

<p style="text-align: center;">AAYAN MULTITRADE L.L.P. (UNIT-1)</p>	<p>Draft Environmental Impact Assessment (EIA) Report for Proposed expansion of existing molasses based distillery unit from 100 KLPD to 700 KLPD (expansion by 600 KLPD) by using Syrup/ “B” &amp; “C” Heavy Molasses and Sugar unit from 10,000 TCD to 15,000 TCD (expansion by 5,000 TCD) along with Co-generation Power Plant expansion from 35 MW to 84 MW (expansion by 49 MW) at village Korit and Samsherpur, Taluka and District Nandurbar, Maharashtra</p> <p style="text-align: right;"><b>EXECUTIVE SUMMARY</b></p>
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## **EXECUTIVE SUMMARY**

### **1.0 Introduction**

Aayan Multitrade L.L.P. (Unit-1) is a Limited Liability Partnership Firm incorporated under section 12(1) of the L.L.P. Act, 2008 dated 15<sup>th</sup> December, 2015 and its identification Number is AAF-3320.

Currently, industry has a setup of 10,000 TCD Sugarcane crushing unit, 100 KLPD Molasses based Distillery and 35 MW Co-generation power plant, now management of the industry has decided to expand the plant by 5000 TCD sugar unit, 600 KLPD distillery unit by using Syrup/ “B” & “C” Heavy Molasses & 49 MW Co-generation power plant.

### **2.0 Project Location**

The proposed expansion activity will be carried out on industry’s own land on Survey No. 105, 106, 107/1, 107/2, 108, 109, 110, 111, 112, 113, 234, 235/1, 235/2, 236/1, 236/2, 236/3, 236/4, 237, 238, 239/1/A, 239/1/B, 239/2 of Korit village and 239, 240/1/A, 240/1/B, 240/1/C/2 of Samsherpur village, Taluka and District Nandurbar, Maharashtra.

As per geographical co-ordinates of the project site, the proposed expansion activity is covered under SOI toposheet No. 46K/7, while the study area of the project (10 km radius) is falling under SOI toposheet No: 46K/2, 47K/3, 46K/6 & 46K/7. The project is located at elevation of 156 meters above mean sea level (AMSL).

### **3.0 Project Description**

During the crushing season, i.e. 180 days. The company will operate a distillery with a production rate of 700 KLPD using sugarcane syrup as the primary raw material; during the off-season, i.e. 150 days distillery will be under operation with 200 KLPD using molasses as raw material.

Industry has existing 10,000 TCD sugar plant and proposes to expand by 5000 TCD and capacity of existing co-generation power plant is 35 MW and proposes to install 49 MW Co-generation power plant to fulfil the additional power requirement of the unit after expansion activity.

As per EIA Notification which is published by MoEF&CC vide S.O. 1533 dated 14<sup>th</sup> September 2006 and its amendment till date; the proposed expansion activity is falling under schedule 5(j) & 5(g) and 1(d) to be appraised at central level as category ‘A’ project.

The salient features of the proposed project are presented in **Table No. 1**.

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**Table 1 : Salient Features of Project**

Sr. No.	Component	Details		
1	<b>Name &amp; Address of Industry</b>	Aayan Multitrade L.L.P. (Unit-1) Survey No. 105, 106, 107/1, 107/2,108,109,110,111, 112,113,234,235/1,235/2,236/1,236/2,236/3,236/4, 237, 238, 239/1/A, 239/1/B, 239/2 of Korit village and 239, 240/1/A, 240/1/B, 240/1/C/2 of Samsherpur village, Taluka and District Nandurbar, Maharashtra, India.		
2	<b>Project Type</b>	Proposed expansion of existing molasses based distillery unit from 100 KLPD to 700 KLPD (expansion by 600 KLPD) by using Syrup/ "B" & "C" Heavy Molasses and Sugar unit from 10,000 TCD to 15,000 TCD (expansion by 5,000 TCD) along with Co-generation Power Plant expansion from 35 MW to 84 MW (expansion by 49 MW)		
3	<b>Project Type</b>	Expansion		
4	<b>Schedule of project as per EIA Notification, 2006 &amp; further amendments till date</b>	5 (j) 5 (g) 1 (d)		
5	<b>Category of Project</b>	'A' Category Project		
6	<b>Plot Area Details</b>			
	<b>Particulars</b>	<b>Area in Sq. m.</b>	<b>% of Total Plot Area</b>	
a	Green Belt	2,29,110	35% of total plot area	
b	Parking Area	98,190	15% of total plot area	
c	Total Built-up Area (Ground Coverage)	1,51,999	23.22% of total plot area	
d	Area Under Internal Roads	79,402	12.13% of total plot area	
e	Open Space	95,899	14.65% of total plot area	
	<b>Total Plot Area</b>	<b>6,54,600</b>	<b>100%</b>	
7	<b>Production Details</b>			
	<b>Name of Product</b>	<b>Existing</b>	<b>Proposed</b>	<b>Total after expansion</b>
	<b>Main Product</b>			
a	Rectified Spirit/ Extra Neutral Alcohol/ Ethanol	100 KLPD	600 KLPD	700 KLPD
b	Sugar	33,000 Ton/M	-20,741.34	12,258.66 Ton/M

