EXECUTIVE SUMMARY

DRAFT ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN FOR

PROPOSED EXPANSION OF SUGAR UNIT 2500 TCD TO 5000 TCD, 15 MW COGENERATION PLANT AND 60 KLPD DISTILLERY PROJECT, AT- TIRTHPURI, TAL. GHANSAWANGI, DIST. JALNA. (Unit –II)

of

M/s. Karmayogi Ankushrao Tope Samarth

Sahakari Sakhar Karkhana Ltd

at Tirthpuri , Tal: Ghansawangi Dist Jalna (Unit –II)

PROJECT PRONENT

M/s. Karmayogi Ankushrao Tope Samarth

Sahakari Sakhar Karkhana Ltd

at Tirthpuri , Tal: Ghansawangi Dist Jalna (Unit –II)

1.1 Introduction

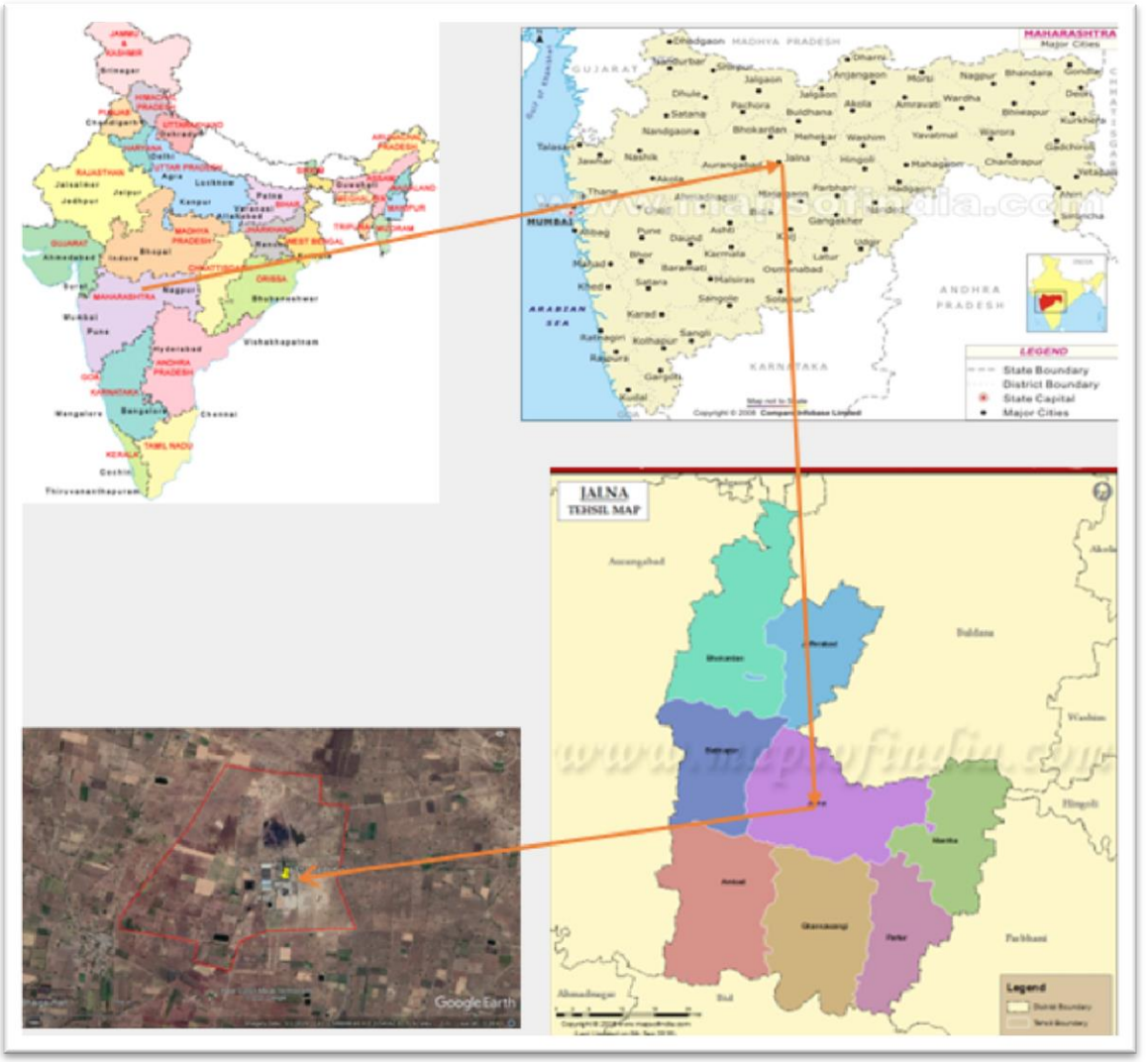
M/s. Karmayogi Ankushrao Tope Sahakari Sakhar Karkhana Ltd., Unit No.2 (Sagar) Tirthpuri, (KATSSSK U-II) At. Po. Tirthpuri, Tal. Ghansawangi, Dist. Jalna was registered under the Maharashtra Co-Operative Societies Act, 1960 vide Registration No. JAL/PRG /(A)-1 dated 10/02/1982.

