

**Executive Summary of Environmental Impact Assessment  
(Draft EIA) Report**

**For**

**Proposed 5 KLPD Mahua Flower-Based Distillery for  
Manufacturing of Potable Alcohol along with Liquor  
Bottling and Sealing Unit with capacity of 7500 cases per  
day.**

**By**

**M/S.MAHUNZA WINERY PRIVATE  
LIMITED**

**At**

**Gat no: 1/1B, Chulwad Village, Taluka- Akarani, District-  
Nandurbar, State- Maharashtra.**

**Environmental Consultant**

**Element Consultancy Services, Pune, Maharashtra**

**QCI-NABET Accredited Organization**

## **EXECUTIVE SUMMARY**

### **1.0 Introduction**

**M/s. Mahunza Winery Private Limited** proposed establishment of 5 KLPD Mahua flower Based Distillery, for manufacturing of Potable Alcohol along with Liquor Bottling and Sealing Unit with Capacity of 7500 cases per day.

M/s. Mahunza Winery Private Limited is a registered company incorporated as company limited on 15.07.2022 with Corporate Identity Number – U15520MH2022PTC386850.

### **2.0 Project Location**

The proposed project would be located at Gut no: 1/1B, At. Chulwad Village, Taluka: Akarani, District: Nandurbar, State Maharashtra.

As per geographical co-ordinates of the project site, the proposed activity is while the study area of the project (10 km radius) is falling under Survey of India topo sheet no's F4301\_46K1, F4302\_46K2, F4305\_46K5 and F4306\_46K6. The project is located at elevation of 427 meters above mean sea level (AMSL).

### **3.0 Project Description**

As mentioned above, it is a new establishment project having capital investment of **Rs. 10 Crores**.

This project requires prior environmental clearance under schedule 5(g) of the Environment Impact Assessment Notification published by MoEF&CC vide S.O. 1533 dated 14th September, 2006 and its amendments till date. M/s. Mahunza Winery Private Limited will be appraised as Category B1 project, which mandates obtaining prior Environmental Clearance from State Expert Appraisal Committee (SEAC-1) and State Environment Impact Assessment Authority (SEIAA). As per Office Memorandum dated 04.04.2016, Public Hearing is applicable for this project.

M/s. Mahunza Winery Private Limited submitted a fresh Form-1 application on 01.02.2025 for the grant of Terms of Reference (ToR) to SEAC and SEIAA Maharashtra. Thereafter, proposal was considered in 295th SEAC-1 meeting dated 10.04.2025, and 298th SEIAA meeting dated 22.07.2025. Accordingly, industry has received ToR on 18.08.2025 vide reference number SIA/MH/IND2/521085/2025 for preparation of EIA report

**Table No. 2: Salient Features of Project**

Sr. No.	Component	Details	
1	Name & Address of Company	M/s. Mahunza Winery Private Limited, Address: Gut.no 1/1B At. Chulwad, Taluka. Akarani, District– Nandurbar, State- Maharashtra.	
2	Product Type	Potable Alcohol manufacturing unit using Mahua Flower (Mahua Flower-based Distillery).	
3	Project Type	New Project	
4	Schedule of project as per EIA Notification, 2006	5(g)	
5	Category of Project*	‘B1’	
6	Plot Area Details		
	Particulars	Area in Sq. m.	% of Total Plot Area
a	Built up	1234.02	17.38 % of total plot area
b	Greenbelt	2343.00	33 % of total plot area
c	Parking	710.00	10.00 % of total plot area
d	Internal Road	1883.39	26.52 % of total plot area
e	Open Space/Margin Space	929.59	13.09 % of total plot area
•	Total Plot Area	7100.00	100.00%
7	Production Details		
	Name of Product/ By-product		
1	Potable Alcohol	5 KLPD	
	By-products		
1	CO <sub>2</sub> Gas	2374 kg/day	
8	Budgetary Estimation		
a	Project Cost (Indian Rs.)	Rs. 10 Crores (INR)	
b	EMP Cost (Indian Rs.)	Capital: 3.2077 Crore, Recurring/Annum: 0.5269 Crore	
9	Power Requirement		
a	Proposed requirement	1000 kVA	
b	Source	MSDCL	
10	Fuel Requirement		
	Fuel	During availability of bagasse	During unavailability of bagasse
a	Bagasse	8780.48 Kg/Day	--
b	HSD (D.G. Set)	155.5 lit./hr.	

