BEFORE THE NATIONAL GREEN TRIBUNAL (SZ) CHENNAI

APPEAL NO.7 OF 2025

Janardhan P Mesta and Anr.

...Appellant

Vs

State Environment Impact Assessment Authority

(SEIAA), Karnataka and Anr

...Respondent

CONVINENCE COMPILATION FILED BY THE 2ND RESPONDENT

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Dated at Chennai on this the 15th day of April, 2025

A.S. Aryan

Counsel for Respondent No. 2

सत्यमेव जयते
Government of India
Ministry of Earth Sciences
National Centre for Coastal Research

National Shoreline Assessment System (N-SAS)

https://www.nccr.gov.in/NSAS/#

National Assessment of Shoreline Changes along Indian Coast

Volume 2 - West Coast

March 2022

Different proxies are used for shoreline position to analyse the coastal changes. Some of the proxies of shoreline position are High Water Line (HWL), wet-dry line, vegetation line, dune toe or crest, toe of the beach, cliff base or top and Mean High Water Line (MHWL) etc. In earlier days, High Water Line in Topo sheets was also used as one of the shoreline positions.

1.3 Past studies on shoreline mapping in India

Globally, the coastal researcher worldwide implies several shoreline proxies to define shoreline position. In India, ISRO-Space Application Centre (SAC) has prepared shoreline change maps for Central Water Commission (CWC) in the form of Atlas (1; 25000 scale). The major objective of this activity is to prepare a digital shoreline change atlas using remote sensing satellite datasets for the time period (1989-91 and 2004-06). This report gives an overview of erosion/accretion spots by plotting two high water line and the coastal land use classification was obtained from land use /land cover mapping work carried out at SAC earlier for these two different periods of datasets i.e. (1989-91 and 2004-06). However, these maps doesn't depict the temporal behaviour and non-linear changes of shoreline, which is very essential for coastal management. Further, NCSCM has prepared shoreline change maps for few coastal states. The shoreline changes maps were prepared by considering the latest shoreline for year 2010 as a one time exercise in 1:50,000 scale.

The National Centre for Coastal Research (NCCR) has carried out a study on shoreline changes along the mainland of India for the period of 1990-2016 using satellite datasets. This report, summarizes the methods of analysis, interpretation of results, provides an information on shoreline changes for the period of 1990 to 2016. Based one the rate of change results using 9 datasets, 526 maps are prepared for entire Indian coast in 1:25000 scale. The state-wise maps, 9 states / 2 UT maps and 66 district level maps were prepared to represent detailed information. The Hotspot maps were prepared for identifying the vulnerable coastal areas. In near future, the study can extended to map the temporal behaviour of shoreline conditions, which is very essential for coastal management.

To improvise further, this report is an accompaniment to the summary of Atlas on shoreline change assessment. This study aim is to provide a detailed interpretation of shoreline change results for a period of 28 years. The results depicts long-term (1990 to 2018)and short-term (1990-2000, 2000-2006, 2006-2012 & 2012-2018) shoreline change rated with different classes. The entire coast is mapped in 1:25000 scale for 9 states/2 UT which is accounted 526 maps. In near future, for reliable and accurate coastal management, beach morphology changes under extreme weather conditions, an active microwave Synthetic Aperture Radar (SAR) remote sensing datasets can be a best complement over optical remote sensing due to persistent cloud cover. Since SAR signal response has been proven to be capable of imaging day/night weather even under extreme climatic conditions with respect to land-sea interactions. This integration of optical and SAR remote sensing provides continuous shoreline monitoring and mapping with different time-steps which could be useful for coastal planners.

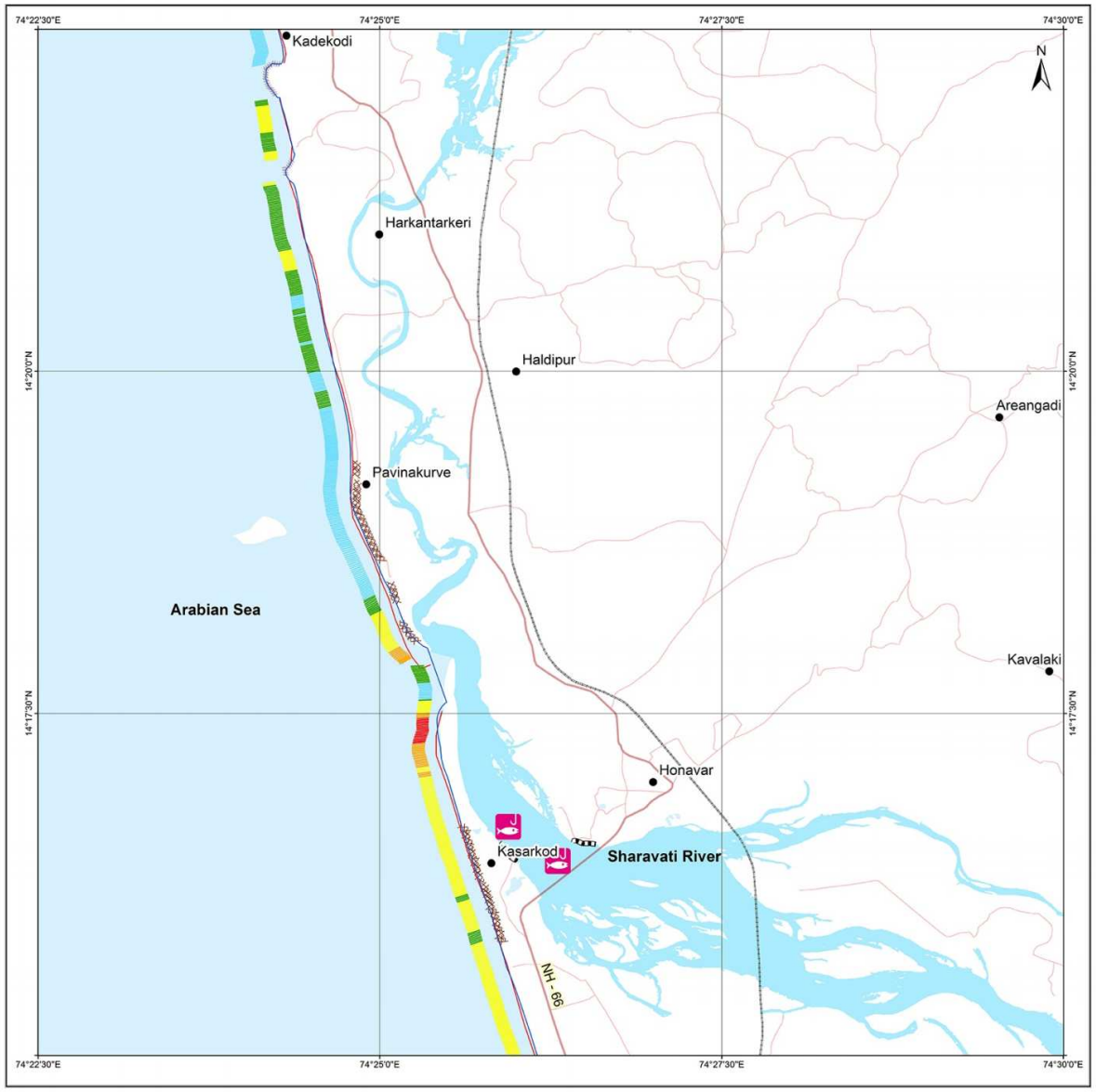
1.4 Shoreline proxies adopted for shoreline mapping at NCCR

• In 2013, ICMAM has conducted a R&D study on shoreline changes using different proxies and varying datasets and prepared a report on methodology for shoreline change mapping. In this report,

1990-2018
UTTARA KANNADA

SHORELINE CHANGE MAP
KARNATAKA

Restricted Use
48 J / 7 / SE
Map No. : NCCR/SCM/213



Shoreline Change Trend for Period 1990-2018
- High Erosion
- Moderate Erosion
- Low Erosion
- Stable Coast
- Low Accretion
- Moderate Accretion
- High Accretion

Shoreline date
- 02/23/1990
- 21/01/2018

Index to sheets

48 J / 7 / NW	48 J / 7 / NE	48 J / 11 / NW
48 J / 7 / SW	48 J / 7 / SE	48 J / 11 / SW
48 J / 8 / NW	48 J / 8 / NE	48 J / 12 / NW

Incidence on 1:50,000 Sheets

48 J / 2	48 J / 6	48 J / 10
48 J / 3	48 J / 7	48 J / 11
48 J / 4	48 J / 8	48 J / 12

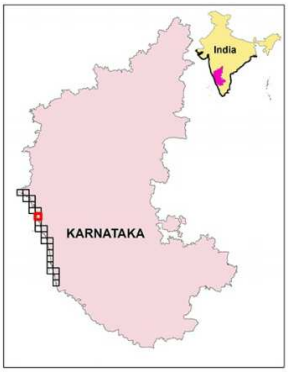
Scale
1000 m 500 0 1 2 km
1:25,000

UTM Coordinates Zone 43

Datum : The World Geodetic System 1984 (WGS84)
Spheroid : The World Geodetic System 1984 (WGS84)