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			Ton/M	
c	Power (Co-generation Power Plant)	35 MW (18 MW, 14 MW, 3 MW)	49 MW	84 MW (Generation : 82 MW, out of it, In- house use : 31.11 MW Sell to grid : 50.89 MW)
<b>By-product</b>				
a	Fusel Oil	0.19 KL/Day	1.14 KL/Day	1.33 KL/Day
b	CO <sub>2</sub> Gas	75 Ton/Day	453.29 Ton/Day	528.29 Ton/Day
c	Bagasse	96,000 Ton/M	30,000 Ton/M	1,26,000 Ton/M
d	Press Mud	12,000 Ton/M	3750 Ton/M	15,750 Ton/M
e	Molasses	14,250 Ton/M	-7,164.066 Ton/M	7,085.93 Ton/M
f1	Spent Wash Powder during Syrup based production (180 Days)	(Spent wash was being concentrated in MEE followed by incineration)	80.35 TPD	80.35 TPD
f2	Spent Wash Powder during B-Molasses based production (100 Days)		0.18 TPD	0.18 TPD
f3	Spent Wash Powder during C-Molasses based production (50 Days)		94.02 TPD	94.02 TPD
<b>8 Budgetary Estimation</b>				
a	Project Cost (INR)	389.5816 Cr (INR)	433.307 Cr (INR)	822.89 Cr (INR)
b1	EMP Capital Cost (INR)	38.88 Cr (INR)	65.322 Cr (INR)	104.202 Cr (INR)
b2	EMP Recurring Cost (INR)	7.648 Cr (INR)		
9	Operation Days	Sugar Unit: 180 Days Distillery Unit: 330 Days (Syrup Based: 180 Days for 700 KLPD, B-Molasses based: 100 days for 200 KLPD, C-Molasses based: 50 days for 200 KLPD)		
<b>10 Power Requirement</b>				
a	Power required	10 MW	21.11 MW	31.11 MW

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b	Source	3.0 MW, 14 MW & 18 MW TG sets Total : 35 MW	49 MW TG set	84 MW TG Sets (total)
<b>Fuel Requirement</b>				
<b>During Season</b>				
a1	Coal (as auxiliary Fuel)	8.675 Ton/Day	8.675 Ton/Day	17.35 Ton/Day
b1	Bagasse	1667.48 Ton/Day	1445.04 Ton/Day	3112.52 Ton/Day
c1	Spent Wash	103.5 Ton/Day	103.5 Ton/Day	207 Ton/Day
<b>During Off-Season</b>				
a2	Coal (as auxiliary Fuel)	8.675 Ton/Day	8.675 Ton/Day	17.35 Ton/Day
b2	Bagasse	35.48 Ton/Day	765.6 Ton/Day	801.08 Ton/Day
c2	Spent Wash	103.5 Ton/Day	103.5 Ton/Day	207 Ton/Day
d	HSD	242 Lit/Hr	134.8 Lit/Hr	376.8 Lit/Hr
<b>Diesel Generator (D.G.) Details</b>				
12	Capacity & No.	2 X 1010 kVA	1 X 1010 kVA	3 X 1010 kVA
<b>Boiler Details</b>				
13	Boiler Details	1 x 28 TPH 1 x 160 TPH	1 x 200 TPH	1 x 28 TPH 1 x 160 TPH 1 x 200 TPH
<b>Stack Details</b>				
14	Boiler Stack Details (from ground level)	1 x 28 TPH : 72 meter height stack has provided (APCD- ESP)  1 x 160 TPH : 82 meter height stack has provided (APCD- ESP)	1 x 200 TPH : 85 meter (APCD: ESP)	1 x 28 TPH : 72 meter height stack has provided (APCD- ESP)  1 x 160 TPH : 82 meter height stack has provided (APCD- ESP)  1 x 200 TPH : 85 meter (APCD: ESP)
c	D.G. Set	Common stack of 6.5 meters above roof	6.5 meters above roof	2 x 6.5 meters (above roof)

