

SIX MONTHLY COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE (EC)

1600 (2×800) MW THERMAL POWER PLANT

At

**GODDA TALUKA, GODDA DISTRICT
JHARKHAND**

Submitted to:

**Regional Office, East Central Zone
Ministry of Environment, Forests & Climate Change,
Central Pollution Control Board, New Delhi &
Jharkhand State Pollution Control Board, Ranchi**



Submitted By:

**Environment Management Department
Adani Power (Jharkhand) Limited
Motia, Patwa & adjacent Village,
Godda Taluka, Godda District
Jharkhand**

PERIOD: April'2020 – September'2020

Adani Power (Jharkhand) Limited

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Adani Power (Jharkhand) Limited

Introduction

Adani Power (Jharkhand) Ltd. AP(J)L, a wholly owned company of Adani Power Limited, is developing 1600 (2x800) MW Coal-based Ultra Supercritical Thermal Power Plant at Village Motia, Patwa and adjacent villages of Godda & Poraiyahaat Blocks of Godda District in Jharkhand. The power plant is based on ultra-supercritical, energy efficient & environment friendly technology.

AP(J)L has been granted Environmental Clearances & Consent to Establish by Ministry of Environment & Forest and Jharkhand State Pollution Control Board and AP(J)L has also obtained all necessary statutory / mandatory clearance respectively.

India and Bangladesh desire to enhance traditional ties of friendship, through economic cooperation. Realizing the ever increasing demand of electricity for the socio-economic development and progress, the Government of India (GoI) and Government of Bangladesh (GoB) have signed a Memorandum of Understanding (MoU) on 11 January, 2010.

As provided in the MoU, GoB and GoI shall inter-alia undertake to encourage and facilitate joint co-operation between the parties in Power generation, transmission, energy efficiency and development of various types of renewable energy;

Accordingly, Adani Power Limited (APL) on 11.08.2015 signed an MoU with Bangladesh Power Development Board (BPDB), to develop a 2X800 MW thermal power plant on BOO basis in India and supply the entire power generated to Bangladesh Power Development Board (BPDB) through a dedicated Transmission Line.

Status of the Project:

AP(J)L has been granted Environment Clearances (EC) vide Letter no: J13012/01/2016-IA.I (T) dated: 31.08.2017 and amendment in EC vide letter dated 03.09.2019 for changing the source of water form Chir River to Ganga River. AP(J)L has also been granted amended EC vide Letter No: J-13012/01/2016-IA.I (T) dated 27.02.2020 to incorporate sector specific Special Economic Zone for Power under SL.No.7(C) of Schedule as mentioned in EIA Notification, 2006.

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Compliance status of Environmental Clearance

1600 MW (2×800 MW) Godda Thermal Power Plant

Environment Clearance Letter no: J-13012/01/2016-IA.I (T) dated: 31.08.2017 & Its Subsequent Amendment Letter no. J-13012/01/2016-IA.I (T) dated 03.09.2019 and 27.02.2020

Si. No.	Specific Conditions	Compliance Status
(i)	Total Ash and Sulphur content in the imported coal shall not exceed 25% and 0.5% respectively.	Noted & compliance assured during operation stage of plant.
(ii)	Land acquisition shall be carried out by the State Govt. in accordance with Santhal Pargana Tenancy Act, 1949, Right of Fair Compensation and Transparency in the Land Acquisition, Rehabilitation Act, 2013 and other prevailing laws. Documents in support of land acquisition after completion acquisition process shall be submitted to this Ministry as well as concerned Regional Office.	Complied. Land already acquired & Land possession documents have already been submitted.
(iii)	As per the Revised Tariff Policy notified by Minister of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage treatment plant of Municipality / local / similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies.	There is no STPs of municipality/local bodies within 50 KM of the site.
(iv)	Compliance of EC conditions, E(P) Act 1986, Rules and MoEF&CC Notifications issued time to time shall be achieved by a qualified environment officer to be nominated by the Project Head of the company who shall be responsible for implementation and necessary compliance.	Compliance assured. We have established Environment Management Department with Senior Management at Corporate level as well as at Site.
(v)	MoEF&CC Notification S.O. 3305 (E) dated 07.12.2015 and subsequent notifications issued time to time shall be implemented with respect to specific water consumption, zero liquid discharge and revised emission standards. The PM, SO ₂ , NO _x and Hg emissions shall not exceed 30 mg/Nm ³ , 100 mg/Nm ³ , 100 mg/Nm ³ and 0.03 mg/Nm ³ respectively. The specific water consumption exceed shall not exceed 2.5 m ³ /MWh and zero wastewater discharge shall be achieved.	Compliance assured during operational phase of the plant. High efficiency Electrostatic Precipitators (ESP) has been considered to meet revised emission standard of <30 mg/ Nm ³ for PM. FGD & SCR are proposed to meet revised standard of SO _x & NO _x Emission. TPP has been designed to meet the Specific Water consumption of less than 2.5 m ³ /MWh and zero waste water discharge.
(vi)	MoEF&CC Notifications on Fly ash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804 (E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied with.	Compliance assured once the project takes off. As per Fly Ash Notification, Half yearly & Annual Ash generation and utilization will be submitted to MoEF&CC, CPCB & JSPCB during operational phase of the plant.

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(vii)	Separate Environmental Clearance may be obtained for the proposed Township as applicable under EIA notification 2006.	Separate Environment Clearance has been granted by SEIAA, Jharkhand for Residential Township vide letter No. EC/SEIAA/2017-18/2070/2017/207 dated 31/08/2018.
(viii)	Solar rooftops shall be installed in the surrounding villages as part of CSR activities.	Noted. It is proposed to provide Solar lights in surrounding villages wherever feasible through Adani Foundation as part of CSR activity. CSR activities are reflected in Annexure -II.
(ix)	Skill mapping of the Project affected people (PAF) be carried out on a long-term basis for their livelihood generation. A report is to be submitted within 3 months to the Ministry from the date of issuance of environmental clearance.	Complied. Skill Mapping Report prepared by M/s Indian Institute of Social Welfare & Business Management (IISWBM) Kolkata has already been submitted to your good office along with compliance report. Skill Development Centers: Adani Skill Development Centre- ASDC, Godda Sakhsam Training Centres Motia, Rangania, Nayabad, Patwa, Sondiha, Basantpur, Sarba, Bahuriya and Dumariya village.
(x)	Modern methods of agriculture organic forming, compost / vermiculture making and utilization, drip/direct to root irrigation to be promoted in and around the Project area.	Noted & compliance assured. A Village level training was conducted in core and railway line villages to promote organic farming through Vermicomposting. Adani Foundation supported farming communities by promoting production of organic manure by installation of Vermi-Compost Bag/Vermibed across the core and pipeline village. Vermicomposting units has been set up by 23 farmers of 6 villages of Godda District for their livelihood generation. Village level training & On-Field Demonstration on System of Rice Intensification (SRI) conducted in Motia village to promote organic farming through SRI method with participation of over 50 small & marginal farmers. We have also supported with Paddy Seeds for SRI which Enabling Farmers to Promote Organic Farming and Increase their Annual income growth. Details report enclosed as Annexure- II.

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(xi)	<p>While implementing CSR,</p> <ul style="list-style-type: none"> • Women empowerment is important. Therefore, proper skill based training/long term livelihood revenue generation be created for all of them. • Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths. • Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan. • Preventive health programme may be preferred than the curative health programme such as nutrition development of small children and around the project. 	<p>Being Complied.</p> <ul style="list-style-type: none"> • SuPoshan and Saksham, two programmes are under implementation to empower girls and women through improvisation of their health and nutrition intake as well as skill training to make women self-reliant economically. • Computer Learning Centres are operational in Motia, Rangania, Pathergama & sunderpahari villages. • We have constructed model bathrooms with soak pit in various villages towards creating awareness for cleanliness and hygiene by our program named "SWACCHAGRIH". • Curative health program being taken care under "SuPoshan" program. <p>Detailed CSR report is attached as Annexure – II.</p>
(xii)	<p>Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.</p>	<p>Complied. Vision document has already been submitted along with compliance report.</p>
(xiii)	<p>Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and the status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.</p>	<p>Noted & compliance assured Project is under construction phase and it is proposed to utilize the roof tops of buildings which are feasible for installation of solar panels.</p>
(xiv)	<p>A long term study of radio activity and heavy metals content on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.</p>	<p>Noted. Radioactivity testing result/report of two Coal samples (test report submitted by Board of Radiation and Isotope technology, Mumbai) from the source area already submitted along with EIA report. Further, Radioactivity Test and Heavy Metal study report will be submitted during the plant operation. There is no proven technology to monitor radioactivity at plant level on continuous basis. Periodic test report will be submitted during operational phase of the plant.</p>
(xv)	<p>Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.</p>	<p>Noted & compliance assured. AP(J)L has proposed to install Online Continuous Emission Monitoring System & Effluent monitoring system. The</p>

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		monitoring system will be installed before COD.
(xvi)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that a particulate emission does not exceed 30 mg/Nm ³ as would be notified by the Ministry, whichever is stringent. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.	Noted. High efficiency Electrostatic Precipitators (ESP) will be installed in each boiler to meet PM emission of less than 30 mg/Nm ³ . Dust extraction system (Cyclone followed by bag filters) in coal crusher and coal transfer area (JNTs), rain gun type dust suppression system in coal yard and dry fog type dust suppression system in belt conveyor have been proposed.
(xvii)	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Dust extraction system with Bag filter in Crusher House is proposed. Pneumatic ash handling system with bag filters for ash handling & water sprinkling system will be provided in Coal yard.
(xviii)	Monitoring of surface water quantity and quality shall be regularly conducted and records maintained shall be submitted to the Ministry regularly. Further, monitoring system shall be placed between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.	Compliance assured. Baseline data was collected during EIA study & Regular monitoring of Air, Water (surface & ground) is being carried out. Environmental Parameters monitoring results submitted periodically to RO, MoEFCC Ranchi, MS JSPCB, Ranchi & RO JSPCB, Dumka. Environmental monitoring reports are enclosed as Annexure - I .
(xix)	A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed report kept of the quantity of water harvested every year and its use.	Rain Water Harvesting (RWH) study carried out along with EIA study and already submitted. RWH plan is under implementation along with project construction.
(xx)	No water bodies including natural drainage system in the area shall be distributed due to activities associated with the setting up/operation of the power plant.	Noted & compliance assured. There are some first order streams, which will be altered. The drainage profile will be maintained from SE to NW direction along the natural drainage profile. There is an unlined (kachcha) canal passing through the site, which is diverted along the Project boundary without disturbing flow and natural drainage pattern.
(xxi)	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Noted & agreed. Excavated Soil is being utilized within the project site to the extent possible.

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(xxii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb, etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.	Monitoring of Mercury and other heavy metals in bottom ash assured during operational phase of the plant. Dry Ash collection, pneumatic conveying and storage are proposed for utilization. Unutilized ash will be disposed off in the ash dyke through HCSD.
(xxiii)	No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the state pollution control board and implementation done in close co-ordinate with the State Pollution Control Board.	Noted & agreed. In case of mine void filling option undertaken during operational phase of the plant, detailed study from reputed institute shall be undertaken, adequate lining will be done and pollution control board shall be consulted.
(xxiv)	Fugitive emission of fly ash (dry and wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided with the local Panchayats.	Compliance assured. To control fugitive emission, adequate water sprinkling arrangements will be made in fly ash area. TPP will provide suitable compensation, if any damage in future.
(xxv)	Green belt consisting of three tiers of plantation of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80%.	Compliance assured. Green belt development / plantation is being developed along with project construction and efforts are being made to develop more greenery in & around the plant with survival rate of more than 80%.
(xxvi)	Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.	Noted and compliance assured.
(xxvii)	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	Corporate HSE policy is placed & signed by the Chairman. IMS implementation & certification for the project will be implemented during plant operation.
(xxviii)	CSR schemes identified based on need assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for	CSR activities are implemented in consultation and collaboration with the community & community leaders as well as District Administration. Regular community meetings are organized in all the villages to understand the issues of community.

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	community development activities and income generating programmes.	Social development activities have been carried out for Need Based families under the CSR activities by Adani Foundation . Need Based Assessment Study and Development of CSR report has already been submitted along with compliance report. CSR report is enclosed as Annexure- II .
(xxix)	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable external agency shall be appointed. CSR activities shall be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	Social development activities have been carried out for Need Based families under the CSR activities by Adani Foundation . Evaluation of CSR activities will be done during plant operation by external agency every three years. However, an Annual Audit Plan is in place in the company which is conducted at all the sites. An internal Audit team undertakes review of the systems, process and also verifies on ground implementation of CSR. CSR report is enclosed as Annexure- II .
S.N	General Conditions:	Compliance Status
(i)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	Noted. Plant layout has been designed with separate system for Storm Water drain and Effluent.
(ii)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	Compliance assured. Decentralized Sewage Treatment Plants are proposed & treated water will be reused suitably within the plant premises for green belt development. One STP of 10KLD capacity is operational near Security Barrage. Treated water is being used for Plantation / green belt development.
(iii)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Fire Safety Management Plan is prepared and implemented. Fire Safety Management Plan already submitted with compliance report of October 2018 to March 2019.
(iv)	Storage facilities for auxiliary liquid fuel such as LDO/ HFO /LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Noted. The LDO/HFO/LSHS will be properly stored in designated location & minimum risk area and Department of explosive shall be consulted. Mock drills are being conducted periodically. DMP already submitted with compliance report of October 2018 to March 2019.

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(v)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Being Complied. First aid facilities, drinking water facility, Sanitation facility, Waste water disposal, solid wastes management and primary health facilities are being ensured at site.
(vi)	Noise levels emanating from turbine shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	Necessary action/prevention measures have been taken care in design to maintain noise levels within 85 dBA at source. High Noise areas are identified. The working personnel will be provided with appropriate Personnel Protective Equipment (PPE's). A complete medical check-up with audiometric test of workers & employees is being carried out prior their joining in the organization.
(vii)	Regular monitoring of ambient air ground level concentration of SO ₂ , NO _x , PM _{2.5} and PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limit, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional office of this ministry. The data shall also be put on the website of the company.	Being complied. Regular monitoring of ground level concentration of Ambient Air for SO ₂ , NO _x , PM _{2.5} and PM ₁₀ and Hg is being carried out and monthly reports are being submitted to the MS, SEIAA & JSPCB Ranchi & RO JSPCB, Dumka. For selection of monitoring location and monitoring frequency intimation letter submitted to the board. Monitoring frequencies are as below: <ul style="list-style-type: none"> • Ambient Air twice in a week, • Water quality & Noise once in Month and • Soil Quality once in a season (Except Monsoon). Environmental monitoring report is enclosed, Please refer Annexure- I . EC compliance report is uploaded on the company website.
(viii)	Utilization of 100 % Fly ash generated shall be made from 4 th year of operation. Status of implementation shall be reported to the regional office of the Ministry from time to time.	Noted. Ash utilization plan/schedule has been incorporated in the EIA report. Status of implementation will be reported to the Regional office, MoEF&CC regularly during plant operation.
(ix)	Provision shall be made for housing of the construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets. Mobile STPs, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the construction of the project.	Required hutment, drinking water, Mobile Toilets. Mobile STPs, Safe Drinking Water & Medical health care facilities, Fuel for cooking and other infrastructure has been arranged on temporary basis. However, local manpower is preferred during Construction phase so there may be

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		less necessity to build housing for the construction labour.
(x)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	Complied. Advertisement in 10 Local News Papers was published in Hindi & English. Copy of News Paper cutting already submitted along with Oct'17 to March'2018 compliance report.
(xi)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied. A copy of the Environment Clearance letter was provided to Panchayats, Zila Parisad and local Body. Acknowledged is already submitted along with compliance report. The clearance letter has been uploaded on the company website http://www.adanipower.com/
(xii)	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutants levels namely SPM, RSPM (PM _{2.5} & PM ₁₀), SO ₂ , NO _x (ambient levels as well as stack emissions shall be displayed at a convenient location near the main gate of the company in the public domain.	Being complied. Six monthly compliance status reports are being submitted to MoEF&CC, CPCB & JSPCB. Compliance status uploaded on Company's website. Digital displayed board will be installed at the main gate of the power plant, before COD of the power plant. However, Display Board is already provided at main gate showing information on Ambient Air Quality displayed at main gate which is maintained and updated periodically. Environmental monitoring report is enclosed, Please refer Annexure- I.
(xiii)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Minister by e-mail.	Noted. Environment statement will be submitted to JSPCB, after obtaining the Consent to Operate (CTO).
(xiv)	The project proponent shall submit six monthly reports on the status of the implementation of the	Six monthly compliance status reports are regularly submitted to MoEF&CC,

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	stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project: proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	CPCB & JSPCB. The same is sent by email also. Six monthly compliance report for the period of Oct'19 to Mar'20 submitted to your office vide our letter no. APL/APJL/EMD/EC/MoEF/195/05/20 dated 26.05.2020. Compliance status updated on Company's website. https://www.adanipower.com
(xv)	The progress of the project shall be submitted to CEA on six monthly basis.	Report Submission to CEA is not applicable as Project is dedicated to Bangladesh Govt. and it is not connected to Indian Grid.
(xvi)	Regional Office of the MoEF&CC will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their reference during monitoring. Criteria pollutants levels including NO _x (from stack & ambient air) shall be displayed at the main gate of the power plant.	Noted. Copies of Environment Impact Assessment report (EIA) with Environment Management Plan already sent to Regional Office, Ranchi, vide our letter no. APJL/ENV/EC/SMR/175 /05/2018, dated-14.05.2018 Digital displayed board will be installed at the main gate of the power plant, before COD of the power plant. However, Display Board is already provided at main gate showing information on Ambient Air Quality displayed at main gate which is maintained and updated periodically.
(xvii)	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Separate budget has been already allocated for Environmental protection measures. Fund for Environment management: Capital Cost: Rs. 2,225.68 Crores
(xviii)	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Financial closures has been achieved and disclosed. Construction work for Site development, Boundary wall, Site office, Stores. Main plant and other facilities is already started. Commissioning of the Plant was expected by May'2022. However due to current pandemic scenario of COVID 19 it may get delayed.
(xix)	Full cooperation shall be extended to the Scientists / Officers from the Ministry / Regional Office of the	Noted. Full co-operation shall be extended all time.

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	Ministry at Bangalore / CPCB / SPCB who would be monitoring the compliance of environmental status.	
Conditions of EC Amendment		
(i)	Stage-I Forest Clearance for diversion of 13.3293 ha for laying pipeline shall be submitted. As per Ministry's guidelines, a formal amendment will be issued after furnishing the Stage-I Clearance.	The copy of Stage-I had submitted before amendment. This condition stands deleted as per amended EC Vide No. J -13012/01/2016-I.A.I (T) dated 27.02.2020.
(ii)	In line with Ministry's OM dated 11.3.2010 in regard to Oil and Gas pipelines, in a similar manner, 10 trees to be planted for every tree cut in the non-forest area.	Noted. We have consulted Divisional Forest Officer (DFO), Godda vide our letter no. AP(J)L/FC/ENV/227/05/20 dated 28.05.2020 to provide plantation scheme with demand note for proposed plantation.
(iii)	There will be storage reservoirs for storing 15 MCM water to cater during lean season.	Noted and agreed. Compliance assured.
(iv)	Daily quantity (Average, minimum and maximum) of fresh water withdrawn from Ganga River near Sahebganj for the Power Plant shall be recorded and data base be preserved to ensure permissible drawl of fresh water from Ganga River. The source sustainability reports for withdrawal of water from Chir River and from the Ganga River shall be placed in the public domain by the proponent, either by uploading to the PARIVESH portal or its own website.	Noted & Agreed. Compliance assured once the project takes off. Source sustainability reports for withdrawal of water from Chir River and from the Ganga River has been uploaded and is already available on https://parivesh.nic.in/
(v)	As per the original EC, 33% greenbelt of plant area shall be developed. In case of any shortage of land, additional land shall be acquired to meet the condition.	Noted. Green belt development / plantation will be developed along with project construction & during operation and efforts will be made to develop more greenery in & around the plant with survival rate of more than 80%.
(vi)	The conditions specified in the In-Principle (Stage-I) Forest Clearance dated 28.6.2019 shall be complied with. A compliance to these conditions shall also be submitted along with Six monthly compliance report. Further, copy of Formal (Stage-II) Approval shall be submitted as and when it is obtained.	Compliance of conditions mentioned in the In-Principle approval (Stage-I) Forest Clearance dated 28.06.2019 has already been complied & uploaded on https://parivesh.nic.in/ . Compliance report of Stage - I Forest Clearance submitted vide our last compliance report for the period of Oct'19 to Mar'20.
(vii)	The total project area has now been reduced to 558 acres from 1255 acres. The remaining area (if acquired) shall be developed as greenbelt.	Noted. Power plant facilities have been reworked and total power plant area has now been optimized to 558 acres from 1255 acres.
(viii)	All the conditions prescribed in the permission granted by National Mission for Clean Ganga (NMCG), Ministry	Noted and will be complied.

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	of Water Resources, River Development & Ganga Rejuvenation vide their letters dated 8.8.2018 and 16.11.2018 for withdrawal of 36 MCM of water from River Ganga during June to December, shall be complied with.	
Additional Conditions (EC Amendment)		
(i)	The area of 7.7 acres (originally proposed 558 acres & Notified SEZ land: 550.23 acres) shall be developed with greenbelt. Demarcation of this land with co-ordinates and progress of greenbelt is to be submitted in the compliance report.	Noted and agreed. Green Belt development/plantation are being developed and efforts are being made to develop more greenery in & around the plant with survival rate of more than 80%.
(ii)	In para 5 of amended EC dated 03.09.2019, the period of '6 months' be read as '07 months'.	Noted.

ADANI POWER (JHARKHAND) LTD.

2*800 MW Godda Thermal Power Project

Village: Motia, Dist: Godda, Jharkhand

ENVIRONMENTAL MONITORING REPORT PERIOD: APRIL'20 – SEPTEMBER'20



Go Green Mechanisms Pvt. Ltd.

Head Office & Lab: Dayal Estate, National Highway
No. 8, Opp. APMC Market Gate – 1, Jetalpur,
Ahmedabad – 382426

Contact: 7069072001/02

Email: lab@gogreenmechanisms.com



REPORT TITLE	COMPANY NAME:	Adani Power (Jharkhand) Ltd.
	SITE LOCATION:	2*800 MW Godda Thermal Power Plant Village: Motia, Dist: Godda, Jharkhand
	BASELINE PERIOD:	Apr'20 to Sept'20
	REPORT DATE:	02.11.2020
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SECTION 1: FOREWORD

The protection of environment plays a crucial role in maintain the local environment quality for any industry, throughout their production. Hence compliance of the statutory requirements becomes very important to conserve the ecological balance within and surrounding the plant area. Therefore, environment protection is becoming a prerequisite for sustainable development. In line with this requirement, the management of Adani Power (Jharkhand) Ltd. has adopted a corporate responsibility of development and top priority is given for environment protection.

In order to comply with the Environment protection act, to fulfil statutory requirement and to be in tune with Environmental Preservation and sustainable development Adani Power (Jharkhand) Ltd., has retained M/S. Go Green Mechanisms Pvt. Ltd. As Environment Consultants and for various Environmental issues related to their Power Plant.

Environmental Quality Monitoring Report for the Month April'20 to September'20 has been collected.

We are thankful to Adani Power (Jharkhand) Ltd. for the opportunity provided to be associated in this endeavour.

Note: Considering the Covid-19 Pandemic and the conditions that prevailed, we couldn't conduct Environmental monitoring for the month of April'20 and May'20.

SECTION 2: LIST OF EQUIPMENTS

The list of Equipments used in the project is delineated in the following table.

Sr. No.	Name of Equipments	Make/Model
1	Respirable Dust Sampler	Ecotech Instruments / AAS 217BL
2	PM _{2.5} Sampler	Ecotech Instruments & Eonair Technologies/AAS 127 & AQS 235
3	Gaseous Attachment with RDS	Ecotech Instruments / AAS 217BL
4	Sound Level Meter	Hemsun / HDB 2202
5	Weather Monitoring Station	Ambient Weather Station
6	Weighing Balance	Shimadzu /AUW220D
7	UV Visible Spectrophotometer	Systronics
8	Hot Air Oven	Patel Scientific Instruments
9	Filtration Assembly	Labline
10	Water Analysis Kit	Systronics
11	Bacteriological Incubator	Labline
12	Centi-micro Balance	Shimadzu /ATX224
13	Dissolved Oxygen Test Kit	Lutron
14	Autoclave	Patel Scientific Instruments
15	Laminar Air Flow	Labline
16	Muffle Furnace	Patel Scientific Instruments
17	Flame Photometer	Systronics /128
18	Digital colony counter	Labline
19	Microscope	Patel Scientific Instruments
20	Orbital Shaker	Labline
21	Centrifuge	Bio Lab
22	Simple Distillation Assembly	Labline
23	ICP-OES/AES	Thermo Fisher Scientific /iCAP 7400 SERIES
24	AAS	Thermo Fisher Scientific / AA 303
25	Ion Chromatography	Metrohm Herisau / 1.925.0020

SECTION 3: LIST OF PROJECT PERSONNEL

Sr. No.	Name	Qualification	Experience (Yrs)	Designation
1.	Amit Badlani	B.E. (Chemical) M.S.(Energy & Environmental Technology) M.S. (Pollution Control)	17 Yrs	Managing Director
2.	R.K.Pandey	B.Sc. Biology	16 Yrs	Project In-charge
3.	Payal Patel	M Sc. (Env. Sci.)	05 Yrs	Lab Manager
4.	Satyam Kumar	M Sc. (Env. Mgmt)	04 Yrs	Technical Manager
5.	Yash Goswami	Dip. Env. Engineer	10 Yrs	Field Operation - Manger
6.	Tantan Kumar	M Sc. (Env. Mgmt)	04 Yrs	Lab Chemist
7.	Pooja Parekh	B.Sc. (Microbiology) & DMLT	01 Yr	Lab Chemist
8.	Chandan Kumar	B.Sc. Chemistry	01 Yr	Field Assistant

For Go Green Mechanisms Pvt. Ltd.

Amit Badlani
Managing Director

SECTION 4: EXECUTIVE SUMMARY

Adani Power (Jharkhand) Limited has undertaken the task of preparing EMP report for its 1600 (2x800) MW Godda Thermal Power Plant & Residential Township which is within the premises of TPP.

M/s. Go Green Mechanisms Private Limited, got the opportunity to prepare the Environmental monitoring Data on the basis of actual field monitoring with respect to Group I Parameters i.e. Air, Water, Soil, Noise & Meteorological on behalf of HTG Engineering Pvt. Ltd.

A Meteorological station was set up on the terrace of "Hostel Block" & Micrometeorological parameters like Ambient Temperature, Relative Humidity, Wind direction, Wind Speed, Rain fall & Barometric Pressure etc were recorded on hourly basis during the study period.

On the basis of wind direction pattern, the three locations of AAQM were selected. The concentration of gaseous pollutants, PM_{2.5} were sampled and analysed for compliance to GSR 826(E) vide Notification Dated 16/11/2009.

Four numbers of Ground water samples were collected to understand the overall water quality of the project area. The water parameters were sampled and analysed to check for compliance to the specifications of (IS 10500:2012 & I 2296:1982 Inland surface water Class C).

The noise level was monitored at 06 locations on Day & Night time basis, monthly as per IS 9989: RA 2001.

The main aim of the soil testing is to assess the soil quality of the area to define the present status of soil. It helps in the assessment of impact if any, due to the project activities and selection of suitable species of plants for green belt development at the project area as it works as an anti-pollution tools.

SECTION 5: CONCEPTS & METHODOLOGY

5.1 METHODOLOGY

In the present study the following are the standard methods used for collection, analysis & interpretation of data:

AAQM Sampling & analysis: "Indian Standards (IS 5182)", "Guidelines for the measurement of Ambient Air Pollutants, Vol-I, CPCB" & "USEPA" methods were used for Ambient Air sampling and analysis to study the present pollution load around the Proposed Project location.

Parameters of AAQM	Standard Methods	Analytical Instruments
PM ₁₀	IS 5182 (P-23):2006	Weighing Balance
PM _{2.5}	GGMPL/SOP/AA/60	Weighing Balance
Oxides of Nitrogen(NO _x)	IS 5182 (P-6):2006	Spectrophotometer
Oxides of Sulphur(SO ₂)	IS 5182 (P-2):2001	Spectrophotometer
Mercury	317 B James Edition	ICP OES/AES /AAS (Hydride Generator)

Water Sampling & analysis: Similarly "Indian Standards (IS 3025)", "USEPA" and "APHA 23rd Edition" were used for water sample collection and analysis.

Parameters of Water Samples	Standard Methods	Analytical Instruments
Taste	IS 3025 (Pt 08): RA 2006	-
Turbidity	APHA 23rd Edn 2017 2130 B	Turbidity Meter
Total Dissolve Solid	APHA 23rd Edn 2017 2540 C	Hot air Oven
Boron(B)	APHA 23rd Edn 2017 4500 B C	Spectrophotometer
Calcium(Ca)	APHA 23rd Edn 2017 3500 Ca B	-
Chloride(Cl)	IS 3025 (Pt 32): RA 2007	-
Fluoride(F)	APHA 23rd Edn 2017 4500 F D	Spectrophotometer
Residual Chlorine	APHA 23rd Edn 2017 4500 Cl B	
Nitrate (NO ₃)	IS 3025 (Pt 34): RA 2017	Spectrophotometer
Phenolic Compounds	IS 3025 (Pt 43): RA 2003	Spectrophotometer
Sulphate (SO ₄)	APHA 23rd Edn 2017 4500 SO ₄ E	Spectrophotometer
Total hardness (CaCO ₃)	APHA 23rd Edn 2017 2340 C	-
Cyanide (CN)	APHA 23rd Edn 2017 4500 CN C ,E	Spectrophotometer/ Ion Chromatography
Selenium (Se)	IS 3025 (Pt 56): 2003	
pH	IS 3025 (Pt 11): RA 2006	pH Meter
Colour	IS 3025 (Pt 04): RA 2017	
Odour	IS 3025 (Pt 05): RA 2006	-
Alkalinity	APHA 23rd Edn 2017 2320 B	-
Temperature	APHA 23rd Edn 2017 2550 B	-
Magnesium (Mg)	APHA 23rd Edn 2017 3500 Mg B	ICP OES/AES /AAS
Copper (Cu)	APHA 23rd Edn 2017 3111 B	ICP OES/AES /AAS

Iron (Fe)	APHA 23rd Edn 2017 3500 Fe B	ICP OES/AES /AAS
Manganese (Mn)	APHA 23rd Edn 2017 3111 B	ICP OES/AES /AAS
Mercury (Hg)	APHA 23rd Edn 2017 3112 B	ICP OES/AES /AAS (Hydride Generator)
Lead (Pb)	APHA 23rd Edn 2017 3111 B	ICP OES/AES /AAS
Arsenic (As)	APHA 23rd Edn 2017 3111 B	ICP OES/AES /AAS (Hydride Generator)
Cadmium (Cd)	APHA 23rd Edn 2017 3111 B	ICP OES/AES /AAS
Zinc (Zn)	APHA 23rd Edn 2017 3111 B	ICP OES/AES /AAS
Hexavalent Chromium	APHA 23rd Edn 2017 3500 Cr B	Spectrophotometer
Detergent	Annex K of IS 13428	Gas Stripping apparatus/ Spectrophotometer
Aluminum	IS 3025 (Pt 55): RA 2009	ICP OES/AES /AAS
E. Coli	IS 1622-1981: RA 2009	Bacteriological incubater/ Autoclave/ Laminar flow
Total Coliform	IS 1622: RA 2009	Bacteriological incubater/ Autoclave/ Laminar flow

Noise Level Monitoring: "Protocol for Ambient Level Noise Monitoring, IS 9989: RA 2001" was followed to monitor the Ambient Noise level surrounding the Project Site.

Parameters	Standard Methods	Analytical Instruments
Leq	IS 9989: RA 2001	Noise Level Meter

Weather Monitoring: "EPA-454/R-99-005, February 2000" was followed for micro-meteorological data collection result interpretation.

Parameters	Standard Methods	Analytical Instruments	Make/Model
Air Temperature	EPA-454/R-99-005	Digital sensor	Ambient Weather Station
Relative Humidity	EPA-454/R-99-005	Digital Sensor(Hygrometer)	
Wind Speed	EPA-454/R-99-005	3 Cup anemometer	
Wind Direction	EPA-454/R-99-005	Hall Effect (Wind Vane)	
Rain Fall	EPA-454/R-99-005	Tipping Bucket	

Soil sampling & analysis: "Indian Standard Method of Test for Soils (IS: 2720, IS: 14767 and IS: 5949)" were followed for soil sample collection, sample conditioning and analysis of physical chemical parameters. Hand boring method using spiral Auger was used for collection of soil samples.