Data Sources: Satellite Data

Sensors	Date of acquisition
LISS-IV	21/01/2018
LISS-IV	14/02/2017
LISS-IV	03/15/2016
LISS-IV	02/25/2015
LISS-IV	03/26/2014
LISS-IV	03/07/2013
LISS-IV	02/17/2012
LISS-III	01/14/2008
PAN (Cartosat-1)	07/01/2006
ETM+	03/14/2000
TM	02/23/1990



- Settlements
- Port
- Harbour
- Groynes
- Jetty
- Breakwater
- Seawall/Ripraps
- Rocky Coast
- Administrative Boundary
- National Highways
- State Highways
- Other Roads
- Railways
- Lakes
- Rivers

Prepared by
Government of India
Ministry of Earth Sciences
National Centre for Coastal Research (NCCR)
Pallikaranai, Chennai - 600100

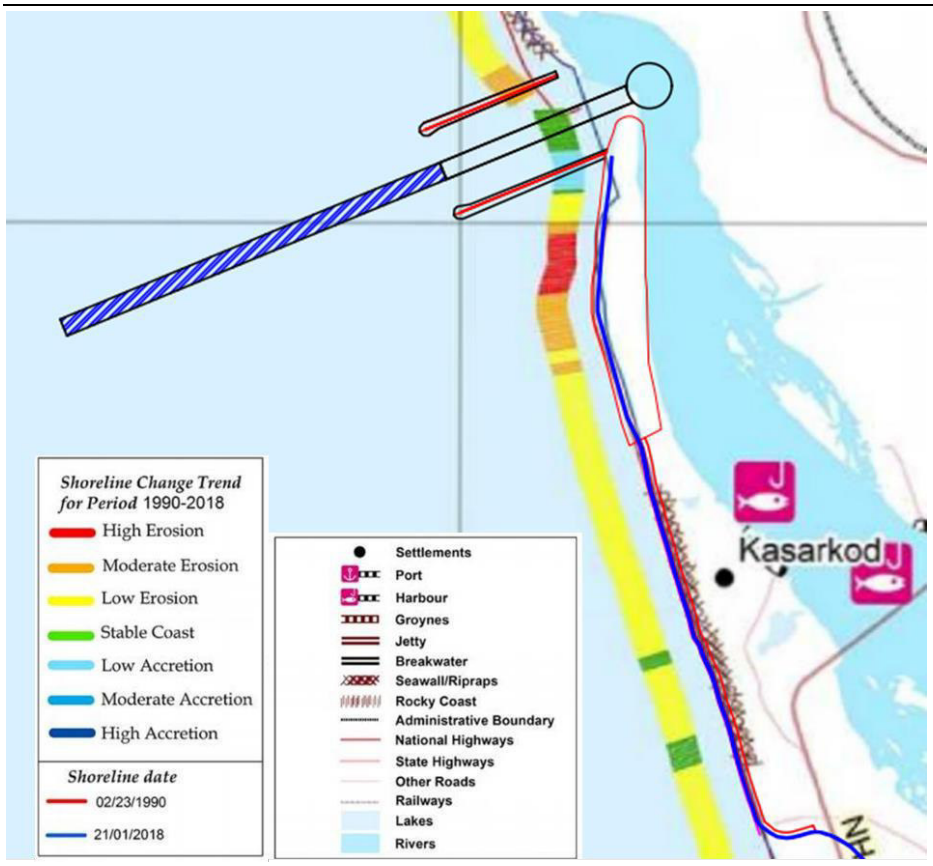


Figure 4-1: Shoreline change as per National Assessment of Shoreline Changes along Indian Coast, March 2022

Assessment of Shoreline Evolution with Proposed Breakwaters

Long shore sediment transport takes place when waves approach obliquely to the shore. This process of sediment transport is a cyclic process where river adds sediment to the coast which is transported by waves. The cycle of sediment transport by the waves to and from the coast is continuous which has aided in keeping the equilibrium of the coastline balanced over the geological times. Any change to the sediment transport cycle leads to imbalance to the prevailing shoreline dynamics.

In the normal condition the shoreline undergoes oscillation due to wave and wave induced current. The predominant quantity of sediment transport along shore takes place within the depth of closure. Coastal structure similar to groyne or a breakwater connected to the land when introduced into the sea obstructs the sediment transport resulting in accretion / erosion of sediment.

The proposed development consists of two breakwaters designated as northern (820 m) breakwater and southern (865 m) breakwater extending into the sea to a water depth of (-) 5.0 m respectively. The approach channel will be dredged to (-) 10 m CD. The Channel will be aligned in Southwest direction.

Shoreline Change Modelling:

Shoreline change simulations have been carriedout by considering the two scenarios:

- Scenario I: With breakwaters and without shore protection on the northern side of inlet

भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
क्षेत्रीय कार्यालय, REGIONAL OFFICE
Kendriya Sadan, IVth Floor, E& F Wings, 17 th Main Road,IInd Block, Koramangala, Bangalore – 560 034.Tel.No.080-25635902, E.Mail: rosz.bng-mef@nic.in

BY SPEED POST

F.No.4-KRB1275/2021-BAN/
Dated the April, 2025

To

The Additional Chief Secretary to Government of Karnataka,
Forest, Ecology & Environment Department,
M.S.Building, Dr.Ambedkar Veedhi,
Bangalore – 560 001.

Sub: Diversion of 0.76 ha. of forest land in F.Sy.No 233 and 237 of Kasarkod village, Manki Hobli, Honnavar Taluk, Uttara Kannada District (Honnavara Forest Division) for Approach Road from NH 66 to Kasarkod side of Honnavar Port in favour of the Assistant Executive Engineer, Port & Inland Water Transport Department, Port Sub Division, Honnavara -reg.

Sir,

Please refer to the State Government's letter No. FEE 90 FLL 2020 (e) dated 05/01/2021 and 06/01/2022 seeking prior approval of the Central Government under Section 2 of the Forest (Conservation) Act, 1980 for the above project. The in-principle (Stage-I) approval for the project was accorded by the Central Government vide letter dated 20/01/2022. The State Government has reported complete compliance with the conditions stipulated by the Central Government in the in-principle approval through the online Parivesh portal on 19/02/2025.

After careful consideration of the proposal of the State Government, I am directed to convey the Central Government's final approval (Stage-II) under Section 2(1) of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 0.76 ha. of forest land in F.Sy.No 233 and 237 of Kasarkod village, Manki Hobli, Honnavar Taluk, Uttara Kannada District (Honnavara Forest Division) for Approach Road from NH 66 to Kasarkod side of Honnavar Port in favour of the Assistant Executive Engineer, Port & Inland Water Transport Department, Port Sub Division, Honnavara, subject to the following conditions:-

1. The legal status of the diverted forest land shall remain unchanged.
2. Compensatory Afforestation (i.e., Planting of ten times the number of trees to be) shall be carried out on land identified by the State Forest Department, i.e in F.Sy. No. 33 of Bangane Village, Kumata Taluk, Uttara Kannda District, within 2 years from the grant of final approval at the cost of the user agency.
3. The additional amount of the Net Present Value (NPV) of the diverted forest land, if any, becoming due after revision of the same by the Hon'ble Supreme Court of India in the future, shall be charged by the State Government from

User Agency, and the same shall be transferred to the designated CAMPA Account

4. The Wildlife Mitigation Plan, as approved by the PCCF, Wildlife, and Chief Wildlife Warden, shall be implemented at the cost of the User Agency.
5. Tree felling shall be restricted to the barest minimum possible and under the confirmation and overall supervision of the local forest officials.
6. The period of diversion under this approval shall be co-terminus with the period of lease to be granted in favour of the user agency or the project life, whichever is less.
7. The total forest area utilized for the project shall not exceed 0.76 ha.
8. No labour camp shall be established on the forest land.
9. No additional or new path will be constructed inside the forest area for the transportation of construction materials for the execution of the project work.
10. The forest land shall not be used for any purpose other than that specified in the project proposal.
11. The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government.
12. No damage to the flora and fauna of the adjoining area shall be caused.
13. The layout plan of the proposal shall not be changed without the prior approval of the Central Government.
14. The concerne d Divisional Forest Office will monitor and take necessary mitigative measures to ensure that there is no adverse impact on the forests in the surrounding areas.
15. The User Agency shall submit the annual self-compliance report in respect of the above-stated conditions to the State Government and Regional Office, Bangalore by the end of March every year.
16. The State Govt. shall ensure complete compliance with FRA 2006 as per rule 11 (7) of Van (Sanrakshan Evam Samvardhan) Rules 2023.
17. The user agency shall comply with all the provisions of all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project.
18. Violation of any of these conditions will amount to a violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, and action will be taken as prescribed under the Act, Rules, and Guidelines relevant.

Yours faithfully,

Digitally signed by Praneetha Paul
Date: 01-04-2025 17:47:59

(Praneetha Paul)
Deputy Inspector General of Forests (Central)

Copy to:-

1. The Chief Executive Officer, National Compensatory Afforestation Fund Management and Planning Authority, Ministry of Environment Forests & Climate Change, 3rd Floor (Front Portion), Supreme Court Metro Station Building (Line-3), New Delhi-110 001
2. The Inspector General of Forests (ROHQ Division), Govt. of India, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhavan, Agni

Wing, Aliganj, Jor Bagh Road, New Delhi – 110 003.

