F.No.11-10/2014-IA-III dated 12th March, 2015

# Development of Jetty for Captive and Third Party Cargo (10.0 MTPA) at Nate Village, Rajapur Taluka, Ratnagiri District, Maharashtra

## Executive Summary of EIA & EMP Report

**Project Proponent:**

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# EXECUTIVE SUMMARY

## 1.0 Introduction

**M/s I LOG Ports Private Limited (ILPPL)**, an initiative of SREI Infrastructure Finance Limited, Calcutta, has proposed to develop a jetty at Nate village in Rajapur Taluka of Ratnagiri District, Maharashtra. The proposal is for developing a Jetty for captive and third party cargo in phases. In the Phase I the handling capacity of cargo is 5.0 MTPA and ultimate capacity is about 10.0 MTPA during Phase II. The estimated initial project cost is Rs. 135 Crores excluding cost of land.

The project proposal was considered by Expert Appraisal Committee (EAC) of MoEF&CC, New Delhi for Infrastructure Development and Miscellaneous Projects & CRZ during the meeting held on 28th January, 2015 Vide Proposal number IA/MIS/MH/23794/2014.The approved TOR was issued vide letter reference no.F.No.11-10/2014-IA-III dated 12th March 2015, ToR Extension dated 22nd March 2018 and ToR Ammendment dated 31st August 2018. The proposed project is classified as"7E" type "A" category as per the EIA Notification dated 14/09/2006. Subsequently, due to changes in business scenario in the country and region, in keeping paradigm the company felt that it would be beneficial to all the stake holders to shift focus to clean cargoes and cleaner fuels. Consequently the project proponent likes to develop the port by aligning the cargo profile with the changed philosophy. Now it is proposed to set up industrial cluster which would use the following cargoes.

Fertilizer, Sugar, Bauxite, coal, Iron ore, cement, cement clinker, gypsum, rock phosphate, steel, steel structures, engineering goods, Crude Palm oil, Refined Edible oils etc, Petroleum products, Petrochemicals, Chemicals, Bulk & break bulk solids including containers, Liquefied Hydrocarbon gases like LPG, LNG etc.

Phase I: Quantity Total 5.0 MTPA
Solid: 1.25 MTPA; Liquid: 1.25 MTPA, Gas: 2.5 MTPA

Completion of Phase II: Quantity: Total 10.0 MTPA
Solid: 2.5 MTPA; Liquid: 2.5 MTPA, Gas: 5.0 MTPA

Accordingly, ILOG Ports has submitted application for amendment in TOR and the same has beem approved by Ministry of Environment, Forests & Climate Change Vide Minutes of 32nd Meeting of Expert Appraisal Committee (Infra -2) held on 2 – 4th July 2018

## 2.0 Brief Description of the Project

The proposed project will be set up in an area of 100 ha in first Phase and the total area will be 428.515 ha on completion of the project. Directorate of Industry has accorded approval for purchase of land for development of proposed Port project as per the Maharashtra Industrial Development Policy.

The construction of the project facilities will be implemented in four phases as described below:

- Phase-1: One berth and storage area for bulk cargo using fair weather operations along with part dredging/reclamation.
- Phase-2: South breakwater about 500 m long
- Phase-3: South breakwater extension by about 500 m
- Phase-4: Additional berths for handling bulk and general cargo and with additional storage area constructed about 700m away from shoreline.