Parameters	Standard Methods	Analytical Instruments
Magnesium	IS 5949:2003	ICP OES/AES
Calcium	IS 5949:2003	ICP OES/AES
Manganese	EPA 200.8	ICP OES/AES
Boron	EPA 200.2:1994/EPA2008: 1994	ICP OES/AES
Copper	EPA 200.8	ICP OES/AES

Sulphur	IS 14685	ICP OES/AES
Chloride	GGMPL/SOP/SOIL/45	ICP OES/AES
Zinc	EPA 200.8	ICP OES/AES
Nitrogen	IS 14684: 2005	ICP OES/AES
Phosphorous	GGMPL/SOP/SOIL/44	ICP OES/AES
Potassium	GGMPL/SOP/SOIL/47	ICP OES/AES
Iron	EPA 200.8	ICP OES/AES
Molybdenum	EPA 200.8	ICP OES/AES

A brief account of the methodologies and matrices followed in the present study is given under different headings. All the methods were structured for the identification, collection and organization of environmental impacts data. The information, thus gathered, had been analyzed and presented in the form of a number of visual formats for easy interpretation and Marision making.

SECTION 6: PLAN FOR SAMPLING LOCATIONS

Site selection criteria play an important role in the initiation of “baseline data generation” as it provides an outlook on the type of environmental compliance and management to be adopted by the project proponent. The locations were selected on the basis of “joint site survey”, “examination of toposheet of the project area”, “secondary micro-meteorological data analysis” and “availability of resources” for ambient air quality monitoring & micro-meteorological monitoring.

A synopsis about the locations is as follows:

AAQM Locations	
Code	Name of Location
L1	Near Motia Village
L2	Near Mali Village
L3	Near Nayabad Village

Met Data Station	
Code	Name of Location
M1	Hostel Block

Water Samples	
Code	Name of Location
G/W-1	Motia Village
G/W-2	Mali Village
G/W-3	Nayabad Village
G/W-4	Patwa Village

Noise Monitoring Locations	
Code	Name of Location
L1	Near Motia Village
L2	Near Mali Village
L3	Near Nayabad Village
L4	Near Patwa Village
L5	Near HTG Residential Area
L6	Near Adani Office
L7	Near CT Area
L8	Near RW Reservoir
L9	Near STP (Township)
L10	Near Temple (In township)

Soil Samples	
Code	Name of Location
S-1	Near Mali Village
S-2	Near Nayabad Village
S-3	Near Patwa Village

SECTION 7: METEOROLOGICAL DATA

Weather monitoring would help in keeping track of different parameters like temperature, humidity, rainfall, wind direction, wind speed & barometric pressure. Real time meteorological data is used to support a number of programs including public aviation, agricultural activity, digester management etc.

In the present study we monitored the "ambient temperature, relative humidity, wind speed, wind direction, barometric pressure etc.



Figure 1: Weather Monitoring Station at Hostel Block

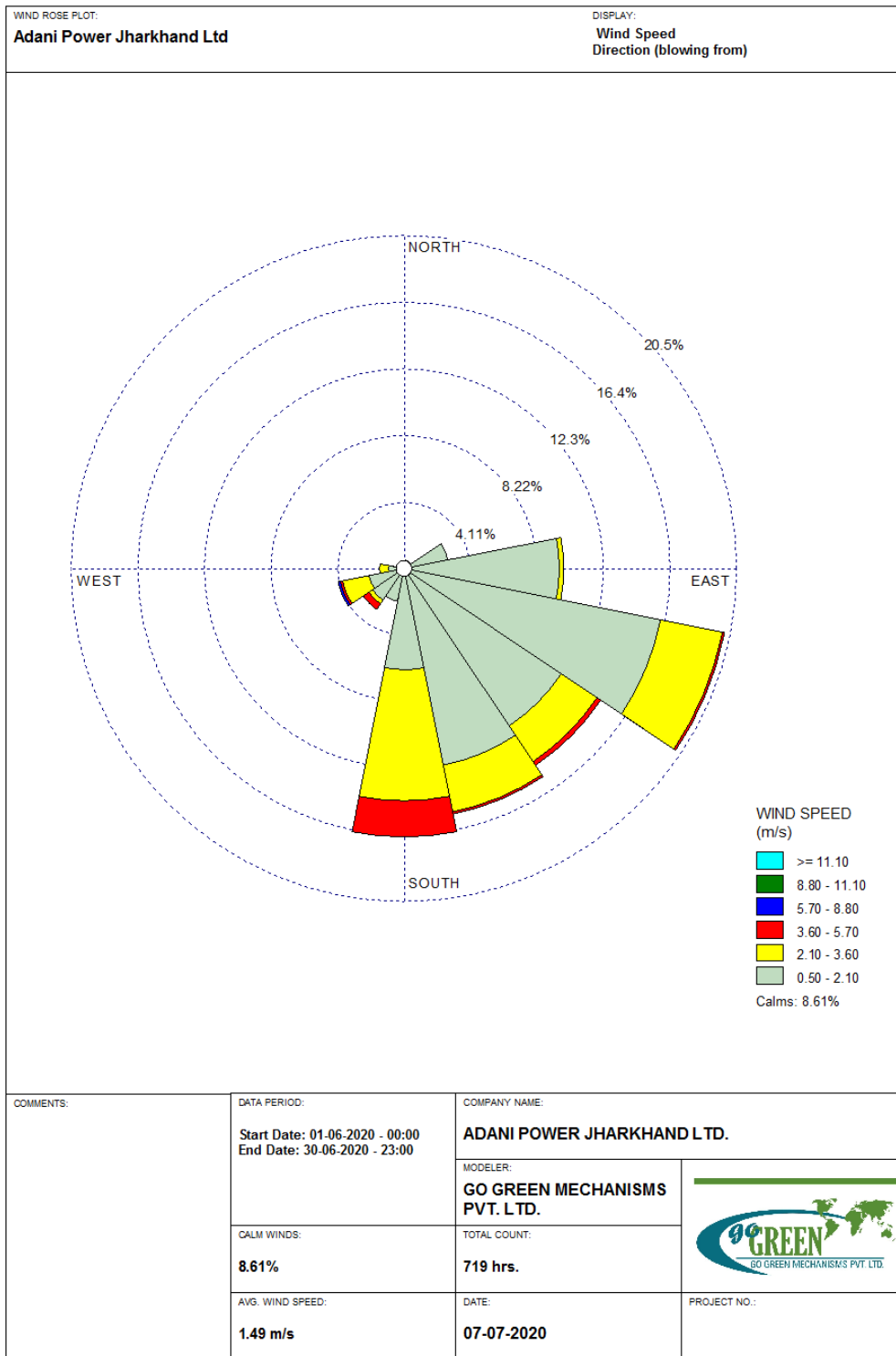


Figure 2: Windrose diagram for the month of June - 2020

It is observed from the windrose diagram for the month of June'20 the predominant wind direction is East-South East.

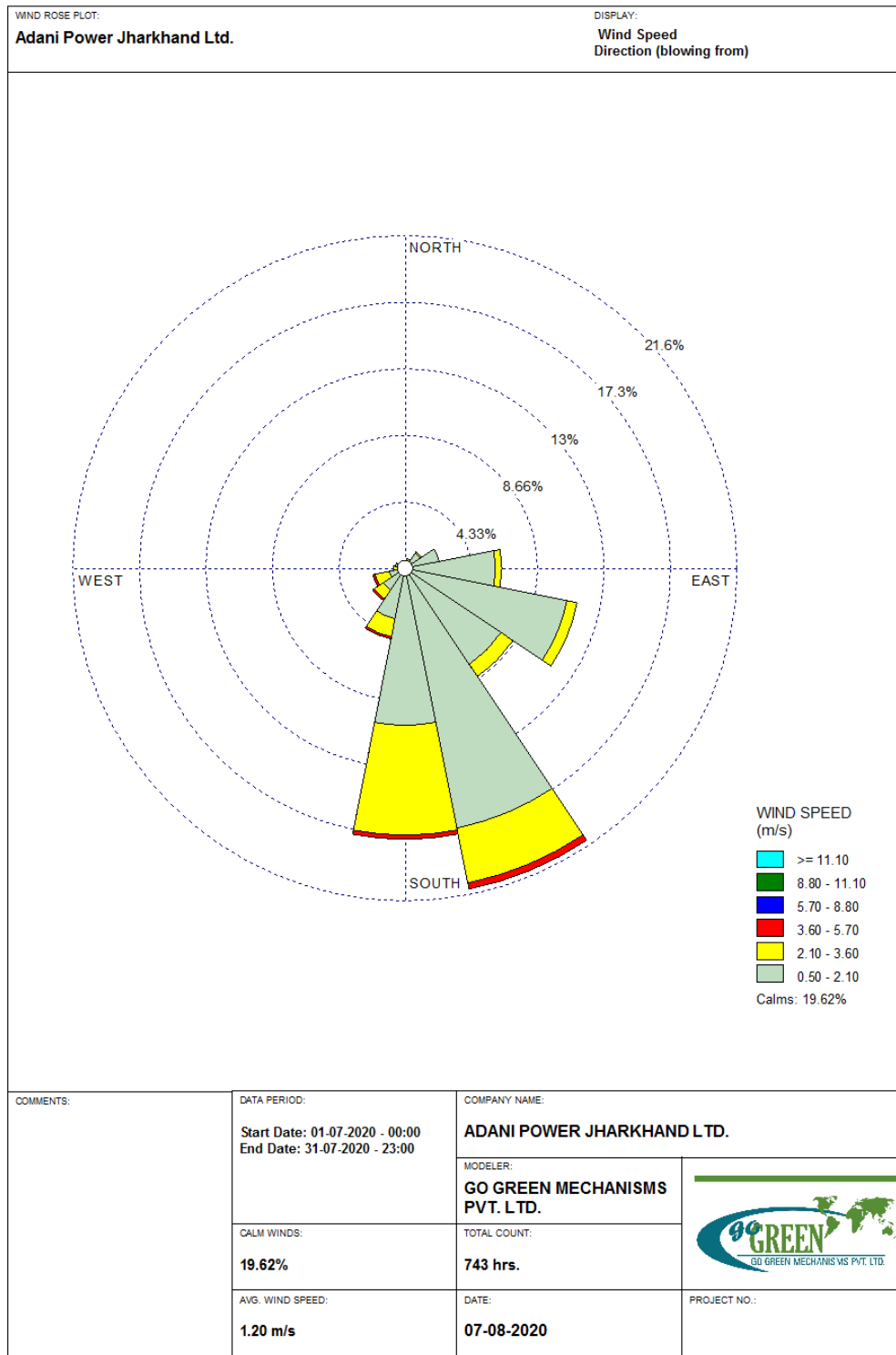


Figure 3: Windrose diagram for the month of July - 2020

It is observed from the windrose diagram for the month of July'20 the predominant wind direction is South-South East.

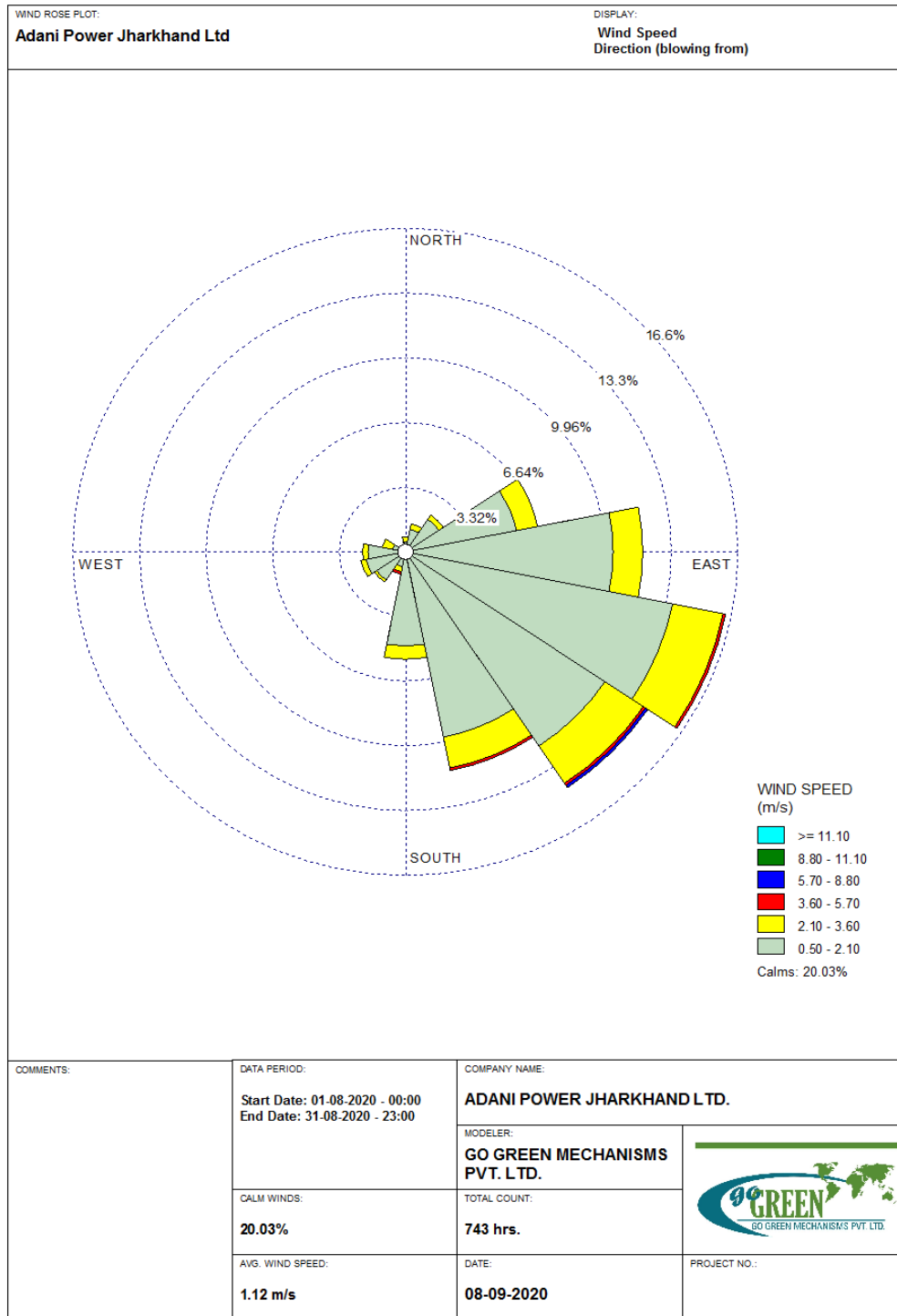


Figure 4: Windrose diagram for the month of August – 2020

It is observed from the windrose diagram for the month of August'20 the predominant wind direction is East- South East.

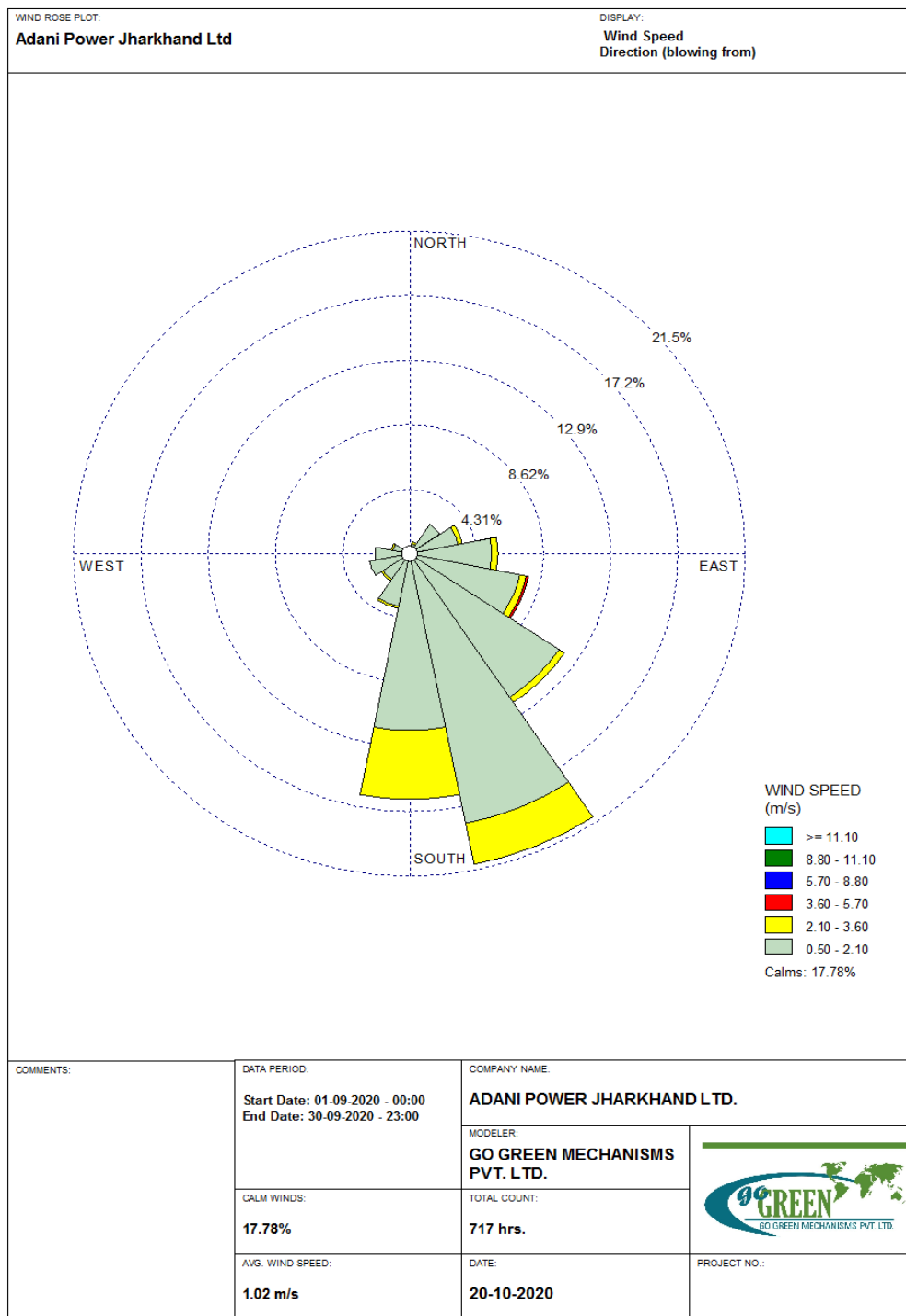


Figure 5: Windrose diagram for the month of September – 2020

It is observed from the windrose diagram for the month of September'20 the predominant wind direction is South- South East.

SECTION 8: AMBIENT AIR MONITORING REPORT

8.1 CONCEPT & SCOPE

The Ambient Air monitoring encompasses the results and statistical evaluation of the data monitored at three different locations.

Different parameters like PM₁₀, PM_{2.5}, Oxides of Sulphur, Oxides of Nitrogen and Mercury are monitored for representing the ambient air quality within the study area.

8.2 FREQUENCY OF SAMPLING

The frequency of the sampling for AAQM was as follows:

PARAMETERS	FREQUENCY OF EACH LOCATION
PM ₁₀ , PM _{2.5} , Oxides of Sulphur, Oxides of Nitrogen	Twice in a week
Mercury	Once in a month

8.3 SAMPLING DURATION AS PER NAAQMs 2009

Sr. No.	Parameters	Sampling Duration (Hr.)
1	Particulate Matter (PM ₁₀)	24
2	Particulate Matter (PM _{2.5})	24
3	Oxides of Sulphur (SO ₂)	24
4	Oxides of Nitrogen (NO _x)	24
5	Mercury	-

8.4 AAQM METHODOLOGY

PARAMETERS	METHODOLOGY/PRINCIPLE
Particulate Matter (PM ₁₀)	<p>Air is drawn through a size-selective inlet and through a 20.3 X 25.4 cm (8 X 10 in) filter at a flow rate, which is typically 1132 L/min. Particles with aerodynamic diameter less than the cut-point of the inlet are collected, by the filter. The mass of these particles is determined by the difference in filter weights prior to and after sampling. The concentration of PM₁₀ in the designated size range is calculated by dividing the weight gain of the filter by the volume of air sampled.</p>
Particulate Matter (PM _{2.5})	<p>An electrically powered air sampler draws ambient air at a constant volumetric flow rate (16.7 lpm) maintained by a mass flow / volumetric flow controller coupled to a microprocessor into specially designed inertial particle-size separator (i.e. cyclones or impactors) where the suspended particulate matter in the PM_{2.5} size ranges is separated for collection on a 47 mm polytetrafluoroethylene (PTFE) filter over a specified sampling period. Each filter is weighed before and after sample collection to determine the net gain due to the particulate matter. The mass concentration in the ambient air is computed as the total mass of collected particles in the PM_{2.5} size ranges divided by the actual volume of air sampled, and is expressed in µg/m³. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate.</p>
Sulphur Dioxide (SO ₂)	<p>Sulphur dioxide from air is absorbed in a solution of potassium tetrachloromercurate (TCM). The impingers setup for the absorbance of Sulphur Dioxide from air is shown in Figure 15. A dichlorosulphitomercurate complex, which resists oxidation by the oxygen in the air, is formed. Once formed, this complex is stable to strong oxidants such as ozone and oxides of nitrogen and therefore, the absorber solution may be stored for some time prior to analysis. The complex is made to react with para-rosaniline and formaldehyde to form the intensely coloured pararosaniline methylsulphonic acid. The absorbance of the solution is measured by means of a suitable spectrophotometer.</p>
Nitrogen Dioxide	<p>Ambient nitrogen dioxide (NO₂) is collected by bubbling air through a solution of sodium hydroxide and sodium arsenite. The concentration of nitrite ion (NO₂) produced during sampling is determined colorimetrically by reacting the nitrite ion with phosphoric acid, sulfanilamide, and N-(1-naphthyl)-ethylenediamine dihydrochloride (NEDA) and measuring the absorbance of the highly coloured azo-dye at 540 nm.</p>



Figure 6: Ambient air Monitoring Near Mali Village



Figure 7: Ambient air Monitoring Near Motia Village

8.5 ANALYTICAL RESULTS

Results & statistical calculations for Location- L1:

Name of Location (L1)		Near Motia Village			
Sr. No.	Date of Sampling	PM ₁₀	PM _{2.5}	SO ₂	NO _x
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³
GSR 826 (E)		100	60	80	80
1.	01.06.2020	51.4	17.5	6.0	10.9
2.	04.06.2020	49.7	16.7	6.4	12.2
3.	08.06.2020	49.9	17.1	5.5	10.2
4.	11.06.2020	52.2	17.9	6.3	12.6
5.	15.06.2020	49.2	16.2	6.0	10.4
6.	18.06.2020	40.9	13.3	7.9	15.5
7.	22.06.2020	50.2	16.7	7.5	15.5
8.	25.06.2020	40.2	13.9	6.1	13.8
9.	29.06.2020	40.5	14.6	5.8	10.6
10.	02.07.2020	48.4	16.2	6.7	14.0
11.	06.07.2020	38.1	13.2	5.7	12.4
12.	09.07.2020	42.6	16.6	5.3	14.3
13.	13.07.2020	48.1	17.9	7.3	14.1
14.	16.07.2020	49.6	15.9	4.7	13.5
15.	20.07.2020	36.4	14.6	4.4	12.9
16.	23.07.2020	38.6	17.5	6.8	13.8
17.	27.07.2020	32.1	14.5	4.5	11.2
18.	30.07.2020	46.8	17.4	7.8	16.4
19.	03.08.2020	38.3	14.1	5.8	11.1
20.	06.08.2020	35.7	13.3	5.2	11.8
21.	10.08.2020	42.3	14.8	6.8	13.2
22.	13.08.2020	44.5	14.5	6.3	12.4
23.	17.08.2020	37.1	12.3	5.9	11.6
24.	20.08.2020	30.2	12.2	6.1	10.2
25.	24.08.2020	45.6	16.8	7.6	15.0
26.	27.08.2020	43.4	16.1	4.8	13.0
27.	31.08.2020	23.7	11.0	4.3	10.0
28.	01.09.2020	24.1	10.1	BQL(QL=5)	9.6
29.	04.09.2020	34.1	13.1	6.7	10.5
30.	07.09.2020	45.6	15.8	7.7	13.4
31.	10.09.2020	25.6	12.2	5.2	10.0
32.	14.09.2020	47.1	16.2	8.1	14.2
33.	17.09.2020	42.8	14.1	7.6	13.3
34.	21.09.2020	21.1	11.1	BQL(QL=5)	8.6
35.	24.09.2020	30.8	12.1	5.3	10.4
36.	28.09.2020	46.1	17.6	7.1	13.8

	RESULT INTERPRETATION			
No. of Observations	36	36	36	36
Min Concentration	21.1	10.1	4.3	8.6
Max Concentration	52.2	17.9	8.1	16.4
Average	40.6	14.9	6.2	12.4

Note: Considering the Covid-19 Pandemic and the conditions that prevailed, we couldn't conduct Environmental monitoring for the month of April'20 and May'20.

Results & statistical calculations for Location- L2:

Name of Location (L2)		Near Mali Village			
Sr. No.	Date of Sampling	PM ₁₀	PM _{2.5}	SO ₂	NO _x
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³
GSR 826 (E)		100	60	80	80
1.	01.06.2020	53.6	16.7	6.5	11.2
2.	04.06.2020	44.7	15.4	7.0	13.2
3.	08.06.2020	44.9	14.2	7.4	12.5
4.	11.06.2020	51.9	15.6	7.2	13.8
5.	15.06.2020	41.3	15.4	5.3	9.0
6.	18.06.2020	43.7	16.8	5.7	10.4
7.	22.06.2020	48.7	17.1	6.6	15.9
8.	25.06.2020	38.9	12.8	5.5	9.6
9.	29.06.2020	41.7	14.2	8.0	16.7
10.	02.07.2020	45.2	17.2	7.0	15.7
11.	06.07.2020	41.6	13.8	5.9	11.8
12.	09.07.2020	44.1	17.0	6.5	14.9
13.	13.07.2020	46.1	16.8	6.9	13.4
14.	16.07.2020	44.2	15.8	7.2	15.6
15.	20.07.2020	37.4	13.1	5.5	11.6
16.	23.07.2020	34.6	16.0	5.4	10.6
17.	27.07.2020	30.6	13.3	4.8	9.7
18.	30.07.2020	45.6	17.8	7.5	14.4
19.	03.08.2020	36.9	13.6	6.4	11.7
20.	06.08.2020	34.9	13.8	5.1	11.4
21.	10.08.2020	41.9	14.3	6.2	13.5
22.	13.08.2020	43.8	16.0	5.7	12.9
23.	17.08.2020	36.7	15.3	6.7	13.7
24.	20.08.2020	29.6	13.2	6.6	12.7
25.	24.08.2020	43.2	16.3	7.2	14.0
26.	27.08.2020	41.6	15.7	7.3	14.6
27.	31.08.2020	25.9	12.0	4.2	10.1
28.	01.09.2020	23.7	10.6	BQL(QL=5)	8.9
29.	04.09.2020	33.8	12.7	5.9	10.7
30.	07.09.2020	43.5	14.8	7.8	13.7
31.	10.09.2020	24.9	11.2	5.1	9.4
32.	14.09.2020	46.9	16.0	7.9	13.6
33.	17.09.2020	41.7	14.0	6.8	11.9
34.	21.09.2020	20.4	10.9	5.3	9.0
35.	24.09.2020	29.4	12.4	5.4	10.3
36.	28.09.2020	45.7	16.7	7.5	12.8

	RESULT INTERPRETATION			
No. of Observations	36	36	36	36
Min Concentration	20.4	10.6	4.2	8.9
Max Concentration	53.6	17.8	8.0	16.7
Average	39.9	14.7	6.4	12.4

Note: Considering the Covid-19 Pandemic and the conditions that prevailed, we couldn't conduct Environmental monitoring for the month of April'20 and May'20.

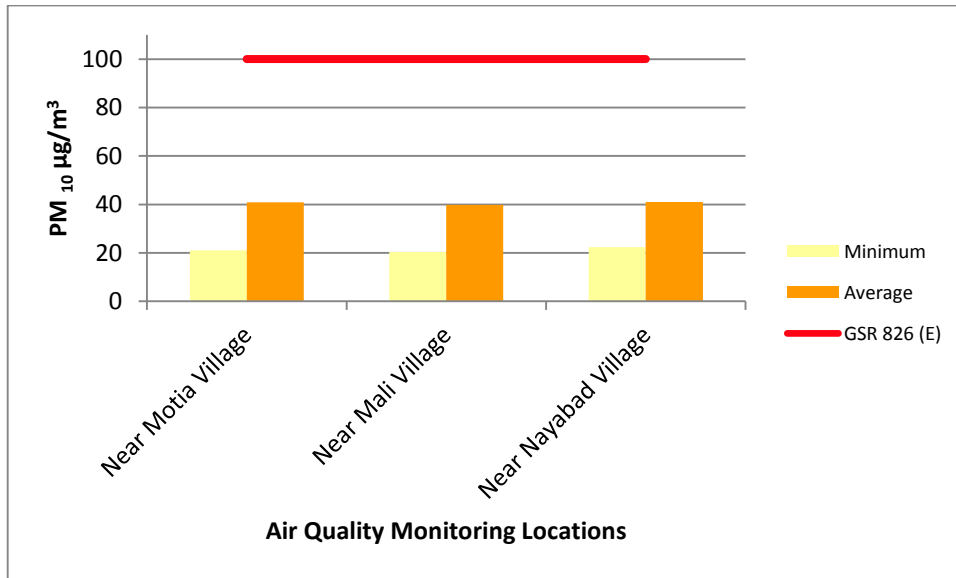
Results & statistical calculations for Location- L3:

Name of Location (L3)		Near Nayabad Village			
Sr. No.	Date of Sampling	PM ₁₀	PM _{2.5}	SO ₂	NO _x
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³
GSR 826 (E)		100	60	80	80
1.	01.06.2020	47.1	15.8	5.4	8.2
2.	04.06.2020	51.8	17.5	6.5	12.2
3.	08.06.2020	48.2	16.7	5.7	11.4
4.	11.06.2020	50.5	14.3	5.3	10.5
5.	15.06.2020	43.8	16.2	6.2	13.5
6.	18.06.2020	49.3	17.9	6.7	12.6
7.	22.06.2020	42.9	14.2	7.10	16.7
8.	25.06.2020	48.8	13.6	5.3	11.4
9.	29.06.2020	45.2	14.6	5.6	10.9
10.	02.07.2020	46.5	16.3	7.1	13.7
11.	06.07.2020	37.6	16.1	5.10	14.2
12.	09.07.2020	45.8	17.7	4.9	16.5
13.	13.07.2020	49.1	18.2	5.6	15.3
14.	16.07.2020	47.8	18.7	7.7	13.6
15.	20.07.2020	35.4	15.4	7.4	15.1
16.	23.07.2020	36.7	14.8	6.6	12.2
17.	27.07.2020	33.3	11.4	4.3	9.8
18.	30.07.2020	48.3	21.4	8.3	15.5
19.	03.08.2020	39.8	15.2	6.9	13.4
20.	06.08.2020	35.8	13.1	5.3	12.1
21.	10.08.2020	44.3	15.1	6.5	14.2
22.	13.08.2020	45.2	14.7	7.1	13.9
23.	17.08.2020	34.7	14.6	4.9	10.8
24.	20.08.2020	28.7	12.9	5.0	11.3
25.	24.08.2020	45.7	17.1	7.7	15.8
26.	27.08.2020	45.0	15.9	7.4	14.4
27.	31.08.2020	24.6	13.5	5.2	11.4
28.	01.09.2020	25.1	11.0	BQL(QL=5)	9.3
29.	04.09.2020	35.7	13.5	6.6	10.2
30.	07.09.2020	46.8	16.8	6.9	13.9
31.	10.09.2020	26.7	11.7	5.2	9.7
32.	14.09.2020	48.0	17.1	8.0	11.8
33.	17.09.2020	43.6	15.5	7.4	13.2
34.	21.09.2020	22.4	11.6	BQL(QL=5)	9.8
35.	24.09.2020	31.2	13.0	6.1	10.8
36.	28.09.2020	47.8	18.2	8.2	14.6

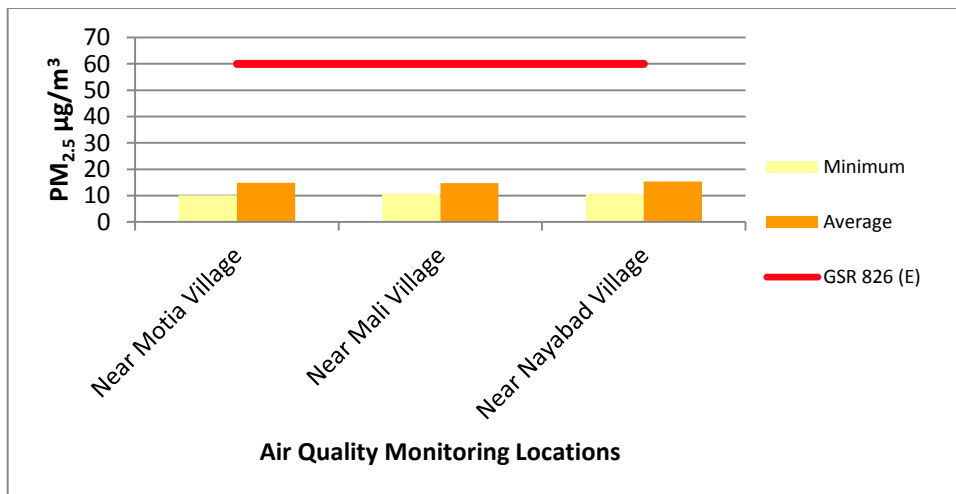
	RESULT INTERPRETATION			
No. of Observations	36	36	36	36
Min Concentration	22.4	11.0	4.3	8.2
Max Concentration	51.8	21.4	8.3	16.7
Average	41.1	15.3	6.3	12.6

Note: Considering the Covid-19 Pandemic and the conditions that prevailed, we couldn't conduct Environmental monitoring for the month of April'20 and May'20.