3. The Principal Chief Conservator of Forests (HoFF), Forests Department, Govt. of Karnataka, Aranya Bhavan, 18th Cross, Malleswaram, Bengaluru – 560 003.
4. The Principal Chief Conservator of Forests (VSESA) /Nodal Officer (VSESA), Office of the Principal Chief Conservator of Forests, Forests Department, Govt. of Karnataka, Aranya Bhavan, 18th Cross, Malleswaram, Bengaluru – 560 003.
5. The Assistant Executive Engineer, Port & Inland Water Transport Department, Port Sub Division, Honnavara, Uttara Kannada -581 334.
6. Guard file.

HIGH TIDE LINE, LOW TIDE LINE AND COASTAL REGULATION ZONE STATUS REPORT FOR THE PROPOSED HONNAVAR PORT, FOUR LANE ROAD CONNECTIVITY FROM NH 66 AND PROPOSED RAILWAY CONNECTIVITY FROM HOSAPATTANA RAILWAY STATION TO THE HONNAVAR PORT AT KASARKOD TONKA VILLAGE, HONNAVAR TALUK, UTTAR KANNADA DISTRICT, KARNATAKA

for

M/s. Honnavar Port Pvt. Ltd.

Prepared By

National Centre for Sustainable Coastal Management
(Ministry of Environment, Forest & Climate Change)
Government of India

August 2024

HIGH TIDE LINE, LOW TIDE LINE AND COASTAL REGULATION ZONE STATUS REPORT FOR THE PROPOSED HONNAVAR PORT, FOUR LANE ROAD CONNECTIVITY FROM NH 66 AND PROPOSED RAILWAY CONNECTIVITY FROM HOSAPATTANA RAILWAY STATION TO THE HONNAVAR PORT AT KASARKOD TONKA VILLAGE, HONNAVAR TALUK, UTTAR KANNADA DISTRICT, KARNATAKA

for

M/s. Honnavar Port Pvt. Ltd.

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National Centre for Sustainable Coastal Management
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Government of India

August 2024

DOCUMENTATION SHEET

1	Authorised Institute with Letter No. & Date	National Centre for Sustainable Coastal Management J-17011/8/92-IA-III dt 8th August, 2019
2	Report No.	NCSCM/CRZ-Cell/CRZ-R/8/2024/58
3	Client's/Institute Name	M/s. Honnavar Port Pvt. Ltd.
4	Authors Principal Investigator Co-Investigator Staff	Badarees K O Manik Mahapatra Balaguru B, Soundararajan. K, Rama Subbu Lakshmi.T
5	Type of Report & Map	CRZ Status Report with CRZ maps
6	Title	HIGH TIDE LINE, LOW TIDE LINE AND COASTAL REGULATION ZONE STATUS REPORT FOR THE PROPOSED HONNAVAR PORT, FOUR LANE ROAD CONNECTIVITY FROM NH 66 AND PROPOSED RAILWAY CONNECTIVITY FROM HOSAPATTANA RAILWAY STATION TO THE HONNAVAR PORT AT KASARKOD TONKA VILLAGE, HONNAVAR TALUK, UTTAR KANNADA DISTRICT, KARNATAKA
7	Key words	Coastal Regulation Zone, Cadastral map, Scale 1:4000, Landuse, High Tide Line (HTL), Low Tide Line (LTL), CRZ IA, CRZ IB, CRZ II, CRZ III, CRZ IVA, CRZ IVB.
8	Abstract	Under the Karnataka Maritime Board (KMB), Department of Ports & Inland Water Transport of Karnataka under the Karnataka Maritime Board (KMB) is planning to develop the Honnavar Port at the Sharavathi River mouth by M/s Honnavar Port Pvt. Ltd. (HPPL) and construct four lane road parallel to the beach at Kasarkod for connecting to the National Highway (NH-66) and the Railway connectivity from Hosapattana Railway station for the Honnavar port at Kasarkod Tonka village, Honnavar taluk of Uttara Kannada District. In this regard, HPPL, requested National Centre for Sustainable Coastal Zone Management (NCSCM) at Chennai, Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India, to prepare a Coastal Regulation Zone map at the scale of 1:4000 by demarcating the High Tide Line (HTL), Low Tide Line (LTL) and Ecological Sensitive Areas (ESAs) for the project site to obtain CRZ clearance. Demarcation of the HTL, LTL, ESAs and identification of Coastal Regulation Zones (CRZ) have been carried out in 1:4000 scale to provide information on the CRZ categories with respect to the proposed project site as per the approved CZMP of Karnataka state prepared as per CRZ Notification, 2019. A field survey was conducted during April 2024 to identify any change in the Ecological Sensitive Area (ESAs), High Tide Line (HTL), etc. According to the approved CZMP of the Karnataka state, the proposed project activities falls under the CRZ IA (Sand Dune, Turtle Nesting Site and Reserve Forests), CRZ IB (Intertidal Zone), No Development Zone NDZ and CRZ IIIB (200m to 500m from HTL), CRZ IVA (Sea) and CRZ IVB (River/Creek) categories. (Refer Figure 2). A field-based map has been prepared based on the field survey conducted during April 2024. Some changes in Sand dune were observed during field visit and prepared a map based on field survey. The changes are represented in the map and categorized the CRZ areas as per CRZ Notification, 2019 (refer Figure 3). The area of the proposed activities falling in CRZ category as per the field survey is given in Table 4 and 5. A CRZ map covering about 7 Km radius of the project site representing CRZ categories based on approved CZMP is given in Figure 4. The proposed project site falls within the Sheet Number D 43 I 7 / SE (Map No. KA 25) of approved CZMP (Karnataka State) prepared as per CRZ Notification 2019.
9	Distribution Statement	Not for Circulation

CONTENTS

HIGH TIDE LINE, LOW TIDE LINE AND COASTAL REGULATION ZONE STATUS REPORT FOR THE PROPOSED HONNAVAR PORT, FOUR LANE ROAD CONNECTIVITY FROM NH 66 AND PROPOSED RAILWAY CONNECTIVITY FROM HOSAPATTANA RAILWAY STATION TO THE HONNAVAR PORT AT KASARKOD TONKA VILLAGE, HONNAVAR TALUK, UTTAR KANNADA DISTRICT, KARNATAKA

1.0 Introduction

Under the Karnataka Maritime Board (KMB), the Department of Ports and Inland Water Transport of Karnataka is preparing to develop the Honnavar Port at the Sharavathi River by M/s Honnavar Port Pvt. Ltd. (HPPL). To establish a connection between the National Highway (NH-66), the Hosapattana Railway Station, and the Honnavar port in Kasarkod Tonka village, Honnavar taluk of Uttara Kannada District, M/s Honnavar Port Pvt. Ltd. (HPPL) proposes a four-lane road and railway connectivity that runs parallel to the Kasarkod beach. The proposed port, four-lane NHAI road connectivity, railway connectivity, and associated infrastructure are all part of Karnataka State's Coastal Regulation Zone.

In this regard, HPPL requested the National Centre for Sustainable Coastal Zone Management (NCSCM) at Chennai, Ministry of Environment, Forestry, and Climate Change (MoEF&CC), Government of India, to prepare a Coastal Regulation Zone map at the scale of 1:4000 by demarcating the High Tide Line (HTL), Low Tide Line (LTL), and Ecological Sensitive Areas (ESAs) for the project site to obtain CRZ clearance. Demarcation of the HTL, LTL, and ESAs and identification of Coastal Regulation Zones (CRZ) have been carried out on a 1:4000 scale to provide information on the CRZ categories with respect to the proposed project site as per the approved CZMP of Karnataka State prepared as per CRZ Notification, 2019. A field survey was conducted during April 2024 to identify any changes in the Ecological Sensitive Areas (ESAs), High Tide Line (HTL), etc.

2.0 Objective

The objectives of the study are:

- Identification of HTL and LTL for the proposed project area
- Mapping of Ecological Sensitive Areas
- CRZ categorization as per CRZ Notification, 2019
- Preparation of CRZ map based on approved CZMP
- Preparation of field-based map
- Superimposing of the project layout plan on the CRZ map as well as field-based maps

3.0 Location

The proposed project activities such as four lane NHAI road connectivity, railway connectivity and associated infrastructure is located in Kasarkod Tonka Village, Honnavar Taluk, Uttar Kannada District, Karnataka within the Latitude Longitude of14°18'16.329"N 74°23'34.541"E and 14°15'9.88"N 74°26'20.948"E (Refer Fig. 1 Location Map).

Fig. 1 Location Map

4.0 Approach & Methodology

The CRZ map is prepared on large scale base maps to facilitate easy and accurate implementation of CRZ in the field. Cadastral map of scale 1:4000, was used as the base map for the present investigation. The HTL/LTL is identified in accordance with the procedures established and issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India.

The key elements of the approach and methodology are:

- Extraction of HTL, LTL and ESAs and preparation of CRZ map 1:4000 from the approved CZMP of Karnataka State as per CRZ Notification, 2019.
- To identify the changes in HTL, and ESAs during field visits.
- Transfer the HTL, LTL and ESAs to the cadastral map with respect to the control points.