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15	Man Power (Nos.)	--	Construction Phase - 100	Construction Phase - 100
		Operation Phase: Skilled -150 Unskilled -227 Total: 377	Operation Phase : Skilled - 60 Unskilled -73 Total: 133	Operation Phase : Skilled - 210 Unskilled - 300 Total - 510
16	<b>Water Requirement</b>			
	<b>Particular</b>	<b>Quantity</b>		
	Water requirement Quantity & its Source	<p>For 15000 TCD Sugar unit &amp; 84 MW Co-generation Power Plant  1<sup>st</sup> Cycle: 20636.28 KLD  2<sup>nd</sup> Cycle : 0 KLD</p> <p>During Syrup based production (700 KLPD):  1<sup>st</sup> Cycle: 7258.07 KLD (Distillery Operation)  2<sup>nd</sup> Cycle: 0 KLD (0 KL/KL)</p> <p>During B-Molasses based production (200 KLPD):  1<sup>st</sup> Cycle: 2357.13 KLD (Distillery Operation)  2<sup>nd</sup> Cycle: 400.3 KLD (2.0 KL/KL) (Distillery Operation)</p> <p>During C-Molasses based production (200 KLPD):  1<sup>st</sup> Cycle: 2573.67 KLD (Distillery Operation)  2<sup>nd</sup> Cycle: 497.44 KLD (2.487 KL/KL)</p> <p style="text-align: center;"><b>Domestic + Greenbelt: 1015.87 KLD</b>  <i>(Treated effluent from ETP &amp; STP will be used for flushing purpose &amp; greenbelt, hence freshwater requirement will be reduced)</i>  Source- Surface water, Tapi River</p>		
17	<b>Effluent Load on ETP &amp; CPU &amp; STP</b>			
	<b>Particulars</b>	<b>Quantity (m<sup>3</sup>/day)</b>		
a	Effluent in Sugar Unit & Co-generation power plant ETP	During Season (Sugar & Syrup Based Production) 2021.13 KLD During Off-season (B & C Molasses Based Production) 303 KLD		
b	Effluent in Sugar Unit CPU	4825.6 KLD		
c	Effluent in Distillery Unit CPU	During Syrup based production (700 KLPD): 5407.74 KLD During B-Molasses based production (200 KLPD): 1547.18 KLD		

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		During C-Molasses based production (200 KLPD): 1670.24 KLD			
d	Sewage in STP	140.36 KLD (During Season & Off-season)			
18	<b>Capacity &amp; Treatment Scheme</b>				
a	MEE & CPU Capacity & Effluent Treatment Scheme	ETP Capacity (Sugar Unit) : existing 1500 KLD capacity will be enhanced to 2023 KLD CPU Capacity (Sugar Unit) : existing 2000 KLD capacity will be enhanced to 5000 KLD CPU (PCTP plant) Capacity (Distillery Unit): existing 1800 KLD capacity will be enhanced to 5500 KLD MEE + Spent Wash dryer: existing MEE of 1800 KLD capacity will be enhanced to 4000 KLD & spent wash dryer will be installed STP Capacity: 150 KLD			
19	<b>Details of Hazardous Wastes</b>				
<b>Sr. No.</b>	<b>Particulars</b>	<b>Category*</b>	<b>UOM</b>	<b>Quantity</b>	<b>Method of Disposal/Management</b>
a	Used/Spent Oil	5.1	KL/A	12	Disposal through SPCB authorised recycler
*Schedule I of The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.					
20	<b>Details of Non-Hazardous Solid Wastes</b>				
<b>SN</b>	<b>Particulars</b>	<b>Category*</b>	<b>UOM</b>	<b>Quantity</b>	<b>Method of Disposal/Management</b>
a.	Boiler Ash	-	Ton/M	730.035	For in-house brick manufacturing
b.	Yeast Sludge	-	Ton/M	341	Will be used as Manure
c.	Sludge from Waste water treatment	-	Ton/M	85.05	Will be used as Manure
d.	Potash Rich Ash	-	Ton/M	428.75	Will be used as Manure

#### 4.0 Description of the Environment

Primary baseline environmental monitoring studies in 10 km radius study area were conducted through NABL approved laboratory – **Eurofine Enviro Lab Pvt. Ltd.** during **March 2024 – May 2024.**

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#### 4.1 Topography, Land use & its Classification

The elevation of the region varies from 29 m to 154 m. The physical setting of study area shows a relatively regular pattern with patches of higher elevations as well as lower elevations. Patches in the Southern region shows a relatively higher elevation feature. A portion extending from WNW to ESE shows a slightly lower elevation region. This region is occupied by Tapi River. This elevation pattern also affects the drainage pattern of the region. The region is occupied by Rivers & Talavs. The area shows a variation of approximately 18 m-70 m from North East to South West and approximately 17 m-42 m from North West to South East. Overall, there are some variations with respect to relief features.