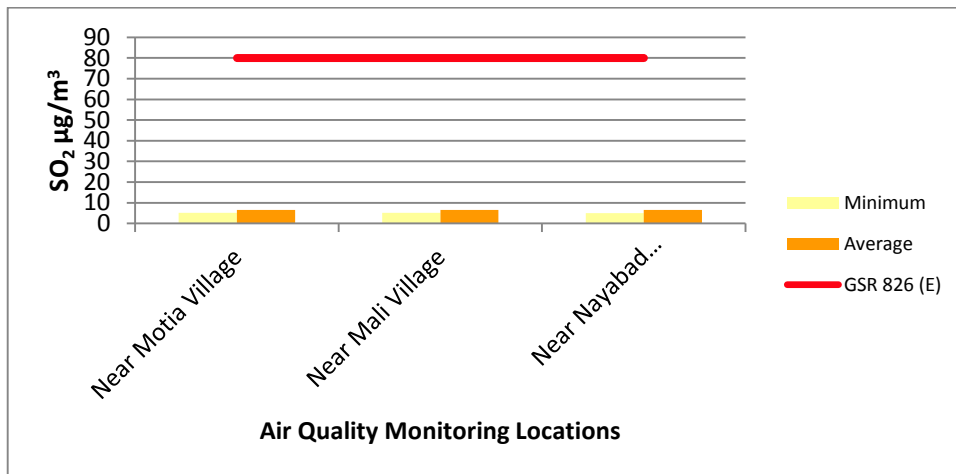
8.6 GRAPHICAL REPRESENTATION OF THE RESULTS



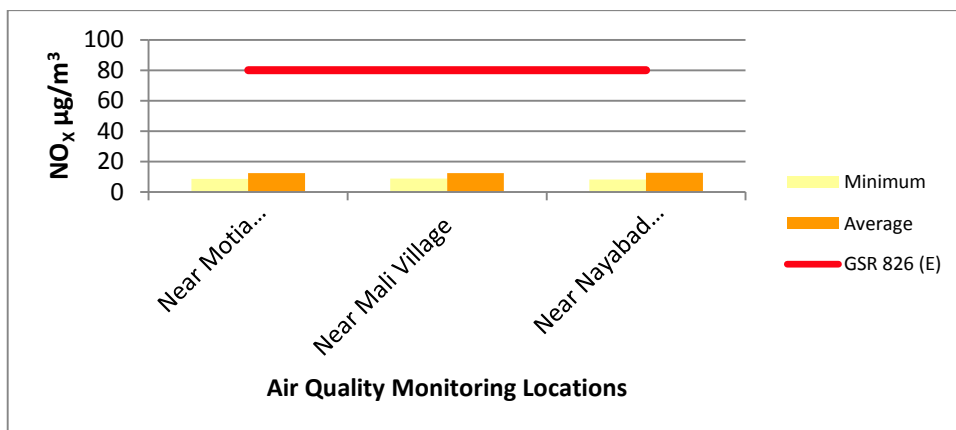
Particulate Matter (PM₁₀)



Particulate Matter (PM_{2.5})



Sulphur Dioxide (SO₂)



Oxides of Nitrogen (NO_x)

8.7 EXECUTIVE SUMMARY OF AAQM RESULTS

Particulate Matter (PM₁₀)				
Site	Minimum	Maximum	Average	GSR 826 (E)
Near Motia Village	21.1	52.2	40.6	100
Near Mali Village	20.4	53.6	39.9	100
Near Nayabad Village	22.4	51.8	41.1	100

Particulate Matter (PM_{2.5})				
Site	Minimum	Maximum	Average	GSR 826 (E)
Near Motia Village	10.1	17.9	14.9	60
Near Mali Village	10.6	17.8	14.7	60
Near Nayabad Village	11.0	21.4	15.3	60

Sulphur Dioxide (SO₂)				
Site	Minimum	Maximum	Average	GSR 826 (E)
Near Motia Village	4.3	8.1	6.2	80
Near Mali Village	4.2	8.0	6.4	80
Near Nayabad Village	4.3	8.3	6.3	80

Oxides of Nitrogen (NO_x)				
Site	Minimum	Maximum	Average	GSR 826 (E)
Near Motia Village	8.6	16.4	12.4	80
Near Mali Village	8.9	16.7	12.4	80
Near Nayabad Village	8.2	16.7	12.6	80

From all the above graphical representation it is clearly interpreted that all the values of PM₁₀, PM_{2.5}, SO₂ and NO_x were lower than the prescribed limits for all the stated locations.

8.8 ANALYTICAL RESULTS OF MERCURY

In this study, we also monitored some other critical pollutants like Mercury to assess the existing levels of air pollutants as well as the regional background concentration of the cluster area. Beside these, some Heavy metal concentration in the ambient air were also monitored in and around the project area. The following tabulated pollutants were monitored once in a month.

Location	Sampling Month	Mercury (Hg)
Unit		$\mu\text{g}/\text{m}^3$
Limits as per GSR 826 Standard		NS
Near Motia Village	Jun'20	BQL(QL=0.02)
	Jul'20	BQL(QL=0.02)
	Aug,20	BQL(QL=0.02)
	Sept'20	BQL(QL=0.02)
Near Mali Village	Jun'20	BQL(QL=0.02)
	Jul'20	BQL(QL=0.02)
	Aug,20	BQL(QL=0.02)
	Sept'20	BQL(QL=0.02)
Near Nayabad Village	Jun'20	BQL(QL=0.02)
	Jul'20	BQL(QL=0.02)
	Aug,20	BQL(QL=0.02)
	Sept'20	BQL(QL=0.02)

Note: NS= Not Specified

SECTION 9: WATER ANALYSIS REPORT**9.1 CONCEPT & SCOPE**

Water quality of the project area plays an important role on the socio economy of the Project. The higher concentrations of the water pollutants have serious impacts on the environment. Hence, it becomes important to assess the water quality periodically in the project vicinity.

Thus to assess the water quality of the project area, 04 locations were selected for Ground water sampling.

The quality of Ground water samples were compared with respect to IS 3025/APHA specification, the concentration of the target analytes are within the prescribed limits.

Bacterial examination was also carried out to find out the E-Coli & Total Coliform contamination in water sources.

9.2 METHODOLOGY

PARAMETER	PRINCIPLE OF METHODOLOGY
PH	Measurement of pH is one of the most important and frequently used test in water chemistry. Practically every phase of water supply and wastewater treatment, e.g., acid-base neutralization, Water softening, precipitation, coagulation, disinfection and corrosion control, is pH dependent. pH is used in alkalinity and carbon dioxide measurements and many other acid-base equilibria. At a given temperature the intensity of the acid or basic character of a solution is indicated by pH or hydrogen ion activity. Alkalinity and acidity are the acid and base neutralizing capacities of a water and usually expressed in mole per liter, needed to change the pH value of a 1-L sample by 1 unit. pH as defined by Sorenson is $-\log [H^+]$; it is the "intensity" factor of acidity
Turbidity	The method is based on a comparison of the intensity of light scattered by a standard reference suspension under the same condition. Higher the intensity of scattered light, the higher the turbidity of particular sample. Formazin polymer is used as the primary standard reference suspension. The turbidity of a specify concentration of formalin suspension is defined as 4000 NTU.
Chloride	In a neutral or slightly alkaline solution, potassium chromate can indicate the endpoint of the silver nitrate titration of chloride. Silver chloride is precipitated quantitatively before red silver chromate is formed.
Fluoride	The SPANDS colorimetric method is based on the reaction between fluoride and a zirconium-dye lake. Fluoride reacts with the dye lake, dissociating a portion of it into a colorless complex anion (ZrF_6^{2-}) and the dye. As the amount of fluoride increase, the color produced becomes progressively lighter. The reaction rate between fluoride and zirconium ions is influenced greatly by the acidity of the reaction mixture. If the proportion of acid in the reagent is increased, the reaction can be made almost instantaneous. Under such condition, however, the effect of various ions differs from that in the conventional alizarin methods. The selection of dye for this rapid fluoride method is governed largely by the resulting tolerance to these ions.
Sulphate	Sulphate ion (SO_4^{2-}) is precipitated in an acetic acid medium with barium chloride ($BaCl_2$) so as to form barium sulphate ($BaSO_4$) crystals of uniform size. Light absorbance of the $BaSO_4$ suspension is measured by a photometer and the SO_4^{2-} concentration is determined by comparison of the reading with a standard curve SO_4^{2-} . The absorbance of the barium sulphate formed is measured by a spectrophotometer at 450 nm.
Cd, Cu, As, Pb, Hg, Zn, Mn	Atomic absorption spectroscopy is based on absorption by ground state atoms of an element present in the sample which is atomized in the flame or graphic furnace. Depending on absorption of selected wavelength of the element the concentration is estimated. The technique provides valuable information on concentration of required elements present in the sample. Concentration are in ppm or ppb levels depending on source of sample excitation.
Iron	Iron is brought into solution, reduced to the ferrous state by boiling with acid and hydroxylamine and treated with 1,10-phenanthroline at pH 3.2 to 3.3 Three molecules of phenanthroline chelate each atom of ferrous iron to form an orange-red complex. The colored solution obeys beer's law; its intensity is independent of pH from 3 to 9. A pH between 2.9 and 3.5 insures rapid color development in the presence of an excess of phenanthroline. Color standards are stable for at least 6 months.

Hexavalent Chromium (As Cr ⁺⁶)	This procedure measures only hexavalent chromium, Cr ⁺⁶ . For total chromium, Determination, acid-digest the sample and follow with a suitable instrumental analysis technique. The hexavalent chromium is determined calorimetrically by reaction with diphenylcarbazide in acid solution. A red-violet colored complex of unknown composition is produced which is measured at 540 nm.
Calcium (As Ca)	When EDTA is added to water containing both calcium and magnesium it combines first with the calcium. Calcium can be determined directly with EDTA, when the pH is made sufficiently high that the magnesium is largely precipitated as the hydroxide and an indicator is used that combines with calcium only. Several indicators give a Colour change when all of the calcium has been complexed by the EDTA at a pH of 12 to 13.
Total Hardness (As CaCO ₃)	This method depends on ability of EDTA or its disodium salt to form stable complexes with calcium and magnesium ions. When the dye Eriochrome black T (EBT) is added to a solution containing calcium and magnesium ions at pH 10.0 a wine red complex is formed. This solution is titrated with standard solution of disodium salt of EDTA, which extracts calcium and magnesium from the dye complex and the dye is changed back to its original blue Colour. Eriochrome black T is used to indicate the end-point for the titration of calcium and magnesium together.
Residual Chloride	Chlorine will liberate free iodine from potassium iodide (KI) solution at pH 8 or less. The liberated iodine is titrated with a standard solution of sodium thiosulfate (Na ₂ S ₂ O ₃) with starch as the indicator. Titrate at pH 3 to 4 because the reaction is not stoichiometric at neutral pH due to partial oxidation of thiosulfate to sulfate.
Boron (As B)	In the presence of boron, a solution of carmine or carminic acid in concentrated sulphuric acid changes from a bright red to a bluish red or blue, Depending on the concentration of boron present.
Total Dissolved Solids	A well-mixed sample is filtered through a standard filter and the filtrate is evaporated to dryness in a weighed dish and dried to constant weight at 180°C. The increase in dish weight represents the total dissolved solids.
Nitrate	Two moles of nitrate nitrogen react with one mole of chromotropic acid to form a yellow reaction product having maximum absorbance at 410 nm.
Alkalinity (As CaCO ₃)	Hydroxyl ions present in a sample as a result of dissociation or hydrolysis of solutes react with addition of standard acid. Alkalinity thus depends on the end point pH used. For method of determining inflection points from titration curves and the rationale for titrating to fixed pH endpoints.



Figure 8: Water Sampling Near Motia Village



Figure 9: Water Sampling Near Mali Village



Figure 10: Water Sampling Near Nayabad Village



Figure 11: Water Sampling Near Patwa Village

9.3 ANALYTICAL RESULTS

Date of Sampling: 11.06.2020

Sr. No.	Parameter	Unit	Locations	As Per IS 10500:2012	
			Motia Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.55	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	380.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	178.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	95.0	200	600
6.	Calcium as Ca	mg/L	53.7	75	200
7.	Chloride	mg/L	21.49	250	1000
8.	Sulphate	mg/L	36.7	200	400
9.	Nitrate	mg/L	7.8	45	No Relaxation
10.	Iron	mg/L	0.25	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	10.69	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	28.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 11.06.2020

Sr. No.	Parameter	Unit	Location	As Per IS 10500:2012	
			Mali Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.4	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	364.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	182.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	103.0	200	600
6.	Calcium as Ca	mg/L	53.7	75	200
7.	Chloride	mg/L	24.5	250	1000
8.	Sulphate	mg/L	44.2	200	400
9.	Nitrate	mg/L	3.80	45	No Relaxation
10.	Iron	mg/L	0.22	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	11.7	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	30.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 11.06.2020

Sr. No.	Parameter	Unit	Locations	As Per IS 10500:2012	
			Nayabad Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.50	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	371.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	186.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	110.0	200	600
6.	Calcium as Ca	mg/L	54.5	75	200
7.	Chloride	mg/L	31.5	250	1000
8.	Sulphate	mg/L	44.1	200	400
9.	Nitrate	mg/L	8.9	45	No Relaxation
10.	Iron	mg/L	0.21	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
15.	Magnesium (Mg)	mg/L	12.2	30	100
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	31.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 11.06.2020

Sr. No.	Parameter	Unit	Location		As Per IS 10500:2012	
			Patwa	Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.59		6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)		1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	326.0		500	2000
4.	Total Hardness as CaCO ₃	mg/L	176.0		200	600
5.	Alkalinity as CaCO ₃	mg/L	113.0		200	600
6.	Calcium as Ca	mg/L	52.1		75	200
7.	Chloride	mg/L	25.0		250	1000
8.	Sulphate	mg/L	43.2		200	400
9.	Nitrate	mg/L	6.5		45	No Relaxation
10.	Iron	mg/L	0.27		0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)		1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)		-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)		0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)		5	15
15.	Magnesium (Mg)	mg/L	11.2		30	100
16.	Colour*	Hazen	BQL(QL=1)		5	15
17.	Odour*	...	Agreeable		Agreeable	Agreeable
18.	Temperature °C*	°C	32.0		-	-
19.	Taste*	...	Agreeable		Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)		0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)		0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)		0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)		0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)		0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)		0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)		0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)		0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)		0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)		0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent		Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent		-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 07.07.2020

Sr. No.	Parameter	Unit	Locations	As Per IS 10500:2012	
			Motia Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.48	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	365.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	163.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	93.0	200	600
6.	Calcium as Ca	mg/L	49.2	75	200
7.	Chloride	mg/L	22.49	250	1000
8.	Sulphate	mg/L	31.6	200	400
9.	Nitrate	mg/L	7.8	45	No Relaxation
10.	Iron	mg/L	0.18	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	9.72	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	29.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 07.07.2020

Sr. No.	Parameter	Unit	location	As Per IS 10500:2012	
			Mali Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.21	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	288.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	176.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	110.0	200	600
6.	Calcium as Ca	mg/L	52.1	75	200
7.	Chloride	mg/L	25.0	250	1000
8.	Sulphate	mg/L	34.2	200	400
9.	Nitrate	mg/L	4.10	45	No Relaxation
10.	Iron	mg/L	0.19	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	11.2	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	30.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 07.07.2020

Sr. No.	Parameter	Unit	Locations	As Per IS 10500:2012	
			Nayabad Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.47	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	264.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	178.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	100.0	200	600
6.	Calcium as Ca	mg/L	50.5	75	200
7.	Chloride	mg/L	32.5	250	1000
8.	Sulphate	mg/L	29.8	200	400
9.	Nitrate	mg/L	8.5	45	No Relaxation
10.	Iron	mg/L	0.18	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
15.	Magnesium (Mg)	mg/L	12.6	30	100
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	30.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 07.07.2020

Sr. No.	Parameter	Unit	Location		As Per IS 10500:2012	
			Patwa	Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.44		6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)		1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	352.0		500	2000
4.	Total Hardness as CaCO ₃	mg/L	172.0		200	600
5.	Alkalinity as CaCO ₃	mg/L	95.0		200	600
6.	Calcium as Ca	mg/L	50.4		75	200
7.	Chloride	mg/L	26.5		250	1000
8.	Sulphate	mg/L	33.7		200	400
9.	Nitrate	mg/L	6.0		45	No Relaxation
10.	Iron	mg/L	0.17		0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)		1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)		-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)		0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)		5	15
15.	Magnesium (Mg)	mg/L	11.2		30	100
16.	Colour*	Hazen	BQL(QL=1)		5	15
17.	Odour*	...	Agreeable		Agreeable	Agreeable
18.	Temperature °C*	°C	32.0		-	-
19.	Taste*	...	Agreeable		Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)		0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)		0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)		0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)		0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)		0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)		0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)		0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)		0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)		0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)		0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent		Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent		-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 17.08.2020

Sr. No.	Parameter	Unit	Locations	As Per IS 10500:2012	
			Motia Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.59	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	394.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	196.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	80.0	200	600
6.	Calcium as Ca	mg/L	61.7	75	200
7.	Chloride	mg/L	19.5	250	1000
8.	Sulphate	mg/L	36.9	200	400
9.	Nitrate	mg/L	6.5	45	No Relaxation
10.	Iron	mg/L	0.16	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	10.21	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	31.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 17.08.2020

Sr. No.	Parameter	Unit	Location	As Per IS 10500:2012	
			Mali Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.4	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	356.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	158.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	96.0	200	600
6.	Calcium as Ca	mg/L	40.1	75	200
7.	Chloride	mg/L	22.5	250	1000
8.	Sulphate	mg/L	40.6	200	400
9.	Nitrate	mg/L	3.90	45	No Relaxation
10.	Iron	mg/L	0.12	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	14.1	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	32.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 17.08.2020

Sr. No.	Parameter	Unit	Locations	As Per IS 10500:2012	
			Nayabad Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.13	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	330.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	138.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	89.0	200	600
6.	Calcium as Ca	mg/L	38.5	75	200
7.	Chloride	mg/L	28.0	250	1000
8.	Sulphate	mg/L	25.1	200	400
9.	Nitrate	mg/L	7.5	45	No Relaxation
10.	Iron	mg/L	0.13	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
15.	Magnesium (Mg)	mg/L	10.2	30	100
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	33.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 17.08.2020

Sr. No.	Parameter	Unit	Location		As Per IS 10500:2012	
			Patwa	Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.29		6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)		1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	328.0		500	2000
4.	Total Hardness as CaCO ₃	mg/L	150.0		200	600
5.	Alkalinity as CaCO ₃	mg/L	103.0		200	600
6.	Calcium as Ca	mg/L	31.3		75	200
7.	Chloride	mg/L	28.9		250	1000
8.	Sulphate	mg/L	41.1		200	400
9.	Nitrate	mg/L	6.9		45	No Relaxation
10.	Iron	mg/L	0.15		0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)		1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)		-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)		0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)		5	15
15.	Magnesium (Mg)	mg/L	17.5		30	100
16.	Colour*	Hazen	BQL(QL=1)		5	15
17.	Odour*	...	Agreeable		Agreeable	Agreeable
18.	Temperature °C*	°C	31.0		-	-
19.	Taste*	...	Agreeable		Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)		0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)		0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)		0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)		0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)		0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)		0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)		0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)		0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)		0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)		0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent		Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent		-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 08.09.2020

Sr. No.	Parameter	Unit	Location	As Per IS 10500:2012	
			Motia Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.51	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	432.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	174.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	65.0	200	600
6.	Calcium as Ca	mg/L	68.9	75	200
7.	Chloride	mg/L	25.0	250	1000
8.	Sulphate	mg/L	29.8	200	400
9.	Nitrate	mg/L	6.3	45	No Relaxation
10.	Iron	mg/L	0.25	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	7.8	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	31.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 08.09.2020

Sr. No.	Parameter	Unit	Location Ganga River
1.	pH @ 25 °C	...	7.4
2.	Turbidity	NTU	9.0
3.	Total Dissolved Solids @ 180 °C	mg/L	245.0
4.	Total Suspended Solids	mg/L	66.0
5.	Dissolved Oxygen	mg/L	8.0
6.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)
7.	Chloride	mg/L	13.0
8.	Sulphate	mg/L	37.2
9.	Nitrate	mg/L	5.6
10.	Fluoride	mg/L	0.54
11.	BOD at 27°C – 3 Days	mg/L	4.1
12.	Chemical Oxygen Demand	mg/L	20.0
13.	Residual Chlorine	mg/L	BQL(QL=0.05)
14.	Colour*	Hazen	BQL(QL=1)
15.	Odour*	...	Agreeable
16.	Temperature °C	°C	32.0
17.	Taste*	...	Agreeable
18.	Chromium	mg/L	BQL(QL=0.02)
19.	Iron	mg/L	0.14
20.	Copper	mg/L	BQL(QL=0.02)
21.	Zinc	mg/L	BQL(QL=0.02)
22.	Cadmium	mg/L	BQL(QL=0.002)
23.	Lead	mg/L	BQL(QL=0.005)
24.	Arsenic	mg/L	BQL(QL=0.005)

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 08.09.2020

Sr. No.	Parameter	Unit	Location STP Outlet (Plant)
1.	pH at 25 °C	--	6.85
2.	Colour	CU	BQL(QL=1)
3.	Total Suspended Solids	mg/L	38.0
4.	Total Dissolved Solids	mg/L	426.0
5.	BOD at 27°C – 3 Days	mg/L	18.0
6.	Chemical Oxygen Demand	mg/L	70.0
7.	Oil & Grease	mg/L	BQL(QL=2)
8.	Chloride	mg/L	63.0
9.	Sulphate as SO ₄	mg/L	142.8
10.	Ammonical Nitrogen as NH ₃	mg/L	3.4
11.	Total Kjeldal Nitrogen as TKN	mg/L	8.2
12.	Dissolved Phosphate	mg/L	1.1
13.	Aluminum (Al)	mg/L	BQL(QL=0.01)
14.	Arsenic (As)	mg/L	BQL(QL=0.01)
15.	Boron (B)	mg/L	BQL(QL=0.1)
16.	Cadmium (Cd)	mg/L	BQL(QL=0.001)
17.	Copper (Cu)	mg/L	BQL(QL=0.01)
18.	Lead (Pb)	mg/L	BQL(QL=0.02)
19.	Manganese (Mn)	mg/L	BQL(QL=0.05)
20.	Mercury (Hg)	mg/L	BQL(QL=0.001)

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 08.09.2020

Sr. No.	Parameter	Unit	Location STP Outlet (Township)
1.	pH at 25 °C	--	7.95
2.	Colour	CU	BQL(QL=1)
3.	Total Suspended Solids	mg/L	22.0
4.	Total Dissolved Solids	mg/L	206.0
5.	BOD at 27°C – 3 Days	mg/L	BQL(QL=2)
6.	Chemical Oxygen Demand	mg/L	10.0
7.	Oil & Grease	mg/L	BQL(QL=2)
8.	Chloride	mg/L	33.9
9.	Sulphate as SO ₄	mg/L	133.5
10.	Ammonical Nitrogen as NH ₃	mg/L	1.4
11.	Total Kjeldal Nitrogen as TKN	mg/L	4.3
12.	Dissolved Phosphate	mg/L	0.7
13.	Aluminum (Al)	mg/L	BQL(QL=0.01)
14.	Arsenic (As)	mg/L	BQL(QL=0.01)
15.	Boron (B)	mg/L	BQL(QL=0.1)
16.	Cadmium (Cd)	mg/L	BQL(QL=0.001)
17.	Copper (Cu)	mg/L	BQL(QL=0.01)
18.	Lead (Pb)	mg/L	BQL(QL=0.001)
19.	Manganese (Mn)	mg/L	BQL(QL=0.05)
20.	Mercury (Hg)	mg/L	BQL(QL=0.001)

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 10.09.2020

Sr. No.	Parameter	Unit	Location	As Per IS 10500:2012	
			Mali Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.29	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	316.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	182.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	87.0	200	600
6.	Calcium as Ca	mg/L	45.7	75	200
7.	Chloride	mg/L	23.0	250	1000
8.	Sulphate	mg/L	38.6	200	400
9.	Nitrate	mg/L	4.8	45	No Relaxation
10.	Iron	mg/L	0.22	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
14.	Magnesium (Mg)	mg/L	16.5	30	100
15.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	33.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 10.09.2020

Sr. No.	Parameter	Unit	Location	As Per IS 10500:2012	
			Nayabad Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.28	6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)	1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	360.0	500	2000
4.	Total Hardness as CaCO ₃	mg/L	170.0	200	600
5.	Alkalinity as CaCO ₃	mg/L	76.0	200	600
6.	Calcium as Ca	mg/L	39.3	75	200
7.	Chloride	mg/L	28.0	250	1000
8.	Sulphate	mg/L	21.4	200	400
9.	Nitrate	mg/L	5.9	45	No Relaxation
10.	Iron	mg/L	0.18	0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)	1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)	-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)	0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)	5	15
15.	Magnesium (Mg)	mg/L	17.5	30	100
16.	Colour*	Hazen	BQL(QL=1)	5	15
17.	Odour*	...	Agreeable	Agreeable	Agreeable
18.	Temperature °C*	°C	32.0	-	-
19.	Taste*	...	Agreeable	Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)	0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)	0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)	0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)	0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)	0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)	0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)	0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)	0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)	0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)	0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)	0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent	Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent	-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

Date of Sampling: 10.09.2020

Sr. No.	Parameter	Unit	Location		As Per IS 10500:2012	
			Patwa	Village	Acceptable Limit	Permissible Limit
1.	pH @ 25 °C	...	7.24		6.5 to 8.5	No Relaxation
2.	Turbidity	NTU	BQL(QL=0.1)		1	5
3.	Total Dissolved Solids @ 180 °C	mg/L	338.0		500	2000
4.	Total Hardness as CaCO ₃	mg/L	126.0		200	600
5.	Alkalinity as CaCO ₃	mg/L	89.0		200	600
6.	Calcium as Ca	mg/L	34.5		75	200
7.	Chloride	mg/L	24.0		250	1000
8.	Sulphate	mg/L	39.6		200	400
9.	Nitrate	mg/L	6.8		45	No Relaxation
10.	Iron	mg/L	0.20		0.3	No Relaxation
11.	Fluoride	mg/L	BQL(QL=0.1)		1	1.5
12.	Hexavalent Chromium as Cr ⁶⁺	mg/L	BQL(QL=0.01)		-	-
13.	Residual Chlorine	mg/L	BQL(QL=0.05)		0.2	1
14.	Zinc (Zn)	mg/L	BQL(QL=0.2)		5	15
15.	Magnesium (Mg)	mg/L	9.7		30	100
16.	Colour*	Hazen	BQL(QL=1)		5	15
17.	Odour*	...	Agreeable		Agreeable	Agreeable
18.	Temperature °C*	°C	31.6		-	-
19.	Taste*	...	Agreeable		Agreeable	Agreeable
20.	Phenolic Compounds*	mg/L	BQL(QL=0.001)		0.001	0.002
21.	Cyanide*	mg/L	BQL(QL=0.01)		0.05	No Relaxation
22.	Aluminum (Al)*	mg/L	BQL(QL=0.01)		0.03	0.2
23.	Arsenic (As)*	mg/L	BQL(QL=0.01)		0.01	0.05
24.	Boron (B)*	mg/L	BQL(QL=0.1)		0.5	1
25.	Cadmium (Cd)*	mg/L	BQL(QL=0.001)		0.003	No Relaxation
26.	Copper (Cu)*	mg/L	BQL(QL=0.01)		0.05	1.5
27.	Lead (Pb)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
28.	Manganese (Mn)*	mg/L	BQL(QL=0.05)		0.1	0.3
29.	Mercury (Hg)*	mg/L	BQL(QL=0.001)		0.001	No Relaxation
30.	Selenium (Se)*	mg/L	BQL(QL=0.001)		0.01	No Relaxation
31.	Detergent*	mg/L	BQL(QL=0.05)		0.2	1
32.	E.Coli (MPN/100 ml)*	MPN/100ml	Absent		Absent	Absent
33.	Total Coliform*	MPN/100 mL	Absent		-	Absent

The above tabulated results reveal that the concentration of the target analyte is found to be within the prescribed limits.

SECTION 10: NOISE LEVEL MONITORING

To know the background ambient noise level at the project and surrounding environment, noise level were measured at all the ambient air monitoring stations for baseline study.

The Day time & Night time average noise level data are given in tabular formats as well as in graphical form for easy interpretation.

Here, the day time means time from 06:00 am to 10:00 pm & night time means time from 10:00 pm to 06:00 am.

$$Leq = \frac{10 \log_{10} (t_1 \times 10^{\frac{L_1}{10}} + t_2 \times 10^{\frac{L_2}{10}} + t_3 \times 10^{\frac{L_3}{10}} + \dots)}{T}$$

Where Leq = Equivalent continuous noise level (dB)(A)

t1 = time at L1 (Hours)

t2 = time at L2 (Hours)

L1 = sound pressure level dB (A) at time 1

T = total time over which the Leq is required (Hours)

(L1) Near Motia Village							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
Unit		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
CPCB Standard for Industrial Area		75	75		70	70	
1	05.06.2020	65.2	50.6	58.7	49.8	38.8	46.9
2	04.07.2020	68.7	51.3	61.6	48.5	36.8	43.5
3	20.08.2020	67.4	44.6	57.2	43.8	32.4	38.7
4	14.09.2020	51.8	41.3	48.3	41.6	28.7	37.3

(L2) Near Mali Village							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
Unit		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
CPCB Standard for Industrial Area		75	75		70	70	
1	04.06.2020	62.6	48.8	58.0	46.6	36.3	43.3
2	03.07.2020	67.3	48.7	61.2	49.6	37.6	44.4
3	21.08.2020	57.8	41.2	53.0	40.3	30.6	36.5
4	14.09.2020	51.8	39.6	48.3	38.9	31.2	34.8

(L3) Near Nayabad Village							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
Unit		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
CPCB Standard for Industrial Area		75	75		70	70	
1	04.06.2020	61.7	45.2	55.1	43.8	35.6	40.1
2	03.07.2020	65.9	45.3	60.4	46.2	38.5	42.7
3	20.08.2020	64.8	43.8	56.0	43.7	30.2	36.7
4	15.09.2020	53.5	37.0	48.7	42.1	30.8	35.9

(L4) Near Patwa Village							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	04.06.2020	65.4	50.1	58.1	49.3	38.8	45.5
2	03.07.2020	66.9	51.3	60.2	69.6	40.8	47.0
3	20.08.2020	66.8	46.3	61.7	42.8	30.6	39.3
4	15.09.2020	51.8	38.4	47.7	40.7	27.6	37.4

(L5) Near HTG Residential Area							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	05.06.2020	53.8	41.3	49.7	38.3	28.6	35.7
2	04.07.2020	52.6	40.8	49.7	38.5	30.1	34.4
3	21.08.2020	54.1	41.3	49.6	39.8	30.8	30.1

(L5) Near RW Reservoir							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	17.09.2020	67.1	55.3	62.8	54.4	32.2	49.7

(L6) Near Adani Office							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	05.06.2020	54.2	42.1	51.3	37.0	29.5	33.7
2	04.07.2020	53.0	41.3	50.1	37.2	30.7	35.1
3	20.08.2020	53.4	42.1	50.6	37.2	30.9	35.1
4	17.09.2020	52.6	40.6	48.7	41.1	28.7	35.5

(L7) Near BTG Area							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	16.09.2020	66.8	45.2	61.3	54.9	32.3	50.2

(L8) Near CT area							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	16.09.2020	69.1	45.6	63.4	55.3	33.5	50.5

(L9) Nr. STP (Township)							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	18.09.2020	57.8	41.3	51.4	37.5	30.9	35.6

(L10) Nr. Temple (Township)							
Sr. No.	Starting Date	Max Day Time	Min Day Time	Leq (Day)	Max Night Time	Min Night Time	Leq (Night)
	Unit	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	CPCB Standard for Industrial Area	75	75		70	70	
1	18.09.2020	50.0	37.4	45.8	38.6	27.6	38.7

From above tabulated results it can be concluded that the noise level was within the prescribed limits throughout the monitoring period at the stated locations.