It is one of the most progressive sugar factory in the state of Maharashtra and is located at Tirthpuri, Tal. Ghansawangi, Dist. Jalna. The nearest state highway is National Highway No. 52 (Solapur – Dhule) which is about 34 Km away from the site. The nearest railway station is Jalna and is about 50 Km away from the site. The nearest airport is Aurangabad and is about 93 Km away from the site.

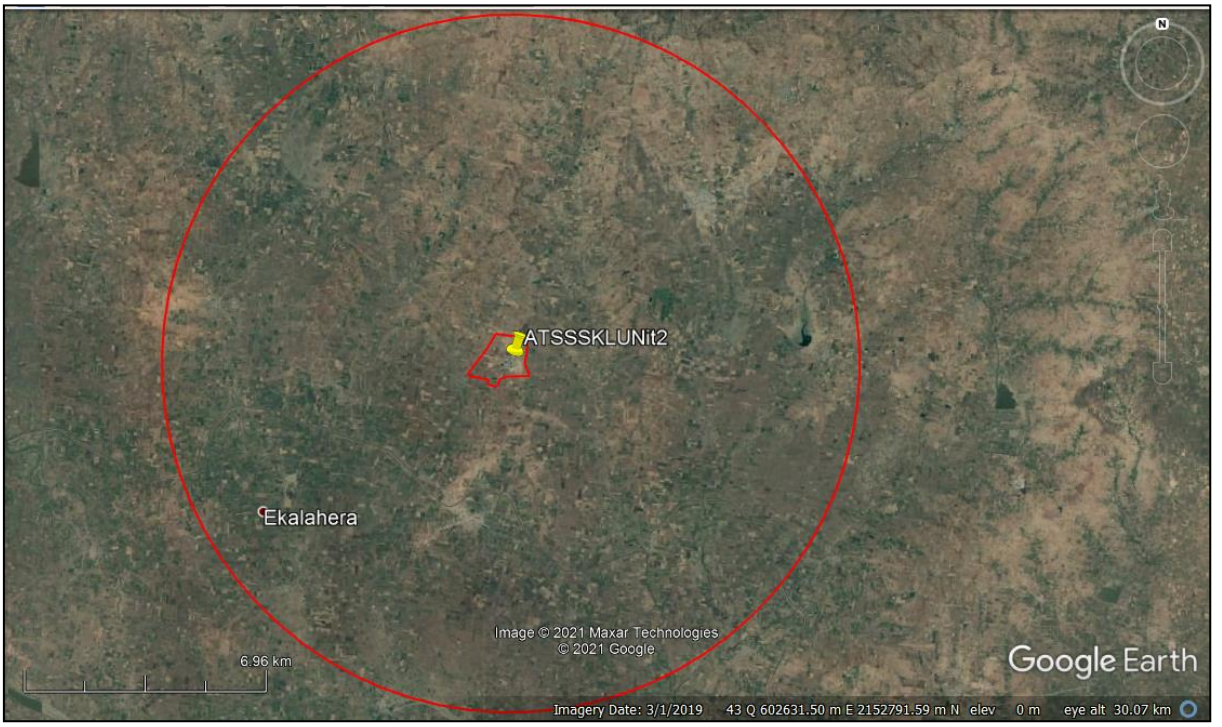
The crushing capacity of the factory is 2500 TCD and the first crushing season was conducted in the year 2009-2010. Based on increasing availability of sugarcane in area of operation, the sugar mill is planning to expand its capacity from sugar unit 2500 TCD to 5000 TCD, 15 MW cogeneration plant and 60 KLPD distillery unit at existing premises of unit II.

1.2 Project location

The project is located at, Tirthpuri, (KATSSSK U-II) At. Po. Tirthpuri, Tal. Ghansawangi, Dist. Jalna Maharashtra. Site is geographically located at latitude 19°28'44.22"N & longitude 75°56'9.46"E.