**Land Use:** Total four major land use/land cover classes were demarcated in the study area following Level I classification, furthermore level II & level III classification were also adopted as per the requirement of **MoEF & CC** in the study area. A thematic map of 1:50,000 scale was generated incorporating these classified categories considering the area of the project.

#### CORE LAND USE:

Of the 6 LU/LC classes as per NRSA-TR-LU & CD-01-90 the 10 Km radius study area has presence of mainly 4 LU/LC classes as shown in Table 2 and Figure 4 of which the Barren Land covers the highest amount of Land (58.56% & 18,604 Ha), followed by Agricultural Land (9,338 Ha & 29.39 %) which is constituted by Crop Land, followed by Built-Up Land (2,697 Ha & 8.49 %) and finally by Waterbodies (1,130 Ha & 3.56 %). There are no regions with respect to Land Cover which are classified under Forest (Vegetation) & others. It is also observed that the study area is well connected to roads, but not railway lines. The roads present are State Highway-80 & Ankleshwar-Burhanpur Highway.

**Table 2: LU/LC and Its Coverage within 10 Km Radius**

Level – I		Level – II	Level –III	Area (Hectare)	Percentage (%)
1.	Built – up land	1.2 Built-up Rural	1.2.1 Built-up Rural	2,697	8.49
2.	Agricultural land	2.1 Crop land	2.1.1 Irrigated Crop Land	9,338	29.39
3.	Wastelands	3.1 Scrub Land	3.1.1 Open Scrub Land	18,604	58.56
4.	Water bodies	4.1 Rivers and Streams	4.1.1 Tapi River 4.1.2 Vaki Nadi 4.1.3 Multiple Nalas	1,130	3.56
5.	Other	-	-	-	-
				31,770	100

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#### 4.2 Soil Environment

In the district mainly three types of soils are observed i.e. course shallow soils, medium deep soils and deep black soils. The soils of the district are basically derived from Deccan Trap Basalt to the south of Tapi River. North of Tapi River the soils are from Deccan 6 Trap Basalt as well as from alluvial formations. The northern part of the district has dark brown to yellowish brown coarse shallow to medium deep soils, with clayey loamy deep soils of Tapi River and Narmada River valley to its south and north respectively.

#### 4.3 Air Environment

Ambient Air quality for criteria pollutants viz. PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub> and CO was monitored at ten (10) locations in study area.

##### Particulate Matter (PM<sub>10</sub>)

The study reveals that maximum concentration was observed in the range of 46.50-64.00 µg/m<sup>3</sup>. The highest 24-hourly concentration was recorded at sampling location A1. At the same time minimum concentration was observed in the range of 36.80 to 49.40. The average concentration of PM<sub>10</sub> ranged between 41.85 to 55.92 µg/m<sup>3</sup>. The highest average concentration of particulate matter PM<sub>10</sub> recorded at project site (A1) due to operation of Distillery unit. It should be noted that the concentration of PM<sub>10</sub> was not observed to be exceeding the standards prescribed by the CPCB.

##### Particulate Matter (PM<sub>2.5</sub>)

The major source of PM<sub>2.5</sub> is said to be the combustion of fossil fuels and industrial emissions etc, present within study area. The maximum of PM<sub>2.5</sub> (37.60 µg/m<sup>3</sup>) during the study period was recorded at location A1, whereas the minimum value (16.40 µg/m<sup>3</sup>) concentration was recorded at A10 location. The average concentration of PM<sub>2.5</sub> during the study period was computed to be in the range of 20.25 to 29.51 µg/m<sup>3</sup>.

##### Sulphur Dioxide (SO<sub>x</sub>)

High level of SO<sub>x</sub> in ambient air indicates the presence of combustion of fossil fuel in the vicinity. The ambient air monitoring results indicate that the highest concentration of SO<sub>x</sub> is experienced at A1 (25.50 µg/m<sup>3</sup>) whereas minimum concentration was recorded at A7 (8.90 µg/m<sup>3</sup>). The presence of NH 752G road and industry is the principal source of emission for SO<sub>x</sub>. The average concentration of SO<sub>x</sub> recorded during the study period ranged between 11.73 to 19.78 µg/m<sup>3</sup>.



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### **Oxides of Nitrogen (NO<sub>x</sub>)**

The various forms of Nitrogen in NO, NO<sub>2</sub> and N<sub>2</sub>O are collectively called as Oxides of Nitrogen. The maximum 24 hourly value of NO<sub>x</sub> was recorded at the monitoring location A4 (30.50 µg/m<sup>3</sup>) due to the vehicular activity, whereas the minimum was recorded at A7 (13.20 µg/m<sup>3</sup>). The average concentrations were in the range of 16.50 to 25.09 µg/m<sup>3</sup>.