With respect to the sound level observed for the locations from L1 to L4 i.e. at Mali Village, Motia Village, Nayabad Village and Patwa Village. In the initial round of noise monitoring up to August, we had placed our noise meter at the boundary of the plant and high sound level were observed due to the vehicular movement and other activities taking place. In the later round of noise monitoring after the month of August, we shifted the noise meter in the village and low sound level was observed.

SECTION 11: SOIL ANALYSIS

11.1 CONCEPT & SCOPE

Soil is fundamental & ultimate natural resources that full fill a number of functions & provide various services like agriculture, industrial construction & ecological habitat development etc. Some of the most significant impacts on this resource occur as a result of activities associated with the use of chemical fertilizers, unscientific construction activities, unplanned city design, unscientific land use pattern and land filling by toxic materials.

Soil analysis can determine the fertility or the expected growth potential and the nutrient deficiency and potential toxicity which help in taking cost effective Marision for the better soil management.

Location Code	Name of Location
S-1	Near Mali Village
S-2	Near Nayabad Village
S-3	Near Patwa Village

11.2 SOIL ANALYTICAL RESULTS

Date of Sampling: 09.06.2020

Location: Near Mali Village				
Date of Sampling: 09.06.2020				
Sr. No.	Parameter	Unit	Result	Norms
1.	Magnesium	%	0.046	NS
2.	Calcium	%	1.16	NS
3.	Manganese	mg/kg	BQL(QL=0.1)	NS
4.	Boron	mg/kg	0.78	NS
5.	Copper	mg/kg	BQL(QL=0.1)	NS
6.	Sulphur	%	0.08	NS
7.	Chloride	%	0.06	NS
8.	Zinc	mg/kg	5.2	NS
9.	Nitrogen	%	0.95	NS
10.	Phosphorous	%	0.06	NS
11.	Potassium	%	0.043	NS
12.	Iron	%	0.039	NS
13.	Molybdenum	mg/kg	BQL(QL=0.1)	NS

Location: Near Nayabad Village				
Date of Sampling: 09.06.2020				
Sr. No.	Parameter	Unit	Result	Norms
1.	Magnesium	%	0.71	NS
2.	Calcium	%	1.42	NS
3.	Manganese	mg/kg	BQL(QL=0.1)	NS
4.	Boron	mg/kg	0.62	NS
5.	Copper	mg/kg	BQL(QL=0.1)	NS
6.	Sulphur	%	0.07	NS
7.	Chloride	%	0.04	NS
8.	Zinc	mg/kg	3.9	NS
9.	Nitrogen	%	0.79	NS
10.	Phosphorous	%	0.081	NS
11.	Potassium	%	0.052	NS
12.	Iron	%	0.054	NS
13.	Molybdenum	mg/kg	BQL(QL=0.1)	NS

Location: Near Patwa Village				
Date of Sampling: 09.06.2020				
Sr. No.	Parameter	Unit	Result	Norms
1.	Magnesium	%	0.84	NS
2.	Calcium	%	1.74	NS
3.	Manganese	mg/kg	BQL(QL=0.1)	NS
4.	Boron	mg/kg	0.75	NS
5.	Copper	mg/kg	BQL(QL=0.1)	NS
6.	Sulphur	%	0.087	NS
7.	Chloride	%	0.07	NS
8.	Zinc	mg/kg	3.4	NS
9.	Nitrogen	%	0.89	NS
10.	Phosphorous	%	0.09	NS
11.	Potassium	%	0.05	NS
12.	Iron	%	0.042	NS
13.	Molybdenum	mg/kg	BQL(QL=0.1)	NS

Note: NS= Not Specified



भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 2487]

नई दिल्ली, बृहस्पतिवार, अगस्त 31, 2017/भाद्र 9, 1939

No. 2487]

NEW DELHI, THURSDAY, AUGUST 31, 2017/BHADRA 9, 1939

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 30 अगस्त, 2017

का. आ. 2836(अ).— केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 10 के साथ पठित, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 12 की उपधारा (1) के खंड (ख) और धारा 13 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 1174 (अ), तारीख 18 जुलाई, 2007 में निम्नलिखित और संशोधन करती है, अर्थात् :—

2. उक्त अधिसूचना में संलग्न सारणी में क्रम संख्यांक 156 और उससे संबंधित प्रविष्टियों के पश्चात् निम्नलिखित क्रम संख्यांक और प्रविष्टियां अंतःस्थापित की जाएंगी, अर्थात् :—

(1)	(2)	(3)	(4)
157	मैसर्स देवांश टेस्टिंग एंड रिमर्च लेबोरेट्रीज प्रा. लि. 94, शिवगंगा इंडस्ट्रीयल एस्टेट, लेकशरी, भगवानपुर-247661, रूढ़की, जिला-हरिद्वार, उत्तराखण्ड।	(1) सुथी अर्चना सिंह (2) श्री अरविन्द खर्कवाल (3) डा. एच.एस. चौहान	09.08.2017 से 08.08.2022
158	मैसर्स नोएडा टेस्टिंग लेबोरेट्रीज, जीटी-20, सेक्टर-117, नोएडा- 201304, उत्तर प्रदेश	(1) श्री गोपाल दास वर्मा (2) श्री पंकज कुमार शर्मा (3) श्री राजेश कुमार सिंह	09.08.2017 से 08.08.2022
159	मैसर्स साई यूनिवर्सल माइनिंग सर्विस, प्लॉट सं० 15-डीपी2, केआईएडीबी, मंकलापुरा इंडस्ट्रीयल एरिया, पानी की टंकी के पास, बेलागी मेन रोड, होमपेट-583201, जिला-बेलागी, कर्नाटक।	(1) श्री पवन कुमार जीवीके (2) श्री डी.मुदर्शन रेड्डी (3) श्री ए.नागागार्जु	09.08.2017 से 08.08.2022
160	मैसर्स बी.एस.एन्वी-टेक प्रा.लि. 12-13 1270/73, एमीटी विले, चौथा तल, सेंट्र एन रोड, टर्नाका, सिकंदराबाद-500017, तेलंगाना।	(1) श्री ए.वी.हनुमंथा राव (2) कुमारी सीएच.बी. तुलामी (3) श्री बी.एस.चंद्रा मुर्ती	09.08.2017 से 08.08.2022

161	मैसर्स नार्डक्रोम टेस्टिंग लेबोरेट्रीजट्रीज एंड रिसर्च प्रा. लि. 170, जजम् बंगलौ रोड, नारायणपुर, धारवाड़-580008, कर्नाटक ।	(1) श्री कृष्णा नारायण कुलकर्णी (2) श्री अंबरीश एम.मिदगी (3) डा. मंजुला एम.पाटिल	09.08.2017 से 08.08.2022
162	मैसर्स गो ग्रीन मेकेनिज़म प्रा. लि. दयाल एस्टेट, राष्ट्रीय राजमार्ग सं. 8, एपीएमसी मार्केट के सामने, गेट-1 (दीन दयाल अनाज मंडी), बगेजा रोड, जैतलपुर, जिला-अहमदाबाद-382426, गुजरात	(1) श्री. अमित बदलानी (2) श्री खंबाटा सायरम होमांग (3) सुश्री वृष्टि पाटिया	09.08.2017 से 08.08.2022

[फा. सं. क्यू 15018/21/2017-सीपीडब्ल्यू]

डा. मनोरंजन होता, सलाहकार

टिप्पण : मूल अधिसूचना भारत के राजपत्र, असाधारण, में अधिसूचना संख्यांक का. आ. 1174(अ), तारीख 18 जुलाई, 2007 द्वारा प्रकाशित की गई थी और अधिसूचना संख्यांक का.आ.1539(अ), तारीख 13 सितम्बर, 2007, का.आ. 1811(अ), तारीख 24 अक्टूबर, 2007, का.आ. 55(अ), तारीख 9 जनवरी, 2008, का.आ. 428(अ) तारीख 4 मार्च, 2008, का.आ. 865(अ), तारीख 11 अप्रैल, 2008, का.आ. 1894 (अ) तारीख 31 जुलाई, 2008, का.आ. 2728(अ) 25 नवम्बर, 2008, का.आ. 1356 (अ) तारीख 27 मई, 2009, का.आ.1802(अ) तारीख 22 जुलाई, 2009, का.आ.2399 (अ) तारीख 18 सितम्बर, 2009, का.आ.3122(अ) तारीख 7 दिसम्बर, 2009, का.आ. 3123(अ), 7 दिसम्बर, 2009, का.आ. 142(अ) तारीख 21 जनवरी, 2010, का.आ.619(अ) तारीख 19 मार्च, 2010, का.आ. 1662(अ) तारीख 13 जुलाई, 2010, का.आ. 2390(अ) तारीख 30 सितम्बर, 2010, का.आ. 2904(अ) तारीख 8 दिसम्बर, 2010, का.आ.181(अ) तारीख 28 जनवरी, 2011, का.आ. 692(अ) तारीख 5 अप्रैल, 2011, का.आ. 1537(अ) तारीख 6 जुलाई, 2011, का.आ.1754(अ) तारीख 28 जुलाई, 2011, का.आ. 2609(अ) तारीख 22 नवम्बर, 2011, का.आ. 264(अ) तारीख 13 फरवरी, 2012, का.आ. 1150(अ) तारीख 22 मई, 2012, का.आ. 1295(अ), 6 जून, 2012 का.आ. 2039(अ) तारीख 5 सितम्बर, 2012, का.आ. 2850(अ) तारीख 7 दिसम्बर, 2012, का.आ.592(अ) तारीख 8 मार्च, 2013, का.आ. 945(अ) तारीख 8 अप्रैल, 2013, का.आ. 2287(अ) तारीख 27 जुलाई, 2013, का.आ. 3489(अ) तारीख 26 नवम्बर, 2013, का.आ. 21(अ) तारीख 3 जनवरी, 2014, का.आ. 561(अ) तारीख 26 फरवरी, 2014, का.आ. 1190(अ) तारीख 2 जून, 2014, का.आ. 2003(अ) तारीख 9 अगस्त, 2014, का.आ.137 (अ) तारीख 12 जनवरी, 2015, का.आ. 1783(अ) तारीख 30 जून, 2015, का.आ. 2453(अ) तारीख 7 सितम्बर, 2015 का.आ. 1953(अ), तारीख 2 जून, 2016 और का.आ. 388(अ) तारीख 10 फरवरी, 2017 द्वारा उनका अन्तिम संशोधन किया गया ।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 30st August, 2017

S.O. 2836(E).—In exercise of the powers conferred by clause (b) of sub-section (1) of section 12 and section 13 of the Environment (Protection) Act, 1986 (29 of 1986), read with rule 10 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following further amendments in the notification of the Government of India in the erstwhile Ministry of Environment and Forests, number S.O. 1174(E), dated the 18th July, 2007, namely :—

In the said notification, in the Table, after serial number 156 and the entries relating thereto, the following serial numbers and entries shall be inserted, namely:—

(1)	(2)	(3)	(4)
157	M/s. Devansh Testing & Research Laboratory Pvt. Ltd. 94, Shiv Ganga Industrial Estate, Lakeshari, Bhagwanpur-247661, Roorkee, Dist-Haridwar, Uttarakhand.	(i) Ms. Archana Singh (ii) Shri. Arvind Kharkwal (iii) Dr. H.S. Chauhan.	09.08.2017 to 08.08.2022
158	M/s. NOIDA Testing Laboratories, GT-20, Sector-117, NOIDA-201304, Uttar Pradesh.	(i) Shri. Gopal Das Verma (ii) Shri. Pankaj Kumar Sharma (iii) Shri. Rajesh Kumar Singh.	09.08.2017 to 08.08.2022
159	M/s. Sai Universal Mining Services Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Bellary Main Road, Hospet-583201, Dist. Bellary, Karnataka .	(i) Shri. Pavan Kumar GVK (ii) Shri. D. Sudharshan Reddy (iii) Shri. A. Nagaraju.	09.08.2017 to 08.08.2022

160	M/s. B.S. Envi-Tech Pvt. Ltd. 12-13 1270/71/73, Amity Ville, 4 th Floor, St. Ann's Road, Tarnaka, Secunderabad-500017, Telangana.	(i) Shri. A.V. Hanumantha Rao (ii) Ms. CH. V. Tulasi (iii) Shri. B.S. Chandra Murthy.	09.08.2017 to 08.08.2022
161	M/s. Nichrome Testing Laboratory and Research Pvt. Ltd. 170, Judges Bungalow Road, Narayanpur, Dharwad- 580008, Karnataka.	(i) Shri Krishna Narayan Kulkarni (ii) Shri Ambarish S. Sindagi (iii) Dr. Manjula S. Patil .	09.08.2017 to 08.08.2022
162	M/s. Go Green Mechanisms Pvt. Ltd. Dayal Estate, National Highway No. 8, Opp. APMC Market, Gate-I (Deen Dayal Grain Market), Bareja Road, Jetalpur, Dist- Ahmedabad-382426, Gujarat.	(i). Shri Amit Badlani (ii) Shri Khambata Cyrus Hosang (iii) Ms. Trupti Padhya.	09.08.2017 to 08.08.2022."

[F. No. Q. 15018/21/2017-CPW]

DR. MANORANJAN HOTA, Advisor

Note.-The principal notification was published in the Gazette of India, Extraordinary vide number S.O. 1174 (E), dated the 18th July, 2007 and subsequently amended vide notification numbers S.O. 1539 (E), dated the 13th September, 2007, S.O. 1811(E), dated the 24th October, 2007, S.O. 55(E), dated the 9th January, 2008, S.O. 428(E), dated the 4th March, 2008, S.O. No. 865(E), dated the 11th April, 2008, S.O. No. 1894(E), dated the 31st July, 2008, S.O. No. 2728(E), dated the 25th November, 2008, S.O. 1356(E), dated the 27th May, 2009, S.O.No. 1802(E), dated the 22nd July, 2009, S.O. No.2399(E), dated the 18th September, 2009, S.O. No.3122(E), dated the 7th December, 2009, S.O. No. 3123(E), dated the 7th December, 2009, S.O. No. 142(E), dated the 21st January, 2010, S.O. 619 (E), dated the 19th March, 2010, S.O. No.1662(E), dated the 13th July, 2010, S.O. No. 2390(E), dated the 30th September, 2010, S.O. No. 2904 (E), dated the 8th December, 2010, S.O. No. 181(E), dated the 28th January, 2011, S.O.No. 692(E) dated the 5th April, 2011, S.O. No. 1754 (E), dated the 28th July, 2011, S.O. No. 2609, dated the 22nd November, 2011, S.O. No. 264(E), dated the 13th February, 2012, S.O. No. 1150 (E) dated the 22nd May, 2012, S.O. No. 1295(E), dated the 6th June, 2012, S.O. No. 2039 (E), dated the 5th September, 2012, S.O. No. 2850 (E), dated the 7th December, 2012, S.O. No. 592 (E), dated the 8th March, 2013, S.O. No. 945(E), dated the 8th April, 2013, S.O. No. 2287 (E), dated the 26th July, 2013, S.O. No. 3489(E) dated the 26th November, 2013, S.O. No. 21(E), dated the 3rd January, 2014, S.O. No. 561 (E), dated the 26th February, 2014, S.O. No. 1190(E), dated the 1st June, 2014, S.O. No. 2003(E), dated the 9th August, 2014, S.O. No. 137 (E), dated the 12th January, 2015, S.O. No. 1783(E), dated the 30th June, 2015, S.O. No. 2453(E), dated the 7th September, 2015, S.O. No. 1953(E), dated the 2nd June, 2016 and S.O. No. 388(E), dated the 10th February, 2017.

RAKESH SUKUL

Digitally signed by RAKESH SUKUL
Date: 2017.09.01 19:25:52 +05'30'

F. No. Q-15018/01/2016-CPW
Government of India
Ministry of Environment, Forest and Climate Change
(CP Division)

.....

Indira Paryavaran Bhavan,
Jorbagh Road, Aliganj, New Delhi-110 003

Dated: 6th April, 2017

ORDER

Subject: Recognition as Environmental Laboratory under the Environmental (Protection) Act, 1986 – regarding.

This refers to application/letter No. Nil, dated 10th December 2015 of M/s Go Green Mechanisms Pvt. Ltd. for recognition of its laboratory under the Environment (Protection) Act, 1986. Based on the recommendation of the Expert Committee for Recognition of Environmental Laboratories in its 48th meeting held on 06.02.2017 and acceptance of the terms and conditions at Annexure-III, IV and V of the Guidelines for Recognition of Environmental Laboratories by the applicant, this Ministry approves the recognition of M/s Go Green Mechanisms Pvt. Ltd., Dayal Estate, National Highway No.8, Opp. APMC Market Bareja (Deen Dayal Grain Market), Bareja Road, Jetalpur, Dist. Ahmedabad – 382 426, Gujarat for five years, as shall be notified in the Gazette of India.

2. As per information provided Vide letter dated 02.06.2016, M/s Go Green Mechanisms Private Ltd. can undertake the analysis of

(i) **Water and Wastewater**(*Physical Test*: Conductivity, Colour, pH, Fixed and Volatile solids, Total solids, Total dissolved solids, Total Suspended Solids, Turbidity, Temperature, Velocity & discharge Measurement of industrial effluent stream, Salinity, Settleable solids and SVI;


(ii) **Inorganic- General and non-metallic** : Acidity, Alkalinity, Ammonical Nitrogen, Chloride, Chlorine residual, Dissolved Oxygen, Fluoride, Total Hardness, TKN, Nitrite Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate, Sulphite, Silica, Sulphide; *Trace Metals*: Boron, Cadmium, Calcium, Chromium Total, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium & SAR, Zinc, Arsenic, Aluminium, Manganese and Vanadium;

(iii) **Organics (General) and Trace Organics**: BOD, COD, Oil and Grease, Phenol, Pesticide i.e. (Organo-chlorine, Organo Nitrogen-Phosphorus), PAH, Organic Carbon and Carbon/Nitrogen ratio;

(iv) **Microbiological Tests**: Total coliform, Faecal Coliform, Faecal Streptococci, E.Coli and Total Plate Count;

(v) **Ambient Air /Fugitive Emissions**: : Nitrogen Dioxide , Sulphur Dioxide, Total suspended particulate matter, PM₁₀, Ammonia, Carbon Monoxide, lead, Ozone, Benzene- Toulene- Xylene (BTX), PAH, Benzo-a-pyrine, PM2.5 and VOC;

cont....


(R. N. JINDAL)
निदेशक/Director
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min. of Environment, Forests & Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

(vi) **Stack gases/ Source Emission** : Particulate matter, Sulphur Dioxide, Velocity & flow, Carbon Dioxide, Carbon Monoxide, Temperature, Oxygen, Oxides of Nitrogen, Acid mist, Ammonia, Fluoride (Particulate), Hydrochloric acid, Hydrogen Sulphide and Carbon Disulphide;

(vii) **Noise** : ambient and source noise level Monitoring; and

(viii) **Meteorological monitoring**: Ambient temperature, Wind direction, Wind speed, Relative Humidity, Solar radiation and Rain fall.

3. The laboratory shall compulsorily participate in the Analytical Quality Control (AQC) exercise conducted by the Central Pollution Control Board (CPCB) at least once a year to ascertain the capability of the laboratory and analyses carried out and shall submit quarterly progress reports to this Ministry.

4. Periodic surveillance of the recognized environmental laboratory will be undertaken by this Ministry/ CPCB to assess its proper functioning, systematic operation and reliability of data generated at the laboratory.

5. It is also mandatory for the laboratory to renew the NABL / ISO 9001 and OHSAS accreditations and its renewal as per accreditation rules. Permission in Para 2 above is subject to such accreditation and renewal, as applicable.

(R.N. Jindal)

Director (S)

Tel. No. 011-24695246

Email: ram.jindal@nic.in

To

M/s Go Green Mechanisms Pvt. Ltd.
Dayal Estate, National Highway No.8
Opp. APMC Market Bareja (Deen Dayal Grain Market)
Bareja Road, Jetalpur,
Dist. Ahmedabad – 382 426, Gujarat.

(र. नि. जिन्दल)
(R. N. JINDAL)
निदेशक/Director
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forests & Climate Change
सरकार, नई दिल्ली
New Delhi

Copy to:

1. Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
2. Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhawan-Sector 10-A, Gandhi Nagar- 382010, Gujarat.
3. Regional Office Nagpur, Ministry of Environment, forest and Climate Change, Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur, Maharashtra.
4. Zonal Office, Central Pollution Control Board, Parivesh Bhawan Opp.VMC Ward, Off. No-10, Subhanpura, Vadodara-390023, Gujarat.
5. IT Division, MoEF&CC, New Delhi-110003.

Issued
Subscribed
07/10/17

O/C



**National Accreditation Board for
Testing and Calibration Laboratories**

(A Constituent Board of Quality Council of India)



CERTIFICATE OF ACCREDITATION

**GO GREEN MECHANISMS PRIVATE LIMITED (TESTING
LABORATORY)**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

DAYAL ESTATE, NATIONAL HIGHWAY NO.8, BAREJA, JETALPUR, AHMEDABAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-7073

Issue Date: 09/12/2018

Valid Until: 08/12/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



Anil Relia
Chief Executive Officer

HALF YEARLY REPORT 2020-21

(APRIL 2020- SEPTEMBER 2020)

INTRODUCTION

The Adani Foundation, the CSR arm of Adani Group of Companies, executes Corporate Social Responsibility projects for Thermal Power Plant, Motia in four main core areas– Education, Community Health, Sustainable Livelihood Development and Community Infrastructure Development. With a people centric approach, the Foundation responds towards the emerging needs at the grass roots level aligning its activities with the Sustainable Development Goals (SDGs) with a vision to end poverty and protect and preserve planet and bring solidarity and peace among all individuals and society. Adani Foundation aims to walk with the communities, empower people to look ahead by making the right choices and securing a bright and beautiful future, together. This year at Godda site, the 2 ongoing Projects have nailed its reach by intensively benefitting immense number of beneficiary's viz. Gyanodaya which facilitate new learning pedagogy in govt. schools through e-learning classes. The exemplified performance of Gyanodaya in shaping bright future of children through digital learning's has navigated NITI Aayog to extend its reach to the unreached by replication of Gyanodaya in all 19 Aspirational Districts of Jharkhand. On the other hand, Phoolo Jhano Saksham Aajeevika Mandal (PJSASM), a Sustainable Model for Uplifting Livelihood for Women Groups have empowered women socially and economically who are independently surpassing all the rivals and achieving triumph in family and society through their stitching skills and allegiance. The unprecedented performance of Women Groups of Saksham Sewing trainees has received two assignments for Sweater Weaving Project and supply of uniforms for 1.51 lakh govt. school students for another 5 years from District Education department. Moreover, the Pond Deepening work in the villages under Water Conservation and Harvesting Program is bridging the gap of resources to create social and economic, ecological assets from conservation and preservation of the '*Wetlands, Water bodies and Water Commons*'.

In this financial year Adani's CSR intervention extends to Godda and Sahebganj districts of Jharkhand state covering 192 villages of Core, Periphery, Railway Siding and Pipeline area. Apart from benefitting and engaging communities from our intervention areas, many of CSR activities were conducted in Godda town too for establishing Adani Foundation as a brand among the intellectuals of the society. The CSR Umbrella also

shielded the community and public as a whole amidst Epidemic outbreak by instantly providing relief from various COVID Mitigation and Relief Program in all over district. Total population of Godda district is 13.13 lakhs, out of which population of our intervention villages is 60000 approximately. We have been able to benefit 4.53 lakhs people directly and 10.38 lakhs people indirectly across the stretch of 91 Kms ranged from Godda district to Sahebganj district passing through more than hundreds of project affected villages by organizing various community development activities in Education, Community Health, Sustainable Livelihood and Rural Infrastructure Development verticals.

The robust team of Adani Foundation at Jharkhand comprises of dedicated professionals including Unit CSR Head, Project Officers, and a deputy manager-CSR from Adani Power (Jharkhand) limited and a Medical team comprises of a doctor and four Para medicos.

The progress of CSR projects/interventions from **April, 2020 to September, 2020** is described in detail as under:

HIGHLIGHTS OF CSR ACTIVITIES

A. Education & Rural Sports

Providing Quality Education in Society

Adani foundation strives to enhance the quality of education in its intervention villages through following initiatives directly benefitting over 60000 students and their families in the year 2020-21.

Due to epidemic, the coaching classes and schools remained closed to avoid any occurrence of fatalities caused by COVID 19. The teachers were engaged in shielding the citizens and community at large from infections of COVID 19 through management in Relief Measures Program.

❖ By Initiating Competitive Classes and Coaching for the Poor Students viz.

- **Apna School** initiative is providing coaching classes to 830 students in a 'Group of 30' till 5th standard in 8 locations at Gangta, Nayabad I & Nayabad II, Kauribihar, Kaithartikar, Sondiha, Baliakitta & Amrakanoli villages.
- **Adani Gyan Jyoti (Group -30) Yojana:** This year 492 students till 10th standard benefitted from foundation building coaching classes and capacity building sessions in core and pipeline areas. Out of Super 30 students of

class 10th standard of Academic Session 2019-20, 12 students had passed the exam with 1st division marks and 13 students secured 2nd division marks.

- ❖ **Teacher Support** has been provided in 15 schools for subjects like Science and Mathematics and improving education level by benefitting over 2900 students.
- ❖ **Education Sponsorship program** to provide 100% education support for one ward each from 300 Project Affected Families of Jitpur mines to reduce dropout by focusing on quality education and thereby regular attendance of students. ***Non-Operational due to Epidemic Outbreak***
- ❖ **Gyanodaya Project:** Adani Foundation in partnership with District Administration and Eckovation Solutions Pvt. Ltd. launched Gyanodaya project on August 2018 to promote e-learning through Smart Classes. Gyanodaya project is currently operational in 273 schools covering 846 classes in 9 blocks of Godda district with its spread across 201 remote and untapped villages facilitated by over 1000 skilled teachers and benefitting more than 53000 students directly.
 - **Initiatives undertaken** amidst Epidemic Outbreak to continue imparting education to the children including Gyanodaya YouTube Channel, Gyanodaya DD Jharkhand
- ❖ **Super 200 Programme:** The students of Super 200 Programme had passed with flying colours with distinction marks of Academic Session 2019-20. They expressed their gratitude towards Adani Foundation for supporting them to achieve their ambition.
- ❖ **Digital literacy Class** is operational to impart digital learnings for tribal youths at SBSAPS Pathargama College. 375 youth has been trained in four batches. Trainings of 83 candidates in fifth batch is ongoing. **Currently non-operational due to Outbreak.**

B. Community Health

Mobile Health Care Unit (MHCU)

Five Mobile Health Care Units have together catered to primary health care needs of 11014 patients this year from core, periphery, railway siding and pipe line area villages.

- ❖ **AF's Supported Mobile Health Care unit** in core villages treated and disbursed medicines to 479 patients (Males 246, Females 147, Children 86 covering 7 villages

and labourers working at Site office. Ambulance services has also been made available for COVID 19 cases at Godda district

- ❖ **Adani operated, Jitpur MHCU** was not functional due to Epidemic outbreak.
- ❖ **Adani supported Helpage India** was non-operational due to outbreak. To cope up and mitigate the COVID 19 crisis, Ambulance services has been made available for COVID 19 cases at Godda district
- ❖ **AF supported Wockhardt operated MHCU in Godda** is functional across 4 blocks viz. Mahagama, Boarijor, Pathargama and Thakurgangti in pipeline area treating and disbursing medicines to 6835 patients catering to Males 2582, Females 2748, Children 1505 covering 41 villages.
- ❖ **AF supported Wockhardt operated MHCU in Sahebganj** is functional across 3 blocks viz. Mandro, Borio, Sahebganj in pipeline area treating and disbursing medicines to 3700 patients (Males- 1333, Females- 1635, Children- 732) covering 35 villages in total 60 stoppages.

- ❖ **Specialized Health Camp for Elderly:** Adani Foundation had organised four Health cum Awareness Camp for Senior Citizens in the month of May 2020 with an aim to provide basic health care services at village level in four villages of periphery and pipeline area.
- ❖ **Specialized Health Camp:** Adani Foundation had organised four special medical camp in four panchayats namely, Lakhanpahadi, Ghat Rampur, Machhitand and Amdiha with the support of Helpage India in Pathargama block of Pipeline area.
- ❖ **Homeopathic Health Camp** was organized on **5th June 2020** by team of Adani Power (Jharkhand) Limited, Adani Foundation and Government Homeopathic Medical College & Hospital, Parsapani, Godda Jharkhand with an objective to boost the immunity system and protect from Corona virus of human body.
- ❖ **Specialized Eye Health Camp for Drivers of Plant Area:** Adani Foundation organised Eye Health Camp amidst outbreak on 1st July 2020 in plant premise of TPP. Godda.
- ❖ **Health Awareness:** With collaboration of Medical Team of Adani Foundation and Helpage India, health awareness is raised among school children, teachers and community. Community health awareness programme during Medical camp in rural areas helps aware rural dwellers about their better health and safety from diseases.
- ❖ **Critical Health cases:** Diagnosis of critical cases of laborers working in TPP (site office) is done by CSR Medical Team regularly in an emergency manner.

- ❖ **Relief Program against Pandemic COVID 19:** Relief program has been initiated by Adani Foundation for safety and protection of every individual and community from Pandemic CORONA Virus through engagement in activities such as
 1. Production & Distribution of 1.52 Lakh Face Masks,
 2. Production & Distribution of 200 Apron/PPE,
 3. Production & Distribution of 30 Corpses Bags and
 4. Production & Distribution of Gowns for Doctors by PJSASM members all across districts,

5. Sanitisation programme running in entire area of Godda and our concern villages through Application of Disinfectants in 12 intervention villages through Fogging/Spraying for 7 days.
6. Distribution of 30000 Soap has been initiated in the community area,
7. Input Support of Essential Commodities for 700 Poor Households including for their subsistence,
8. AF Supported **Community Kitchen** led by four Self Help Groups (SHGs) was initiated at 4 places in the district to prepare meals and reduce hunger by feeding two times (Lunch & Dinner) every day to more than 2000 Labourers, Contractors and Truckers in Town and Plant area
9. **Relief Program for Migrant Workers** such as Crowd Management, Distribution of Food Packets, Essential Food Grains for Quarantined Migrant Laborers, Water Bottles for Drinking Use.
10. **Production of 25 Hands-Free Sanitisation Machine/Units** (G-HanSa) at Public Places and Plant Premises in Godda.
11. **E-Sewa App** has been installed in coordination with District Administration, Godda which provides home delivery services for essential grocery items and commodities benefitting over 1000 consumers at door steps.
12. **Making Ambulance available** for COVID 19 cases at Godda district.
13. **COVID Support:** Donation of Rs. 1 Crore in **CM Relief Fund** of Jharkhand state by APJL, Godda.

Suposhan Program

- ❖ **SuPoshan:** Malnutrition among children of 0 to 5 years has reduced by over 90% i.e. 271 children out of 299 became healthy while Anemia has reduced by more than 46 % i.e. over 813 out of 1758 adolescent girls of 10 to 19 years and women in reproductive age group have become healthy and rest falls under Moderately Anemic Range as per Universal HB screening survey. Suposhan program has been scaled up in 13 new villages of Railway (4) and Pipeline (8) and 1 new village of core area followed by baseline survey and conduction of Universal HB screening.

No Community Engagement/ Measurement work were carried out in both Godda & Jitpur Site due to Epidemic Outbreak

❑ Initiatives amidst COVID 19

- **Chief Minister's Didi Kitchen:** Self Help Groups (SHGs), Anganwadi workers and Sanginis had actively volunteered in Chief Minister's Didi Kitchen, scheme of Jharkhand state government and served home cooked food to poorer and needy children and community members in their location of core and pipeline areas.