4.1 Extraction of HTL

Extraction of HTL was carried out from the approved CZMP of Karnataka State prepared as per CRZ Notification, 2019 and verified in the field. Extracted HTL is verified in the field based on geomorphologic features and other features such as embankments, landward boundaries of tidal flats (MoEF & CC, 2015).

5.0 Data Source

In addition to the field investigation, data from various sources were used for the compilation of the final CRZ map and preparation of the CRZ report. The principal data sources include:

- Hydrographic charts of Naval Hydrographic Office
- Survey of India Toposheets
- Satellite Images
- Approved CZMP of Karnataka State as per CRZ Notification, 2019

6.0 Tide

Coastal zone regulations are restricted to the sea coast and banks of water bodies influenced by tidal action. The tidal range is an important parameter that decides the landward extent of the reach of seawater into the land and the location of the HTL including the extent of CRZ. The distance up to which development along rivers, creeks and backwaters is regulated depends on the landward extent of tidal influence. The Tidal range data with respect to Chart Datum pertaining to Honnavar (Lat. 14° 16' Long. 74° 26') provided by Naval Hydrographic Office, Dehra Dun is given below in Table 1.

Table 1: Tidal range at Honnavar (NHO Chart No. INT 7343 - 257)

Tide Condition	Height (m)
Mean High Water Spring (MHWS)	1.8
Mean High Water Neap (MHWN)	1.5
Mean Low Water Neap (MLWN)	1.0
Mean Low Water Spring (MLWS)	0.4
Mean Sea Level (MSL)	1.2

7.0 Field Investigation

Field investigation was carried out during April, 2024. HTL was extracted from approved CZMP maps were verified at field based on geomorphologic features and other features such as embankments, landward boundaries of intertidal zone (MoEF & CC, 2015). The HTL was plotted on the cadastral map using reference points identified in the field as well as approved CZMP. The distance and positions of HTL to control points which were extracted from the approved CZMP were verified in the field using high precision Trimble GPS. An appraisal of existing landuse/landform in the project area was also carried out.

8.0 Coastal Landuse/Landcover

The major land use/landcover around the project site is mangrove patches in Sharavati River bank, reserve forest, sand dune, sandy beach, residential areas, hamlets, beach tourism

recreational area, historical old fishing port with associated activities and its related infrastructures etc., associated with mixed vegetation with, road and rail networks. The seaside has wide beach with medium to fine-grained sand.

9.0 Coastal Regulation Zone and HTL

The Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi issued Notification No. G.S.R. 37(E) dated 18th January 2019 which is referred to as the Coastal Regulation Zone (CRZ) Notification, 2019 in supersession of CRZ Notification 2011, declaring the designated areas as Coastal Regulation Zone (CRZ), with a view to conserve and protect the unique environment of coastal stretches and marine areas, besides ensuring livelihood security to the fisher communities and other local communities in the coastal areas and to promote sustainable development based on scientific principles taking into account the dangers of natural hazards, sea level rise due to global warming. All developmental activities in the CRZ are regulated through the CRZ Notification, 2019 (MoEF & CC, 2019).

The CRZ consists of the following:

I. The land area from High Tide Line (hereinafter referred to as the HTL) to 500 meters on the landward side along the sea front. Explanation. - For the purposes of this notification, the HTL means the line on the land upto which the highest water line reaches during the spring tide, as demarcated by the National Centre for Sustainable Coastal Management (NCSCM) in accordance with the laid down procedures and made available to various coastal States and Union territories.

II. CRZ shall apply to the land area between HTL to 50 meters or width of the creek, whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance up to which development along such tidal influenced water bodies is to be regulated are governed by the distance up to which the tidal effects are experienced which is determined based on salinity concentration of 5 parts per thousand (ppt) measured during the driest period of the year and distance up to which tidal effects are experienced shall be clearly identified and

demarcated accordingly in the approved Coastal Zone Management Plan (CZMP) of the States/UT's.

III. The "intertidal zone" means land area between the HTL and the Low Tide Line (hereinafter referred to as the LTL).

IV. The water and the bed area between the LTL to the territorial water limit (12 Nm) in case of sea and the water and the bed area between LTL at the bank to the LTL on the opposite side of the bank, of tidal influenced water bodies. Explanation for the "tidal influenced water bodies" means the water bodies influenced by tidal effects from sea in the bays, estuaries, rivers, creeks, backwaters, lagoons, ponds that are connected to the sea.

The CRZ Notification, 2019 categorizes Coastal Regulation Zones as CRZ I, CRZ II, CRZ III and CRZ IV. based on whether the area is ecologically sensitive, developed, undeveloped or water body and its bed.

CRZ- I areas are environmentally most critical and are further classified as under as CRZ IA and IB.

1. CRZ-IA shall constitute the ecologically sensitive areas (ESAs) and the geomorphological features which play a role in maintaining the integrity of the coast such as Mangroves (in case mangrove area is more than 1000 square meters, a buffer of 50 m along the mangroves shall be provided and such area shall also constitute CRZ- IA), Corals and coral reefs, Sand dunes, Mudflats, National parks, Marine Parks, Sanctuaries, Reserve Forests, Wildlife Habitats and other protected areas under the provisions of Wild Life (Protection) Act, 1972 (53 of 1972), Forest (Conservation) Act, 1980 (69 of 1980) or Environment (Protection) Act, 1986 (29 of 1986), including Biosphere Reserves, Salt marshes, Turtle nesting grounds, Horse shoe crabs' habitats, Sea grass beds, Nesting grounds of birds, Areas or structures of archaeological importance and heritage sites.
2. CRZ-IB constitute of the intertidal zone i.e. the area between Low Tide Line and High Tide Line.

CRZ-II shall constitute the developed land areas up to or close to the shoreline, within the existing municipal limits or in other existing legally designated urban areas, which are substantially built-up with a ratio of built-up plots to that of total plots being more than 50 per cent and have been provided with drainage and approach roads and other infrastructural facilities, such as water supply, sewerage mains, etc.

CRZ-III areas are land areas that are relatively undisturbed (viz. rural areas, etc.) and those which do not fall under CRZ-II, shall constitute CRZ–III, and CRZ-III shall be further classified into CRZ IIIA and CRZ IIIB.

1. CRZ IIIA areas are such densely populated CRZ-III areas, where the population density is more than 2161 per square kilometer as per 2011 census base, shall be designated as CRZ–III A and in CRZ-III A, area up to 50 meters from the HTL on the landward side shall be earmarked as the 'No Development Zone (NDZ)', provided the CZMP as per this notification, framed with due consultative process, have been approved, failing which, a NDZ of 200 meters shall continue to apply.
2. CRZ-III B areas are all other CRZ-III areas with population density of less than 2161 per square kilometer, as per 2011 census base, shall be designated as CRZ-III B and in CRZ-III B, the area up to 200 meters from the HTL on the landward side shall be earmarked as the 'No Development Zone (NDZ)'.

Land area up to 50 meters from the HTL, or width of the creek whichever is less, along the tidal influenced water bodies in the CRZ III, shall also be earmarked as the NDZ in CRZ III and the NDZ shall not be applicable in the areas falling within notified Port limits.

CRZ-IV constitutes the water area and shall be further classified as CRZ-IVA and CRZ-IVB.

1. CRZ- IVA is the water area and the sea bed area between the Low Tide Line up to twelve nautical miles on the seaward side shall constitute CRZ-IV A.
2. CRZ- IVB areas shall include the water area and the bed area between LTL at the bank of the tidal influenced water body to the LTL on the opposite side of the bank, extending from the mouth of the water body at the sea up to the influence of tide.

The CRZ Notification of 2019 has also defined Critical Vulnerable Coastal Areas (CVCA), which includes Sundarban region of West Bengal and other ecologically sensitive areas identified as under Environment (Protection) Act, 1986 such as Gulf of Khambat and Gulf of Kutchh in Gujarat, Malvan, Achra-Ratnagiri in Maharashtra, Karwar and Coondapur in Karnataka, Vembanad in Kerala, Gulf of Mannar in Tamil Nadu, Bhaitarkanika in Odisha, Coringa, East Godavari and Krishna in Andhra Pradesh shall be treated as Critical Vulnerable Coastal Areas (CVCA) and managed with the involvement of coastal communities including fisher folk who depend on coastal resources for their sustainable livelihood.

In order to protect and preserve the 'green lung' of the Greater Mumbai area, CRZ Notification 2019 provides the protection for all open spaces, parks, gardens, playgrounds indicated in development plans within CRZ-II shall be categorised as No Development Zone and a Floor Space Index up to 15% shall be allowed only for construction of civic amenities, stadium and gymnasium meant for recreational or sports related activities. The residential or commercial use of such open spaces shall not be permissible.

The Coastal Zone Management Plan (CZMP) prepared based on CRZ Notification, 2019 has been approved and it is valid for Karnataka State for the approval of CRZ projects.

10.0 Coastal Regulation Zone for the Proposed Project Site as per approved CZMP

The project site has HTL on the Sea side. The proposed project site falls within the Coastal Regulation Zone of Uttara Kannada District of Karnataka State. The proposed project site falls in CRZ category of Kasaragod Tonka Village area.