Sr. No.	Component	Details			
11	Diesel Generator (D.G.) Details				
	Capacity & No.	1 x 750 kVA			
12	Boiler Details				
a	Boiler	5 TPH			
13	Stack Details				
a	Boiler	Stack of 30 m height is proposed APCD: Back filter & Wet Scrubber			
b	D.G.	Stack of 2 m height is proposed			
15	Man Power	Skilled: 6 Unskilled: 4 Total: 10			
16	Water Requirement				
	Particular	Quantity (m <sup>3</sup> /day)			
	Water requirement quantity & its source	1st cycle: 87.45KL/Day. 2nd cycle: 15.39 KL/Day. Source- Ground Water			
17	Effluent Generation & Recycle Details				
	Effluent	Domestic sewage @ 0.45 CMD from proposed Mahua flower based distillery shall be treated in Septic tank followed by Soak Pit.  Effluent from Mahua flower based Distillery: 32.65 CMD Spentwash will be treated in ETP and other effluents will be treated in proposed ETP.  Zero effluent is generated from industrial activities as the water used for cooling is re-circulated back into the process. Industry shall be adopting <b>Zero Liquid Discharge</b> as no any effluent will be discharged outside industrial premises.			
18	ETP Capacity				
a	ETP	40 CMD			
19	Details of Hazardous Wastes				
Sr. No.	Particulars	Category*	UOM	Quantity	Method of Disposal/Management
1.	Used Oil/Spent Oil	5.1	KL/A	0.23	Disposal through MPCB authorised recycler
20	Details of Non-Hazardous Wastes				
1.	Spent Mahua	--	MT/D	11	Sell as Cattle feed
2.	Boiler Ash	--	MT/D	0.129	Inhouse Brick manufacturing unit
3.	Organic fertilizer ( ETP Sludge)	--	MT/D	0.0865	Sold or used as manure

Sr. No.	Component	Details				
4.	Broken glass	--	Kg/M	1.3	Sold to recyclers	
5.	Dry Waste	--	Kg/Day	23.55	Sale to authorized vendor	
6.	Wet Waste	--	Kg/Day	17.7	Used as manure	
	*Schedule I of The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.					
21	Details of E-Waste Wastes					
Sr. No.	Category*	Schedule	Electrical & Electronic Equipment Code	Nos.	Quantity Kg/Yr.	Method of Disposal/Management
1.	Personal Computing: Personal Computers (Central Processing unit with input and output devices)	Schedule – IIB	ITEW2	1	12	Sale to authorised recycler by CPCB
2.	Personal Computing: Laptop Computers (Central Processing unit with input and output devices)	Schedule – IIB	ITEW3	1	3	
3.	Printers including cartridges	Schedule – IIB	ITEW6	2	7	
4.	Telephones	Schedule – IIB	ITEW12	3	2.8	
5.	Cordless telephones	Schedule – IIB	ITEW14	3	1.850	
6.	Inverter	Schedule – IIC	ITEW25	1	25	
7.	Electric fans	Schedule – IIC	CEEW9	3	14	
	Total			14	65.65	

## 4.0 Description of the Environment

Primary baseline environmental monitoring studies in 10 Km radius study area were conducted through NABL approved laboratory – ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD during March 2025 to May 2025.

### 4.1 Topography, Land use & its Classification

The elevation of the region varies from 304 m to 1075 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 North Western region shows a relatively lower elevation feature. A portion extending from East to South East shows a higher elevation region. This elevation pattern also affects the drainage pattern of the region. The region is occupied by Rivers & Lakes.

The topographical setting of the study area shows a regular pattern with certain regions having high and low elevations. The elevation in the region ranges between 304 m to 1075 m

MSL. The study shows that there are 4 LU/LC classes present within the area in 10km buffer area. In the 10km LU/LC map, the Barren Land covers 57.35 % of the study area. The Agriculture land (32 %), Built-Up Area (8 %), as well as the Waterbody (less than 2.65 %) covers the remaining regions of the study area (approx. 53%). It is also observed that the study area is well connected to roads but not railway lines that are passing within the 10 km radius of the study area.