### **Carbon Monoxide (CO)**

The anthropogenic source of CO is due to incomplete combustion of fuel majorly in absence of air. The maximum concentration of CO observed during the study period at A1 (1.20 ug/m<sup>3</sup>), whereas minimum was observed at A7 and A10 (0.02 ug/m<sup>3</sup>).

### **Additional Parameters**

From the monitoring results of additional parameters, it is evident that Lead, Benzene, Benzo (a) pyrene, Arsenic, Nickel and VOC's were below detection limit and maximum concentration of Ammonia was 11.5 µg/m<sup>3</sup> and minimum was 6.6 µg/m<sup>3</sup>. The maximum concentration of Ozone (O<sub>3</sub>) was 18.0 µg/m<sup>3</sup> and minimum was 10.2 µg/m<sup>3</sup>.

Thus, it is concluded that the concentration of additional parameters at project was also within the prescribed NAAQS, 2009.

### **4.4 Noise Environment**

Ambient noise levels were monitored at eight (8) locations in the study area during the study period.

#### **Industrial Zone**

The day time noise level at the project premises was observed 62.25 dB (A) while during night time the noise level was recorded 51.85 dB (A). It should be noted that the noise levels during the day time as well as night time were estimated to be under the prescribed standards by CPCB.

#### **Residential Zone**

The minimum noise level was recorded during the day time at location N7, whereas the maximum noise level was observed at location N6. The location N6 is well populated in the surroundings. It shall be noted that the permissible limits for noise did not exceed at any of the locations selected for sampling.

### **4.5 Ground Water Environment**

The results revealed that concentrations of various parameters amongst all the samples were in the range of pH – 7.66 to 7.89, TDS – 502.6 to 602.3 mg/l, Sulphates –79.9 to 91.5 mg/l, Total Hardness –196.8 to 232.6 mg/l, Nitrate – 25.6 to 38.6 mg/l, Bicarbonate -83.5 to 96.5 mg/l,

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Calcium – 51.3 to 63.5 mg/l, Sodium – 70.6 to 91.5 mg/l, Potassium 22.5 to 34.3 mg/l, Magnesium – 17.3 to 24.1 mg/l, COD - <5.0 mg/l, BOD - <1.0 mg/l, whereas concentrations of Arsenic, Lead were <0.01 mg/l and Cadmium- <0.001, Iron-<0.05 to 0.91, Chromium-<0.05, Mercury as Hg-<0.001, Nickel-<0.01 & Zinc-<0.05. Total Coliforms & E. Coli-<2 No/100 ml in all samples.

Observations during ground water sampling revealed that any of the sampled ground water sources were not subjected to releases, domestic activities like bathing, cattle washing etc. However as evidenced during sampling & field visits the study area was subjected to tremendous agricultural runoff which may be attributed to found concentrations of Nitrogen, Sulphates & Phosphates in ground water. Further to assess the prevailing quality of ground water in study area, the analysis results are compared with the IS 10500 : 2012 viz. Drinking Water Standards by Bureau of Indian Standards which revealed that parameters viz. pH, Chlorides, Sulphates, Nitrate, Arsenic, Calcium, Cadmium, Lead, Chromium, Mercury, Nickel, Zinc, Fluorides, Total Coliforms and E. Coli were within acceptable concentration whereas TDS of all samples is beyond the acceptable concentration but it was within permissible limit in the absence of alternate source and Ammonical Nitrogen, Iron and total hardness were within permissible concentrations, However though the concentrations of COD, BOD, Sodium, Potassium & Phosphates being not specified in standards based on the specified standards it can be interpreted that prevailing ground water in study area is fit for human consumption use, thus it can be concluded that the prevailing ground water in study area is by & large not polluted.

#### **4.6 Surface Water Environment**

Surface water samples were derived from 4 locations of upstream and downstream of Tapi River and one more near to village Praksha and remaining location is on Gomati River within the study area. Analysis results of the same revealed that pH values amongst all samples varied in the range of 7.45 to 7.52, Total Hardness concentration varied in the range of 372.6 mg/l to 462.2 mg/l & maximum concentration was recorded at SW1, TDS concentration varied in the range of 321.6 to 406.3 mg/l whereas maximum concentration was recorded at SW3 & minimum concentration was recorded at SW4. Electrical Conductivity was found in the range 572.6 to 711.2 µS/cm. The concentrations of Dissolved Oxygen in the range of 4.2 to 5.4 mg/lit, The concentration of BOD in the range of 3 to 11 mg/lit & COD were found in the range of 8 to 32 mg/l whereas the concentrations of Phosphates, Nitrite & Ammonical Nitrogen varied in the range of 1.56 to 2.18 mg/l, <0.01 mg/l and 0.26 to 0.48 mg/lit respectively.