A CRZ map of 1:4000 Scale has been prepared in accordance with the approved CZMP of Karnataka State as per CRZ Notification, 2019 (Refer Figure 2). According to the approved CZMP of the Karnataka state, the proposed project activities falls under the CRZ IA (Sand Dune, Turtle Nesting Site and Reserve Forests), CRZ IB (Intertidal Zone), No Development Zone, CRZ IIIB (200m to 500m from HTL), CRZ IVA (Sea) and CRZ IVB (River/Creek) categories. (Refer Figure 2). The proposed project layout is superimposed on the 1:4000 Scale CRZ map and it is shown in Figure 2.

The area (in square meters) of the proposed project activities under each CRZ category (based on the approved CZMP as per CRZ Notification, 2019) is given in the Table 2.

Table 2. Area of the proposed project activities under CRZ categories as per approved CZMP of Karnataka State

Sheet No	Proposed Project Activities	Area in Square meters								
		CRZ IA			CRZ IA 50m Mangrove Buffer Zone	CRZ IB Intertidal Zone	NDZ	CRZ IIIB 200 to 500m from HTL	CRZ IVA	CRZ IVB
		Turtle Nesting Site	Sand Dune	Reserved Forest						
Sheet No: 1	Four Lane NHAI Road Connectivity and Improvement of NH66	**2090.58**	**1893.79**	**59841.76**	-	-	4641.22	9890.30	-	-
Sheet No:2	Four Lane NHAI Road Connectivity and Improvement of NH66	-	-	-	**3655.25**	-	59242.88	15454.86	-	-
	Fuel Station	-	-	-	-	-	5470.23	-	-	-
	Gate House/Weigh Bridge	-	-	-	-	-	1379.41	-	-	-
	Underpass	-	-	-	-	-	241.89	-	-	-
Sheet No: 3	Approach Channel Inner(L-1395m)	-	-	-	-	9705.31	-	-	93493.66	22768.10
	Approach Channel Outer(L-2280m)	-	-	-	-	-	-	-	66618.56	-
	Coal Stackyard Closed	-	-	-	-	25563.43	9665.83	-	-	9984.44
	General Cargo Storage - Closed	-	-	-	-	-	14287.29	-	-	-
	General Cargo Storage - Open	-	-	-	-	-	20603.18	-	-	-
	Iron Ore Stackyard	-	-	-	-	-	33169.64	-	-	-

	Jetty	-	-	-	-	188.99	782.25	-	-	13937.65
	Liquid Cargo Storage	-	-	-	-	1319.98	-	-	-	1390.05
	North Breakwater (L-820m)	-	-	-	-	5878.90	69.03	-	34722.62	-
	Operation Building Area	-	-	-	-	-	2485.42	-	-	-
	South Breakwater (L-865m)	-	-	-	-	3350.21	-	-	47693.41	-
	Substation	-	-	-	-		796.88	-	-	-
	Turning Circle (Dia250m, Depth-10m)	-	-	-	-	3354.81	-	-	-	45680.84
Sheet No: 4	Approach Channel Outer(L-2280m)	-	-	-	-	-	-	-	200238.24	-

(Note: CRZ I A categories such as Sand Dune, Turtle Nesting Site and Reserve Forests are overlapping each other).

The length (in meters) of the proposed project activities under each CRZ category (based on the approved CZMP as per CRZ Notification, 2019) is shown in Table 3.

Table 3. Length of the proposed project activities under CRZ categories as per approved CZMP of Karnataka State

Sheet No	Proposed Project Activities	Length in Meters					
		CRZ IA			CRZ IB Intertidal Zone	NDZ	CRZ IVB
		Turtle Nesting Site	Sand Dune	Reserved Forest			
Sheet No: 1	Proposed Railway Line	148.01	72.62	730.31	-	167.16	-
Sheet No: 2	Internal Road	-	-	-	-	284.33	-
	Proposed Railway Line	-	-	-	-	2307.31	-
	River Side Bank Protection	-	-	-	285.14	-	-
	South Seaside Shore Protection Work(1676m)	-	-	-	322.53	38.47	-
Sheet No: 3	Berth Dredge Area	-	-	-	-	-	1131.49
	Internal Road	-	-	-	607.03	1282.97	-
	North Seaside Shore Protection	-	-	-	298.72	303.66	-
	Proposed Railway Line	-	-	-	-	931.38	-
	River Side Bank Protection	-	-	-	994.02	15.24	484.67
	South Seaside Shore Protection Work(1676m)	-	-	-	1291.22	-	-

(Note: CRZ I A categories such as Sand Dune, Turtle Nesting Site and Reserve Forests are overlapping each other).

The proposed project site falls within the Sheet Number D 43 I 7 / SE (Map No. KA 25) of approved CZMP (Karnataka State) prepared as per CRZ Notification 2019.

11.0 Field based map for the proposed project site

A field-based map has been prepared based on the field survey conducted during April 2024. During field visit land modifications are observed at Sand dunes area and prepared a field-based map of 1:4000 scale. The changes are represented in the map and categorized the CRZ areas as per CRZ Notification, 2019 (refer Figure 3 and Table 4&5).

Table 4. Area of the proposed project activities fall under CRZ categories based on field-based map

Sheet No	Proposed Project Activities	Area in Square meters								
		CRZ IA			CRZ IA (50m Mangrove Buffer Zone)	CRZ IB (Intertidal Zone)	NDZ	CRZ IIIB (200 to 500m from HTL)	CRZ IVA	CRZ IVB
		Turtle Nesting Site	Sand Dune	Reserved Forest						
Sheet No: 1	Four Lane NHAI Road Connectivity and Improvement of NH66	**2090.58**	-	**59841.76**	-	-	4641.22	9890.30	-	-
Sheet No:2	Four Lane NHAI Road Connectivity and Improvement of NH66	-	-	-	**3655.25**	-	59242.88	15454.86	-	-
	Fuel Station	-	-	-	-	-	5470.23	-	-	-
	Gate House/Weigh Bridge	-	-	-	-	-	1379.41	-	-	-
	Underpass	-	-	-	-	-	241.89	-	-	-
Sheet No: 3	Approach Channel Inner(L-1395m)	-	-	-	-	9705.31	-	-	93493.66	22768.10
	Approach Channel Outer(L-2280m)	-	-	-	-	-	-	-	66618.56	-
	Coal Stackyard Closed	-	-	-	-	25563.43	9665.83	-	-	9984.44
	General Cargo Storage - Closed	-	-	-	-	-	14287.29	-	-	-
	General Cargo	-	-	-	-	-	20603.18	-	-	-

	Storage - Open									
	Iron Ore Stackyard	-	-	-	-	-	33169.64	-	-	-
	Jetty	-	-	-	-	188.99	782.25	-	-	13937.65
	Liquid Cargo Storage	-	-	-	-	1319.98	-	-	-	1390.05
	North Breakwater (L-820m)	-	-	-	-	5878.90	69.03	-	34722.62	-
	Operation Building Area	-	-	-	-	-	2485.42	-	-	-
	South Breakwater (L-865m)	-	-	-	-	3350.21	-	-	47693.41	-
	Substation	-	-	-	-		796.88	-	-	-
	Turning Circle (Dia250m, Depth-10m)	-	-	-	-	3354.81	-	-	-	45680.84
Sheet No: 4	Approach Channel Outer(L-2280m)	-	-	-	-	-	-	-	200238.24	-

(Note: CRZ I A categories such as Turtle Nesting Site and Reserve Forests are overlapping each other).

The length (in meters) of the proposed project activities under each CRZ category based on Field Survey is shown in Table 5.

Table 5. Length of the proposed project activities under CRZ Categories based on field-based map

Sheet No	Proposed Project Activities	Length in Meters					
		CRZ IA			CRZ IB Intertidal Zone	NDZ	CRZ IVB
		Turtle Nesting Site	Sand Dune	Reserved Forest			
Sheet No: 1	Proposed Railway Line	148.01	-	730.31	-	167.16	-
Sheet No: 2	Internal Road	-	-	-	-	284.33	-
	Proposed Railway Line	-	-	-	-	2307.31	-
	River Side Bank Protection	-	-	-	285.14	-	-
	South Seaside Shore Protection Work(1676m)	-	-	-	322.53	38.47	-
Sheet No: 3	Berth Dredge Area	-	-	-	-	-	1131.49
	Internal Road	-	-	-	607.03	1282.97	
	North Seaside Shore Protection	-	-	-	298.72	303.66	-
	Proposed Railway Line	-	-	-	-	931.38	-
	River Side Bank Protection	-	-	-	994.02	15.24	484.67
	South Seaside Shore Protection Work(1676m)	-	-	-	1291.22	-	-

(Note: CRZ I A categories such as Turtle Nesting Site and Reserve Forests are overlapping each other).

A CRZ map covering about 7 Km radius of the project site representing CRZ categories based on approved CZMP is given in Figure 4.