Project Location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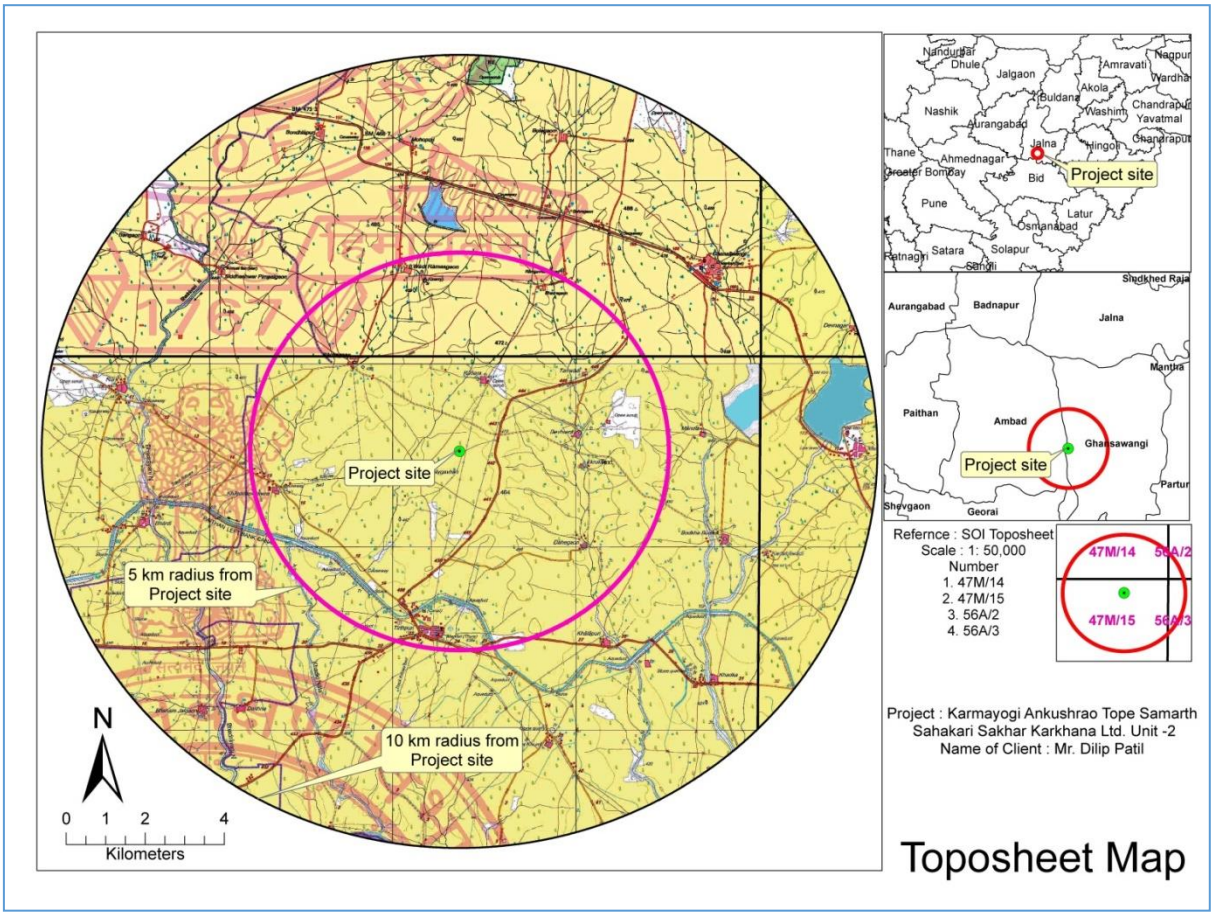
Project site
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Ratnagiri
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56A/3
Project : Karmayogi Ankushrao Tope Samarth Sahakari Sakhar Karkhana Ltd. Unit -2
Name of Client : Mr. Dilip Patil
Toposheet Map

1.3 Project Description

1	Name and Address	M/s. Karmayogi Ankushrao Tope Sahakari Sakhar Karkhana Ltd., Unit No.2 (Sagar) Tirthpuri, (KATSSSK U-II) At. Po. Tirthpuri, Tal. Ghansawangi, Dist. Jalna
2	Area of the project	Total Plot Area – 107.83 ha Sugar cogeneration: 5.29.ha Proposed expansion Sugar and cogeneration: 3.0.ha Distillery : 4.41 ha Green Belt area –37.28 ha
3	Latitude & Longitude	Latitude ; 19°28'44.22"N longitude 75°56'9.46"E.
4	Plant Capacity	Expansion & Modernization of sugar unit from 2500 TCD to 5000 TCD Bagasse based Co generation-15 MW Molasses /b0 heavy/ Cane Juice based Distillery Unit – 60 KLPD
5	Operational days	Sugar unit- 150 days Co-gen unit- Season -150 days distillery – 300 days/annum
6	Proposed Project Cost	Sugar Expansion: 8107.77 lakh Cogeneration: 5222.06 Lakh Distillery : 8919.35 lakh
7	Capacity of Boiler	• Existing boiler of 60 TPH capacity 46 ata pressure 440 0C temp revamp to 490 0C with new 15 MW BP TG set • Proposed boiler of 50 TPH capacity 46 ata pressure 490 0C with new matching 15 MW DEC TG set • Existing 3 MW BP Type TG , 46 ata pressure will be scrapped once co gen boiler is put in to operation successfully • Proposed boiler for distillery : 20 TPH,45 ata, 400 ^{0}C with 2 MW TG
8	Total water Requirement	**Existing: -** Sugar Unit (2500 TCD) -300 CMD