The water resource in the region is well distributed with respect to drainage pattern in the 10 km radius study. The region is occupied by a few water bodies. Based on the physical characteristics and Land Use Land cover of the study area, it could be understood that there will be change in land use of project site from agriculture land, barren land and waste land to built-up land and hence land degradation will take place. This is a case of green field project and since the change in land use is minor, no mitigation measures were envisaged.

## **4.2 Soil Environment**

In the district mainly three types of soils are observed i.e. coarse 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 eight (8) locations in study area whereas additional parameters viz. NH<sub>3</sub>, C<sub>6</sub>H<sub>6</sub>, BaP, O<sub>3</sub>, Pb and Ni, along with criteria pollutants were monitored at proposed project location.

### **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>.

### **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 µg/m<sup>3</sup>), whereas minimum was observed at A7 and A10 (0.02 µg/m<sup>3</sup>).

All the parameters were found to be within the desired limits specified by NAAQ Standard.

### **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>.

## ***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 to be 63.2 dB (A) while during night time the noise level was recorded to be 54 dB (A). It shall 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.

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## **Residential Zone**

The minimum noise level recorded during the daytime was observed at location N8, whereas the maximum noise levels can be observed at location N6. The location N6 is surrounded by industrial area hence can give rise to high noise level 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, 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.1, <0.01mg/l & <0.05 mg/l respectively. Total Coliforms & E. Coli were absent in all samples.

### **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.

### **4.7 Biotic Environment**

Based on field survey, total 170 plants species have been recorded, out of which 72 Tree species, 25 Shrubs species and 44 Herbs and 17 Climber species are identified in entire study area. Total 15 species of odonates, 7 species of bugs and 6 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. 61 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**

The 10 km study area includes Akarani Taluka of Nandurbar District. There are total 77 villages in the study area. The study area is essentially urban in nature. The socio economics of study area is studied through primary and secondary survey. The socio-economic aspects of the study area are summarized in the table given below.

**Table 2: Summary of Socio-Economic Aspects**

<b>Demographic Parameters</b>	<b>Details</b>
No. of States	1
No. of District	1
No. of Tehsil	4
No. of Villages	77
Total No. of Households	23,365
Total Population	1,01,578
Child Population	14,687
Scheduled Castes	4,221
Scheduled Tribes	69,518
Literacy	61.98 (Average)

*Source: Primary Census Abstract & DCHB 2011, Nandurbar District, State Maharashtra*

#### **5.0 Anticipated Environmental Impacts and Mitigation Measures**

**Table 3: Summary of Anticipated Impacts and its Mitigation Measures**

<b>Sr. No</b>	<b>Environmental Parameters</b>	<b>Aspect Attributes</b>	<b>Anticipated Impacts</b>	<b>Proposed Mitigation Measures</b>
<b>Construction Phase</b>				
1.	Air Quality	Dust during handling of cement/concrete/stone aggregates & other construction materials.	Exposure of construction workers to such dusts may lead to short term respiratory problems, whereas, prolonged & continuous exposure may lead to malfunctioning of lungs. The anticipated construction period will be 8 months after grant of all Environmental Clearance, Consent To Establish & all other Statutory Permissions.	Proper loading and unloading of the materials to ensure minimum dust. Managing & covering the stockpiles. Regular sprinkling of water on the working site, Installing wind barriers around working site & all around the plot boundary for containing the dust.
2.	Noise Levels	Noise generated from construction machineries like Poclain, Lift Crane, Jack Hammer Drill, Digger, Compactor, Roller etc. & by use of construction equipment like Jack Hammer, Cutter, Drill Concrete vibrator etc. and by arrival & depart of transport vehicles.	It is anticipated that the cumulative noise levels by all construction machineries, equipment & activities at propagating at plant boundary will be within a range. Significant impacts outside plant premises are not anticipated.	PPEs viz. Ear Plugs/Muffs will be provided to workers, Construction activities will be limited from 9.00 AM to 5.00 PM, Installation of noise barriers around project plot will further minimize the intensity of propagating noise.
3.	Water Quality	Surface runoff generated Water used for construction activities mainly for concrete mixing, sprinkling etc. Sanitation waste water by construction workers.	If such runoff water & sanitation waste water finds way to surrounding soils & water body, may lead to contamination of surrounding soils & increased turbidity & contamination in water body.	The surface runoff generated during construction activities will be properly filtered and utilised for gardening or sprinkling & Mobile sanitation facilities will be provided to workers which will be periodically cleaned through night soil tankers.
4.	Construction & Demolition Wastes	Proposed project being a green field project demolition waste will	Haphazard handling of such wastes may lead to advent of	Excavated/ dug soil/earth will be stored appropriately in dedicated space within