12.0 SUMMARY AND CONCLUSIONS

- A CRZ map with HTL, LTL and CRZ categories is prepared in 1:4000 scale by superimposing the proposed project layout plan with survey plot information (Refer Figure 2 CRZ Map).
- The CRZ map of 1:4000 scale has been prepared based on the approved CZMP of Karnataka State as per CRZ Notification, 2019.(Refer Figure 2) and a field-based map is prepared as per field survey conducted during April 2024.
- As per CRZ map, the proposed project activities fall under the CRZ IA (Sand Dune, Turtle Nesting Site and Reserve Forests), CRZ IB (Intertidal Zone), No Development Zone NDZ and CRZ IIIB (200m to 500m from HTL), CRZ IVA (Sea) and CRZ IVB (River/Creek) categories. (For details refer Figure 2 and Table 2 & 3).
- As per field-based map the proposed project activities falls under the CRZ IA (Turtle Nesting Site and Reserve Forests), CRZ IB (Intertidal Zone), No Development Zone NDZ and CRZ IIIB (200m to 500m from HTL), CRZ IVA (Sea) and CRZ IVB (River/Creek) categories. During the field visit land modification of Sand dune were observed and prepared a field-based maps as per field survey. (For details refer Figure 3 and Table 4 & 5).
- The area of the proposed activities falling in each CRZ categories as per the field survey is given in Table 4 and 5.
- A CRZ map covering about 7 Km radius of the project site representing CRZ categories based on approved CZMP is given in Figure 4.
- The proposed project site falls within the Sheet Number D 43 I 7 / SE (Map No. KA 25) of approved CZMP (Karnataka State) prepared as per CRZ Notification 2019.

- The proposed four lane NHAI road Connectivity and Railway connectivity from NH 66 to the proposed port area does not pass through Sand dune and completely falls within Port limit as per the field-based maps.

- As per CRZ Notification, 2019 Land area up to 50 meters from the HTL, or width of the creek whichever is less, along the tidal influenced water bodies in the CRZ III, shall also be earmarked as the NDZ in CRZ III. "The NDZ shall not be applicable in the areas falling within notified Port limits" (Refer CRZ Notification, 2019 under section 2.3.3 attached as Annexure - A)

REFERENCES

MoEF &CC, 2015. Manual on Demarcation of High Tide Line and Preparation of CZMP of the Coast of India.

MoEF, 2019. Notification No. G.S.R.37 (E) dated 18.1.2019, Ministry of Environment Forest and Climate Change, Government of India, New Delhi.

NHO, 2019. Hydrographic Chart no INT 7343 – 257 Malvan to Kundapura. Naval Hydrographic Office, Dehra Dun, 2019.

PLATES

Plate 1: Proposed Road Connecting to the NH 66

Plate 2: Proposed Road crossing the Reserve Forest area with modified land

Plate 3: Sand dune near to the proposed NH Road

Plate 4: Sharavathi Backwater near to the proposed project site

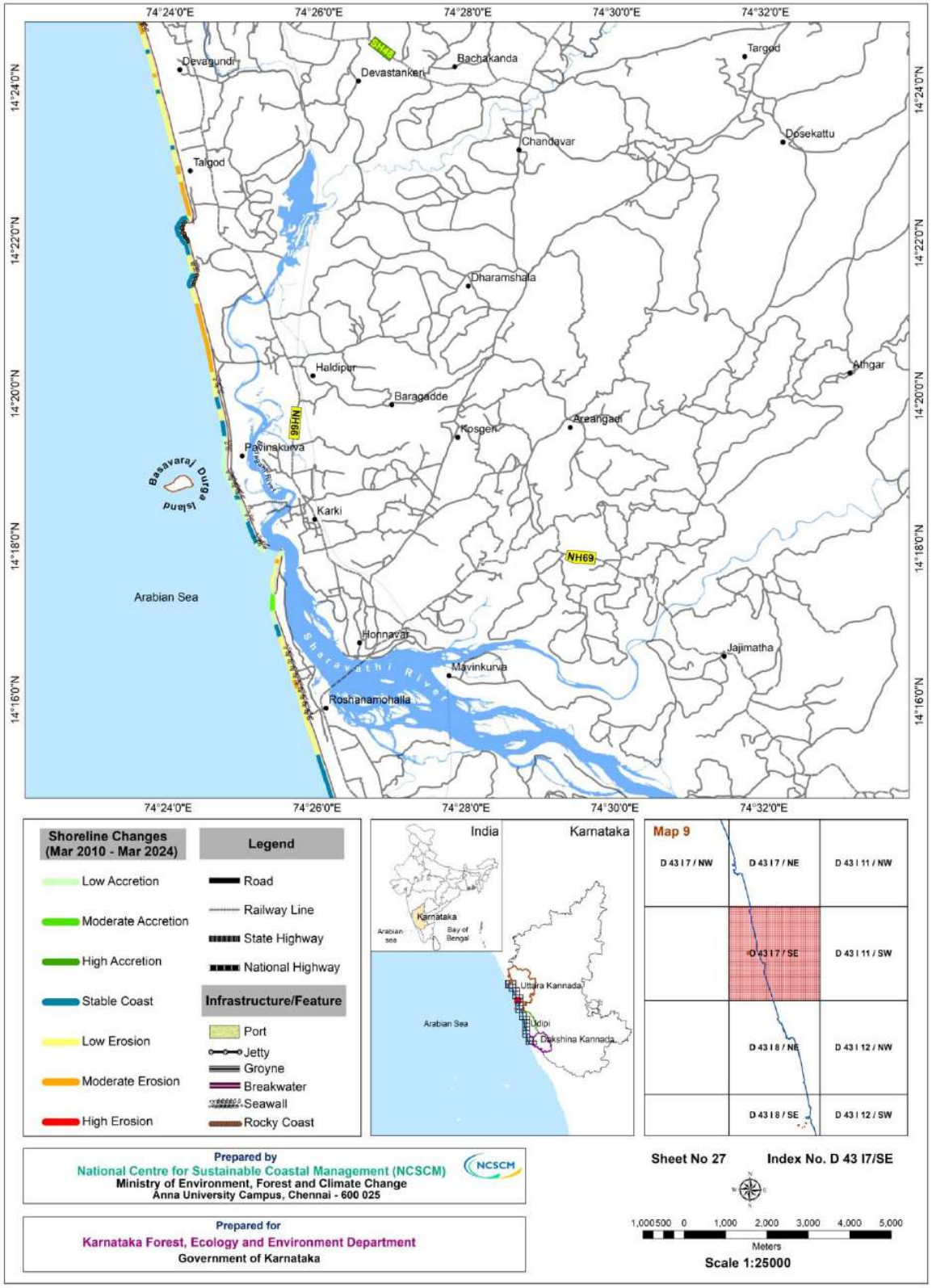


Figure 7.9: Shoreline changes along Sharavathi Estuary, Uttara Kannada

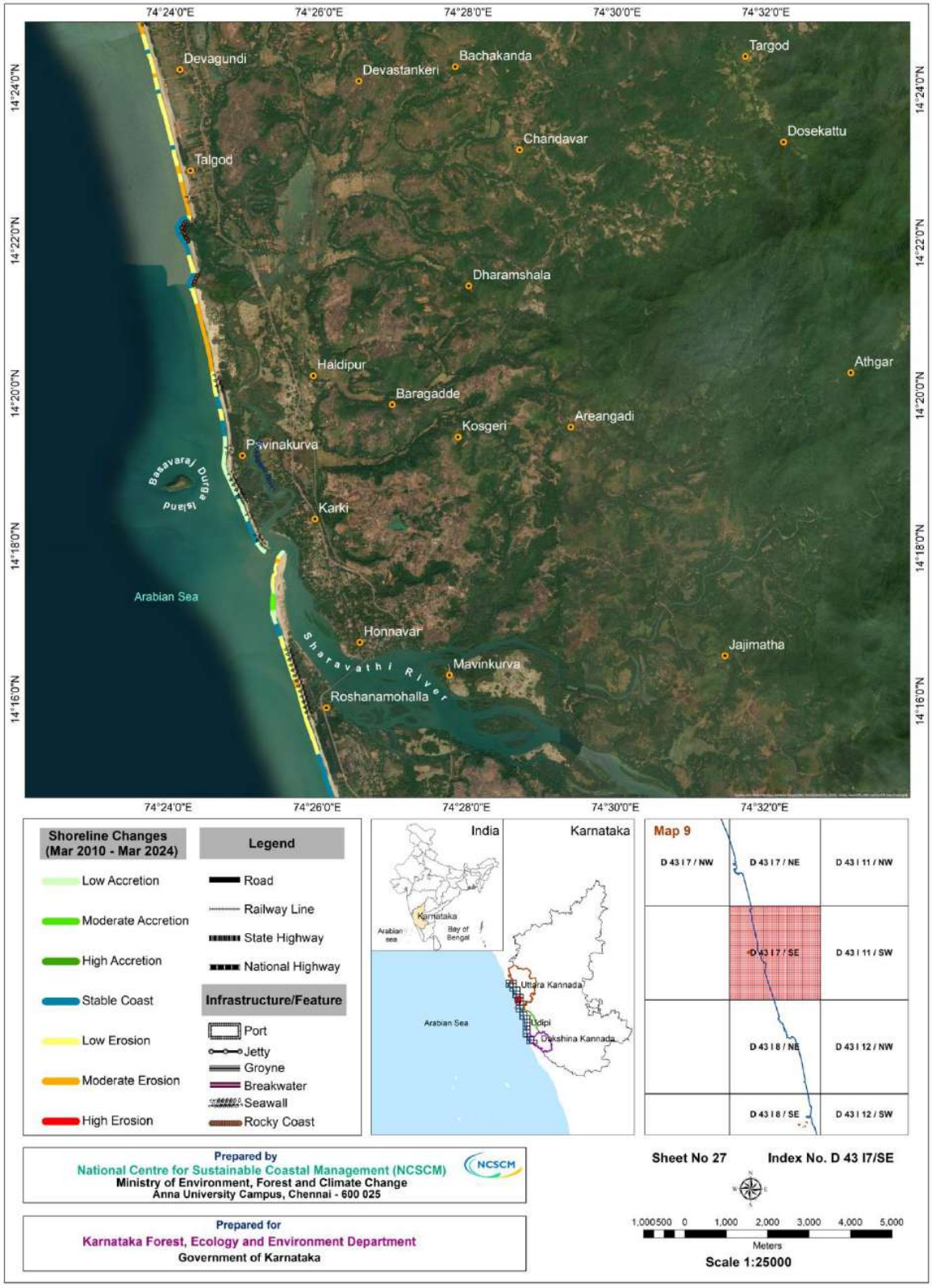
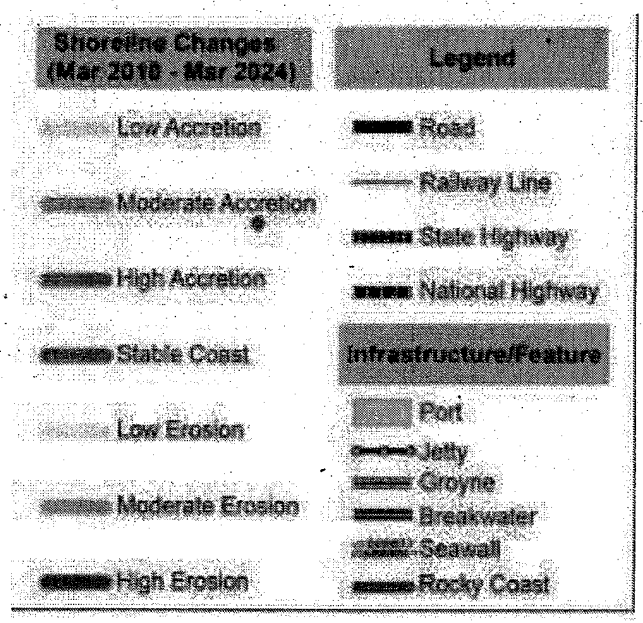