**SALIENT FEATURES OF THE PROPOSED JETTY**

| S.No. | Features | Details |
|---|---|---|
| 1 | Projected Throughput | Phase-I: 5.0 MTPA<br>Ultimate capacity 10.0 MTPA. |
| 2 | Minimum width of entrance channel | 200 m |
| 3 | Design ship size | 80,000 DWT vessels |
| 4 | Break water | About 1,000 m long breakwater on south side in 2nd phase |
| 5 | Berth length and width | 250 m long and 40 wide |
| 6 | Turning circle depth | -15m |
| 7 | Turning circle diameter | 600 m |
| 8 | Storage area and area for Jetty based industries | About 100 ha excluding area developed through reclamation |
| 9 | Berth Plan | One Off shore jetty in Phase-1 and 2 additional berths subsequently. |
| 10 | Back-up land area requirement for utilities | Phase I 100 ha<br>On completion of the project 428.515 ha |
| 11 | Facilities | Site development, utilities and administrative building |
| 12 | Estimated project cost | Initial estimated cost Rs. 135 Crores excluding cost of land for Phase I |
| 13 | Water requirement | 140 m3 per day from State Water Board (Jeevan Pradhikaran) |
| 14 | Power Requirement | Phase -1 0.9MW<br>ultimate requirement 2MW<br>Source : Maharashtra State Electricity Distribution Company Limited (MSEDCL) |
| 15 | Employment Generation | During construction phase - direct employment is 20, indirect employment is 200<br><br>During Operational phase - direct employment is 50, indirect employment is 300 |
| 16 | Green belt development | 33% of the project area for greenbelt |

The berth will be constructed about 700 m away from shore line.

The construction and operation stages of the project are as follows.

- Piling for construction of jetty.
- Reclamation for operational area.
- Construction of approach road.
- Loading/ unloading of dry bulk cargo, sugar, liquid cargo etc.
- Stacking of dry bulk cargo, sugar, storage of liquid cargo etc.
- Transportation of dry bulk cargo, sugar, liquid cargo etc.

## 3.0 Environmental Setting within 10km's of the Proposed Site

The environmental setting around 10-km radius of the proposed project site is described below:

**ENVIRONMENTAL SETTING OF THE PROPOSED PROJECT SITE**

| S.No | Item | Details | |
|---|---|---|---|
| 1 | Project | Development of Jetty for Captive & Third Party Cargo of 10.0 MTPA Capacity | |
| 2 | Cargo handling capacity | 10.5 MTPA | |
| 3 | Location details | Villages : Nate<br>Tehsil : Rajapur<br>District : Ratnagiri<br>State : Maharashtra<br>The site lies in southern part of Ratnagiri District of coastal Konkan division | |
| 4 | Proposed Area | 428.515 Ha | |
| 5 | Screening category | 7E - "A" | |
| 6 | Cost of the project | Rs 135 Crores excluding cost of land | |
| 7 | Geographical Coordinates | Latitude | Longitude |
| | | $16^0$38'54"N - $16^0$39'30" N | $73^0$19'45" E-$73^0$20'00" E |
| 8 | Present elevation of site | 26-28 m above MSL | |
| 9 | Nearest highway | State Highway-4 runs at a distance of 4 km, ESE from the project site | |
| 10 | Nearest railway station | Rajapur Railway station is at a distance of about 20 km from the site on Konkan Railway line | |
| 11 | Nearest Airport | Ratnagiri (40 km, N)<br>Mumbai (370 km, NNE) | |
| 12 | Nearest major water bodies | Arabian sea (adjacent), Arjuna river (3.5 km, SSE) Nate Creek | |
| 13 | Nearest town/city/village (Densely populated areas) | The nearest village is Ambolgadh at a distance of 1 km from the proposed port and densely populated city is Ratnagiri which is about 40 kms aerial distance from the project site. | |
| 14 | Hills/valleys | None | |
| 15 | Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves) | No Protected areas as per Wildlife Protection Act, however Bharade village (4.5 km) is a Western Ghats-Environmentally Sensitive Area (ESA) as per the MoEF Letter Ref No: F.NO.1-4/2012 - RE (Pt.) / dated 13.11.2013, | |
| 16 | Seismicity | Zone-III (as per IS-1983, Part I: 2002) | |

## 4.0 Locational Advantage of the Project

The proposed project location near Nate village is well suited for setting up the infrastructural facilities proposed on the basis of following advantages:

- The site has tangible Oceanographic advantages and Tranquil area for smooth Operations
- Well connected by Road and Rail
- Deep water located within 2-3 Km from the shore thereby reducing dredging.
- Site consists of barren land and no plantation
- No settlement and no rehabilitation required.
- No industry is located within 25 kms from the proposed project site.
- Located near to Kolhapur (Sangli & Satara) sugar and industrial corridor and the nearest port interface to Ratnagiri, Kolhapur & Belgaum belts and further up to Sholapur and Karim nagar
- Significant potential for cargo movement for both agri & industrial products

## 5.0 Description of the Environment

**Study Area:** 10KM's radius of the project site.
**Study Period:** Premonsoon 2015 and Premonsoon 2018

## 5.1 Meteorology

| | **Premonsoon** |
|---|---|
| Wind Speed | 2.1-3.6 |
| Wind Direction | NW |
| Temperature | 43.8-25.6 °C |
| Relative Humidity | 86% |

## 5.2 Ambient Air Quality

The baseline data survey for Ambient Air Quality in the study area has been carried out by selecting 8 monitoring stations. The details ambient air quality is given below

**Summary of Ambient Air Quality in the Study Period 98% Range (µg/m3)**

| **Season** | **$PM_{10}$** | **$PM_{2.5}$** | **$SO_2$** | **$NO_X$** | **CO** | **$O_3$** | **Pb** | **$NH_3$** |
|---|---|---|---|---|---|---|---|---|
| Premonsoon 2015 | 51-58.5 | 18.8-21.5 | 11.4-12.5 | 17-18.3 | <0.01 | 18.6-21.2 | <0.01 | 23.6-28.3 |
| Premonsoon 2018 | 47.8-54.0 | 18.2-22.5 | 10.7-17.0 | 15.0-24.6 | 3.2-5.2 | 16.1-24.1 | <0.01 | 20.0-25.2 |
| **NAAQ Standards Annual/24 Hr** | **100** | **60** | **80** | **80** | **24** | **100** | **1.0** | **400** |

## 5.3 Ambient Noise Level

From the results it can be seen that the Day equivalents and the Night equivalents were within the Ambient Noise standards of residential areas standards.

| | **N1** | **N2** | **N3** | **N4** | **N5** | **N6** | **N7** | **N8** | **N9** | **N10** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Min** | 34.2 | 35.2 | 33.8 | 36.1 | 37.1 | 36.5 | 36.7 | 36.9 | 37.0 | 34.2 |
| **Max** | 52.1 | 53.0 | 48.9 | 49.7 | 50.3 | 50.1 | 51.2 | 51.4 | 51.2 | 52.1 |
| **Ld** | 46.6 | 47.2 | 45.2 | 46.0 | 46.1 | 46.2 | 46.7 | 47.3 | 47.8 | 46.6 |
| **Ln** | 43.8 | 42.6 | 43.9 | 44.6 | 44.2 | 43.8 | 44.6 | 41.9 | 48.9 | 46.2 |
| **CPCB Standards Day/night** | 75/70 | Day 55 dB(A) and Night 45 dB(A) | | | | | | | | |

## 5.4 Water Environment

- 8 ground and 6 surface water samples were collected from the study area to assess the water quality during the study period
- The ground water quality is observed to be within the permissible limits as per the drinking water standards (IS: 10500).
- The surface water quality is typically representing the marine water quality.

## 5.5 Soil Quality

Seven number of soil samples were collected from core zone and buffer zone area.

- The pH values of the soil samples collected were in the range of 6.2 – 7.8
- Water holding capacity is in the range of 39– 55%

- Organic matter % in the range of 3.9 – 5.3 mg/l
- The nutrients like N, P and K are in moderate concentration in all the samples

## 5.6 Land Use

In the study area.

- Waste land – 39 %
- Water bodies – 48.75 %
- Agricultural land – 10 %
- Forest land - Nil

## 5.7 Biological Environment

Study area encompasses diverse habitats which supports various species of birds, reptiles, mammals and also many invertebrate species also.