		Domestic-55 CMD **Proposed: -** Sugar expansion (5000 TCD) & Co-gen(15MW) : 1175 CMD Distillery Unit - 624 CMD Domestic - 55 CMD **Total - 1799 CMD**
9	Total Power Requirement	1. Power consumption for the existing sugar factory (2500 TCD) & existing Boiler units as 3.0 MW 2. Power consumption for 5000 TCD after expansion and TG set (15MW) during season as 5.90 MW 3. Power Export : 8.86 MW 4. Power consumption for proposed distillery unit- Power consumption for 60 KLPD Distillery unit : 1.47 MW
10	Steam Requirement	Proposed units • After expansion of Sugar unit (5000 TCD)- 98.45 TPH • Distillery unit: boiler (20 TPH,45 Bar(g) 400 C – 16.5 TPH (The steam requirement will be 7.5 - 8.00 TPH for the 60 KLPD distillery plant, 4.50 - 5.00 TPH for standalone spent wash evaporation plant, 5.00 – 5.25 TPH for ATFD dryer.)
11	Total Fuel Requirement	**Sugar and cogeneration Unit '** Existing 60 TPH & proposed 50 TPH Boiler: 171840 MT bagasse Distillery : 20 TPH Boiler : 218 MT/day bagasse
12	Manpower	**Total Manpower = 265 Nos.** For Existing Unit –155 Nos. For Cogen Unit- 50 For Proposed distillery Unit - 60 Nos. Out of which 40 shall be skilled staff and rest shall be unskilled staff.

1.4 Basic Raw Material
Land requirement

Total land 107 ha is in possession of KATSSKL Unit II. Out of 107 ha land, 37.28 ha land is allocated for green belt. The proposed expansion will be within the existing distillery unit.

S.No	Land Utilization For	Area in Sq.m	Percentage %
A	Total Plot Area (Sq.M)	1100800	
B	Area Lease to M.S.E.B. (Sq.M)	22500	
C	Net plot Area (Sq.M)	1078300	
1	Existing Sugar	52900	
2	Proposed Sugar and Cogeneration	30000	
3	Proposed Distillery	44100	
4	Open Area	231236	
5	Cane Development Plot	120000	
6	Road	136565	
7	Parking area	130000.00	12.0
8	Green Belt Area	372898.2	34.58

Raw material:

The command area comprises Ghanswangi Tehsil with 117 villages. Area under irrigation in Ghanswangi Tehsil of Jalna District 39970 ha, out of which 12944 .77 ha area under sugar cane considering the average cane productivity of 90 MT/ha 11.66 lakh MT cane is available from command area. For the 5000 TCD crushing, 7.5 Lakh MT sugar cane will be required.

The bagasse available as fuel for co gen plant from 5000 TCD will be 195000 MT per annum. The bagasse required during crushing season of 150 days for sugar and co gen plant will be 171840 MT. For 20 TPH boiler of distillery, bagasse required will be 65454 MT /annum. 15660 MT will be available from own sugar unit and remaining will be procured from nearby factories.

The Distillery will be operated for 300 days. Proposed distillery will be operated on C-Molasses/ B- heavy/syrup . The total B- heavy molasses requirement for 60 KLPD distillery plant will be about 29,032 MT/annum considering 150 working days on B heavy-molasses per annum. The available B-heavy molasses with sugar mill is 17133 MT. The remaining B-heavy molasses can be purchased from nearby sugar mills.

Water Requirement

The fresh water 1144 m3/day (Existing 309 m3/day adnd 835 M3/day) will be required for the project and permission is obtained from Mula Right Bank Canal, which is very close to the factory. The water is lifted through pumps from the canal. Factory has obtained permission from Irrigation Department; Govt. of Maharashtra for lifting the water,

KATSSKL lifts the water from KT Weir on Mandala dam, 5 km away and stores it in one water reservoir having 10,000m3 capacity situated in the sugar plant complex. Permission is obtained from irrigation department.

- Existing sugar unit water requirement is 300 m3/day
- For expansion sugar and cogeneration water requirement will be 1175 m3/day

Total requirement of water for 60 KLPD distillery based on continuous fermentation, multi pressure vacuum distillation, Bio-methanation plant standalone evaporation system to concentrate spent wash and an ATFD dryer will be around 1164 M3/day.