- **Telephonic Follow up & Counselling:** Due to epidemic, telephonic mode has been started to counsel the target groups including Children, Adolescent Girls, Pregnant Women on topic such as Anaemia, Nutrition & Hand wash; Immunisation, Importance of MCP Card, etc.
 - **Follow-up of Sanginis:** - Sanginis were taught through telephonic communication for creating awareness on management of COVID 19 situation and family counseling of target groups.
 - **Importance of Hand wash and Social Distancing:** - Sanginis took a lead to guide their community on various measures to fight and tackle with Covid 19, manage social distancing, local measures to boost immunity system, and made aware about hand wash practice through demonstration.
 - **E- Learning Course:** - Due to lock down effect of Covid pandemic Suposhan team along with Sangini did E-Learning Courses for time utilization and knowledge purpose
 - **Cooking video made by Sangini:** With advent of Epidemic outbreak, the Sangini had initiated to raise awareness of community on COVID 19 and Nutritional elements which is easily found in the villages for the enhancement of health of children, adolescents and women.
- ❖ **AF Supported with Vegetable Seeds** to 82 families of core and railway line villages to meet the nutritional requirement of women and children as well as the entire family through inclusion of green nutritious vegetables in their daily meal.
 - ❖ **Plantation for Nutrition Security:** Moringa/Drumstick plantation in the intervention villages was done by Suposhan Sangini and villagers to promote importance of Nutrition among community.

Awareness Programmes

- ❖ **Awareness Program on COVID 19:** Adani Foundation operated Wockhardt Foundation had organized 'One-day Awareness Program on COVID 19' in Malnistara village of Pathargama block, Godda district.
- ❖ **Celebration of World Breastfeeding Week:** World Breastfeeding Week (WBW) was celebrated by Suposhan Sanginis to mobilize the target groups through Banner on MHCU, Slogan writing, Pamphlet, etc.
- ❖ **Celebration of National Nutrition Month (1-30th September)** was celebrated in core, railway line, pipeline and Jitpur mines villages, by Suposhan Sanginis to mobilize the target groups on importance of Nutrition and its various dimensions.

Capacity Building Programmes

- ❖ **Training On Nutritional Security at KVK:** One day on campus training was organized on the topic "Nutritional Security" at Kriffco supported Gramin Vikas

Trust (GVT) led Krishi Vigyan Kendra (KVK), Godda on 07.09.2020 for extension Suposhan functionaries.

Seasonal Assistance/Community Involvement

- ❖ **Material Support to District Administration, Sahebganj:** Under Welfare Program, Adani Foundation supported the Government premises in DC Office, Sahebganj with setup of three seated Fabricated Steel Chair.
- ❖ **Distribution of Relief Materials-Tarpaulin Distribution:** Under Welfare Support Relief Materials are distributed to support families affected from natural hazards or manmade calamities for the safety of their health and lives. Five poorer households of Motia village were assisted with tarpaulin to live in the shelter with safety during rainy season and protect themselves from uncertain circumstances.
- ❖ **Poor Assistance Programme-Mosquito Net Distribution:** Adani Foundation believes in assisting the community who are marginalized and deprived from basic facilities for survival. The health of the villagers is made secure and protected from several diseases which leads to fatalities and death cases in the villages
- ❖ **Assistance in Health, Marriage and Death:** Poor people are supported financially in events like marriage, death and illness as emergency support. Adani provides financial support for such purposes which require huge expense such as marriage ceremony, educational needs, major illness including hospitalization of patient, death of a person. 68 beneficiaries from 13 villages have been extended financial support to the tune of **Rs. 7, 37, 334/-**
- ❖ **Plantation on World Environment Day:** World Environment Day was celebrated on 5th June'20 in plant premises and ITI Siktia centre among the community. AF team encouraged the women group of Phoolo Jhano Saksham Aajeevika Sakhi Mandal (PJSASM) to promote afforestation to preserve our Planet, Earth.
- ❖ **Environment Protection Programme-** Promoting Afforestation, Nutrition and Ecological Preservation in project villages and plant premises to conserve the Planet, Earth and its biological creatures by Self Help Group (SHGs), teachers and community.
- ❖ **Plantation of Horticulture plants:** 352 saplings of horticulture plants of nutritional value namely banana, lemon, drumstick, and guava, was planted in seven villages by 141 families of TPP area.

C. Sustainable Livelihood

- ❖ **Adani Skill Development Centre:** New Training Batch was started on August'20 of Fitter, Bar-Bender, Asst. Elec., Welder, GDA, SMO, F&B, trade. Total 174 candidates are enrolled in new batch in 7 business trades.
- ❖ **On the Job Training (OJT) & Placement:** 11 candidates from Fitter, Bar Bending, and Welder trade have got placement in JBM company in Gujarat and 1 candidate in Hospitality trade was placed in Kavinten Pvt Ltd.
- ❖ **Conduction of Guest Lecture** by Experienced Professionals in specialized trade for the candidates via Online Mode. Training was given on topics Soft skill (Fitter Mechanical Assembly), Hand washing (GDA), Steel and its types (Bar-bending)
- ❖ **Production of Medical (Patient) Bed for COVID Centre by ASDC Trainers:** The Master trainer of Fitter & Welder trade of ASDC Saksham have designed and made Beds which is convenient and comfortable for the COVID positive patients quarantined in COVID Centre.
- ❖ **Livelihood opportunity from Mask Production and shield for Protection of Life from COVID 19:** Production & Distribution of PPEs by PJSASM, Women Groups to reduce and cope up with epidemic COVID 19.
 - ❖ 1.52 Lakh Face Masks,
 - ❖ 200 Apron/PPE,
 - ❖ 30 Corpses Bags and
 - ❖ Doctors Gowns for Doctors
- ❖ **Livelihood opportunity for Women Group from Uniform Stitching Work:** So far, the Women Groups, have collectively earned over Rs. 2 Crores respectively from uniform stitching work in the year 2018-19 and 2019-20 respectively.
- ❖ **Saksham Training Cum Uniform Production Center:** Uniform stitching work has been resumed in core and outreach centres maintaining social distancing and use of face masks for safety and protection from infection.
- ❖ **Extension of School Uniform Production work:** The Successful completion of first order of School Dress production, SHG (Phoolo Jhano SAKSHAM Aajeevika Sakhi Mandal) has got another 5 years of contract of school uniforms production.
- ❖ **Women Empowerment** from Uniform Stitching & Management of School Materials Distribution
- ❖ **Sweater Weaving Project:** District administration has entrusted faith on SHG for supply of Sweater for 1.50 lakhs school students. It is functional in Sunderpahari Centre which is sustaining livelihood of more than 80 women belonging from remote areas. Total 18659 sweaters have been produced since inception of its production on 26th December 2019 up to September 2020.
- ❖ **AF conducted 34 Veterinary Health Camps** in Godda & Sahebganj district benefitting over **2,077** households with treatment of 11,659 Livestocks.

- ❖ **Village level training on Vermicomposting:** A Village level training was conducted on 17th May 2020 in core and railway line villages to promote organic farming through Vermicomposting.
- ❖ **Vermicomposting production by Farmers:** Vermicomposting units has been set up by 23 farmers of 6 villages of core and railway line area of TPP.
- ❖ **Village level training & On-Field Demonstration on System of Rice Intensification (SRI)** was conducted on 20th June 2020 facilitated by technical experts of Krishi Vigyan Kendra (KVK) in Motia village
- ❖ **AF Supported with (Improved Samba Mahsuri Rice)- BPT-5204 CSIR CCMB,** Paddy Seeds for SRI to 56 farmers of core villages.
- ❖ **Livelihood Security from System of Rice Intensification (SRI):** 60 farmers of core, railway line and pipeline-Sahebganj villages have gained courage to implement SRI in their farm land of 54.96 acres.
- ❖ **Financial Support for Volunteers and Project Affected Families:** This year Jitpur mines has continued to support 370 families project affected families at the rate Rs. 1440/- per month towards livelihood engagement. Also, Rs.1, 65,201 Monthly Honorarium payments for Volunteer was continues this year. These volunteers help the Adani team for field mobilization and also help to maintain positivity in the Project affected Villages.
- ❖ **Monitoring** of 150 Self Help Groups is going on under livelihood programme.

Awards and Honours

- ❖ **Certificate Distribution to Saksham Trainees:** ASDC Saksham trainees were awarded merit certificate after completion of trainings and their assessment of performance are per set standards in fitter, welder, Food & Beverage, Bar-Bending and Digital Literacy trade.

D. Rural/Community Infrastructure Development

Water Conservation, Ground water recharge

1. **Deepening work of Ponds:** No Pond Deepening work has been carried out in the Half Financial Year 2020-21. Impact Assessment was conducted in aspirational villages.

Drinking Water Facility

- 1. Drinking water facility in villages –Borewell, Community Well etc.:** 3 Deep Boring was done in Sahebganj and Renovated 01 no. of Community well at Sondiha Village for drinking and domestic use.
- 2. Installation & Repairing Work of 90 Hand pumps & Hand pump Platform** in core, railway line and pipeline villages.

Educational infrastructure Development

- 1. Renovation of** Primary school at Amrakanoli village of TPP core area for quality learning of students.
- 2. Construction of 06 Class room** is going on at High School, Motia to provide infrastructure for students to learn in a proper proximity.
- 3. Renovated & Beautified with BALA painting for Model Anganwadi Program** in 3 AWCs at Laiya Tola of Bari-Baksara village, Harijan tola, Motia village and Gangta Govindpur village for learnings of the children (3-5 years). Ongoing Renovation of three Anganwadi Centre at Motia Kahar tola, Motia Chapota tola and Patwa village.
- 4. Construction of Library at Madhuri village** of our core area to provide a common platform for the students to access educational resources for improvement of academic performance and attain quality of education.
- 5. Construction of Canteen at Police Line,** Gumma village of railway line area
- 6. Construction work of Main Gate** at ITI Siktia

Other Village development structures

- 1. Construction of 6 Seating Place (Chabutra)** in TPP villages
- 2. Renovation of 1 Community Hall** for Community Programs in Karikado village of core area.
- 3. Renovation and construction of 19 community structures** in TPP core villages and town area.

DETAILED DESCRIPTION OF CSR ACTIVITIES

EDUCATION & RURAL SPORTS

Providing Quality Education in Society

- 1. 'Apna School' initiative to provide coaching classes for students:** This initiative was initiated in tribal village viz. Nayabad, Gangta, and Baliakitta to provide coaching classes to the students till 5th standard. During the year another centres was started to provide access to formal education to the poor and enthusiastic children in Kauribihar, Kaithartikar, Sondiha, and Amrakanoli village.

The total number of students getting benefitted is 830. The local teachers from the community have been engaged in the teaching. This initiative has led to improvement in learning and education of children. This coaching class is also useful to interact with the community.

The initiative has mainly been taken in area with low literacy level i.e. below 50% literacy among Santhal and Yadav Community (Scheduled Tribes and Other Backward Classes).

Sl. No.	Location	Standard	No. of Student
1	Nayabad I	I to V	12
2	Nayabad II	I to V	16
3	Gangta II	I to V	14
4	Baliakita	I to V	42
5	Kauribihar	I to V	296
6	Kaithartikar	I to V	136
7	Sondiha	I to V	172
8	Amrakanoli	I to V	142
Total			830

- 2. Adani Gyan Jyoti Yojna (Group 30):** - Education plays a vital role in development of society economically, socially and financially, it also helps to them

strengthen, so Adani Gyan Jyoti Yojna was initiated in Motia Village in which 30 students each of 8th, 9th & 10th standard studies at the centre for their concept building. This year the programme was extended in another village of pipeline area with an objective of improvement in results of poor & meritorious students in matriculation board exams. The program is serving over 492 students and capacitating them for their holistic development.

Sl. No	Adani Gyan Jyoti Kendra	Standard	No. of Student
Core Area			
1.	Motia	8 th	30
2.	Motia	9 th	30
3.	Motia	10 th	30
Total			90
Pipeline area			
1	Upper Middle School, Jiyajori	1 st to 5 th	30
2	Upper Middle School, Jiyajori	6 th to 8 th	35
3	Primary School, Ranidih	1 st to 5 th	48
4	Majdoor Bhawan, Karnu	3 rd to 5 th	39
5	Middle School, Baniyadih	5 th to 8 th	250
Total			492

Academic Performance: In tenure of FY 2018-19, total 95 numbers of students benefitted from Adani Gyan Jyoti Yojana and completed their exams successfully. For the Academic Session 2019-20, Admission test was conducted for new session of class 8th and class 10th board students.

- **Passing Result and Passing Marks (2018-19):** Out of total 56 students of class 8th, 18 students were selected for next session. While, all 30 students who appeared in 10th board exams got succeeded with decent marks. Out of which 20 students got 1st division, 8 Students got 2nd division, & 2 students got 3rd division marks.
- **Passing Result and Passing Marks (2019-20):** The students succeeded with improved marks and passed with flying colours in their board exams. All 30 students had passed the exam securing 100% passing percent while, the proportion of students securing 1st and 2nd division was equal and only 5 students fallen under 3rd division marks.

Class 8 th Student of Academic Session 2018-19		
Appeared	Selected	%
56	18	32.14

Academic Session	Year Wise Performance of Class 10 th students under Gyan Jyoti Tuition Programme					
	Class 10 th (Student)		Passing %	1 st Div	2 nd Div	3 rd Div
	Appeared	Passed				
2018-19	30	30	100	20	8	2
2019-20	30	30	100	12	13	5

□ **Commencement of Gyan Jyoti Programme in Pipeline villages amidst COVID Outbreak**

- Four Gyan Jyoti Tuition Program is operational in Pipeline area to impart quality of education for growth & development of children.
- Classes has been commenced on alternate basis and extending the time duration from 3 hours to 5 hours.
- Total 402 Children are attending the classes with all guidelines being taught in the classroom, maintaining the social distancing and wearing face masks prepared by members of Phoolo Jhano Saksham Aajeevika Sakhi Mandal.

3. Gyanodaya Project: GYANODAYA, 'Mera Mobile, Mera Vidyalaya', a step towards lightning in dark was launched by Adani Foundation in partnership with District Administration and Eckovation Solutions Pvt. Ltd. on August 2018 to promote e-learning through Smart Classes in Middle and Higher Secondary Government Schools for students of 6th-12th standard. Gyanodaya project has reached **273 Govt. Schools** covering 846 classes with its reach spread across 201 remote and untapped villages of Godda district in 9 blocks of Godda district.

In the tenure of less than 1.8 years, the program has leveraged its services facilitated by over 1000 skilled teachers and benefitting more than 53000 students directly. Transformation in their lives has been observed through multiple benefits of digital learning such as - digital skills, decision making capabilities, visual learning, cultural awareness, improved academic performance and creativity. Gyanodaya model is filling the gap of teachers' shortage by enabling students to access the smart classes with a simple touch of TV remote.

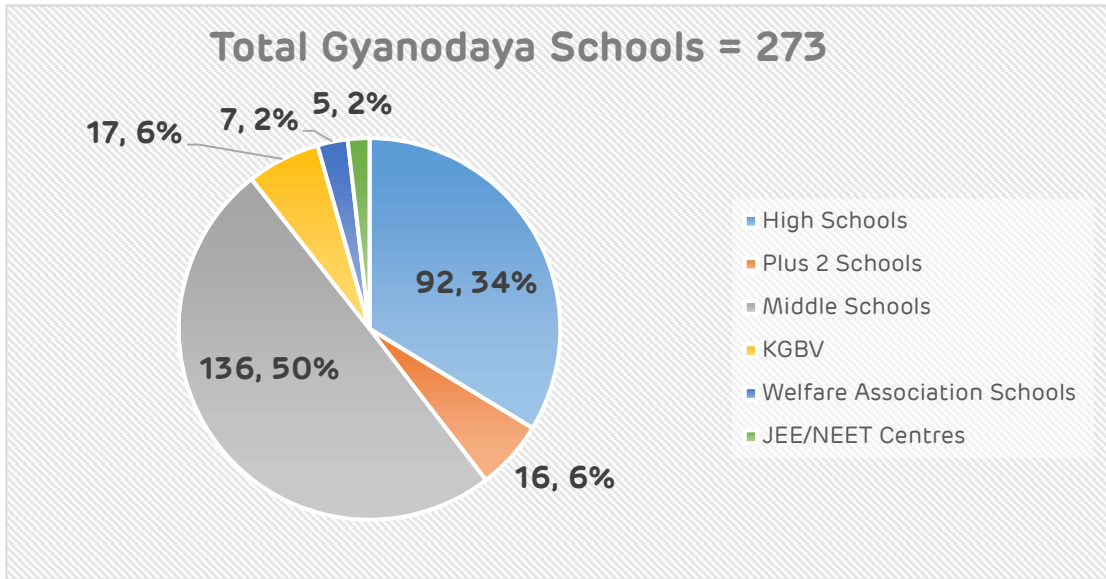
Outreach of Gyanodaya: Gyanodaya program covers **136** Middle Schools, **92** High Schools, **16** Plus 2 Schools, **17** KGBVs, **7** Welfare Association Schools, and **5** JEE/NEET Centres, respectively.

Details of Block Wise Outreach of Gyanodaya							
Block	Middle schools	High Schools	Plus2 Schools	KGBVs	Welfares	JEE/NEET Centres	Aggregate
Godda	42	19	2	2	0	3	68
Sunderpahari	3	3	0	2	3	NA	11
Podaiyahat	27	17	5	2	0	NA	51
Pathargama	23	6	01	2	0	1	33
Basantrai	8	3	2	1	0	NA	14
Mahagama	15	15	2	2	0	1	35
Boarigor	3	7	1	2	4	NA	17
Mehrana	7	11	2	2	0	NA	22
Thakurgangti	8	11	1	2	0	NA	22
Total	136	92	16	17	7	5	273

During the last Financial Year 2019-20, Gyanodaya Programme had resulted into the following mentioned output and outcome for multi stakeholders and beneficiaries:

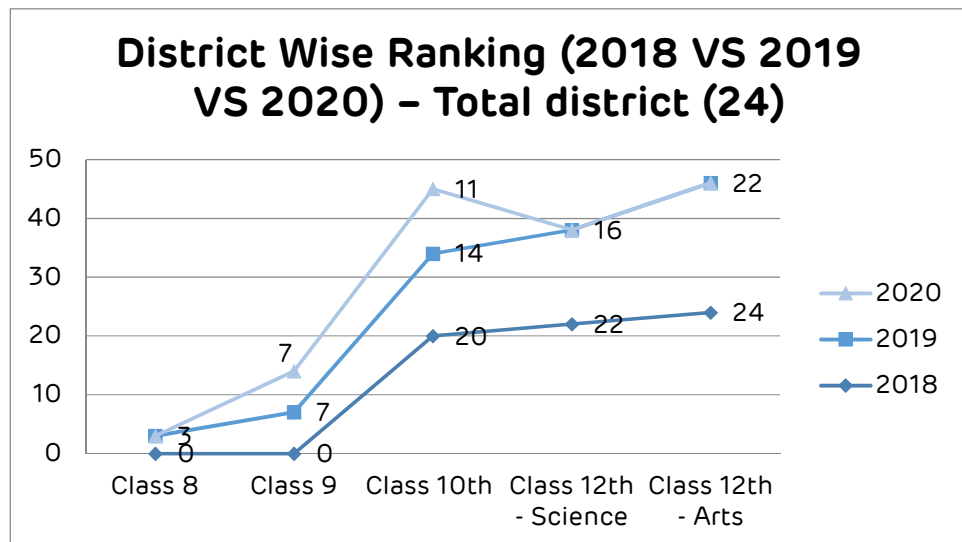
Programme Output

- ❖ **Capacity Building of 765 teachers:** Total 765 teachers have been trained to use digital technology to conduct smart classes in schools effectively and efficiently in the district.
- ❖ **Beautification Work of 176 schools:** Under the provision of 14th Finance Commission, 176 schools were beautified to enable school teachers and children for learning in ecosystem of education. This initiative also has seen the major involvement of Panchayati Raj Institutions in setting up crucial infrastructure in the schools using the provisions of the 14th Finance Commission.
- ❖ **100 % Electrification of 42 remote schools** has been done to provide energy access in schools and impart digital learning.
- ❖ About **25 schools** have been provided drinking water connection and hand-pumps to enable access to drinking water for children.



Programme Outcome

- 1. Improvement in School Ranking at District Level:** The magnificent attempt of Gyanodaya has resulted into improvement in overall performance of education of Godda District after the year 2018. The School Ranking has improved significantly in the year 2020.



**No Examination held of Class 8th and Class 9th in 2018*

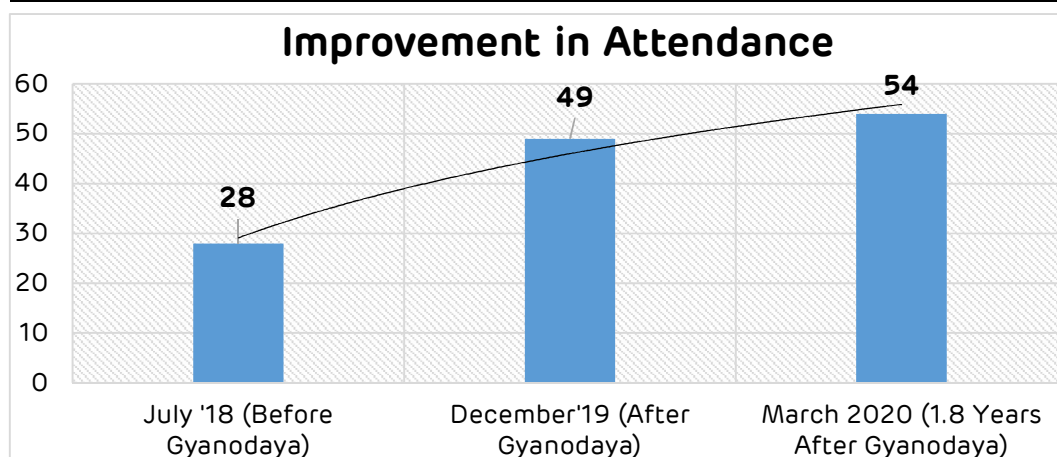
- Class 9th standard upholds **7th** rank position in the year 2019 & **2020** as compared to **21st position** in the year 2018-19
- The figures improved from 20th rank (2018) to 14th rank (2019) to **11th** rank in the year **2020** of Class 10th,

- c) 22nd rank (2018) to **16th rank (2019)** in class 12th (Science) and
- d) 24th rank (2018) to **22nd rank (2019)** in class 12th (Arts)
- e) Class 8th stands at **3rd rank (2019)** among 24 districts of Jharkhand state.

- 2. Increase in Attendance Rate of Students:** The visually appealing, easy-to-grasp and retainable concepts covered in the study materials has led to 170% increase in the class-wise attendance comparing the figures of past years (July 18) from 20% attendance to **54%** (March 2020). A significant reduction in dependency on tuition classes has been observed all across the blocks which will thereby increase the faith of students and parents likewise on government schools. The growth in the class-wise attendance has been a result of making learning engaged and interactive using conceptualized and animated concept videos being taught under the Gyanodaya model. **No classes were held due to outbreak**

Improvement in Attendance after implementation of Gyanodaya

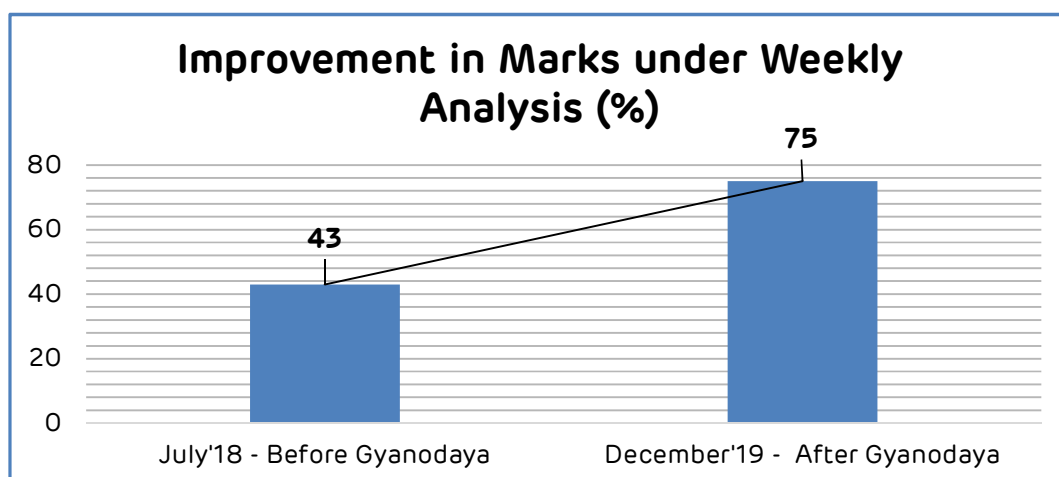
July-18 (Before Gyanodaya)	March 2020 (1.8 Years After Gyanodaya)
20-30%	54%



- 3. Improvement in Marks of Students:** Prior to educational initiative of Gyanodaya, the students used to fall under 30-40% marks bracket which has now shifted to **70-75%** marks bracket on an average due to better understanding and retention of basic concepts and a daily quiz after every video.

Impact of Gyanodaya project on Results is as given below:

July-18 (Before Gyanodaya)	December 2019 (1.6 Years After Gyanodaya)
Improvement in Marks under Weekly Analysis	
30% - 40%	70-75 %



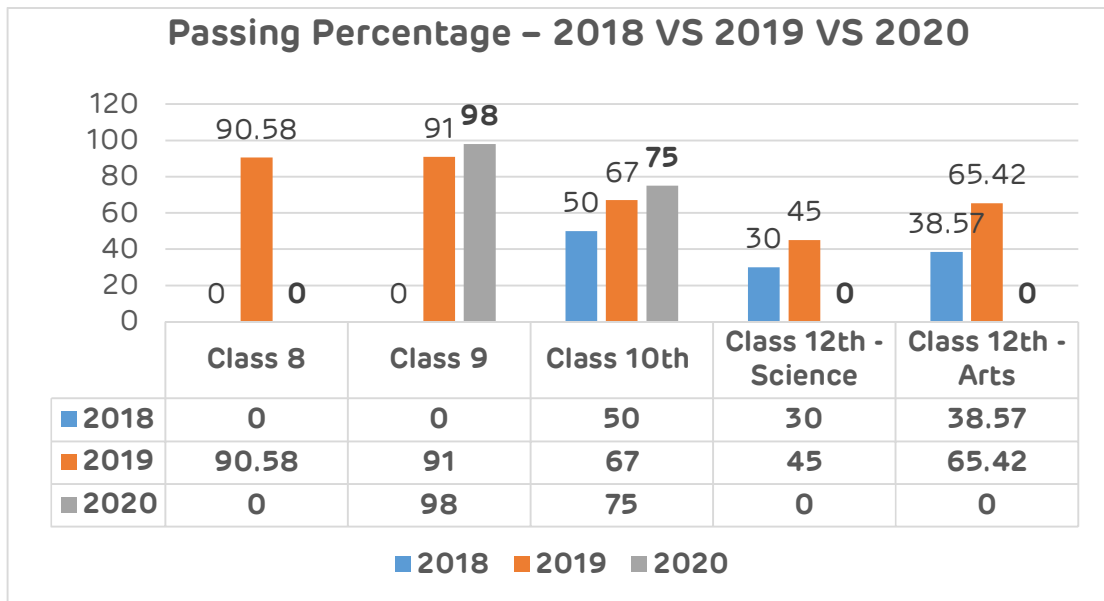
- 4. Increase in Passing Percentages:** The passing percentage of students of Class 9th and Class 10th has increased in the year 2020 as compared to previous two consecutive years 2019 and 2018
- i. **Class 10th: 75% (2020)** passing percentage as compared to figure of 2019 (67%) and 2018 (50%),
 - ii. **Class 9th:** Passing percentage increased from 91% (2019) to **98%** in the year **2020**,
 - iii. While, the passing % of Intermediate students has increased from 30% (2018) to **45% (2019)** in Intermediate (Science) and 38.57% (2018) to **65.42% (2019)** in Intermediate (Arts).
 - iv. On the other hand, the passing percentage of class 8th students are **90.58%** in the year **2019**.

Class wise Increase in Passing Percentages of students in Godda district

Academic Year	Class 8 th	Class 9 th	Class 10 th	Class 12 th Science	Class 12 th Arts
2017-2018	0	0	50	30	38.57
2018-2019	90.58	91	67	45	65.42
2019-2020	NA	98	75	NA	NA
% Increase	90.58	7.69	50	50	69.61

**Exams were not conducted of class 8th & 9th on 2018*

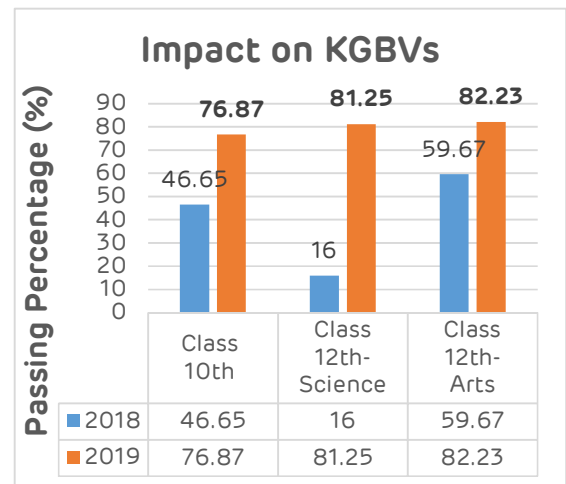
***% increase figure from 2018 to 2020*



5. Impact on Kasturba Gandhi Bal Vidyalaya (KGBVs)

There are 17 KGBVs in the districts where about 1200 girl students were enrolled in 10th standard and about 450 students were enrolled in 12th standard in 2019.

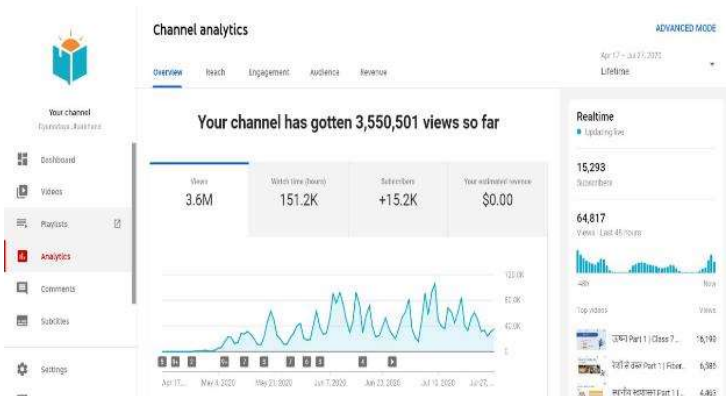
- **Improvement in Passing Percentage of Class 10th:** The passing percentage of girl's students has increased from 46.65% (2018) to **76.87%** (2019) of standard 10th.
- **Improvement in Passing Percentage of Class 12th:** Likewise, it has improved significantly from low passing rate of 16% (2018) to **81.25%** (2019) in Class 12th (Science) and from 59.67% (2018) to **82.23%** (2019) in Class 12th (Arts).



□ Initiatives undertaken amidst Epidemic Outbreak to continue imparting education to the children

- ✓ **Gyanodaya YouTube Channel:** Gyanodaya Godda responded swiftly to closure of schools and other institutions due to COVID 19 with the formation of YouTube Channel on April 2020. The YouTube version of Gyanodaya was started by Adani Foundation and Eckovation team to continue benefitting

students in this Epidemic outbreak. The parents and their wards were informed about this initiative via print and social media platforms to gain access to education without any hindrance. All the content for every standard has been uploaded to the platform. Over 3.6 million viewers have attempted to get the knowledge.



- Website Link for Contents & Online Classes for the students of Class 6 to 12: godda.nic.in/covid-19-2/

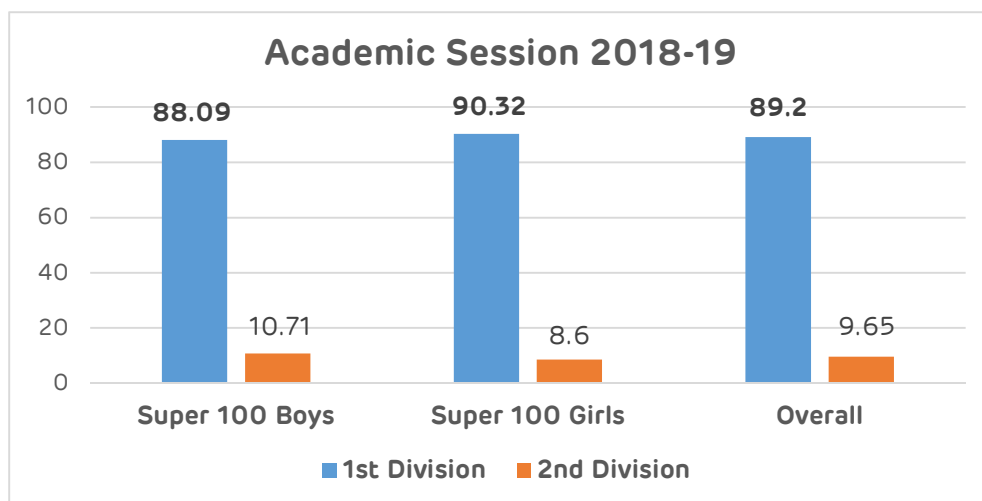
✓ **Gyanodaya DD Jharkhand:** Gyanodaya collaborated at the state level and broadcasted 3 hours of content through DD Jharkhand daily, since 11th May 2020 for students residing in remote areas of Jharkhand of Class 1st to Class 12th standard. It has been instrumental in cases where students do not have access to a smart phone or high speed internet access

- Over 1 lakh children including both school going students and out of school children from all across the districts of Jharkhand state are benefitting. The parents and their wards are enriching their knowledge and creating a learning environment in their home.

