and recovery with Panchayat & Government body. More than 17,000 people benefited from various efforts.

Adani foundation consider this as ethical responsibility and a source of satisfaction. Stakeholders and government bodies also appreciated the efforts.

Meetings with Taluka & District government officials to facilitate assistance and coordination with local authorities.



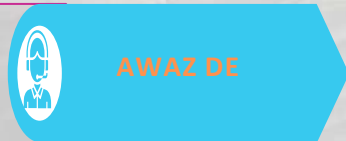
Connect With Government & community

Health teams and ambulances on standby in case of emergency.



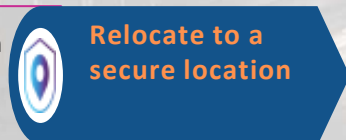
Health Team

Reached to more than 10000 people by Awaz de to aware all, specially for fisherfolk settlement.



AWAZ DE

4500+ Workforce migration with basic amenities.



Relocate to a secure location

100+ Team member distributed for each taluka/Villages as per requirement



Duty delegation



Monitoring

Tracking the cyclone's progress by AF team member.



Connect

Team members in directly touch with 10 Temporary housing & 60 Villages.



Government

Co-ordinating with Government organizations from Talati to Collector.



Panchayat

Co-ordinate with Gram panchayat in case they need any emergency support.

Pre-cyclone preparation



- Team distribution
- Workforce migration
- Basic amenities
- Awareness efforts.
- Meetings with government.

During cyclone



- Food and shelter provision
- Fodder support
- Awareness messages
- Vehicle support.
- Coordination with Panchayat

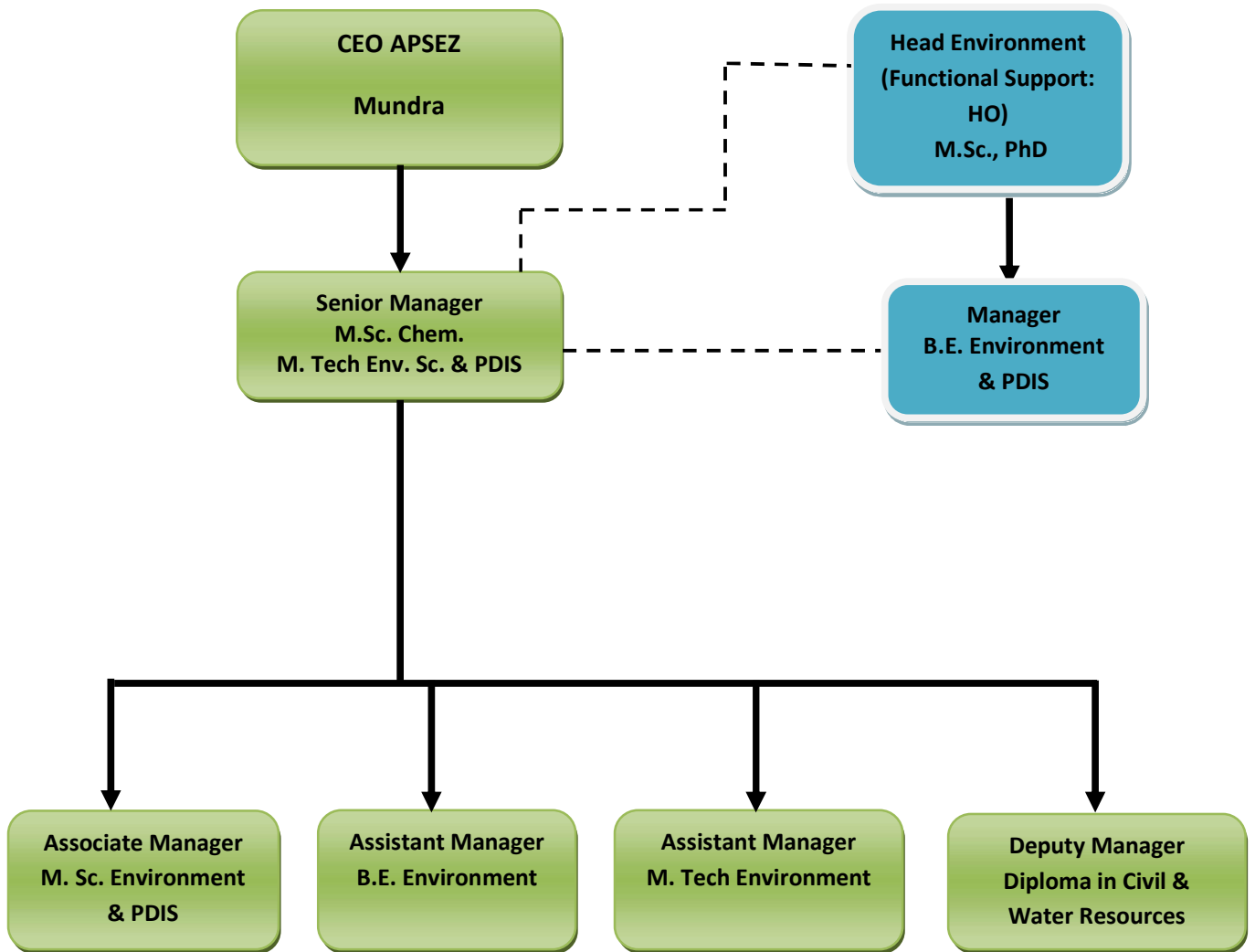
Post-cyclone relief



- Temporary housing
- Food packets
- Excavator support
- Transfer of affected individuals.
- Provision of fodder