Power requirement:

Sugar & Cogeneration:

Steam Generation

50 & 60 TPH, 46 ata boiler

Steam Generation

Steam generated from 60 TPH, 46 ata boiler is 55.0 TPH and 50 TPH, 46 ata boiler is 98.45 TPH is passed through 15 MW BP TG set.

Steam Consumption

- At 2.5 ata (98.45 TPH steam)

- SF process : 95.45 TPH
- De-aerator : 3.00 TPH

Total : 98.45 TPH

Steam demand of SF process at 2.5 ata is met through the exhaust steam from 15 MW BP TG (98.45 TPH) thus totaling 95.45 TPH which comes to be 42.00% on cane as assumed

Power :

From 15 MW BP TG set:

98.45 TPH steam at 2.5 ata : 14769 KW Thus the total power generation from 15 MW BP TG is 14796 KW.

Captive Power Consumption: Sugar factory including boiler (26 KW/TCH) : 5909 KW

Thus the total captive power consumption is 5909 KW.

- Power Export
- Total power generation : 14769 KW
- Total captive power consumption : 5909 KW
- Surplus exportable power : 8860 KW
- Power export in season (150 days) : 28.70 MU at 90% capacity utilization

Thus the cogeneration plant will export 8.86 MW power amounting to 28.70 MU during season of 150 days.

Distillery: Steam Requirement

The steam requirement will be 7.5 TPH for the 60 KLPD distillery plant, 4.50 TPH for standalone spent wash evaporation plant, 5.00 TPH for ATFD dryer.

The KATSSSKL U-II is having one boiler (Capacity – 60 TPH.) of total steam generation capacity. However, excess steam from the boiler for distillery and spentwash evaporation plant cannot be made available. Therefore, KATSSSKL U-II has proposed to install an independent 20 TPH steam producing capacity boiler having 45 kg/cm2 (g) pressure for

distillery and spent wash evaporation plant. Therefore, required steam will be made available for distillery, spent wash evaporation and ATFD plant from the proposed boiler.

Power ;

KATSSSKL U-II has decided to install 2.0 MW capacity turbine separately for distillery & ETP system. The estimated requirement of power proposed distillery and ETP will be 1.47 MW. The required electricity for 60 KLPD distillery & ETP will be generated from the independent distillery boiler and TG set.

It will be also necessary to work out the exact steam and power balance for 60 KLPD distillery plant during the tendering process for the new 60 KLPD distillery unit, new multiple effect spent wash evaporation plant, ATFD, new boiler & TG set.

Manpower requirement:

Total Manpower = 265 Nos.

- For Existing Unit –155 Nos.
- For Cogen Unit- 50
- For Proposed distillery Unit - 60 Nos. Out of which 40 shall be skilled staff and rest shall be unskilled staff. More than 85 % of the manpower requirement will be fulfilled by employing the local people. Man power requirement for construction work will be about 50. Construction workers will reside in nearby villages. Residential facility will not be required for the construction personnel.

Cost and implementation schedule:

Sugar Expansion: 8107.77 lakh

Cogeneration: 5222.06 Lakh

Distillery: 8919.35 lakh

Proposed expansion will be completed within 12 months from receipt of NOC from statuary Authorities.

1.5 Benefits of the Project

The project is going to have positive impact on consumption behavior by way of raising average consumption and income through multiplier effect. The following changes in socio-economic status are expected to take place with this project. People perceive that the project will help in the development of social infrastructures/such as.

- Education facilities
- Banking facilities
- Post offices and Communication facilities
- Medical facilities
- Recreation facilities
- Road Transport facilities
- Educational facilities
- Water supply and sanitation

1.6 Baseline Environment

The study area is considered to be within 10 km radius of the project site for baseline environment monitoring. The studies were conducted for the period of March 2021 to May 2021.

Ambient Air Quality Status:

Air Quality monitoring reports showed that all the parameters are under limit as per NAAQS Standards. It can be seen that PM10 and PM2.5 ranges from 46.98 to 78.10 µg /m3 and17.55 to 26.80µg/m3. SO2, NOx & CO ranges from 14.96 to 28.50 µg /m3 19.54 to 40.20 µg /m3 and 0.18 to 0.58 mg/m3 respectively

Inference: All the parameters were found well within the prescribed limits of NAAQ Standard, CPCB.

Noise Level

Noise monitoring was carried out as per MoEF and CPCB guidelines. To understand the Noise Quality with respect to zone category, nine representative locations were selected. Noise monitoring was carried out from time 06:00 Hrs to 22:00 Hrs and Night Time – 22:00 Hrs to 06:00 Hrs. Obtained results are compared with Noise pollution rules 2000. Higher noise level recored at project site due to the project activities and vehicular movement.