4. Super 100 & Super 200 Program

- **Super 100 Programme:** The Super 100 Program of Adani Foundation in collaboration with District Administration provided Residential Coaching Classes for conducive learning environment to top 100 students of Godda district for the preparation of Jharkhand Board exam held on March 2019. It resulted in increase in performance of Super 100 Boys and Super 100 Girls.
 - **Super 100 Boys:** Out of 84 boys, 74 boys (**88.09%**) got 1st division, and 9 (10.71%) got 2nd division.
 - **Super 100 Girls:** Similarly, out of 93 girls, 84 (**90.32%**) got 1st division and 8 girls (8.6%) got 2nd division.

Academic Session 18-19 (Passing Results in %)			
Super 100 Students	Total Students	1 st Division	2 nd Division
Super 100 Boys	84	88.09	10.71
Super 100 Girls	93	90.32	8.6
Overall	177	89.2	9.65

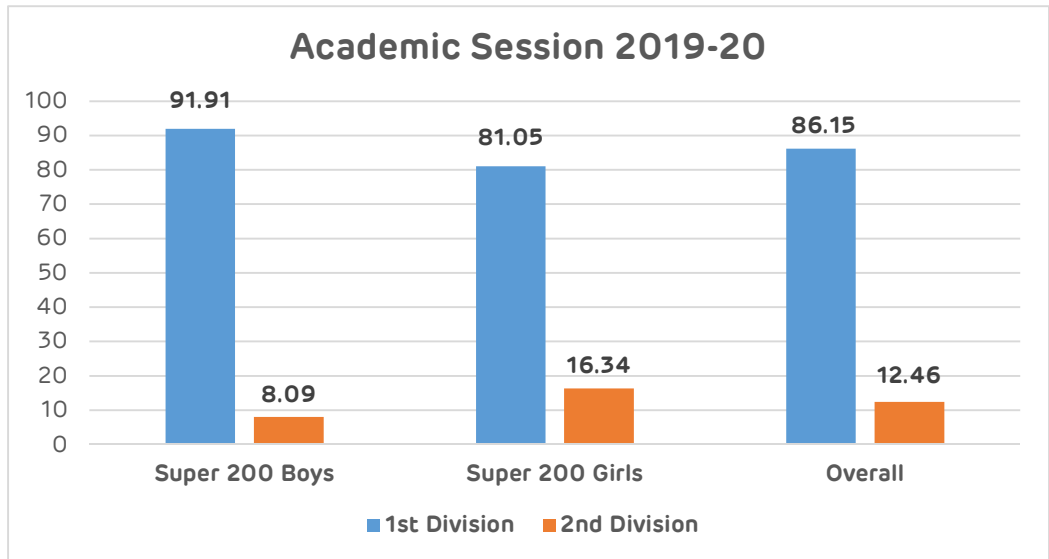


- **Super 200 Programme:** The outstanding performance of Super 100 students in Jharkhand Board Exam held on March 2019 and Appraisal by District Administration, led to origin of Super 200 Programme on 8th November 2019 with an objective to enable Super 200 students (Boys and Girls) to succeed in 10th Board exam with first division marks and secure bright career. It is operational in ITI Siktia, Women's College for Super 200 Boys and Kasturba Vidyalaya, Pathargama & Kasturba Vidyalaya, Godda Center for Super 200 Girls in Godda district.
- The **Closing ceremony of Super 200 Program** was held on February 2020 at ITI Siktia and Kasturba Vidyalaya to motivate and build confidence in students for the broad exam preparation. District Administration and Adani Foundation team put forth their speech to appreciate students on their hard work and blessings for future endeavor.
- **Performance of Students of Academic Session 2019-2020**
 - **Super 200 Girls:** During the Academic Session, 2019-20, 153 girls learning in KGBV Pathargama & Godda centre had appeared in 10th Board exams. Out of which, **124 girls (81.05%)** secured **1st division marks**, 25

students (16.34%) got 2nd division marks, and 2 students got 3rd division marks while 1 student passed with marginal marks.

- **Super 200 Boys:** 136 boys had appeared in the board exam, out of which **125 boys (91.91%)** of Super 200 Boys got **1st division marks**, 11 (8.09%) got 2nd division marks, while no students fallen under 3rd division. District Administration, District Education Officer (DEO) and whole team of Gyanodaya, Godda, Super 200 Program and Adani Foundation were applauded for their endeavour in changing the scenario of education in Godda district.

Academic Session 19-20 (Passing Results in %)							
Super 200 Students	Total Appeared	1 st Division		2 nd Division		3 rd Division	
		Students	%	Students	%	Students	%
Super 200 Boys	136	125	91.91	11	8.09	0	NA
Super 200 Girls	153	124	81.05	25	16.34	2	1.31
Overall	289	249	86.16	36	12.46	2	0.69



- 5. Teacher Support in School:** - On community demand, Adani Foundation has provided 25 experienced and knowledgeable teachers in 15 schools including 14 govt. and 1 private school in core, railway line and pipeline areas to enable access to quality education by all the school going students. This initiative aims to improve the quality of education in schools by improving student-teacher ratio and concept building of students in subjects like Science and Mathematics benefitting over 2900 students who regularly attend classes.

Sl. No	Location	Standard	No. of Student
1.	High School, Motia	9 th & 10 th	235
2.	Middle school, Motia	1 st to 8 th	546
3.	High School, Baksara	9 th to 12 th	276
4.	Upgraded high school, Sondiha	6 th to 8 th	192
5.	Middle School, Kauribahiyar	1 st to 8 th	286
6.	Primary School, Kaithatkar	1 st to 5 th	142
7.	Veena Bharti, Podaiyahat	6 th to 10 th	276
8.	Middle School, Rangania/Baliakitta	1 st to 8 th	176
9.	Primary School, Amrakanoli	1 st to 5 th	136
10.	Middle School, Jiajori	1 st to 8 th	76
11.	Primary School, Ranidih	1 st to 5 th	50
12.	Primary School, Karnu	1 st to 5 th	100
13.	Manasparivartan Private School, Baksara	1 st to 8 th	126
14.	Upper Middle School, Baniadih	8 th to 9 th	176
15.	Primary School, Thakurgangti	1 st to 5 th	120
Total			2913

6. School Education Sponsorship Program

Context: Jitpur coal block is located in north-western part of Chuperbita Basin of Rajmahal coal field in Godda district of Jharkhand. Around, 70 % of population are PVTGs including Santhal and Pahari tribes who resides in outskirts area in rural Godda depending upon traditional culture and lifestyles for their survival. Rain fed farming, NTFPs collection, and wage labor in coal mines during drought period is their only, source of earning and substantial number of people falls under below poverty lines. Due to lack of income, illiteracy, agriculture debt; lack of awareness about their rights and basic provisions, alcoholism and superstitions enters them in vicious circle of poverty.

Also, the tribal children cannot access to basic education due to poor socio and economic condition of their families. They are rather engaged in agriculture, labor, livestock grazing, and monotonous work of households. In times of nurturing with education and constructive environment, their childhood is lost in solitude and despair with chain of hardships and labor. Also, due to no availability of adequate school and school teachers, there was 100% incidence of dropout in schools.

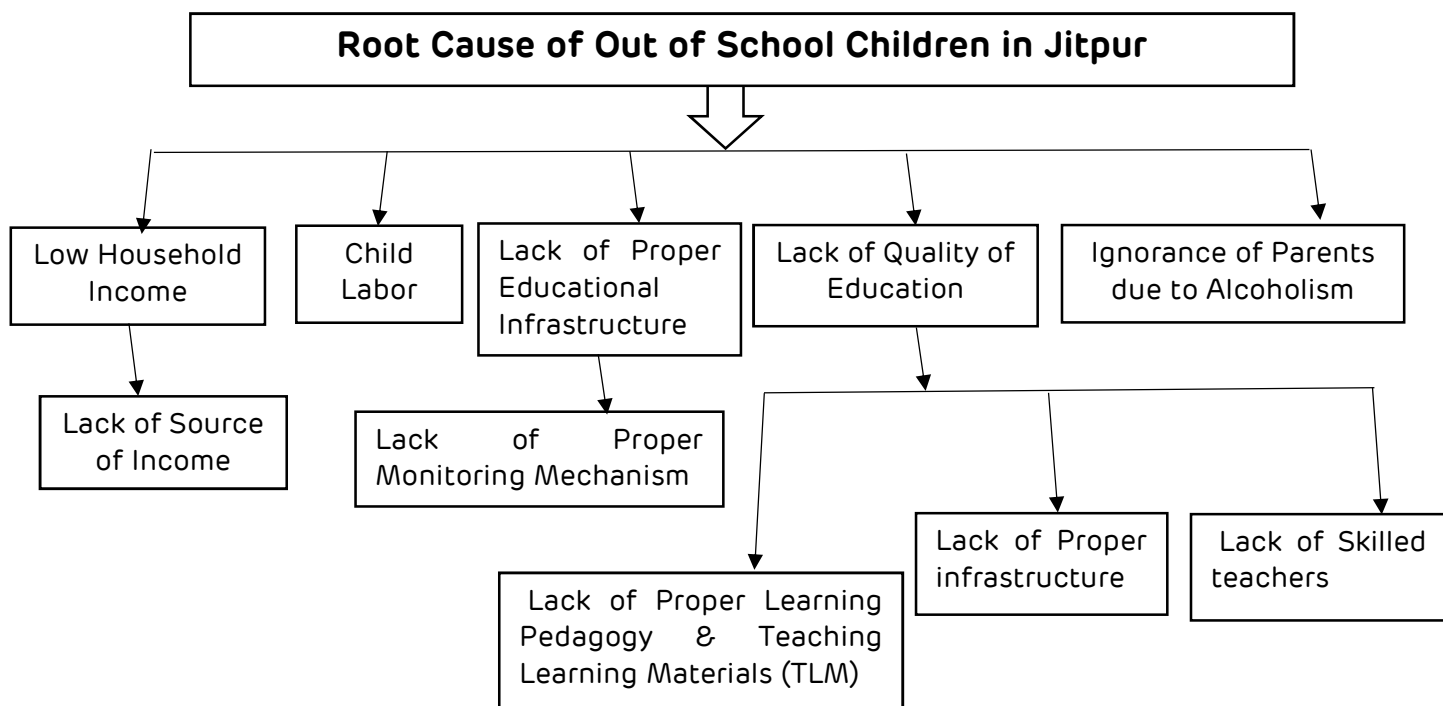


Fig. 1 Root Causes of Drop out of Children in Jitpur coal mines area

❑ **Intervention:** To reduce the plight of families and overcome difficulties, and reduce dropout rate of tribal children, Adani Foundation team launched *School Education Sponsorship Program* in the year 2016 to provide 100% education support for one ward each from 300 Project Affected Families of Jitpur mines to reduce dropout by focusing on quality education and thereby regular attendance of students and ensure 100% literacy in new generation.

❑ **Services under Umbrella of Education Sponsorship Program**

Under this programme, 100% Educational support is provided which comprises of (a) School Fees, (b) Books, (c) Stationary items, (d) Accommodation facilities, and (e) Fooding and Logistic facilities

- 1) **School Fees:** The School fees of each child are paid by Adani Foundation under Financial Support for education of children.
- 2) **Accommodation facilities:** The students are permitted residential facilities on annual basis for the duration of regular academic session.
- 3) **Fooding and Logistic facilities:** The fooding and conveyance facilities are also provided for the children to gain access to schools coming from remote villages. Children are provided three times nutritious and healthy food keeping in safety and security as utmost priority.

- 4) **Teaching Learning Tools and Materials** such as Books, Stationary items, and related needs are taken care of each children going to school under umbrella of Education Sponsorship Program.
- 5) **Skilled Teachers:** Highly qualified and well versed teachers in nutshell of teaching sector groom students towards their better and bright future.

Triggers of Adani Foundation

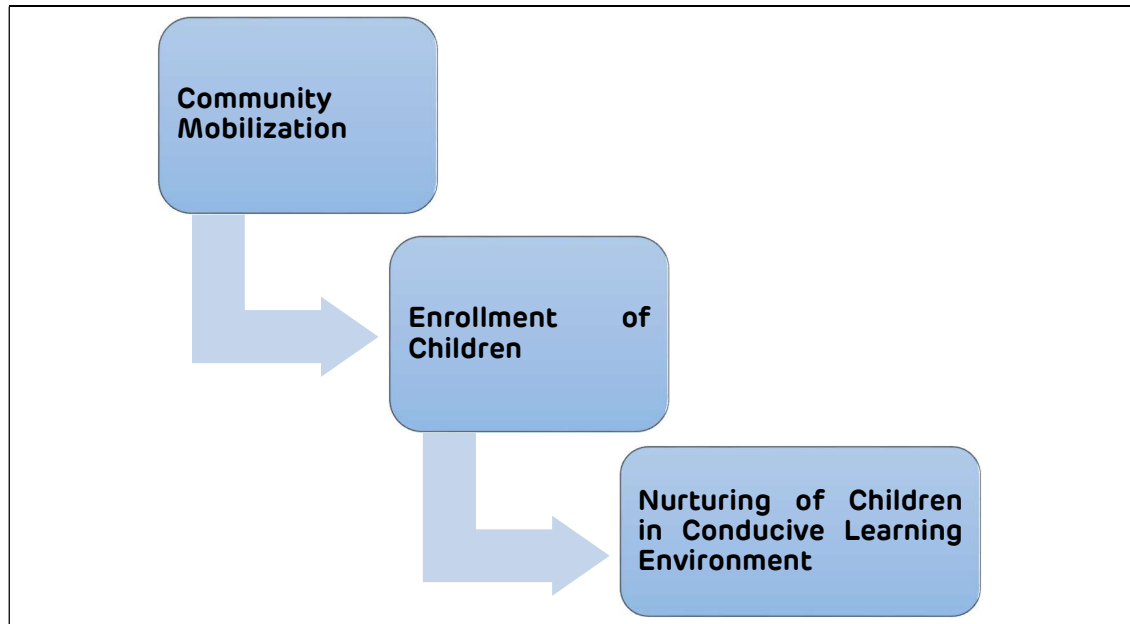


Fig. 2 Process of Intervention

- I. **Community Mobilization:** The families were approached to inform, educate and sensitize on provisions and importance of Residential School Facility under this programme. The community were mobilized with support of Village Resource Person, Community Leaders and active persons which helped disseminate knowledge regarding the services.
- II. **Enrolment:** On June 2016, the parents of 155 wards were convinced in each family to enrol their children in educational institutions who were further, admitted in reputed private schools fulfilling all amenities. In the first year, it was challenging to retain the enrolled students and attend regular classes, AF team put dire efforts to stabilize and continue the regular course.

VILLAGE WISE ENROLLED CHILDREN FROM PROJECT AFFECTED FAMILIES (PAF)				
SN	Village	Enrolled (2018-19)	Shifted to new school (2019-20)	Total No. of Wards
1	Dahubera	29	20	29
2	Pakeri	14	0	14
3	Dan agora	23	0	23
4	Dumarpalam	34	0	34
5	Jitpur	80	0	80
6	Kairajori	27	0	27
7	Paharpur	74	0	74
8	Sunder Pahari	9	0	9
9	Telvita	10	0	10
Total		300	20	300

Gradually, with quality learning pedagogy used by teachers and facilities provided to students helped hold children who attended classes with their own interest, effortlessly. It led to link more number of children in the succeeding years with enrolment of total 300 children from 300 families in current duration.

YEAR WISE PROGRESS IN ENROLLMENT OF TRIBAL CHILDREN UNDER EDUCATION SPONSORSHIP PROGRAM			
2016-17	2017-18	2018-19	2019-20
155	275	300	300

II.1 Enrolment of Children in Schools: The children are enrolled in different Private Schools as per their interest, suitability and convenience from respective villages. 132 students are learning in Veena Bharti Residential School, 73 students are learning in Viswa Bharti Mission School, 33 students in Nav Prabhat Mission School, 24 students in Evergreen Bhartiya Charitable Trust and 13 tribal students in Nav Jivan Adivasi Chatravas.

School Wise Enrolled Children under Education Residential Program			
SN	School	Location	No. of Students
1	Evergreen Bhartiya Charitable Trust	Tiyodih, Sunderpahari Road, Godda	24
2	Viswa Bharti Mission School	Hanuman Nagar, Pakur Road, Godda	73

3	Veena Bharti Residential School	Gunghasa, Poriyahat, Godda	132
4	Nav Prabhat Mission School	Godda	33
5	Nav Jivan Adivasi Chatravas	Godda	13
Total Students			275

II.2 Students Enrolled in Elementary and Primary Education: The objective of mainstreaming the poorer tribal children in formal education system has been reached by admitting children in reputed and qualified Private Schools in Godda district of Jharkhand. The commitment to link the tribal children of unheard and marginalized families are fulfilled keeping assuring *"Equal Right of Education for Every Child"*.

Class Wise Students under Education Sponsorship Programme											
S N	School/Class	Number of Students									Total
		Nursery	L.K.G	U.K.G	I	II	III	IV	V	VI	
1	Evergreen Bhartiya Charitable Trust	7	9	5	1	0	2	0	0	0	24
2	Viswa Bharti Mission School	14	16	18	17	3	4	1	0	0	73
3	Veena Bharti Residential School	21	31	29	22	14	5	5	4	1	132
4	Nav Prabhat Mission School	0	6	15	12	0	0	0	0	0	33
5	Nav Jivan Adivasi Chatravas	NA	NA	NA	NA	NA	NA	NA	NA	NA	13
Total		42	62	67	52	17	11	6	4	1	275

Class Wise Enrolment of Children: Out of total 275 children studying under Education Residential/Sponsorship Programme, 67 students are studying in U.K.G. class, 62 students in L.K.G., 52 children in class 1, 42 children enrolled in Nursery, 17 children in Class 2, 11 children in class 3, 6 children in class 4, 4 children in class 5 and one child is studying in class 6th.

III. Achievements: Dropout rate has reduced by over 60% and attendance rate of students has increased gradually by 70% in schools. Their parents are no longer forcing their wards to engage them in farming and other activities. The average

marks of each student is more than 74%. On the other hand, the highest average mark **78.62%** is attained by students of Nav Prabhat Mission School.

The children have become a social agent who passes the message for development of conditions of other children living in their villages and debarring the culture of alcoholism by people in the community for betterment of their society.

Academic Performance of Students of Session 2019-20		
SN	School	Average Marks of Students (%)
1	Evergreen Bhartiya Charitable Trust	74
2	Viswa Bharti Mission School	72.78
3	Veena Bharti Residential School	71.85
4	Nav Prabhat Mission School	78.62
5	Nav Jivan Adivasi Chatravas	NA
Average Marks		74.31

E. Impact Assessment of Education Sponsorship Programme

Feedback of Students Performance: Impact Assessment survey was carried by team of Adani Foundation & School Management Committees to understand the effectiveness of program in changing lives of the unheard. Feedback of educational program was taken from both parents and students to gauge the benefits leveraged to poorer children from Adani Sponsored Education Residential Program. Also, Home visits was also done to understand the perception of parents and community about the impact of Programme.

There has been changes in life of children by way of enhanced standard of living, development of personality and better academic results in the schools. They are also adapting to environment of urban areas which has groomed their overall personality. More, than 65-75 % of total children are getting more than **90% marks** in academics.

SN	Before Intervention	Post Intervention
1	Unable to speak confidently among friends, peers and society	Educators have fostered self-motivation in children. They have been inculcated with discipline, moral values and encouraged to honor and respect the concerned in an appropriate manner.
2	Earlier were webbed in poorer level of living	Standard of living has improved maintaining health and hygiene.

3	Children were familiar with their local dialects which hindered interpersonal communication among other rural and urban children	The children are now able to read and write and fluently communicate in both Hindi & English language.
4	Lack of Interest in study and engaged in child labor and other household activities	Studying with concentration & dedication effortlessly. Attending classes on regular basis.
5	After recess, children did not want to go to school on following day.	Completes household work and school homework on equal manner and attend session with other children.
6	Lack of interest in local cultural systems and rituals	In the curriculum, the local culture are prioritized & children are educated in their regular course to develop spiritual mind and promote local tradition for development of society.

- *Non-Operational due to Epidemic Outbreak*

COMMUNITY HEALTH PROGRAMME

Mobile Health Care Unit (MHCU)

In this Financial Half Year duration, April 2020-September 2020, five Mobile Health Care Units have together catered to **11,014** patients so far from the Core, Periphery, Railway line and Pipeline villages. Adani Foundation runs its own MHCU in core and mines area villages while it has partnered with Helpage India and Wockhardt Foundation to extend primary medical services in Periphery and Pipeline villages respectively. All of these five MMUs provide services in the villages as per schedule through a team of a Doctor, a Pharmacist, an ANM, and a Social Protection Officer. AF supported mobile medical facilities goes a long way to ensure access of poor people to quality primary health care services at their doorstep. The services provided at doorsteps during COVID 19 has been instrumental in protecting the health of the individuals of all age group and gender.

- 1. Mobile Health Care Unit in Core villages:** During the Financial Half Year, 'April 2020-September 2020', Adani operated Mobile Health Care Unit in core villages of TPP Plant area have conducted 25 halts at 9 locations covering 7 villages along with for labourers working at Site office on weekly basis amidst Epidemic to cater medical needs of the villagers at grassroots.

The camp was put on hold during April'20 to June'20 and in the month of August due to suspected COVID Cases and protecting from infection of COVID 19 to the villagers and medical team. Ambulance services has also been made available for COVID 19 cases at Godda district. The MHCU in core villages was resumed with all preparation to operate before going into the field with wearing of PPEs and Face masks, and use of sanitizers for cleanliness.

Total **479** patients including 246 males, 147 female & 86 children have been served in this year.

Patients treated by Adani Operated MHCU on April-September 2020					
SN	Month	Males	Females	Children	Total
1	April	0	0	0	0
2	May	0	0	0	0
3	June	0	0	0	0
4	July	130	79	48	257
5	August	0	0	0	0
6	September	116	68	38	222
Gross Total		246	147	86	479

- 2. Mobile Health Care Unit in Jitpur Mines villages:** Mines MHCU delivered its services at five locations covering twelve villages where patients are diagnosed by doctor and provided free medicines to the patients. The MHCU conducts full quick para and also refers the patients to nearest hospital if required. Adani operated, Jitpur MHCU was not functional due to Epidemic outbreak. Ambulance services has been made available for COVID 19 cases at Godda district

Patients treated by Mines MHCU on April-September 2020					
SN	Month	Males	Females	Children	Total
1	April	0	0	0	0
2	May	0	0	0	0
3	June	0	0	0	0
4	July	0	0	0	0
5	August	0	0	0	0
6	September	0	0	0	0
Gross Total		0	0	0	0

- 3. Helpage India operated MHCU for Periphery Villages:** Helpage India operated MHCU delivered medical services in 30 periphery villages coming under buffer zone 1 and railway siding villages of Adani Power Plant. Adani supported Helpage India was non-operational due to outbreak. To cope up and

mitigate the COVID 19 crisis, Ambulance services has been made available for COVID 19 cases at Godda district

Patients treated by Helpage India MHCU on April-September 2020					
SN	Month	Males	Females	Children	Total
1	April	0	0	0	0
2	May	0	0	0	0
3	June	0	0	0	0
4	July	0	0	0	0
5	August	0	0	0	0
6	September	0	0	0	0
Gross Total		0	0	0	0

4. Wockhardt Foundation operated MHCU for Pipeline Villages in Godda:

Adani supported Wockhardt Foundation MHCU team commenced its operation for pipeline area in the villages of Godda district since October '18. Total **6835** patients including **2582** males, **2748** females and **1505** children were treated since April' 20 to Sep'20, covering over 41 villages from 4 blocks namely, Mahagama, Boarigor, Pathargama and Thakurgangti. The camp is conducted maintaining social distancing and use of masks for protection of both Medical team and the community.

Patients treated by Wockhardt Foundation (Godda) MHCU on April-September 2020					
SN	Month	Males	Females	Children	Total
1	April	95	104	57	256
2	May	531	595	283	1409
3	June	526	549	324	1399
4	July	431	410	248	1089
5	August	408	424	259	1091
6	September	591	666	334	1591
Gross Total		2582	2748	1505	6835

5. Wockhardt Foundation operated MHCU for Pipeline Villages in Sahebganj:

Adani supported Wockhardt Foundation MHCU team commenced its operation for pipeline area villages of Sahebganj district since 21st September '18. Total **3700** patients including **1333** males, **1635** females and **732** children were treated April-Sep'20 covering over 35 villages from 4 blocks viz. Mandro, Borio, Sahebganj and Taljhari (Boha village) in total 60 stoppages. Maintaining social distancing and use of masks. The camp could not operate in some areas due to poor road condition and connectivity in the month of July-August'20.

Patients treated by Wockhardt Foundation (Sahebganj) MHCU on April-September 2020					
SN	Month	Males	Females	Children	Total
1	April	45	61	26	132
2	May	158	214	111	483
3	June	365	496	184	1045
4	July	169	185	89	443
5	August	157	163	81	401
6	September	439	516	241	1196
Gross Total		1333	1635	732	3700

2. Specialized Medical Camps: During month of April to September'20, Adani Foundation endeavored to cater health needs in a specific health issues of the masses amidst Epidemic outbreak by adhering to safety protocols. Total of 10 Specialized Medical Camps were organized at 12 locations covering more than 30 villages from core, railway line and pipeline area. Specialized Medical Camps were organized with the objective to provide critical and specialized health care services in villages to cater untreated illness/ medical issues concerning women/ girls and children, elders, laborers and drivers of plant site and eye patients for whom access to safe and standard health services remains a challenge.

Patients Diagnosed and treated: Total **1777 patients** including 1459 males, and 318 females were diagnosed and treated for various ailments by doctors of respective specialization viz. Geriatric, ophthalmic and Homeopathic for boosting the immunity system of human body from protection of COVID 19 virus along with BP/ Sugar measurement and provision of medicines at free of cost at the camp site.

SN	Date	Block	Venue	Specialization	Patients treated		
					Male	Female	Total
1	23.5.2020	Thakurgangti	Diara	Health Camp for Elderly: Geriatric medicine	40	30	70
2	24.5.2020	Godda	Baisari		40	34	74
3	30.5.2020	Thakurgangti	Chapri		38	60	98
4	31.5.2020	Godda	Kurmichak		38	49	87
5	05.06.2020	Godda	Adani Power (Jh) Ltd, Godda (Medical Centre)	Homeopathic Health Camp	676	0	676

6	05.06.2020	Godda	Adani Power (Jh) Ltd, Godda (Plant Canteen)		223	0	223
7	05.06.2020	Godda	Adani Power (Jh) Ltd, Godda (Bachelor Hostel)		221	0	221
8	21.06.2020	Pathargama	Lakhanpahadi	Health Camp for Elderly: Geriatric medicine	40	41	81
9	22.06.2020	Pathargama	Ghat Rampur		42	30	72
10	27.06.2020	Pathargama	Machhitand		45	33	78
11	28.06.2020	Pathargama	Amdiha		33	41	74
12	01.07.2020	Godda	Adani Power (Jh) Ltd, Godda (Motia site office)	Eye Camp for Drivers of Plant Area: Ophthalmic	23	0	23
Gross Total					1459	318	1777

3. Awareness Program on COVID 19: Adani Foundation operated Wockhardt Foundation had organized 'One-day Awareness Program on COVID 19' in Malnistrara village of Pathargama block, Godda district. The villagers were informed about COVID 19, its precautionary, preventive and curative measures; Nutritional Food Intake, its importance; Importance of social distancing and Importance of WASH.

4. Relief Program against Pandemic COVID 19: Relief program has been initiated by Adani Foundation for safety and protection of every individual and community from Pandemic CORONA Virus. Adani Foundation, District Administration & Nagar Nigam of Godda district is working jointly to fight battle against CORONA virus through engagement in activities such as:

1. Donation of Rs. 1 Crore in **CM Relief Fund** of Jharkhand state by APJL, Godda.
2. **Distribution of Personal Protective Equipment's (PPEs)** all across districts by production of **1.52 Lakh Face Masks, 200 Apron, 30 Corpses Bag and Gowns for Doctors** by PJSASM members in all respective sewing centres. It was sterilized before distribution work.

3. **Sanitisation programme (Fogging & Spraying)** running in entire area of Godda and 12 core villages. Disinfectants was applied in 12 rural outskirts of core area namely Motia, Patwa, Basantpur, Baksara, Choti Baksara, Sondiha, Rangania, Baliakitta, Petwi, Dumaria, Nayabad, Gangta and others Panchayats of TPP, Motia and overall targeted areas in town through Fogging/Spraying for 7 days benefitting over 2089 HHs and 8356 people.
4. **Temperature Screening:** All employees and staffs of Adani Group are screened and tested for detecting COVID-19 virus through measurement of body temperature by Security team members.
5. **Distribution of 30000 Soap** has been initiated in the community area.
6. **AF Supported Community Kitchen: Support program initiated by Team for safety from Pandemic CORONA Virus:** AF team in collaboration with District Administration initiated four Community Kitchen from **28th March 2020** till 31st May 2020, feeding two times (Lunch & Dinner) every day to more than 2000 Labourers, Contractors and Truckers in Town and Plant area which served more than 1 Lakh people. The Community Kitchen was led by four Women Self Help Groups in 4 key locations to provide access to hot cooked meals to the labourers and poorer people in the district.

SN	CENTRE/ LOCATION
1	VIBAH BHAWAN, GODHI, GODDA
2	VIBAH BHAWAN, SHIVPUR, GODDA
3	HOSPITAL ROAD CENTER, GODDA
4	GODDA COLLEGE, GODDA

7. **Support of Essential Commodities for 700 Households:** In this adversities, team Adani Foundation and District Administration came along to reduce the plight and sufferings of most vulnerable groups of society such as women, BPL families, poor children of more than 700 migrant workers, truckers and labourers of our Plant area including 335 households of five tribal villages benefitting 1340 family members by Supporting through distribution of rations and essential grocery items such as Rice, Pulse, Oil, Vegetables, Salt etc. for their subsistence.

Material Support of Commodities to Tribal Villages			
SN	Village	Household	Beneficiary
1	Nayabad	55	220
2	Gangta	60	240
3	Karikado	20	80
4	Petbi Santhali	55	220
5	Gumma Santhali	145	580
Total		335	1340

- 8. Installation of 25 Hands-Free Sanitisation Machine/Units (G-HanSa) at Public Places and Plant Premises in Godda:** On 6th April 2020, Adani Foundation team had initiated with knowledge and skills of 108 ASDC trainees proficient in Welder and Fitter trade in setup of an innovative Hands-Free Sanitisation Units which enables the commoners to access disinfectants via this simple and innovative tool. Total 25 Hands-Free Sanitisation Machine was produced and installed at various public places and plant premises for the citizens to prevent themselves from COVID-19 virus. They were also made aware and disseminated knowledge on pandemic, its precautionary measures and safeguarded the citizens.

PRODUCTION & INSTALLATION OF G-HANSA				
SN	LOCATION	UNIT	DATE	REMARKS
1	Collectorate Office	1	8.04.20	Produced at ASDC
2	DC Resident	1	12.04.20	
3	DDC Resident	2	NA	
4	Vikash Bhawan	1	12.04.20	
5	SDO Resident	1	12.04.20	
6	DTO Office	1	20.04.20	
7	CS Office	1	25.04.20	
8	Sadar Hospital	1	24.04.20	
9	Adani Office, Godda	1	May'20	
10	Adani Office, Mahagama	1	May'20	
11	Adani Office, Sahebganj	1	June'20	

12	DC Office, Sahebganj	1	June'20	Produced by APJL
13	S.P office Sahebganj	1	June'20	
14	Adani Office in various location	11	May-June'20	
TOTAL		25 G-HANSA		

9. E-Sewa App has been installed in coordination with District Administration, Godda which provides home delivery services for essential grocery items and commodities benefitting over 1000 consumers at door steps.