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
	Management	<p>not occur however inert construction wastes such as: Cardboards, Wooden Boxes, Wooden planks, Metal rods, HDPE bags, Felled Concrete, Stones, Aggregates &amp; debris will be anticipated to be generated.</p> <p>Excavated/Dug soil/earth will be generated during site preparation activities.</p>	<p>Rodents, Reptiles within project plot, thereby causing dangers to workers working on site.</p> <p>Disposal of such wastes on land will lead to degradation of soils.</p>	<p>project plot &amp; will be used for green belt development activity along with mix of new soil.</p> <p>Inert construction wastes viz. Cardboards, Wooden Boxes, Wooden planks, Metal rods, HDPE bags will be stored in dedicated space &amp; sold to recyclers.</p> <p>Felled Concrete, Stones, Aggregates &amp; debris will be used as filling material for internal roads in consonance with Construction &amp; Demolition Wastes Management Rules 2016.</p>
<b>Operational Phase</b>				
1.	Air Quality	<p>Utilities stack emissions viz. Particulate Matter, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO from boiler &amp; D.G operations &amp; Process emissions viz. CO<sub>2</sub> &amp; VOC's.</p> <p>VOC emission generated due to the handling and storage of the Ethanol.</p> <p>Fugitive emissions from material transport vehicles.</p>	<p>Anticipated health effects: People in downwind localities if prone to continuous &amp; prolonged emissions may be susceptible to adverse health impacts related to respiratory &amp; pulmonary due to particulate matter. Carbon monoxide decreases the oxygen carrying capacity of the blood by reducing the haemoglobin.</p> <p>The health effects related to VOC's are eye, nose and throat irritation headaches.</p>	<ol style="list-style-type: none"> <li>1. Back filter &amp; Wet Scrubber system is proposed as an APC equipment with stack of 30 m height to boiler.</li> <li>2. D.G set of 750 KVA will be provided with a stack of 2 m above roof as per CPCB guidelines for proper dispersion of emissions.</li> <li>3. The roads within the premises will be paved to avoid the dust generation from vehicular activity.</li> <li>4. It will be ensured that all the</li> </ol>

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
			<p>Environmental effects:</p> <p>The air emissions in long course of time may affect the immediate surrounding vegetation stature physically (leaf senescence, hampered growth etc.) &amp; biologically thus may affect the overall surrounding ecology.</p>	<p>transportation vehicles have a valid PUC (Pollution under Control) Certificate.</p> <p>5. Regular sweeping of all the roads &amp; floors will be done to avoid fugitive dust.</p> <p>6. The proposed thick green belt of along the plant periphery will help to capture the fugitive emissions.</p> <p>7. Industry to ensure that at no point of time the air emission concentrations exceed the prescribed CPCB/Consented standards.</p>
2.	Noise Quality	Operation of Steam Boilers, Cooling Towers, Pumps, Blowers & material transport vehicles.	<p>It is anticipated that the cumulative noise levels by all machineries, equipment &amp; operation activities at propagating at plant boundary will be within a limit</p> <p>Impacts of exposure to continuous &amp; prolonged noise would be Temporary/Permanent hearing loss, Mental disturbances, Increase in heart rate, Reduced workers performance due to psychiatric disorder and Tinnitus in case of</p>	<p>1. Acoustic enclosures will be provided to high noise generating equipment for attenuation of noise level during operation.</p> <p>2. Boiler will be placed in a confined space viz. boiler house where the surrounding walls will acts as a barrier for propagating noise.</p> <p>3. PPE's viz. Ear muffs/plugs will be provided to workers working near</p>