All values during day and night period are under the permissible standards.

Surface water Environment

- **pH:** pH of the all surface water sample ranges from 6.7 to 7.7
- **Total Dissolved Solids:** The dissolved solids consist mainly of bicarbonates, carbonates, sulphates, chlorides, nitrates and possibly phosphates of calcium, magnesium, sodium and potassium. The amount of dissolved solids present in water is a consideration for its suitability for domestic use. Results show the ranges of TDS 110.5 mg/l to140.1 mg/l .
- **Biological Oxygen Demand (BOD):** BOD values are in the range of 3.1 to 4.6 3 mg/l.
- **Chemical Oxygen Demand:** The recorded results of COD below 10 mg/l.
- **Total Hardness:** The desirable limit for total hardness, as per the Indian standards is 200 mg/lit and the values observed in samples are below the desirable limit
- **Chloride: :** The concentrations of the chlorides of all samples were between 35.4 and 46.9 mg/lit.
- **Sulphate:** The concentration values ranged from 26.5 to 37.4 mg/lit,

Groundwater Environment

- **pH**: The pH is a measure of the activity of the (solvated) hydrogen ion. The range of pH is neutral to slightly alkaline (6.8 to 7.4)
- **Total Dissolved Solids:** The dissolved solids consist mainly of bicarbonates, carbonates, sulphates, chlorides, nitrates and possibly phosphates of calcium, magnesium, sodium and potassium. The amount of dissolved solids present in water in the range of 154.1 to 610.2 mg/l.
- **Total Hardness:** The values of the samples analysed are in the of 102 to 530.2mg/l
- **Chloride:** The chloride values are in the range on 39.8 to 160.5 mg/l
- **Sulphate:** The concentrations of sulphates in the in the range on 23.8 to 80.2 mg/l.

Soil Environment

The pH of the samples varied from 7.15 to 7.8 . Electrical Conductivity value ranges from 0.16 µS/cm to 0.62 µS/cm. it can be stated that the soil is not harmful for germination or cropping.

The bulk density of soil in the study area is found to be in the range of 1.25 - 1.48 g/cc. It can be observed from the results that the soil is ideal for plant growth. The porosity of soil observed in the study area ranged from 35.95to 49.2 %.

It is observed that Calcium and Magnesium concentrations are in the range of 17.2- 25.8 mg/kg and 1.92-3.68 mg/kg respectively whereas; Sodium and Potassium are in the range of 15- 48 mg/kg and 198- 624mg/kg respectively.

Organic matter is found to be in the range of 0.37- 1.38% and Phosphorus is present in soil more than sufficient limit i.e. in the range of 6.8- 13.25 mg/kg. The soil porosity is found to medium hence, the water holding capacity of the soil will be medium. From above observations it can be concluded that soil moderately fertility in nature. the sand percentage varied between 25.0 to 31.0 % and silt percentage varied from 47.0 to 50.0 % whereas clay percentage is in the range of 20.0 to 26.0 %

Ecology

The proposed expansion and new unit is located in existing premises of factory . As per guidelines of MoEF for Environmental Impact Assessment, the study area was restricted upto 10 km periphery of the project site. Detail assessment was carried out for the determination of Floral, Fauna, Avifauna and Aquatic Ecology species.

Based on field survey Primary observed that approx. 85 species of trees & shrubs were observed within the study area. Common trees *Albizia saman*, *Terminalia catappa*, *Spathodea campanulata*, *Peltophorum pterocarpum*, *Cassia siamea* few of *Mangifera indica*, *Azadirchta indica* and varieties of Ficus were observed in the study area.

From the faunal study it was observed that there were 59 different species of birds, 17 species of butterfly's, 6 species of mammals, 5 species of amphibians and reptiles in the study area.

None of the species were found in Schedule 1 as per Wildlife Protection Act, 1972. In the project area green belt is developed with native species. pollution load of the proposed expansion will be minimal and will not affect the Flora and Fauna of the study area

Socio Economic survey:

Study area includes 31 villages from Ambad Tahsil and Ghansawangi Tahsil

- The Ambad Tahsil include 4 villages and Ghansawangi Tahsil 27 villages

- Total study area consisting of 29042.18 ha with the population density of 521person / km².
- Total population in the study region (Census 2011) is worked out as 55706 out of which 28629 (51.393%) are male and 27077(48.60%) female respectively.
- Sex ratio (No. of females per 1000 males) is 945 which indicates that females are less number than their male counterpart in the study are.
- Out of the total population, Scheduled Caste population is 7348 (13.19%) out of which 3743 (50.93%) Male and 3605(49.06%) female population.
- Out of the total population, Scheduled Tribe is 1248 (2.24%), out of which 620 (49.67%) Male and 628 (50.32%) Female population respectively.
- The literacy rate of the total population is worked out to 31578 (56.68%). Male literacy 18539 (58.70%), and female literacy is 13039 (41.29%)
- The Illiteracy rate of the total population is worked out to 24128 (43.31%). Male literacy 10090 (41.81%), and female literacy is 14038 (58.18%)
- The total population of main worker, marginal worker and non-worker category are 25992 (46.65%), 2514 (4.51%) and 27200 (48.82%) respectively.
- Male population is marginally higher in the region as compared with the female.