Annexure – 4

Updated Organogram of Environment Management Cell, APSEZ, Mundra



Annexure – 5

Cost of Environmental Protection Measures

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2021 - 22	2022 - 23	2023 - 24	2023 - 24
1.	Environmental Study / Audit and Consultancy	6.82	7.32	22.67	27
2.	Legal & Statutory Expenses	10.52	12.32	8.60	13
3.	Environmental Monitoring Services	14.31	15.32	13.37	19.20
4.	Hazardous / Non-Hazardous Waste Management & Disposal	107.09	104.035	130.11	148.68
5.	Environment Days Celebration and Advertisement / Business development	4.04	2.53	3.42	11.50
6.	Treatment and Disposal of Bio-Medical Waste	2.14	2.29	2.28	2.28
7.	Mangrove Plantation, Monitoring & Conservation	53.6	35.0	15	15.0
8.	Other Horticulture Expenses	921	956	904	904
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	252.27	141.33	186.94	212.9
10.	Expenditure of Environment Dept. (Apart from above head)	149.8	90.14	80.39	182.92
Total		1371.79	1366.28	1366.78	1536.48

Annexure – 6

091245

Previous License No.

Previous License No. 4999

गुजरात विशेष आर्थिक क्षेत्र अधिनियम २००४ के अध्याय ७ की शर्तों के आधीन

0102

फॉर्म नं. ४

(नियम ५ के अनुसार)

कारखाना चलाने के लिये नामांकन और लाइसेंस

अधपन्ना 52109
नामांकन संख्या 70707

लाइसेंस नं. _____

सविनय Malay Mahadevia + 8 १९४८ के कारखाना के अधिनियम और उसके अंतर्गत बनाये गये नियमों के आधीन निम्न लिखित मकान विस्तारका वर्ष के दौरान किसीभी कार्य दिवसमें 500 से अधिक/अधिक नहीं व्यक्तियों को कार्य पर रखने और 5000 होर्स पावर से अधिक/अधिक नहीं विद्यय शक्ति रखनेवाले कारखानों को नियमनुसार लाइसेंस दिया जाता है।

यह लाइसेंस ३१ दिसंबर 2018 तक मान्य रहेगा।

का. धा. दिनांक : 7 / 10 / 98

दिया गया भुगतान शुल्क 79200/- 52 2640/-

बाकी भुगतान शुल्क 79200/-

अधिक भुगतान शुल्क 2640/-

ता. 20-11-2017

M. Mahadevia
Deputy Director
Industrial Safety & Health
Adipur (Kutchh)

- Sd -
विकास आयुक्त
मुन्द्रा विशेष आर्थिक क्षेत्र

लाइसेंस दिए गए मकान विस्तार की रूपरेखा

दिनांक 11-11-98 का नकशा नं. 1297C में दर्शित लाइसेंस दिए गए मकान

Narval Island - Mandra - Kutch

जगह पर आया है और उसमें

Adani Ports And Special Economic Zone Ltd है।

नवी करण

नवी करण दिनांक	कामगारों की संख्या के लिये	होर्स पावर के लिये	कुल शुल्क	अधिक भुगतान शुल्क	लाइसेंस समाप्ति की तारीख ३१ दिसंबर,	लाइसेंस देनेवाले अधिकारी के हस्ताक्षर
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26/11/2017	500	से अधिक नहीं	5000	से अधिक नहीं	39600	42240	2019	<i>M. Mahadevia</i>
	500	से अधिक नहीं	5000	से अधिक नहीं	39600	2640	2020	<i>M. Mahadevia</i>
11-01-2021	500	से अधिक नहीं	5000	से अधिक नहीं	39600	42240	2021	<i>M. Mahadevia</i>
	500	से अधिक नहीं	5000	से अधिक नहीं	39600	2640	2022	<i>M. Mahadevia</i>
21-11-2022	500	से अधिक नहीं	5000	से अधिक नहीं	198000	2640	2023 To 2027	<i>M. Mahadevia</i>
		से अधिक नहीं		से अधिक नहीं			20	
		से अधिक नहीं		से अधिक नहीं			20	
		से अधिक नहीं		से अधिक नहीं			20	
		से अधिक नहीं		से अधिक नहीं			20	