Concentrations of elements such as Calcium, Sodium & Potassium were found in the range of 36.5 to 44.5 mg/l, 43.5 to 55.3 mg/l & 19.8 to 24.3 mg/l respectively.

AAYAN MULTITRADE L.L.P. (UNIT-1)	Draft Environmental Impact Assessment (EIA) Report for Proposed expansion of existing molasses based distillery unit from 100 KLPD to 700 KLPD (expansion by 600 KLPD) by using Syrup/ "B" & "C" Heavy Molasses and Sugar unit from 10,000 TCD to 15,000 TCD (expansion by 5,000 TCD) along with Co-generation Power Plant expansion from 35 MW to 84 MW (expansion by 49 MW) at village Korit and Samsherpur, Taluka and District Nandurbar, Maharashtra.
	<b>EXECUTIVE SUMMARY</b>

Heavy metals viz. Lead <0.01 mg/lit, Chromium <0.05 mg/lit, Mercury <0.001 mg/lit, Cadmium <0.001 mg/lit, Arsenic <0.01 mg/lit & Nickel <0.01 mg/lit were below detection limits in all samples.

To ascertain the best suited use of sampled surface water bodies, the analysis results were compared with the Designated Best Use Water Quality Criteria & the analysis revealed that sampled surface water bodies i.e. SW1 to SW4 water body suited for Class "E" Water i.e. Irrigation, Industrial Cooling, Controlled Waste disposal.

#### **4.7 Biotic Environment**

Based on field survey, total 160 plants species have been recorded, out of which 66 Tree species, 22 Shrubs species and 55 Herbs and 17 Climber species are identified in entire study area. Total 15 species of odonates, 6 species of bugs and 7 species of beetles have been reported during entire field visit from different habitats on project site. 29 species of butterflies found during the field survey which shows greater diversity of butterflies. 62 bird species were recorded in the study area, most of them around the water bodies and grassland. Among the amphibians and reptiles, 3 were common amphibians and 8 were reptiles. Mammals observed during field survey were 10 species which are mostly common, no threatened taxa have been reported from proposed project site.

#### **4.8 Socio-Economic Environment**

**Table 3: Summary of Socio-Economic Aspects**

<b>Demographic Parameters</b>	<b>Details</b>
No. of States	2
No. of District	3
No. of Tehsil	5
No. of Villages	72
Total No. of Households	25,095
Total Population	1,24,170
Child Population	16,518
Scheduled Castes	5,532
Scheduled Tribes	68,979
Literacy	Average (62.47%)