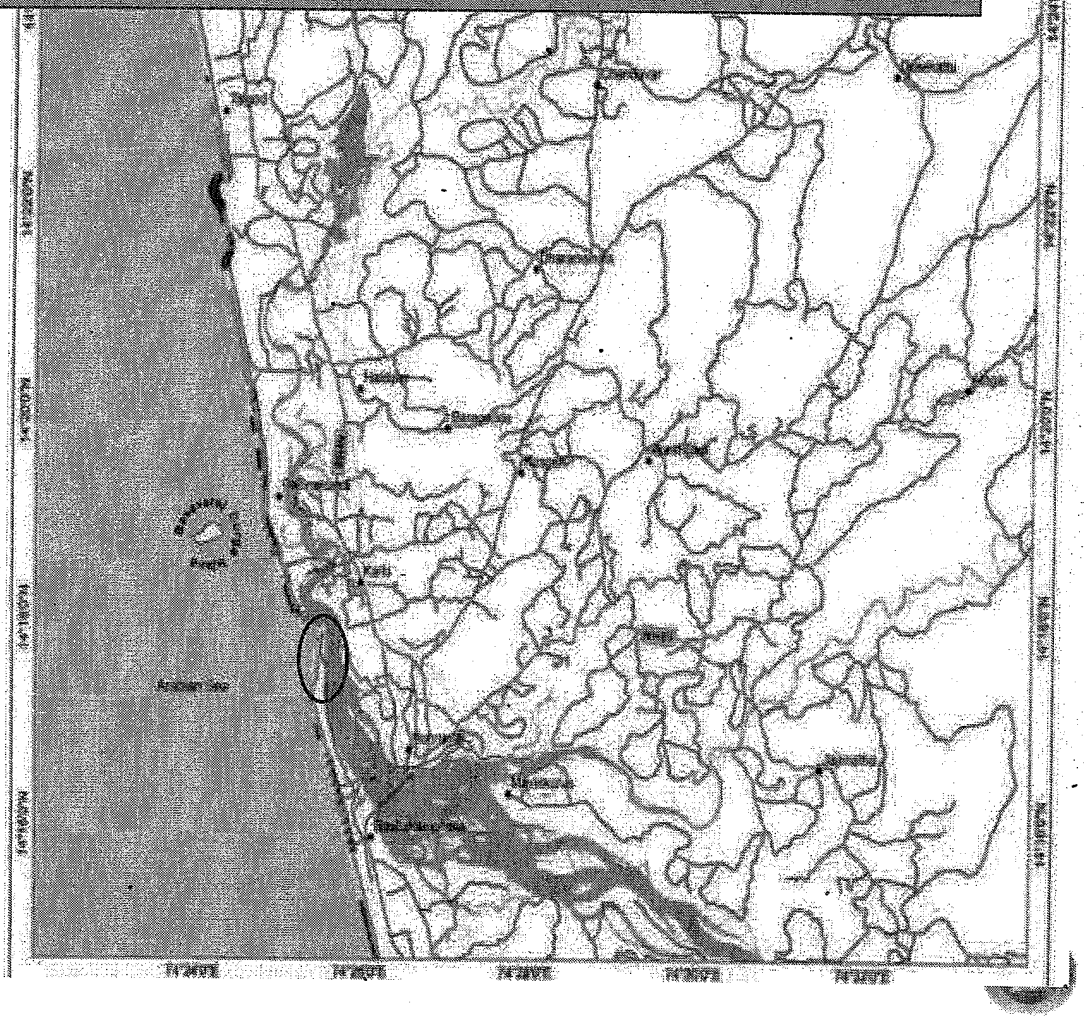
Figure 9: Shoreline changes along Sharavathi Estuary, Uttara Kannada

PROJECT STANDARD TOR POINT – 10:

Submit the status of shore line change at the project site

- As per the NCSCM report on shoreline Management Plan, September 2024 the proposed project is in low Erosion & Moderate Accretion





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HONNAVAR PORT (P) LTD.

To,

Date: 08/02/2023

Deputy Conservator of Forest,
Honnavar Division,
Honnavar Taluk,
Uttar Kannada District.

Sir,

Sub: Placing of turtle eggs – regarding.

****

With respect to the above subject cited, I would like to inform your kind self that yesterday on 07.02.2023 at around IST 10.00 hrs, a group of approx six men entered into the port premises at Kasarkod side of Honnavar Port area leased out to M/s. Honnavar Port (P) Ltd. The said men were roaming inside the port premises suspiciously.

However later, on examining into the incident with our port security personnel, it was learnt that the said men entered inside the project premises from the beach area and placed turtle eggs within the proposed National Highway alignment form NH-66 to Project premises. The footage of the entire incident of placing the turtle eggs within the project location is captured in the CC camera installed in the port site (video footage enclosed).This type of illegal activates are regular, doing to stop the projects.

Therefore, this act of placing the turtle eggs in the project premises has to be seriously taken into consideration from the concerned authorities and action has to be taken under the Wild Life Protection Act.

This is for your kind information and needful action in the matter.

Thanking You.

Yours faithfully,

Honnavar Port Private Limited Bengaluru

Security Head,
For Honnavar Port (P) Ltd.

Copy transmitted to:

09/02/2023

1. The Deputy Commissioner, Uttar Kannada District, Karwar for favour of information and necessary action.
2. The Director, Ports & Inland Water Transport Department, Baithkol, Karwar for favour of information and necessary action.
3. Assistant Commissioner Bhatkal Sub Division, Bhatkal
4. Tahsildar Honnavar information and necessary action.
5. The Range Forest Officer, Honnavar for favor of information and necessary action.
6. The Circle Police Inspector, Police Station Honnavar for favor of information and necessary action.
7. The Port Officer, Honnavar for favor of information and necessary action.

Enclosure: As above.