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
			<p>high level of noise exposure on regular basis.</p> <p>The intensity of propagating noise at a distance of 100 m from plot boundary will be almost nil, thus significant impacts outside plant premises are not anticipated.</p>	<p>noise generating equipment.</p> <p>4. The proposed thick green belt of along the plant periphery will help to further minimise the intensity of propagating noise out of plant premises.</p>
3.	Water Quality	<p>1. Effluent from process, washings, Backwashes.</p> <p>2. Boiler &amp; Cooling Tower blow-downs.</p> <p>3. Domestic wastewater.</p>	<p>The anticipated treated effluent characteristics area: pH - 7.5 to 8.0, TSS &lt; 100 mg/lit., BOD &lt; 100 mg/lit., COD &lt; 250 mg/lit., TDS &lt; 2100 mg/lit. and Oil &amp; Grease &lt; 10 mg/lit.</p> <p>Accidental/Deliberate release of treated/un-treated effluents in surface water bodies may lead to contamination/ eutrophication/ acidification/ toxification of the subjected water bodies and in of case land may lead to complete degradation of subjected land affecting, also may contaminate the ground water by way of percolation.</p> <p>Such affected soils, Surface water &amp; ground water sources cannot be used for any purpose &amp; depending</p>	<p>Spent wash generated will be sent treated in ETP, Blow downs from Boiler and Cooling Towers, Sealing water, and Washing effluent.</p> <p>Domestic effluent load will be connected and treated in Septic tank followed by Soak Pit</p> <p>No any effluent will be discharged within and outside premises.</p>

<b>Sr. No</b>	<b>Environmental Parameters</b>	<b>Aspect Attributes</b>	<b>Anticipated Impacts</b>	<b>Proposed Mitigation Measures</b>
			terrestrial & aquatic ecology will be completely affected.	
4.	Solid Waste Management - Hazardous	1. Hazardous waste i.e. Spent oil generated from DG and maintenance of the plant. 2. Hazardous waste generated from maintenance operations.	Unscientific handling & disposal may lead to contamination of surrounding soils, water sources & there by affecting the ecology & health of the workers coming in direct contact with the hazardous waste like skin allergies/rashes/burns etc.	1. Spent oil generated from project activities will be handled, stored and disposed as per Hazardous Waste Management Rule, 2016 and its amendments till date.
5.	Solid Waste Management (Non Hazardous Inert Waste)	Non-hazardous solid waste like boiler ash, ETP sludge, Broken glass, Dry Waste, Wet waste	Haphazard handling & storage may lead to inadequate open space in plant premises & it may lead to rodent breeding thereby affecting the occupational health & environment.	1. Designated area for Scrap materials storage ewill provided in the plant. 2. Scrap materials will be recycled through scrap vendors. 3. Boiler ash – 42.57 TPA will be used in brick manufacturing unit. 4. ETP Sludge- 28.55 TPA will be used/sold as Manure.

## **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 factory is identified for Ethanol.

The scenario considered for assessing the impact by quantitative risk assessment was taken from Evaporating puddle of flammable chemical (All tank leakage is considered) – Toxic area of vapour cloud .

## **7.0 Disaster Management Plan**

Disaster Management Plan will be implemented in consultation with the District Administration to take care of health and safety during any untoward incidents.

In view of handling of processes in industry, On-site Emergency Plans are important and hence has been prepared for the industry. Additionally recommendations for On-site and Off-site shall be provided to the District Administration. During operational phase, 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 are accredited by NABL and/or MoEF&CC.

## **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 EHS department will ensure 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 Corporate Environment Policies of Mahunza Winery Private Limited are strongly adhered to all time.

All recommendations given in the EIA report including that of occupational health, risk mitigation and safety shall be complied Mahunza Winery Private Limited have allocated Indian Rs. 3.2077 Crore for environmental pollution control measures & environment management plan activities; which is ~32 % of total project cost.

## **11.0 Project Benefits**

The following benefits are expected from the proposed project:

- This project of will have locale 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 envisioned from the perspective of need based assistance in health, education, sustainable lifestyles, social mobilization, infrastructure, water harvesting, agriculture and environmental protection taking into consideration locale 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 2% of proposed project cost viz. Rs. 0.209 Crores is allocated for implementation of need based CER activities in project area.