## 5.0 Anticipated Environmental Impacts and Mitigation Measures

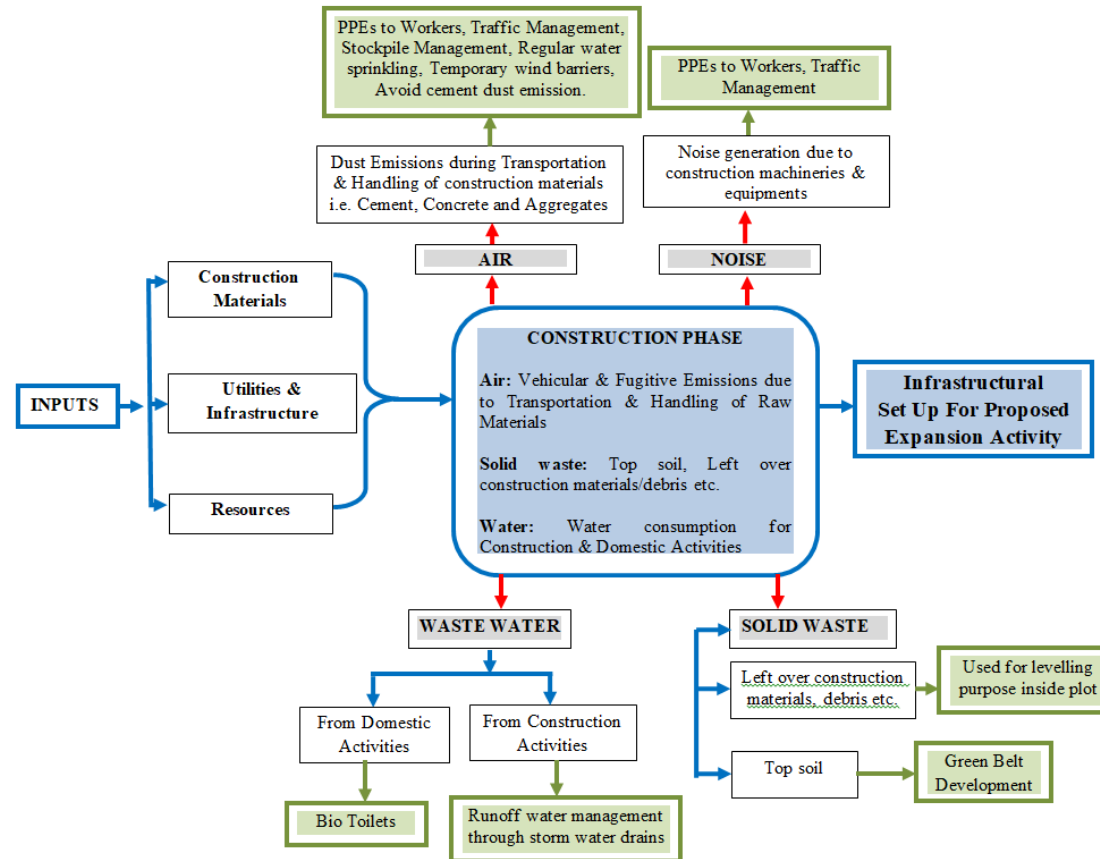
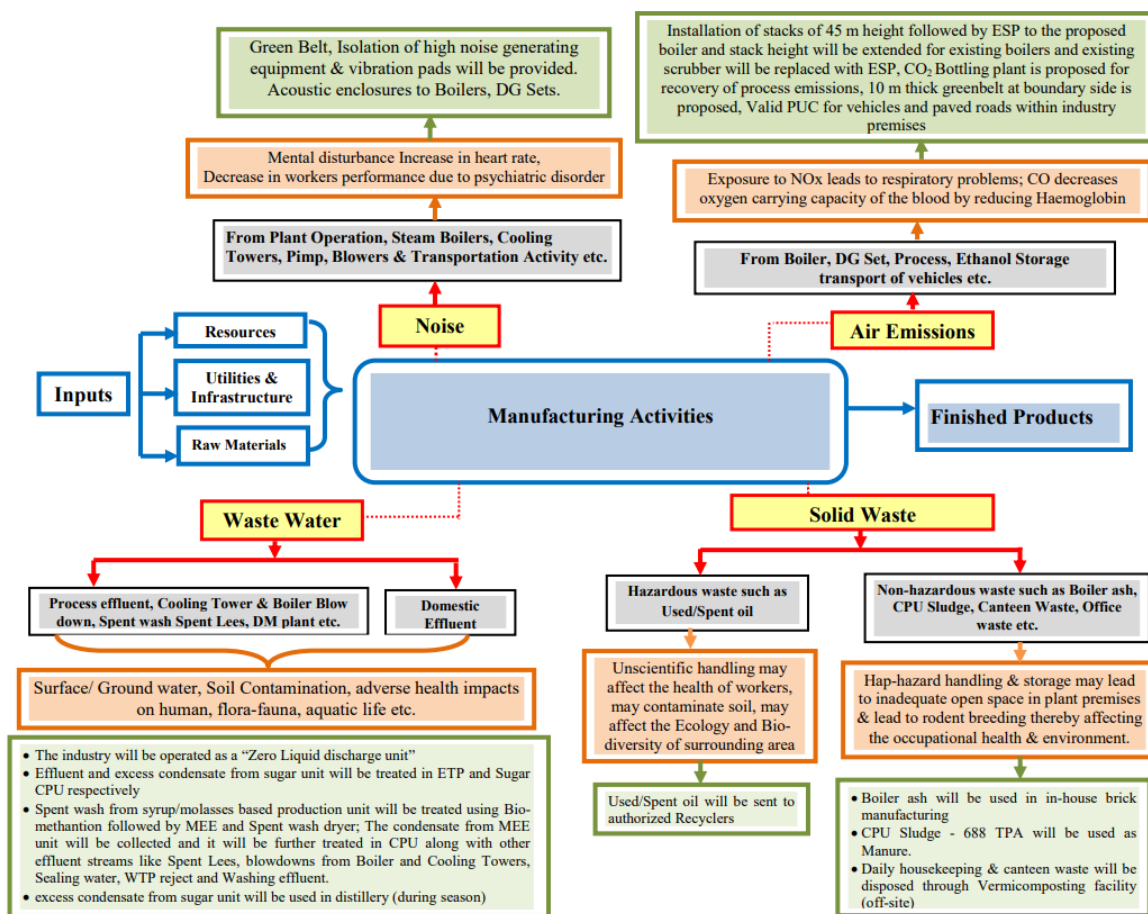


Figure 1A: Impact and Mitigation Measures during Construction Phase



**Figure 1B: Impact and Mitigation Measures during Operation Phase**

<p style="text-align: center;">AAYAN MULTITRADE L.L.P. (UNIT-1)</p>	<p>Draft Environmental Impact Assessment (EIA) Report for Proposed expansion of existing molasses based distillery unit from 100 KLPD to 700 KLPD (expansion by 600 KLPD) by using Syrup/ "B" &amp; "C" Heavy Molasses and Sugar unit from 10,000 TCD to 15,000 TCD (expansion by 5,000 TCD) along with Co-generation Power Plant expansion from 35 MW to 84 MW (expansion by 49 MW) at village Korit and Samsherpur, Taluka and District Nandurbar, Maharashtra.</p>
<p><b>EXECUTIVE SUMMARY</b></p>	

## 6.0 Quantitative Risk Assessment and Mitigation Measures

Quantitative Risks for the proposed project have been assessed based on ALOHA for tank storage.