Study area recorded with 102 bird species from different habitats during study period. Most of the species falls under schedule-IV as per IWPA, 1972 while some species like Indian-Pied Hornbill, Spotted Owlet, White-Bellied Sea Eagle and Indian Peafowl are categorized as a schedule-I as per WPA-1972

## 5.8 Socio-Economic Environment

There are about 57 villages in the study area.

- Total population – 34472
- Males – 15646, Females – 18826
- Male to Female ratio – 1000 : 831
- Male Literacy Rate - 36.6%
- Female Literacy Rate - 35.9%
- Cultivators – 6012
- Agricultural Labour – 4971
- House Hold Workers – 383
- Other Workers – 4640
- Total Main Workers – 10146
- Total Marginal Workers – 5860
- Total Non Workers – 18466
- SC Population - 1.1%
- ST Population - 0.3%

## 5.9 CRZ Area

The Jetty falls under CRZ areas IB, III & IVA. The LTL, HTL.

- CRZ Zoning map is prepared by Institute of Remote Sensing (IRS), Anna University, Chennai, TN.

## 6.0 Impacts During Construction & Operation Phase and Management Plan

| Discipline | Potential Impacts | Probable Source | Mitigative Measures |
|---|---|---|---|
| **Impact during construction phase** | | | |
| Water Quality | Increase in suspended solids due to soil run-off during heavy rains | Loose soil at construction site | Landscaping and extensive plantation will be done. |

| Discipline | Potential Impacts | Probable Source | Mitigative Measures |
|---|---|---|---|
| Air Quality | Increase in dust and NOx concentration | Levelling activity and Heavy vehicular movement | Sprinkling of water on the construction area unpaved roads Proper maintenance of vehicles |
| Noise | Increase in noise level | Construction equipment | Equipment will be kept in good condition to keep the noise level within 90 dB(A). Workers will be provided necessary protective equipment e.g. ear plug, earmuffs |
| Terrestrial Ecology | Clearing of Vegetation | Soil enabling activities | Landscaping and extensive plantation will be done. |
| Marine ecology | Disturbance of biota and water quality | Development of breakwater structures, dredging of channel | Regular monitoring of the turbidity and sediment concentration may be carried by water sampling |
| No R&R issues. | | | |
| **Impact during Operation phase** | | | |
| Water Quality | Deterioration of surface water quality | Discharge from various units | |
| Ecology | | | |
| a. Terrestrial | Impact on flora and fauna | Emissions | |
| b. Aquatic | Impact on benthic and meio fauna | Treated waste water from Jetty operations | The wastewater will be provided with adequate treatment, and will be used for Horticulture purposes. |
| Noise | Increase in noise levels in the Jetty area. | Equipment and auxiliaries. | Equipment will be designed to conform to noise levels prescribed by regulatory agencies. Provision of green belt and plantation would further help in attenuating noise. Employees working in high noise areas would be provided earplugs/ earmuffs as protective device. |
| Demography and Socio-economics | Strain on existing amenities like housing, water sources and sanitation, medical and infrastructure facilities. | Influx of people for proposed Jetty | Local population will be given preference for employment. Additional infrastructure facilities will be developed by the project proponent. |

## 7.0 Expenditure of Environmental Measures

- Cost of environmental Protection Measures - Rs. 7 Crores.

- Post project monitoring will be carried out as per the Guidelines provided by MOEF&CC, CPCB and MSPCB

## 8.0 Corporate Social Responsibility (CSR)

ILPPL through its Corporate Social Responsibility will endeavor to develop the social infrastructure and enhance the quality of life of communities in the villages located around the proposed site. As far as CSR data is concerned, ILPPL keeps a provision of about 2% for CSR

- Health facilities in the port area will be open for villages
- Developmental activities for Fishermen Community
- School development
- Skill development for the local villagers