Observations recorded during survey in the study area are

- Every villages having Gram panchyat
- Most of the surveyed villages are having Anganwadi facilities.
- The survey reported that most of the villages have primary and middle school facility, for further education student have to go about 10 km away. Maximum educational level of the study area is up to 10th standard. In the study area observed that most of student choose English medium for education .For higher & technical education people have to go to Taluka place Ambad Tahsil Ghansawangi Tahsil .
- Communication facilities are very good; people are using mobile cell phone. Dish TV are also available in the study area.
- A road approach is mainly pakka road. Road construction is very good. Each and every village connects to the pakka(main) road. For travelling purpose government bus service and other private sources are available for villagers in this region.
- Bore well, tank water, well and hand pump are the main source of drinking water supply in the region. There is no drinking water problem.

- Sanitation facilities are good condition. 70% villagers are using toilets. Most of the villages having proper gutter line for waste water disposal.
- Health condition of villagers is good in this area; villagers are satisfied with the health centers because they are getting proper treatment from Government Hospitals. Private clinics are also available in study area.
- Electricity is available in almost all the villages. Most of the villages having irrigation facility through electricity. Electricity use for all purpose in the study area.
- LPG gas and Wood is major fuel for cooking purpose;
- Most of the people are engaged in agricultural and livestock activities. Farming is the main occupation, a few respondents have service in government sector and most of respondent are labor. Some other is trying to migrate in other places. In the study area villagers are engaged in agriculture work, industrial work, small business like shop, vegetables. Sugarcane, toor, cotton, Bajra, is main agriculture crops in study area.
- Qualities of houses are in satisfactory condition and mostly people have cemented concrete constructed houses but some villagers are living in poor condition.
- Self Help Group (SHG) is actively strong in maximum villages.
- Marathi is main language in the study area.

1.7 Environment Impact and its Mitigation Measures

Air Environment

- ❖ The height of the stack is provided 60 m for 60 TPH existing boiler
- ❖ For the proposed 20 TPH boiler , 45 M stack height and ESP will be provided & proposed 50 TPH Boiler, 60 M stack height and ESP will be provided
- ❖ Stack emissions will be regularly monitored by factory /external agencies on periodic basis to check the efficiency of air polluting control devices and necessary action.
- ❖ Online Monitoring system is installed and connected to CPCB and MPCB server for exiting boiler ad will be provided to proposed 50 TPH and 20 TPH Boiler
- ❖ To control of the airborne fugitive emissions from the ash handling area will be achieved through regular water sprinkling in this area.

The green belt development at ash handling areas will be undertaken

Noise Environment

- ❖ All rotating items will be well lubricated and provided with enclosures as far as possible to reduce noise transmission. Vibration isolators will be provided to reduce vibration and noise wherever possible
- ❖ Manufacturers and suppliers of machine/equipment like cane handling equipment's i.e. Belt Conveyor, Compressors, STG, Turbine and generators will be manufactured as per OSHA/ MoEF guidelines.
- ❖ The personnel safety such as ear muffs, ear plugs and industrial helmets will also act as a noise reducers will be provided workers.
- ❖ Acoustic laggings and silencers will be provided in equipment wherever necessary. The compressed air station will be provided with suction side silencers. Ventilation fans will be installed in enclosed premises
- ❖ The silencers and mufflers of the individual machines will be regularly checked

Water Environment

Waste Water Treatment: Sugar and Cogeneration

- Existing sugar unit effluent generation: 119 m3/day
- Existing effluent treatment plant capacity; 250 m3/day.
- After expansion sugar unit effluent generation: 550 m3/day

It is proposed to upgrade the capacity of existing effluent treatment plant to 600 m3/day

Distillery Unit

The KATSSSKL U-II management has decided to install Bio-methanation plant, standalone multiple effect bio-methanated spent wash evaporation plant and ATFD dryer to achieve "Zero Spent wash Discharge" for total 60 KLPD distillery plant as per CPCB norms.