Based on the unsafe distances plotted in ALOHA software output, the MCLS (Maximum Credible Loss Scenario) for the proposed expansion plant is identified for Ethanol & the anticipated effect distance is 134 m from Ethanol PESO area in factory premises and passing village road adjacent to industry.

The scenario considered for assessing the impact by quantitative risk assessment was taken from Thermal radiation from pool fire (Puddle source-liquid in all tanks considered).

## 7.0 Disaster Management Plan

The Disaster Management Plan will be implemented in consultation with the District Administration to ensure health and safety during untoward incidents.

In view of handling of processes in the industry, On-site Emergency Plans are essential and hence has been prepared for the industry. Additionally, recommendations for and Off-site shall be provided to the District Administration. During the operational phase, the surrounding population shall be made aware of safety precautions to be taken in case of any emergency due to the overall project activity.

## 8.0 Occupational Safety & Health Management

The Project Proponent shall continue to strictly adhere to the rules of the Factories Act 1948 & the Maharashtra Factories Rules, 1963 regarding the occupational health facilities to be provided to the company's workers.

- The industry will provide decontamination facilities for the workers. The health records of the workers will be maintained.
- For continuous development, the company will continue to train & educate the operators and workers on the environment, health & safety rules & regulations, procedures and measures.
- Periodic medical check-ups will be carried out to ensure the health status of all workers.
- Job rotation will be done.

## 9.0 Post-Project Environmental Monitoring Plan

Post-project environmental status will be evaluated as per the Environmental Monitoring Plan framed in EIA along with additional parameters suggested if any Statutory Clearances/Permissions and frequency of environmental attributes, including monitoring locations, will be as per the guidelines provided by MoEF&CC/CPCB/MPCB. Monitoring has been carried out by third-party laboratories that NABL and/or MoEF&CC accredit.

<p style="text-align: center;">AAYAN MULTITRADE L.L.P. (UNIT-1)</p>	<p>Draft Environmental Impact Assessment (EIA) Report for Proposed expansion of existing molasses based distillery unit from 100 KLPD to 700 KLPD (expansion by 600 KLPD) by using Syrup/ “B” &amp; “C” Heavy Molasses and Sugar unit from 10,000 TCD to 15,000 TCD (expansion by 5,000 TCD) along with Co-generation Power Plant expansion from 35 MW to 84 MW (expansion by 49 MW) at village Korit and Samsherpur, Taluka and District Nandurbar, Maharashtra.</p>
<p><b>EXECUTIVE SUMMARY</b></p>	

## 10.0 Environmental Management Plan

Conduction of Environmental monitoring program as per plan, periodic reviews & audits will be carried out for effective environmental management. Project Management and the EHS department will ensure the overall effective implementation of the management plan.

Systems will be in place to ensure compliance of all environmental statutory requirements & obligations and it will be ensured.

All recommendations given in the EIA report, including occupational health, risk mitigation and safety, shall be complied. In addition, the company have allocated Indian Rs 65.322 Cr for environmental pollution control measures & environment management plan activities of proposed activity, which is ~15 % of the proposed project cost.

## 11.0 Project Benefits

The following benefits are expected from the proposed project:

- This project will have local specific positive social and economic benefits.
- Some of these would be direct benefits of long term nature.
- The project will generate revenue for the State Government.
- The project will create additional direct/indirect employment at various downstream & upstream ends and largely for local people.
- Local people will be preferred for employment during the construction and operation stage.

## 12.0 Corporate Environment Responsibility (CER) Action Plan

Ideally CER planning is for need based assistance in health, education, sustainable lifestyles, social mobilization, infrastructure, water harvesting, agriculture and environmental protection taking into consideration local specific scenarios around the project area.

Industry will carry out its duties under Corporate Environment Responsibility (CER) as per the MoEF&CC Office Memorandum - F.No.22-65/2017-IA.III dated 30<sup>th</sup> September 2020, by virtue of which the CER activities will be implemented as part of Environment Management Plan. The proposed CER activities will be carried out in consultation with the District Collector and the same shall be completed within three (3) years or by the end of construction phase, whichever is earlier.

CER cost of 0.75% of proposed project cost viz. 3.249 Cr is allocated for implementation of need based CER activities in project area.