10. Medical Support and health checkup services are carried out by Ambulance and Medical team of Adani Foundation, Godda providing immediate ambulance services in affected region of Godda district.

11. Relieving the Migrants: Under the aegis of District Administration, Adani Foundation and Municipal Corporation worked together with Red Cross Society in Godda district to provide relief support to the citizens.

i. **Crowd Management:** Management of more than 2000 migrant workers coming from various parts of country was led by volunteers of Adani Foundation & District Administration in various Quarantine centres running in Godda district including Godda Krishi College, and Godda college.

ii. **Distribution of Food Packets:** The volunteers of Adani Foundation had come forward and deputed themselves in managing the migrant labourers who had arrived on 3rd May from various states of country hailing from Godda and served them with free of cost food packets as refreshments and honoured with respect by the team. Also, Counselling session was held in order to rejuvenate them in this outbreak.

iii. **AF Supported with Essential Food Grains for Quarantined Migrant Laborers** with support of District Administration through essential food grains in Quarantine centres of 5 blocks of Godda district namely Godda, Poreyahat, Pathargama, Basantrai & Sunderpahari to support migrant workers for their subsistence. It catered to over 4000 migrant workers coming from various states of country with essential food grains and commodities for 15 days.

- iv. **AF supported with Water Bottles for Drinking Use:** Adani Power (Jharkhand) Limited & AF team provided support by supplying drinking water bottles for the migrants residing in Quarantine centre at Godda college. 600 water bottles have been provided to cope up with outbreak for Corona warriors in Godda college.

Suposhan Program

6. Support Program for Sustained Health and Nutrition (SuPoshan):

SuPoshan programme, a flagship programme of Adani Foundation, was launched in Godda in January '17 with an objective to reduce the occurrence of malnutrition & anemia amongst children, adolescent girl, pregnant & lactating women within three years of implementation period, Suposhan project has reached out to over 8000 direct beneficiaries. Malnutrition among children of 0 to 5 years has reduced by over 90% i.e. 271 children out of 299 became healthy while Anemia has reduced by more than 46 % i.e. over 813 out of 1758 adolescent girls of 10 to 19 years and women in reproductive age group have become healthy as per Universal HB screening and rest falls under Moderately Anemic Range.

The program has been able to achieve set goals by administering program inputs with target groups such as regular focused group discussions, awareness events, family counseling on topics to bring about change in behavior pattern within the community and raise awareness on various related issues like feeding practices for newborn, introduction of complementary feeding, pregnancy care, health and hygiene, facts and myths related to menstruation cycle, diet and care during sickness, effective methods and habits of cooking, etc. Activities like Hb screening, promoting IFA tablet to anemic girls and women, check-up by pediatrician and MHCU doctor, immunization in VHND, vegetable seeds support too contributed to bring about improvement in health status of malnourished children, girls and women.

Achievement in Malnutrition Identification and Reduction

SN	Village Name	Total No. of SAM identified	Improvement in SAM to MAM	Total No. of MAM identified	Improvement in SAM to MAM to Healthy	Current No. of MAM children	Current No. of SAM children
1	Motia	14	14	61	65	10	0
2	Patwa	2	2	6	8	0	0
3	Ranitikar	1	1	7	8	0	0
4	Nayabad	1	0	2	3	0	0
5	Gangta	0	0	0	0	1	0
6	Basantpur	30	29	46	68	7	1

7	Badi Buxara	7	7	19	25	1	0
8	Choti Buxara	5	5	11	13	3	0
9	Rangania	0	0	0	0	0	0
10	Baliakitta	10	10	7	16	1	0
11	Petbi	15	15	19	33	1	0
12	Sondiha	15	15	21	32	4	0
Total		100	98	199	271	28	1

Achievement in Anaemia Identification and Reduction

SN	Village Name	Total Adolescent Girls	Total Anaemic Adolescent Girls	Improvement in Adolescent Girls from Anaemia to No Anaemia	Total WRA	Total Anaemic WRA	Improvement in WRA from Anaemia to No Anaemia
1	Motia	159	99	60	131	55	76
2	Patwa	23	10	13	72	37	35
3	Ranitikar	0	0	0	0	0	0
4	Nayabad	5	2	3	31	20	11
5	Gangta	28	16	12	54	34	20
6	Basantpur	79	44	35	252	122	130
7	Badi Buxara	63	36	27	189	118	71
8	Choti Buxara	47	30	17	137	88	49
9	Rangania	16	9	7	17	8	9
10	Baliakitta	34	16	18	149	79	70
11	Petbi	36	15	21	118	52	66
12	Sondiha	75	39	36	43	16	27
Total		565	316	249	1193	629	564

*WRA: Women in Reproductive Age group (19-45 years)

**Anaemic in Moderate Range

❖ Expansion of Suposhan Program

SuPoshan Program is currently operational in TPP core area in 14 villages including two new villages namely Dumaria and Rampur Dumaria covering 16 Anganwadi centers at Godda site. This year, the Suposhan program was scaled up to 12 new intervention villages including Kanhadih (Ramnagar), Kauribaihar

Ghat, Kauribaihar Mal, and Gumma village of Railway line area and 8 new villages of pipeline area namely Goradih, Jirli, Dhamni Simariya, Dhankunda, Dakaita, Telgama, Chitrakothi, and Ranidih village covering 13 AWCs to combat malnutrition and enhance nutritional level of target groups and community in the region.

More than 3000 HHs has been reached in new villages of railway line area, and pipeline area. The newly recruited Sanginis were trained on basic knowledge of Suposhan, implementation methods in villages with collaborative efforts working with ICDS and Community Health Workers. Suposhan program was started with conduction of baseline survey of households including target groups namely children (0-5), adolescent girls and Women in Reproductive Age Groups (WRA). In line with Baseline survey and Universal HB screening of core villages, the survey was carried out in railway and pipeline areas.

Details of Total Household and Target groups of Suposhan					
Railway Line villages					
SN	Village	Total Household	Children (0-5)	Adolescent Girls	Women in Reproductive Age
1	Kanhadih (Ramnagar)	234	87	106	236
2	Kauribaihar Ghat	225	124	83	217
3	Gumma	462	163	155	421
4	Kauribaihar Mal	302	150	180	298
	Total	1223	524	524	1172
New Core Villages					
5	Dumaria	422	152	146	348
	Total	1645	676	670	1520
Pipeline Area					
1	Goradih	319	76	176	293
2	Jirli	117	60	45	115
3	Dhamni Simariya	187	78	99	186
4	Dhankunda	145	39	49	147
5	Dakaita	205	72	92	229
6	Telgama	97	19	40	102
7	Chitrakothi	110	43	53	121
8	Ranidih	155	64	67	219
	Total	1335	451	621	1412
Total Families (RAIL+NEW-CORE+PIPE)		2980	1127	1291	2932

•No Community Engagement/ Measurement work were carried out in both Godda & Jitpur Site due to Epidemic Outbreak

❖ **AF Supported with Vegetable Seeds** to target families to meet the nutritional requirement of women and children as well as the entire family through inclusion of green nutritious vegetables in their daily diet. Nine varieties of green and leafy vegetables consisting of micro and macro rich nutrients viz. iron, minerals and

vitamins such as spinach, amaranthus, radish, French bean, ladies finger, ridge gourd, sponge gourd, papaya, and bottle gourd was distributed on July'20. The objective of distributing vegetable seeds to 82 households of core and railway line villages was to promote establishment of nutrition garden in the homestead land or the backyard area to have access to vegetables for whole year with nutritional security for the needful poorer children, adolescents and women.

SN	PANCHAYAT	VILLAGE	HOUSEHOLD
1	Baksara	Petwi	4
2	Motia	Patwa	14
3	Motia	Motia	20
4	Baksara	Balia Kita	7
5	Baksara	Badi Baksara	7
6	Sondiha	Sondiha	5
7	Baksara	Basantpur	3
8	Baksara	Chhoti Baksara	1
9	Paardih	Kauribahiyar	19
10	Baksara	Rangania	1
11	Baksara	Baksara	1
	TOTAL		82

❖ **Chief Minister's Didi Kitchen: Serving meals in the community was carried out by Sanginis to support Frontline Workers and Community at large in this testing time**

Sanginis actively volunteered in Chief Minister's Didi Kitchen, scheme of Jharkhand state government in two months', April'20-May'20 in which they served home cooked food to poorer and needy children and community members in their location of core and pipeline areas. The zeal to devote for community did not stop the Sanginis to encounter COVID 19 by assisting the Frontline workers viz. Self Help Groups (SHGs) and Anganwadi workers in this initiative.

Awareness Programmes

❖ **Telephonic Follow up & Counselling:** Due to epidemic, telephonic mode has been started to counsel the target groups including Children, Adolescent Girls, Pregnant Women on topic such as Anaemia, Nutrition & Hand wash; Immunisation, Importance of MCP Card, etc.

❖ **Follow-up of Sanginis:** - Sanginis were taught through telephonic communication for creating awareness on management of COVID 19 situation and family counseling of target groups. Also, counselled on dietary requirements for the adolescent's health and improve the anaemic ratio during using the home base

available product like Sprouted seeds, Moringo leaf, using Pulses and other iron reached vegetables.

❖ **Importance of Hand wash and Social Distancing:** - Sanginis took a lead to guide their community on various measures to fight and tackle with Covid 19, manage social distancing, local measures to boost immunity system, and made aware about hand wash practice through demonstration.

❖ **E- Learning Course:** - Due to lock down effect of Covid pandemic Suposhan team along with Sangini did E-Learning Courses for time utilization and knowledge purpose.

7. Awareness Events: The community level events were postponed due to COVID 19 suspected cases in the region. Social distancing was maintained along with no social gathering comprising of maximum 4-5 participants during the event. Various awareness events like celebration of world breastfeeding week, national nutrition month, world environment day etc. were conducted spreading the message in the community. Various competitions were organized under SuPoshan which play an effective role in spreading the message for care of pregnant lady, signs of malnutrition, right food and care for malnourished child and importance of hygiene/ sanitation and timely vaccination for good health of child and family to masses as it easily draws attention of public and conveys messages through Banner on MHCU, Slogan writing, Pamphlet, etc. in local language. Activities to stimulate thinking among participants were also conducted on topics such as significance of nutrition and its constituents in regular diet, vitality and method of hand washing, pregnancy care, proper latching and breastfeeding, nutritional requirement and its impact on newborn health, etc.

SN	Event Name	Mode	Date/Duration	Villages Covered	Audience Size
1	World Environment Day	Community level	5 th June 2020	2	10
2	World Breastfeeding Week	Telephonic and Village level	1 st Aug'20-7 th August'20	5	20
3	National Nutrition Month (along with plantation)	Telephonic and Village level	1 st -30 th September 2020	25	285
Total				25	315

**Conducted with precautions and safety face masks and sanitizer*

Type of activities carried out during Poshan Maah										
Name of Site	Rangoli making	Slogan Writing	Drawing/Quiz competition	Tele Counselling			Moringa Plantation	Follow-up of SAM	Cooking Demo	Any training attended
				Children (0-5)	Adolescent	Women				
Godda	9	1	10	30	21	25	150	32	13	16
Jitpur	4	1	2	25	23	25	135	23	3	0
	13	2	12	55	44	50	285	55	16	16

Capacity Building Programmes

Need based capacity building Programmes were organized by Suposhan team members to develop skills of Sanginis by educating them about ways to combat malnutrition.

- **Skill Enhancement of Suposhan Functionaries:** One day on campus training was organized on the topic "Nutritional Security" at Kriffco supported Gramin Vikas Trust (GVT) led Krishi Vigyan Kendra (KVK), Godda on 07.09.2020 for extension Suposhan functionaries for their skill enhancement.

Medical Services

- 8. Health Awareness:** with collaborative efforts of Adani Foundation & Helpage India in Peripheral & Railway Line village area to provide support for better community health. Health Awareness Program are organised in area to aware rural people about harmful diseases, maintenance of cleanliness, direction for balance diet which help them to fight from diseases and the COVID 19 virus affecting the populations at large scale followed by all safety norms. School children and community persons have become more vocal with active approach towards curbing diseases and sharing of such valuable information among community.
- 9. Critical Health cases:** Diagnosis of critical cases of laborers working in TPP (site office) is done by CSR Medical Team regularly in an emergency manner.
- 10. Ambulance Facility to Poor Patients:** Families from 13 core villages have been benefitted from this initiative of Adani whose families remain loyal and grateful to company for the support provided by us in times of distress. Ambulance service is given to poor people belonging to TPP area in times of medical emergency or for transfer of critical patients to higher centre and also for COVID health check-up and treatment like Bhagalpur, Deoghar, Ranchi, and Patna & Other nearby hospitals.

Seasonal Assistance

- 11. Material Support to District Administration, Sahebganj:** Under Welfare Program, Adani Foundation supported the Government premises in DC Office, Sahebganj with setup of three seated Fabricated Steel Chair.
- 12. Relief Materials to Affected Families from Natural Hazards (Tarpaulin Distribution):** Under Welfare Support Relief Materials are distributed to support families affected from natural hazards or manmade calamities for the safety of their health and lives. Five poorer households of Motia village were assisted with tarpaulin to live in the shelter with safety during rainy season and protect themselves from uncertain circumstances.
- 13. Poor Assistance Programme-Medicated Mosquito Net:** Adani Foundation believes in assisting the community who are marginalized and deprived from basic facilities for survival. The health of the villagers is made secure and protected from several diseases which leads to fatalities and death cases in the villages. Assistance of Mosquito Net to the poorer households will help them from getting affected from any vector-borne epidemic and common occurring water borne diseases such as Dengue, Malaria, etc. Sanginis of Jitpur mines villages took lead in mobilizing the community about importance of using mosquito net, especially for mothers and children and supported with Medicated Mosquito Net to 315 tribal households in seven Jitpur Coal Mines block villages namely Jitpur (70 families), Dahubera (40), Agora (40), Dumarpalam (45), Paharpur (60), Kairojori (50) and Sunderpahari (10).
- 14. Material Support to Community:** The distribution of these materials has helped us to build positive image of Adani amongst people of Godda as well as strengthen our ties with key stakeholders. During the year, Adani Foundation distributed various materials and reach out to more than 2000 beneficiaries directly and indirectly.

Seasonal Assistance to Community							
S N	Project Area	Distribution duration	No of Villages/ locations	Name of block	No. of block	No of HHs/families	No. of Beneficiaries
Material Support to Community: Tarpaulin (Rain Affected Families)							
1	Core Area	25.09.2020	1	Godda	1	5	20
Total (a)			1		1	5	20
Material Support to Mosquito Net Distribution							
1	Jitpur coal mines	September' 20	7	Jitpur coal block	1	315	1265
Total (b)			7		1	315	1265
Total (a+b)			8		2	320	1285

Welfare Support

- 15. Assistance in Health, Marriage and Death:** Adani provides financial support to poor people for such events which require huge expense such as marriage ceremony, educational needs, major illness including hospitalization of patient, death of a person. 68 beneficiaries from 13 villages have been extended financial support to the tune of **Rs. 7, 37, 334/-**

SN	Support Cause	No. of beneficiaries	Supported Amount
1	Health Support	26	191848
2	COVID/Others Support	11	197686
3	Marriage Support	1	3000
4	Death Support	11	39000
5	Education Support: Community Resource Centre, Financial Support To Orphanage	14	293000
6	Social Occasion Support	5	12800
	Total	68	737334

- 16. COVID Support:** Donation of Rs. 1 Crore in **CM Relief Fund** of Jharkhand state by APJL, Godda.

SUSTAINABLE LIVELIHOODS

- 1. Adani Skill Development Centre:** Adani Skill Development Centre- ASDC, Godda was inaugurated by Executive Director AF- Education and Skills on 27th September 2018. Total Eight trades viz. Welder, Fitter, Mason and Bar bender, General Duty assistant, Hospitality, Electrical, industrial Sewing Machine Operator, and Digital Literacy classes is operational in which over 1917 candidates were trained till Financial Year 2019-20.

Trainees Enrolled and Benefitted in Various Trades at ASDC				
Sr. No	Trade	Year 18-19		Total
		No. of trainees benefitted in 1 st Batch	No. of trainees benefitted in 2 nd Batch	
1	Fitter (2 year)	29	91	120
2	Welder	30	35	65
3	Ass. Electrician (2 year)	30	50	80
4	Hospitality	30	65	95
5	Digital Literacy	257	985	1242
6	G.D.A.	30	175	205
7	Bar Bending	30	80	110
Total		436	1481	1917

- Free Training Model:** Due to outbreak, Online classes on Business Trades at ASDC has been initiated to continue imparting trainings for the interested and willing candidates in a particular domain of interest. Free training model was initiated to impart online classes for the candidates who are economically incapable to afford to pay training fees as per new provision amidst Epidemic. The online classes enable the students to learn in the remotest areas to access the classes at home with safety and protection from COVID virus. Total 16 candidates were enrolled since April'20, out of which, 14 in Digital Literacy, 1 in GST with Tally and 1 in Financial Literacy trade had attended the classes and learnt under the Free Online Training Session.
- Enrollment in new batch:** New Training Batch was started on August'20 of Fitter, Bar-Bender, Asst. Elec., Welder, GDA, SMO, F&B, trade. Total 174 candidates are enrolled in new batch in 7 business trades till September'20.

ADMISSIONS APRIL '20 TILL SEPTEMBER '20						
SR NO	TRADE	TOTAL UP TO JULY' 20		NEW BATCH ONGOING (AUGUST'20)		
		Enrolled	Trained	Female	Male	Total
1	Digital Literacy	14	9	0	3	3
2	GST with Tally	1	1	0	1	1
3	Financial Literacy	1	1	0	1	1

4	Bar-Bender	0	0	0	25	25
5	Fitter	0	0	0	27	27
6	GDA	0	0	25	0	25
7	SMO	0	0	30	0	30
8	Welder	0	0	0	15	15
9	Food & Beverage	0	0	0	22	22
10	Asst. Electrician	0	0	0	25	25
TOTAL		16	11	55	119	174

- **Saksham Certificate Distribution at ASDC:** Saksham trainees were awarded merit certificate after completion of trainings and their assessment of performance are per set standards in hospitality, welder and Digital Literacy trade.

Distribution date	Business Trade					Total
	Fitter	Bar-Bending	Digital Literacy	Welder	Food & Beverage	
July 2020	14	0	0	0	0	14
August 2020	20	0	25	15	0	60
September 2020	20	0	0	11	12	43
Total	54	0	25	26	12	117

- **Conduction of Guest Lecture:** Guest Lecture was given by Experienced Professionals in specialized trade for the candidates via Online Mode. Training was given on topics Soft skill (Fitter Mechanical Assembly), Hand washing (GDA), Steel and its types (Bar-bending).

Date	Trade	Guest Name	Title of the session	Participant
29 th Sep'20	Fitter Mechanical Assembly	Vicky Sourav, Fitter Instructor (Satyendra I.T.I, Pathargama (Godda)	Soft skill	15
29 th Sep'20	General Duty Assistant (GDA)	Sweety Teresa, Community Health Officer, CHC Dumka	Hand washing	22
29 th Sep'20	Bar-bending	Srimanta Manna, Civil Engineer (Adani Power Ltd.) Jharkhand	Steel and its types	14
Total				51

- **On Job Training & Placement of Saksham Trainees at ASDC**

During last year 2019-20, 34 trainees of 4 business trades imparted trainings in ASDC namely General Duty Assistant (GDA) (4), Bar Bending (19), Hospitality (9) and 2 in Welder trade were selected and placed at reputed organizations with decent annual package enabling to achieve higher dreams and secure bright career and better standard of living.

This year also the candidates got the offer and placed at different organization of their domain field. However due to Epidemic the opportunity ratio for the trained candidates got decreased and put on hold their dreams for the time being. 4 candidates of Hospitality, Fitter and Bar bending trade joined the organization with decent package. The candidates are thankful to ASDC and have expressed gratitude to Adani for such an opportunity

Placement of Trainees at ASDC (April'20-September'20)							
SN	Duration	No. of Trainees placed	Trade	Company	Salary per Month	CTC (In lakhs)	Location
1	July'20	1	Hospitality	Kavinten Pvt. Ltd.	7000	0.84+Accommodation	NA
2	September' 20	2	Fitter	JBM	14,993	1.79	Gujarat
3	September' 20	1	Bar-Bending	JBM	14,993	1.79	Gujarat
Total 4 Saksham trainees							

- **Production of Medical (Patient) Bed for COVID Centre by ASDC Trainers:** The Master trainer of Fitter & Welder trade of ASDC Saksham have designed and made Beds which is convenient and comfortable for the COVID positive patients quarantined in COVID Centre.

2. **Saksham Training cum Uniform Production Centers:** Total 17 Saksham training cum uniform production centres is operational including 4 core and 13 outreach centres in Godda district. This year two batches (Batch VI and VII) have completed training and one batch have commenced training (Batch VIII) at Saksham Training Centres. So far, more than 2000 women have been trained in Sewing Machine Operator/Self Employed Tailor vertical who are engaged in producing school uniforms as well as are self-employed in stitching cloths of individual orders assisting them to uplift their socio-economic conditions. **Due to Epidemic, the admission of new candidates got slowed down but has been restarted gradually in Saksham training cum Sewing center, since April 2020.** Uniform stitching work has been resumed in core and outreach centres maintaining social distancing and use of face masks for safety and protection from infection of COVID virus

S.N	Centre	1st Session	2nd Session	3rd Session	4th Session	5th Session	6th Session	7th Session	(June 20-Aug 20)	8 th Session	Total
		(Nov 16-May 17)	(June 17 - Nov 17)	(Dec 17-May 18)	(June 18-Nov 18)	(Dec 18 - May 19)	(June 19 -Nov 19)	(Dec 19-May 20)		Sep'20 -Feb'21	
		Enrolment									
		142	260	248	191	193	483	688	0	158	2363
1	Rangania	26	31	22	35	21	25	21	x	AO- 38	219
2	Dumaria	x	60	39	26	21	15	15	x	AO	176
3	Sondiha	30	34	31	32	30	15	20	x	AO- 30	222
4	Basantpur	x	58	47	50	31	27	30	x	AO	243
5	Motia	53	37	57	34	28	11	20	x	AO	240
6	Ranitikar	21	x	x	x	X	x	x	x	AO	21
7	Patwa	x	40	x	x	X	x	10	x	AO	50
8	Sarba	x	x	17	14	11	x	x	x	AO	42
9	Bahuriya	x	x	35	x	X	x	18	x	AO	53
10	Thakurgangti	x	x	x	x	21	33	NA	x	AO-38	92
11	Nayabad	12	x	x	x	X	x	x	x	AO	12
12	Sundarpahari	x	x	x	x	X	128	19	x	AO	147
13	Ranidih	x	x	x	x	x	14	NA	x	AO- 10	24

14	Pathargama	x	x	x	x	x	37	40	x	AO- 30	107
15	ITI Siktia	x	x	x	x	x	40	339	x	AO	379
16	Gangta Govindpur/Mani yamore	x	x	x	x	x	24	33	x	AO- 12	69
17	ASDC Godda	x	x	x	x	30	30	123	x	AO	183
18	Padra	x	x	x	x	x	23	NA	x	AO	23
19	Bhartikitta	x	x	x	x	x	29	NA	x	AO	29
20	Jitpur	x	x	x	x	x	32	NA	x	AO	32
Total		142	260	248	191	193	483	688	0	158	2363
Total = 2363											

**AO-Admission Ongoing*

**Non-Operational during June 20-Aug 20 due to Lockdown*

- 3. Adani Supported Digital Learning Centres:** 5 Computer/Digital Learning Centers operational in Motia village of core area and newly commenced digital learning centres, on August 2019 in SBSSPSJ College, Pathargama of pipeline area, three in schools of Sunderpahari block on January 2020 namely 1. Kasturba Girls School, Sunderpahari, 2. Kasturba Girls School, Bankaghat and 3. +2 Schools, Rampur at Sunderpahari and one center at Jitpur. While, Digital literacy trainings in Rangania centre was completed in the year 19-20. The program has benefitted the tribal and poorer school going children and college students of the region.

Under this program, total 1346 rural youths and children have developed their knowledge and personality through digital learning. It's a boon for marginalized and poorer children and distressed rural youths who are now capacitating their abilities and igniting themselves with knowledge of digital education.

Currently, non-operational due to Lockdown.

Trainees at Saksham Computer/Digital Learning Centres								
Sl. No	Name of Centers	Year 17-18		Year 18-19		Year 19-20	Year 20-21	Total Trainees Benefitted
		Batch I	Batch II	Batch III	Batch IV	Batch V	Batch VI	
		Trainees	Trainees	Trainees	Trainees	Trainees	Trainees	
1	Rangania	42	22	39	20	25	0	148
2	Motia	60	36	87	0	98	0	281
3	Pathargama	0	0	0	0	375	0	375
4	Sunderpahari	0	0	0	0	512	0	512
5	Jitpur	0	0	0	0	30	0	30
Total		102	58	126	20	1040	0	1346

**Village level Saksham Computer training Centre at Motia*

***Digital Learning Classes in College & Schools at Pathargama block and Sunderpahari block respectively ***Non-operational due to Lockdown (COVID 19)*

- 4. Skill and Entrepreneurship Development-AF Supported with Sewing Materials in the Center:** Adani Foundation has set up a mass production Centre with total 274 Sewing Machines comprising of 107 domestic sewing machines, 154 electric operated machines and rest 13 are Kaj, Button and Interlocked machines in Core and Outreach centers to support these women to fulfill their commitment with District Education Development.

S.N	Sewing Machine Details	Total no. of existing Machines		Kaj	Button	Interlock
		(Domestic)	(Electric)			
1	Motiya	10	0	0	0	0
2	Ranganiya	8	0	0	0	0
3	Sondiha	8	0	0	0	0
4	Ranitikar	3	0	0	0	0
5	Patwa	1	0	0	0	0
6	Basasntpur	10	0	0	0	0
7	Dumariya	8	0	0	0	0
8	Sarba	1	0	0	0	0
9	Bahuriya	4	0	0	0	0
10	Bahadurchak	3	0	0	0	0
11	Gangta	2	0	0	0	0
12	Pathargama	0	24	0	0	1
13	ITI	0	114	3	3	2
14	ASDC	0	15	1	1	1

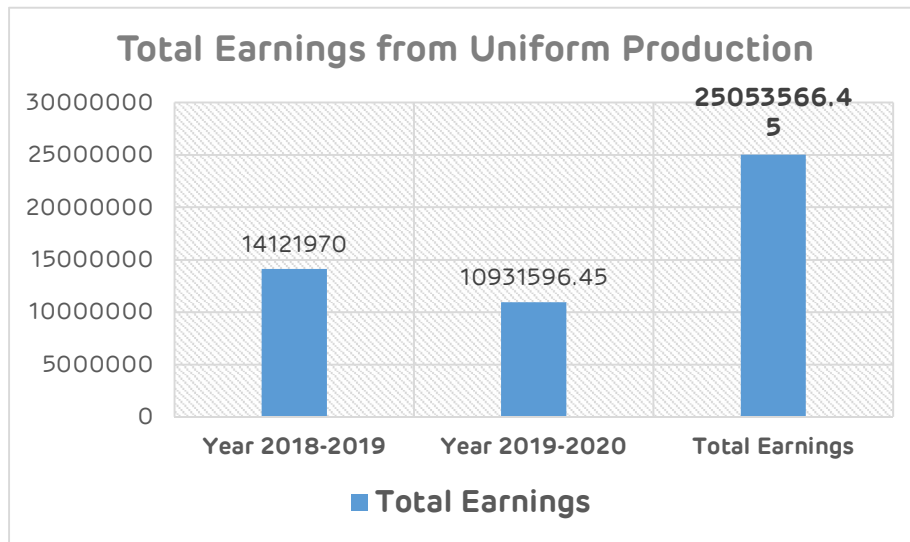
15	Sundarpahari	29	1	0	0	2
16	Govindpur	10	0	0	0	0
17	Ranidih	5	0	0	0	0
18	Thakurgangti	5	0	0	0	0
Total		107	154	4	4	5

5. Govt. Order for Uniform Stitching to Phoolo Jhano Saksham Aajeevika Sakhi Mandal (PJSASM) & Extension for 5 Years: Over 1500 women are engaged at 17 Uniform Production cum Training Centres led by Phoolo Jhano Saksham Aajeevika Sakhi Mandal (PJSASM). The project has been extended by District Administration by signing MOU with Adani Foundation for delivering school uniforms for next **five years**. It has become an ultimate ladder for making over 2000 trained women socially and economically independent which brought a ray of hope in their lives.

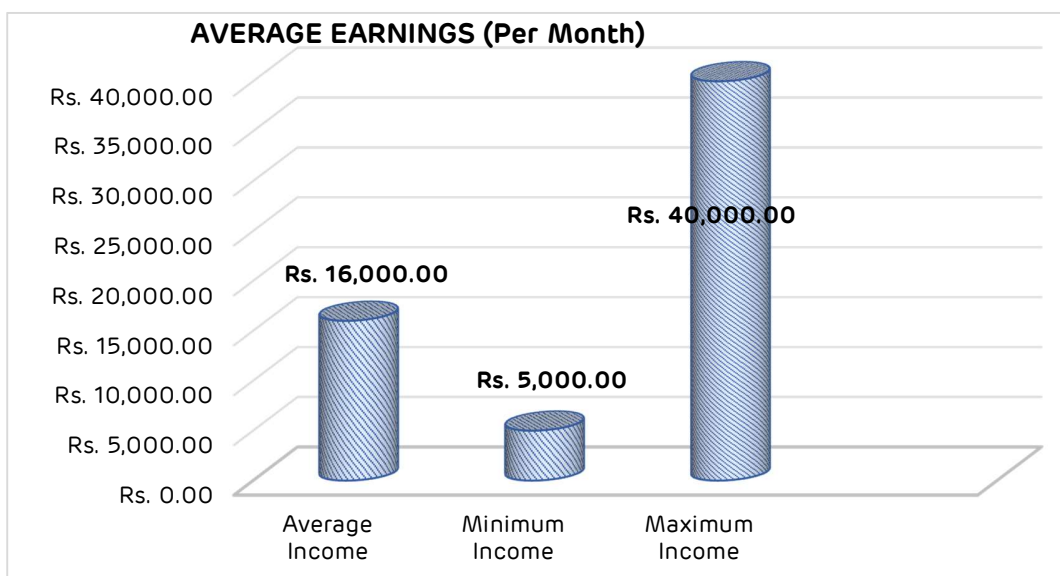
- **Accomplishment of First Work Order for Session 2018-19:** District Administration has entrusted our Saksham Sewing trainees with the responsibility of stitching and delivering two pairs of uniform for **151,000 govt. school students** from standards I to VIII for Academic Session 2019-20 on 12th January 2019. The first work order of uniform production & distribution for Academic session 2018-19 was accomplished successfully, with toil and dedication of women groups of PJSASM during last year FY 19-20. Total **3, 05, 578** two pairs of School Uniforms were delivered to **152,789** students in **1205** Primary and Middle Schools of Class 1st to 8th standard across 9 blocks of Godda district namely Godda, Podaiyahat, Sunderpahari, Pathargama, Basantrai, Mahagama, Boarijor, Thakurgangti, and Mehrama block on cluster basis in respective BRCs and CRCs in the district with support of school teachers and principals.
- **Few Miles Away towards Second Work Order for Session 2019-20:** The second work order of Uniform production and distribution for Academic Session 2019-20 is reaching towards its set goals and sooner; it will also be accomplished in fulfilling the dedicated commitment with all ownership and responsibilities. More number of women will be linked to the centres to enhance their socio-economic conditions through uniform production work. The intervention is leading to continue timely delivery of quality school uniforms for poorer and undermined children. So far, two pairs of **1,78,100** School Uniforms has been handed over to SMCs for more than **89050 students** of government schools of Class 1st to Class 7th standard of Academic Session 2019-20.

6. Total Earnings from Uniform Production: These 1500 skilled women have collectively **earned over Rs 1, 41, 21, 970** and **Rs. 1, 09, 31, 596.45** in the year 2018-2019 and 2019-20 respectively through this initiative of Adani Foundation by

stitching over total **3, 05, 578** two pairs of School Uniforms in the FY 2019-20. Total **3, 05, 578** two pairs of School Uniforms were distributed to **152,789** students in **1205** Primary and Middle School of 9 blocks of Godda district in the year 2019-20. So far, sum of **Rs. 2,50,53,566.45 (2.50 crore)** has been paid to the skilled women since initiation of uniform production work.