- **Primary effluent treatment system:**
- The raw spent wash produced from proposed 60 KLPD distillery will be 480 m3/day at about 15% solids and will be taken to the biogas plant for primary treatment. During the bio-methanation process the COD will be reduced by about 65 – 70 % and biogas will be produced at the rate of about 0.5 NM3/ Kg of COD consumed. Total volume of bio-methanated spent wash generated will be 480 M3/day with approximately 15 % solids.
- **Secondary effluent treatment system:**

- Standalone multiple effect spent wash evaporation (SMEE) will be used for concentration of bio- methanated spent wash generated in bio-methanation plant (480 M3/day at about 8% solids) from 8% total solids to concentrate to 40% total solids and final bio-methanated spent wash volume will be reduced from 480 M3/day to 96 M3/day.
- The evaporation condensate (app. 540 M3/day) after treatment in CPU will be reused for distillery cooling tower make up or for fermentation process (molasses dilution as make- up water).
- Final effluent treatment system: Agitated Thin Film Dyer system
- The concentrated bio-methanated spent wash having 40% total solids will be treated in agitated thin film dryer (ATFD) for drying to produce powder with 90% total solids. The dry powder will be produce about 46 MT/day content 10 % moisture. This powder will be sold as biofertilizer. Thus, the “Zero Liquid Discharge” will be achieved.
- Condensate Polishing Unit (CPU):
- The bio-methanated spent wash evaporation condensate quantity of 384 M3/day from SMEE, distillation plant spent lees quantity of 90 M3/day and blow downs (Cooling tower, WTP, Boiler) quantity of 126 M3/day, total quantity of 600 M3/day will be treated in condensate polishing unit (CPU) and treated water, 540 M3/day will be reused for distillery cooling tower or for fermentation process (molasses dilution as make-up water).

Solid waste management

Bagasse will be used for existing 60 TPH , proposed 50 TPH & 20 TPH Boiler. Molasses will be used as raw material for distillery unit. Press mud will be used for composting and sale to farmer as soil conditioner. Ash will be sale to brick manufacturer.

Green belt development plan

→ Special attention is planned to maintain green belt in and around the factory premises.
→ Adequate provisions shall be made to facilitate daily watering of all plants and lawns.
→ Special attention provided during summer to ensure that the green belt does not suffer from water shortage.
→ Development & maintenance of green belt to be considered as a priority issue.

→ No outside soil is brought for any building/ greenery developments.

Factory has provided green area of 372898.2 Sq.m. i.e about 34% of Total Plot Area. Total number of plant is about 25000 in factory premises. Proposed number of plants 20000 nos

Socio Economic Environment

- Health and safety related displays will be exhibited at strategic locations in the industry.
- Workers will be educated and trained in occupational health safety.
- Regular health checkup of the workers will be carried out and health records of individual workers will be maintained.
- Utility rooms provided will be provided with facilities and properly maintained.
- First aid facilities will be provided at different locations. Further first aiders will be trained.
- CSR activities will be implemented

1.8 Environment Monitoring

Environment monitoring is prescribed during pre-construction, construction and operation phase. During operation phase of project it is important to understand the baseline environment status which is caused due to proposed project activity. Environmental monitoring will comply Air, Water, Soil, Ecology, and Noise parameters as per monitoring compliance norms and schedule. All parameters will be tested as per standard tools and methods and obtained results should be compared with CPCB norms.

1.9 Corporate Environment Responsibility (CER)

As per New Office Memorandum Published by MOEF &CC, New Delhi on 1st May 2018 regarding applicability of CER and Budget to the decided towards CER activities.

The total project cost is Rs. 22248 lakhs. 1.0% of the total cost it becomes Rs.222 lakhs approx. Hence we have dedicated Rs 222 lakh for Corporate Environment Responsibility (CER) activities to be carried out in surrounding villages based on need assessment.

1.10 Cost for Environment Management Plan

Cost of Environmental Protection Measures

S. No.	Environmental Aspect	Capital Expenditure Rs in lakh	Recurring Expenditure Rs in lakh.(per annum)
1	Air Emission control		
	Stack – Cogeneration boiler	90.00	5.0
	Stack – distillery boiler	75.00	5.0
	ESP	220	10.0
	CO2 Plant	200	5.0
2	Water & Wastewater management		
	Effluent treatment plant upgradtion	200.0	
	MEE	515	10.0
	Condensate Polishing Unit (CPU)	350	10.0
3	Ash handling system	90.00	5.0
4	Green Belt Development	-	5.0
5	Environment Monitoring (stack, Ambient Air, Water and Soil and Noise) and meteorology	-	5.0
7	Rain Water Harvesting	25	2.0
9	Health & Safety	5	1.0
10	Online Monitoring System	15	2.0
	Total	1785	65.00