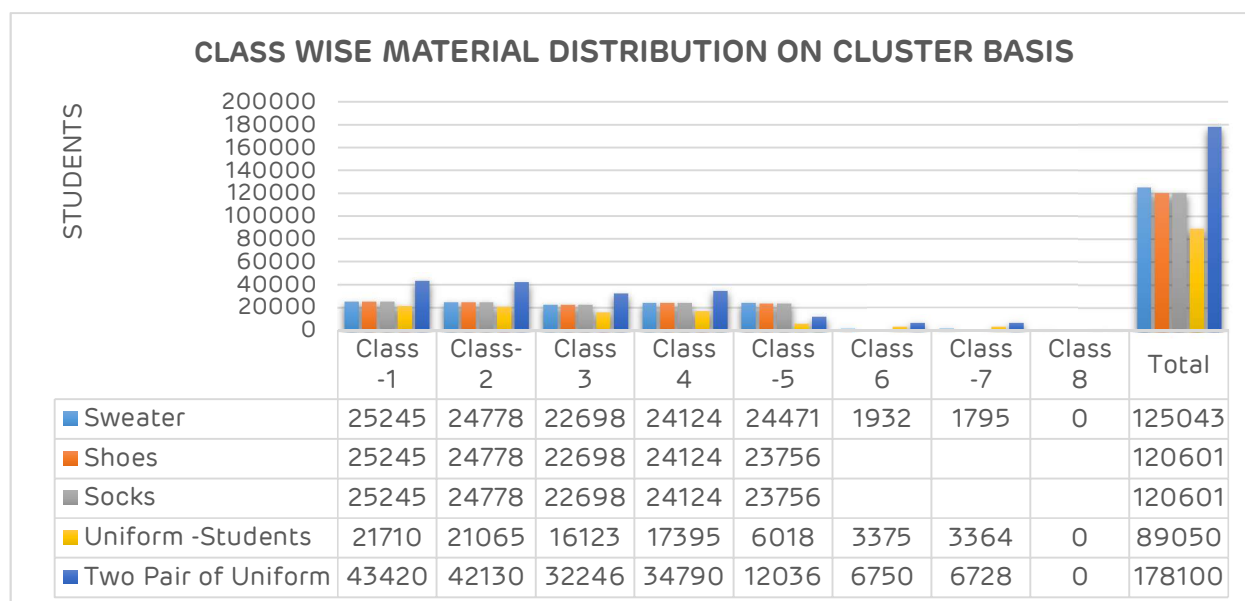
7. Livelihood opportunity for Women Group from Uniform Stitching Work: So far, the Women Groups, have collectively earned over Rs. 2.50 Crores respectively from uniform stitching work in the year 2018-19 and 2019-20 respectively. The women are sustaining their livelihood independently from uniform stitching work with an average monthly income of Rs. 12000-16000. It is also linking more number of women in the centers making them self-reliant, independent and economically empowered.



8. Women Empowerment from Uniform Stitching & Management of School

Materials Distribution: The Phoolo Jhano Women (PJSASM) have went beyond their limitations and have explored their capabilities apart from Uniform stitching work. They have volunteered themselves in the management of timely delivery of two pairs of Uniforms, Sweaters and necessary school materials (shoes and socks) for students by supporting the School Management Committees (SMCs) and handing over to School Teachers and Principals of respective schools on cluster basis.

The Uniform production work has provided the women associated to Phoolo Jhano Saksham Aajeevika Sakhi Mandal (PJSASM), a platform to uplift their socio-economic conditions and they are empowering themselves through increased decision making capabilities, financial literacy and livelihood security, enabling **Women Empowerment** with dignity and pride earned from their hard work and allegiance, in the community. The Phoolo Jhano Saksham Aajeevika Sakhi Mandal, is creating sustainable livelihood for the women from 'Art of Needle, Thread and Fabric'(uniform stitching) has widened the scope of livelihood for all the women in needs and vulnerabilities. They have summoned strength to fill the *banks of dreams, ocean of hopes* with strengthened democratic power and sovereignty in the family and society.



**Class wise total students including boys and girls were distributed two pair of school uniforms*

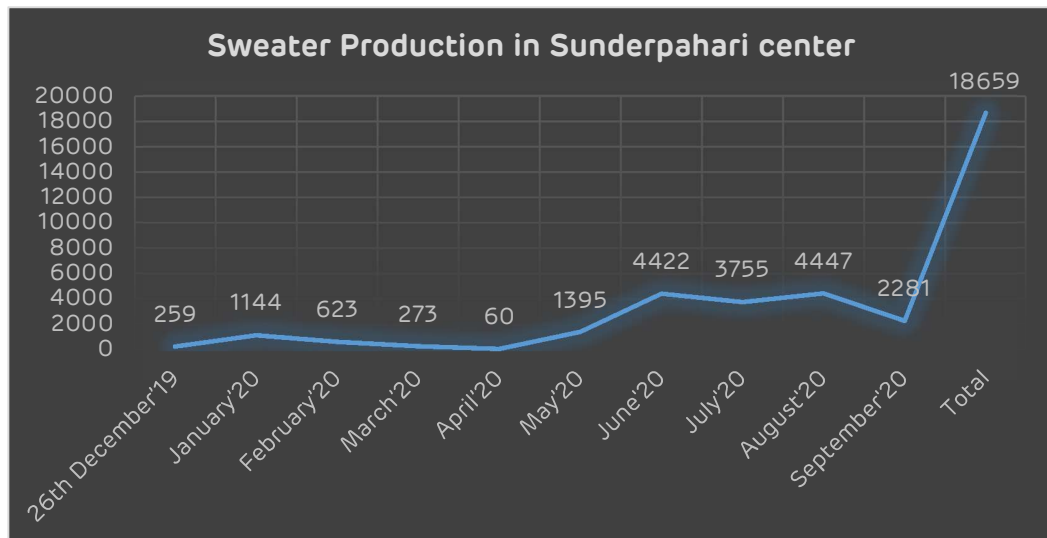
In Financial Half Year 2020-21, Adani Foundation supported School Management Committees (SMCs) with delivery of two pairs of uniforms, set of Sweater, Shoes and Socks for the students of Class 1st to 8th standard. Total **125043** Sweaters, **120601** Shoes and Socks, and two pairs of **178100** School Uniforms Class was handed over to SMCs

for more than **1 lakh students** of government schools of Class 1st to Class 8th standard of Academic Session 2019-20.

Block Wise Material Distribution (Academic Session 2019-20 Standard 1st to 8th)					
Block	Sweater	Shoes	Socks	School Uniform	
				Student	Two pair of Uniform
Sundarpahari	7243	6394	6394	7243	14486
Boarijore	13696	13696	13696	11333	22666
Godda	24330	23628	23628	19205	38410
Mahagama	18409	18409	18409	0	0
Mehrama	14266	14266	14266	17406	34812
Thakurgangti	13077	13064	13064	10482	20964
Poreyahat	15277	15277	15277	6244	12488
Basantrai	10501	7623	7623	6143	12286
Pathargama	8244	8244	8244	10994	21988
Total	125043	120601	120601	89050	178100

9. Sweater Weaving Project: District administration has entrusted faith on SHG with another assignment of Sweater weaving project to weave and produce sweaters from their skills of operating sweater machines and its stitching for making finished sweaters for 1.50 lakhs school students residing in remote and untapped villages of district. **Rs. 50 lakhs** were sanctioned for sweater making project from Canara bank to SHG led PJSASM group. This work is facilitated jointly by Adani Foundation, and valuable guidance and frequent monitoring by District Administration. It is functional in Sunderpahari Centre which is sustaining the livelihood of more than 100 tribal & rural women residing in remote areas. More number of tribal and indigenous women from native origin are mobilized and employment needs is generated among the deprived women of the region to improve their socio-economic conditions and Women Empowerment from Sustainable livelihood options of Uniform and Sweater Production work in the center. The women are earning regularly monthly average income of Rs. 5000-10000 through this program helping them to change their household conditions for their family members and achieving their dreams.

- Sweater Production in Sunderpahari center:** The Sweater Production Work was initiated by teams of Center Coordinator, Master trainer and the very important, women members in the month of December on 26th December 2019. The work is operated by 33 electric run sweater machines for production of palla and its stitching is work done by women members on rotational basis from available 29 sewing machines. The women have been trained on operating with sweater machines on technical know-how of using machine, and its maintenance.



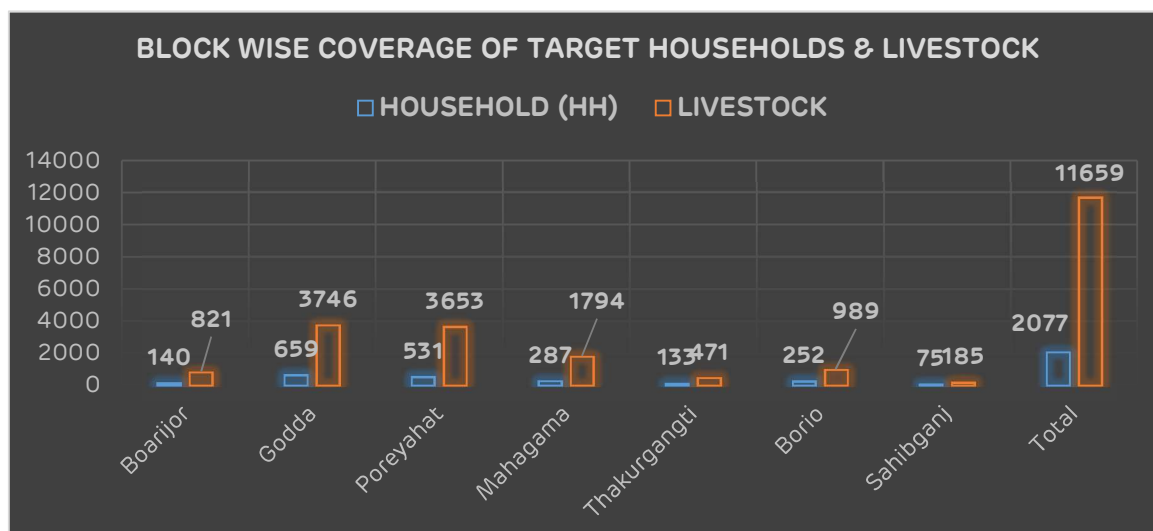
- The women are performing family responsibilities and workplace duties with perfection, managing dual work of Uniform and Sweater Production in Sunderpahari center. They are no longer limited to working in confined four walls in the villages. Due to Lockdown and irregular electric supply in the area, the production work got slowed down. So far, total 18,659 sweaters have been produced since inception of its production on 26th December 2019 up to September 2020.

10. Livelihood opportunity from Mask Production and shield for Protection of Life from COVID 19 in Saksham Training cum Sewing Center: Women group of PJSASM were engaged during this juncture in production of face masks and other personal Protective Equipment's (PPEs) to provide instant medical and relief support for citizens and community of the district. In this testing period, all District officials, Ward members, Medical Teams and Adani Foundation worked collaboratively to cope up with an unprecedented circumstances caused by Corona Virus. The production work was carried out in the sewing centers namely ITI Siktia, Pathargama, ASDC, Sunderpahari, Motia and other Saksham training centres adhering to safety protocols. Around 1.52 lakhs face masks, 200 Apron, 30 Corpses Bags and Doctors Gowns was made to fight battle with epidemic COVID-19 and Handed over to District Administration.

CENTRE WISE MASK PRODUCTION		
SN	CENTRE	TOTAL PRODUCTION
CORE CENTRE		
1	ITI SIKTIA	85212
2	ASDC	22423
3	PATHARGAMA	26761
4	SUNDERPAHARI	8100
OUTREACH CENTRE		
5	MOTIA	4514
6	DUMARIA	5223
TOTAL		1,52,233

11. Veterinary Health Camp in Godda & Sahebganj

- Specialized Medical Camp for Livestocks** was organized in association with Animal Husbandry Department, Godda from 23rd May 2020 to 19th June 2020 in first phase with mutual guidance and needful support of Dr. Swapan Rajjak-District Animal Husbandry Officer (DHO) in the intervention villages including core, periphery, railway line and pipeline areas of Thermal Power Plant. In 2nd Phase, the camp was conducted from 24th September 2020 to 29th September 2020, in Sahebganj in facilitation with Dr. Abhimanyu Singh, Dr. Piyush Singh and Dr. Shivnarayan Kisku-District Animal Husbandry Officer (DHO), Sahebganj. With an objective to treat and cure the diseases occurring in the cattle's and livestock's to prevent them from fatalities and strengthen the financial status of poor and needful households during the outbreak.
- Coverage: Total 34 Veterinary Health Camps** including 26 Veterinary Health Camps in Godda district and 8 Camps in Sahebganj district at village level was conducted in which 25 villages were covered of five blocks namely Godda, Poreyhat, Thakurgangti, Boarijor, and Mahagama and 8 villages were covered in 2 blocks of Sahebganj namely Borio & Sahebganj benefitting over **2,077** households directly by providing door to door services to the farmers. Total **11,659** cattle and Livestock were screened during the camp.

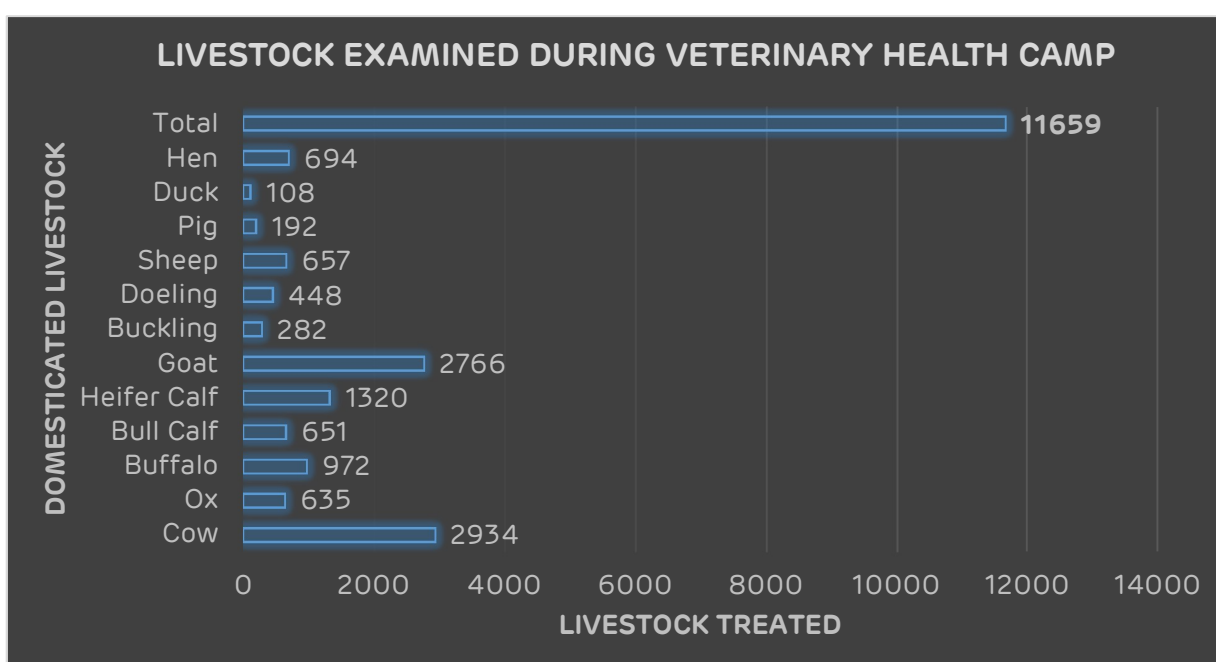


**Block Wise Details of Household and Livestock covered during the Camp*

DAY WISE VETERINARY HEALTH CAMP (1 st Phase)					
SN	DATE	BLOCK	VILLAGE	HOUSEHOLD (HH)	LIVESTOCK
1	23.05.2020	Thakurgangti	Samda	43	216
2	23.05.2020	Godda	Dumariya	113	752
3	24.05.2020	Thakurgangti	Bahdur Chak	41	161
4	24.05.2020	Godda	Motia	104	377
5	25.05.2020	Godda	Motia	174	832
6	26.05.2020	Poreyahat	Sondiha	105	681
7	26.05.2020	Godda	Patwa	76	510
8	26.05.2020	Thakurgangti	Niyamatchak	49	94
9	27.05.2020	Boarijor	Goradih	74	424
10	27.05.2020	Poreyahat	Baliakitta	72	675
11	27.05.2020	Poreyahat	Petwi	82	558
12	28.05.2020	Poreyahat	Basantpur	94	452
13	28.05.2020	Poreyahat	Baksara	102	551
14	29.05.2020	Godda	Gangta	43	436
15	29.05.2020	Godda	Nayabad	33	352
16	29.05.2020	Boarijor	Dhankunda	28	169
17	30.05.2020	Boarijor	Jirli	38	228
18	30.05.2020	Godda	Kauribahiyar	116	487
19	30.05.2020	Poreyahat	Belbarna	37	324
20	30.05.2020	Poreyahat	Gumma	39	412
21	09.06.2020	Mahagama	Amdiha	26	171
22	09.06.2020	Mahagama	Kaithiya	20	134
23	10.06.2020	Mahagama	Gudiya	48	289
24	10.06.2020	Mahagama	Jiyajori	101	639
25	19.06.2020	Mahagama	Karnu	62	362
26	19.06.2020	Mahagama	Maniyamore	30	199
Total				1750	10485
DAY WISE VETERINARY HEALTH CAMP (2 nd Phase)					
SN	DATE	BLOCK	VILLAGE	HOUSEHOLD (HH)	LIVESTOCK

1	24.9.2020	BORIO	CHANAN	83	205
2	25.9.2020	SAHIBGANJ	DIHARI	75	185
3	26.9.2020	BORIO	LOHANDA	32	218
4	26.9.2020	BORIO	GOGHI	20	119
5	28.9.2020	BORIO	SATICHOUKI PANGRO	25	57
6	28.9.2020	BORIO	NIRAPARA	28	124
7	29.9.2020	BORIO	BARA PANGRO	26	155
8	29.9.2020	BORIO	CHHOTA TETRIYA	38	111
Total				327	1174
Grand total				2,077	11,659

**Number of Village, Households and Livestock covered during Camp*



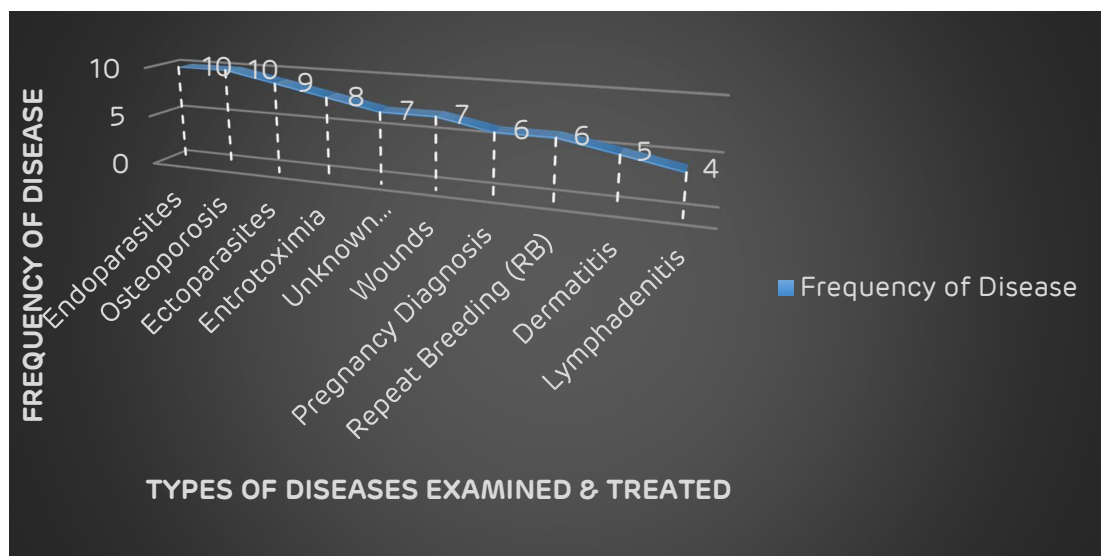
**Livestock wise treatment during Veterinary Camp*

- **Examination and Treatment of Livestocks:** Animals were examined by Dr. Ranjit Soren, Dr. Dhananjay Yadav, Dr. Chandrakant, Dr. Baleswar Meera & Dr. Virendra Kishore and assisted by field animators of Adani Foundation in delivering their services during the camp. It catered to the needs of small & marginal farmers irrespective of caste, creed, and religion through diagnosis of health complications of their Livestocks.
- **Treatment of Domesticated Livestock:** Total **11659** domesticated cattle and Livestock were screened including 2934 Cow, 2766 Goat, 1320 Heifer Calf, 651 Bull Calf, 972 Buffalo, 657 Sheep, 448 Doeling, 282 Buckling, 694 Hen, 635 Ox, 192 Pig, and 108 Ducks, respectively during the camp.

- **Diseases Identified and Diagnosed:** The screening and health check-up included Vaccination, Deworming, Ticks, and Parasites, Demolition, Infertility Check-ups, Weakness treatments and General treatment to the animals. The most common diseases were found to be Endoparasites, Osteoporosis, Ectoparasites, Enterotoxaemia, and Unknown Fever/Pyrexia of Unknown Origin (PUO), Wounds, Pregnancy Diagnosis, Repeat Breeding (RB), Dermatitis, and Lymphadenitis. The farmers were advised to do routine deworming and vaccination along with feeding of supplemental mineral-vitamin mixture to improve their body nutrient status and overall health.

FREQUENCY OF DISEASES DIGANOSED DURING VETERINARY HEALTH CAMP		
DISEASE	RANKING OF DISEASE	SYMPTOMS
Endoparasites	10	Worms inside the rumen
Osteoporosis	10	Swelling infacial bones, weakness
Ectoparasites	9	Ticks and mites on the body of the animal
Enterotoxaemia	8	Diarrhoea, Dysentery, running animal
Unknown Fever/Pyrexia of Unknown Origin (PUO)	7	Fever
Wounds	7	Any Part of the body
Pregnancy Diagnosis	6	Detecting the pregnancy of cattle
Repeat Breeding (RB)	6	Animal is not conceiving/Infertility
Dermatitis	5	Scratching, swelling in the skin-generalized
Lymphadenitis	4	Swelling in lymph node, conjunctivitis

**Qualitative information as per disease pattern diagnosed by Veterinary Doctors*



**Ranking of Diseases in Descending Order (Highest Frequency to Moderate Frequency of Diseases)*

- **AF supported with Medicines:** The medicines were procured from Maruti Drug Agency, supplier of medicines. The medicines consisted of DE wormer, Animal Feed Supplements, Antiseptic lotion, Antibiotic and Vaccines for treatment of common pandemic and epidemic diseases occurring to domesticated Livestocks in intervention villages. Total 17 kinds of medicines and animal feed supplements were arranged for treatment of various species of animal's including cattle, buffalo, bull, goat, poultry, and pig and distribution to needful farmers during the camp. Medicines and nutrient supplements was also distributed to concerned livestock owners.

VETERINARY MEDICINE LIST		
S.N	MEDICINE NAME	USAGE
1	Sulphacure	Treatment of ring worm infection and different forms of mange in camels, equines, cattle, sheep, goats & small animals. It kills biting and sucking lice.
2	Amoxirum Forte	Treatment of Mastitis & other Bacterial infections
3	Curemox Bolus	Treatment of Infections
4	Nil Tik	Effective solution against Ectoparasites
5	Worned	
6	Curemin Prenium	Feed Supplement for Veterinary
7	Vetzole 1.5 Bolus	DE wormer for Cattle
8	Himax Oint	Animal Feed Supplements
9	Ictoliv Forte	Animal Feed Supplements
10	Neblon Powd	Acute, Subacute or Chronic Diarrhoea and Dysentery, Symptomatic relief to animals suffering from Rinderpest and other specific diseases
11	Enrostrong 10%	Animal Feed Supplements: Calves, goats and sheep
12	Zobid_M	Pneumonia, Broncho pneumonia, Pleuritis, Mastitis, Prolapse of Uterus, Sprain, Laminitis, Myositis, Arthritis, surgical interventions and Otitis.
13	Zydacef 3GM	<ul style="list-style-type: none"> • Antibiotic for severe infections: Infection of the brain • Respiratory tract infections (Pneumonia and COPD) • Ear infections • Abdominal infections • Infection of urinary tract • Bone and joint infection • Skin and soft tissue infections
14	Intacef	<ul style="list-style-type: none"> • Antibiotic for severe infections: • Infection of the brain • Respiratory tract infections (Pneumonia and COPD) • Ear infections • Abdominal infections • Infection of urinary tract • Bone and joint infection • Skin and soft tissue infections

15	Vetzole tab	• Treat tapeworm infection
16	Betadin Lotion	• Antiseptic
17	Bandyes	• Teat wounds, prevent swelling

12. Village level training on Vermicomposting: A Village level training was conducted on 17th May 2020 in core and railway line villages to promote organic farming through Vermicomposting. The organic step emphasises on capacitating the farmers with technical knowledge of organic farming, its significance and importance on improving socio-economic and ecological conditions. The farmers were encouraged to become *Vermi-Entrepreneurs* to supplement their livelihood with increased monetary income on annual basis in a sustained manner.

13. Vermicomposting production by Farmers: Vermicomposting units has been set up by 23 farmers of 6 villages of core and railway line area of TPP. These prepared vermicomposting are used by farmers for their agricultural production for all seasonal crops and vegetables.

- **Livelihood generation from Vermicomposting:** Estimated Production 57.5 ton of Vermicomposting is ongoing through management of Vermicomposting production by the farmers in TPP villages. The farmers are utilizing the vermicomposting in their own farm land and sale to the neighboring farmers and local market.

14. A Village level training was conducted on 20th June 2020 facilitated by technical experts of Krishi Vigyan Kendra (KVK) in Motia village to promote organic farming through SRI with participation of over 50 small & marginal farmers. Objective of training: The organic step emphasises on capacitating the farmers with technical knowledge of organic farming, its significance and importance on improving socio-economic and ecological conditions. The trained farmers were encouraged to supplement their livelihood with increased monetary income on annual basis. Social Distancing was also maintained.

15. AF Supported with Paddy Seeds for SRI: Enabling Farmers to Promote Organic Farming and Increase their Annual Earnings. 56 farmers were supported with 2 kg average seeds of paddy (Improved Samba Mahsuri Rice)- BPT-5204 CSIR CCMB, supported by Agriculture department of Godda Sadar block.

16. Livelihood Security from System of Rice Intensification (SRI): The small & marginal farmers have got the skill to cultivate paddy through SRI Technique thereby enabling livelihood security. 60 farmers of core, railway line and pipeline-Sahebganj villages have gained courage to implement SRI in their farm land of 54.96 acres.

- **Empowering the Tribals and Women farmers:** Line sowing of paddy plant was done by the women farmers of households empowering the women from '*Ek Ropa Dhaan*'. The tribal farmers hailing from Santhal belt in Sahebganj district, were mobilized to initiate the line sowing process of paddy crops in their 0.88 acres of land.

17. Plantation on World Environment Day: World Environment Day was celebrated on 5th June'20 in plant premises and ITI Siktia centre among the community. AF team encouraged the women group of Phoolo Jhano Saksham Aajeevika Sakhi Mandal (PJSASM) to promote afforestation to preserve our Planet, Earth.

- **Saplings of Ornamental trees and Shade trees:** More than 150 saplings of Shade trees and flowery plants, i.e. Gulmohar tree (*Delonix regia*) was planted by Phoolo Jhano Women on the roadside of ITI Siktia, one of uniform production hub near to plant area. Pledge was taken to conserve plant species. Social Distancing was also maintained during plantation of saplings.

18. Environment Protection Programme- Promoting Afforestation, Nutrition and Ecological Preservation in project villages and plant premises to conserve the Planet, Earth and its biological creatures. The Self Help Group (SHGs), teachers and community were encouraged to plant saplings in their home garden for nutritional and ecological security.

19. Plantation of Horticulture plants: 352 saplings of horticulture plants of nutritional value namely banana, lemon, drumstick, and guava, was planted in seven villages by 141 families of TPP area. The community praised Adani Foundation for its continued support for Plantation of trees helps to make the environment cleaner and ensure fresh air around us. Also, the women and adolescents were made aware and sensitized to include nutritional diet in daily routine to reduce occurrence of malnutrition among children and anaemia in adolescents.

20. Financial Support for Volunteers and Project Affected Families: This year Jitpur mines has continued to support 370 families project affected families at the rate Rs. 1440/- per month towards livelihood engagement. Also, Rs.1, 65,201 Monthly Honorarium payments for Volunteer was continues this year. These volunteers help the Adani team for field mobilization and also help to maintain positivity in the Project affected Villages.

RURAL INFRASTRUCTURE DEVELOPMENT

Water Conservation, Ground water recharge

- 1. Deepening work of Ponds:** No Pond Deepening work has been carried out in the Half Financial Year 2020-21. Impact Assessment was conducted in aspirational villages including short documentary, and Pani Chaupal was organized to assess the impact leveraged to farmers, and community.

Drinking Water Facility

- 1. Drinking water facility in villages –Borewell, Community Well etc.:** 3 Deep Boring was done near to Government premise, Sahebganj and Renovated 01 no. of Community well at Sondiha Village for drinking and domestic use. The work will facilitate the government functionaries and community during the summer season and all of the year.
- 2. Installation & Renovation Work of 90 Hand pumps & Hand pump Platform:** Hand pumps are primary source for drinking water and other domestic need in the TPP area. Adani Foundation has been taken up the hand pumps maintenance and repairing work of hand pumps, its installation and construction of hand pump platform in 4 blocks including core, railway line and pipeline villages. With this work, we are ensuring 100% functionality of the hand pumps in the area. This year we have renovated and repaired 89 hand pumps in Godda, Podaiyahat, Thakurgangti & Boarijor in core, railway & pipeline area and 1 hand pump installation in Gumma villages. Branding of hand pumps repaired by Adani Foundation are also been done for its recognitions and better monitoring.

Educational infrastructure Development

- 1. Renovation of School-**Primary school at Amrakanoli village of TPP core area for quality learning of students. It will provide better learning ambience for the rural children who cannot afford to avail education in private schools due to low household's income.
- 2. Construction of 06 Class room** is going on at High School, Motia to provide infrastructure for students to learn in a proper proximity. Also it is helpful to create a better educational environment in the campus.
- 3. Renovated & Beautified with BALA painting** for learnings of the children (3-5 years) in **three Anganwadi Centre** at Laiya Tola of Bari-Baksara village, Harijan tola, Motia village and Gangta Govindpur village. **Ongoing Renovation of three Anganwadi Centre** at Motia Kahar tola, Motia Chapota tola and Patwa village. Anganwadi is the source of several benefits for child and maternal health and well-being. It will help facilitate enhancement of nutrition level/Suposhan of community of our TPP area, particularly of children (0-5 years), adolescent girls, pregnant women and lactating

mothers supported by Sanginis and Suposhan team members. In addition to this, it will help District Administration, ICDS functionaries for continuous and proper functioning of Anganwadi Centres to provide needful benefits.

- 4. Construction of Library at Madhuri village** of our core area to provide a common platform for the students to access educational resources for improvement of academic performance and attain quality of education.
- 5. Construction of Canteen at Police Line**, Gumma village of railway line area to provide better infrastructure for the government functionaries and delegates
- 6. Construction work of Main Gate at ITI Siktia** for smooth functioning of Dress Stitching Center, in which all nearby tribal and rural women prepare dress for school children.

Other Village development structures

- 1. Construction of 6 Seating Place (Chabutra) in TPP villages:** Construction of 5 Seating place (Chabutra) has been done 2 in Gumma & Kauribihar railway line villages, 2 in pipeline villages at Bhawani Chowki, and Sriram Chowki village in Sahebganj and 1 in Bahadurchak village of Thakurgangti block of our pipeline and Intake Point area. Ongoing Construction of Seating Place (Chabutra) at Bhagwanpur village in pipeline area. Normally village not having common places in the village for seating purpose for elders and senior citizens. This is being used by the common people in the village for seating purpose.
- 2. Renovation of 1 Community Hall for Community Programs** for Promotion of cultural activity and local events at village level for community. It helps share peace and harmony among community. As we are committed to provide better community structures to the village, we have renovated 1 community halls in Karikado village of core area. This hall is also being used for community purpose.
- 3. Renovation and construction of 19 community structures:** We have taken up the renovation of community structures like Temples/Puja Sthal/ Manjhisthan/ Satsang Bhawan/Sidhu Kanhu Shade etc. in core, railway line and pipeline villages. People of our area having big faith for these temples and other places. So many people are visiting daily for religious purpose at the temple.

Annexure – III



Green Belt Development



Green Belt Development



Green Belt



Green Belt Development in Progress



Road Side Plantation (Outside the Plant)



Road Side Plantation (Outside the Plant)



Concrete Road which help to reduce fugitive emission



Concrete Road which help to reduce fugitive emission



Display Board at Main Gate