9/2/2023

8/2/2023

8/2/2023

Port Office : Kasarkod Tanka, Honnavar Taluk, Uttar Kannada District, Karnataka - 581 342.
Regd. Office : #103, Lalchzar Apartments, 45/1-2, Palace Road, Bangalore - 560 001, Karnataka, India.
Phone : +91-80-2235 3670, 4149 4960 Fax : +91-80-2235 3671 Email : info@honnavarport.com


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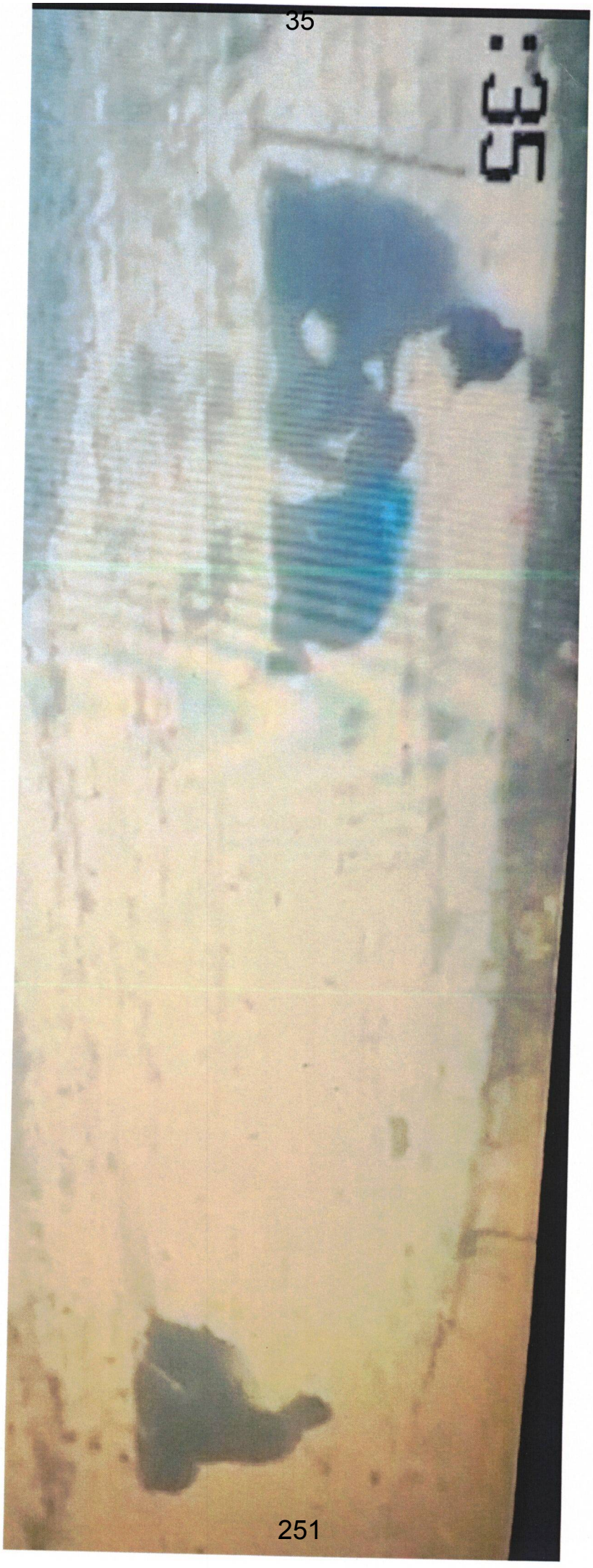

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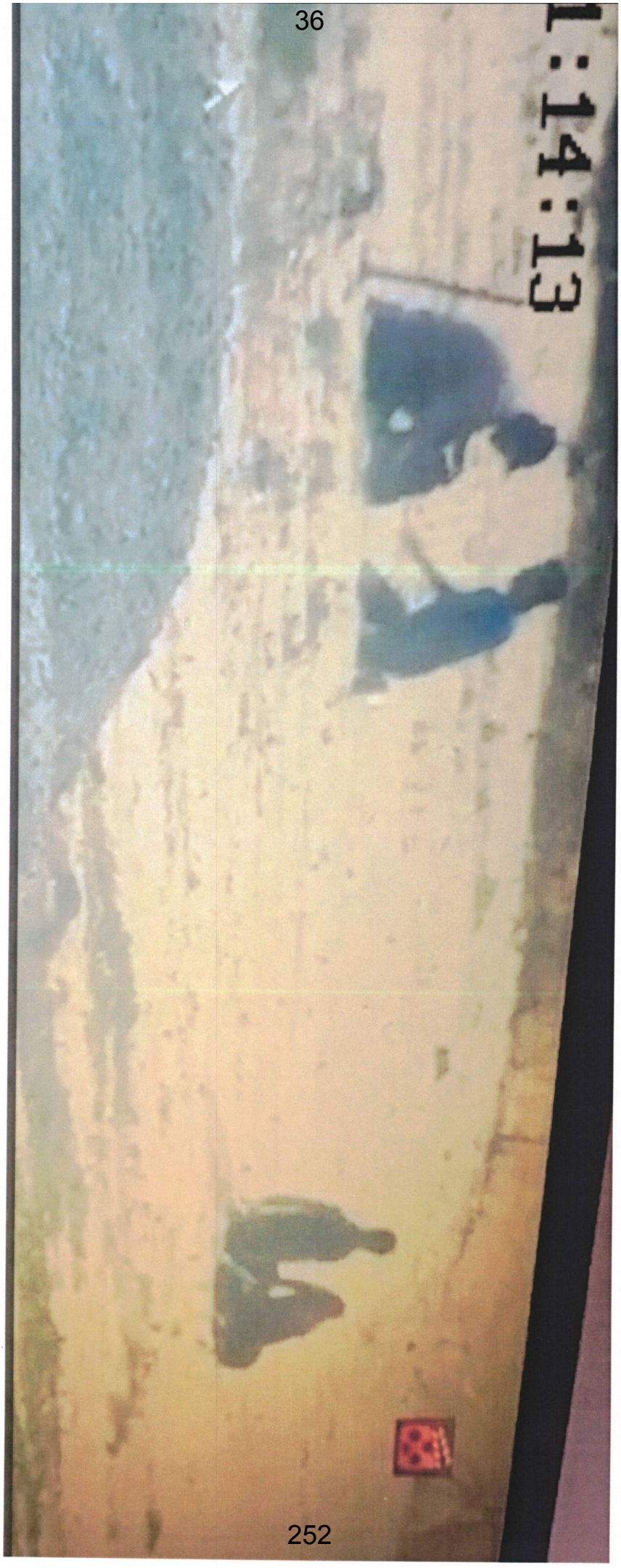

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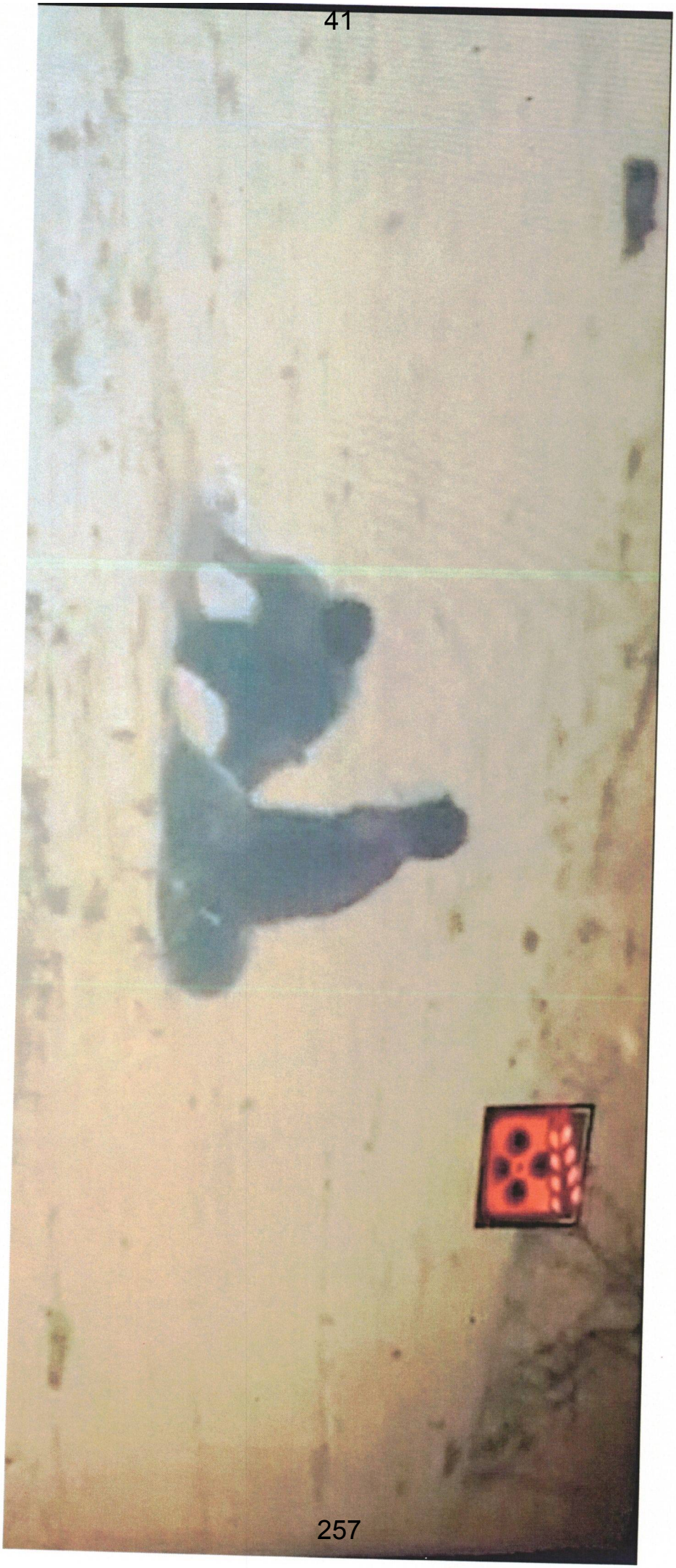
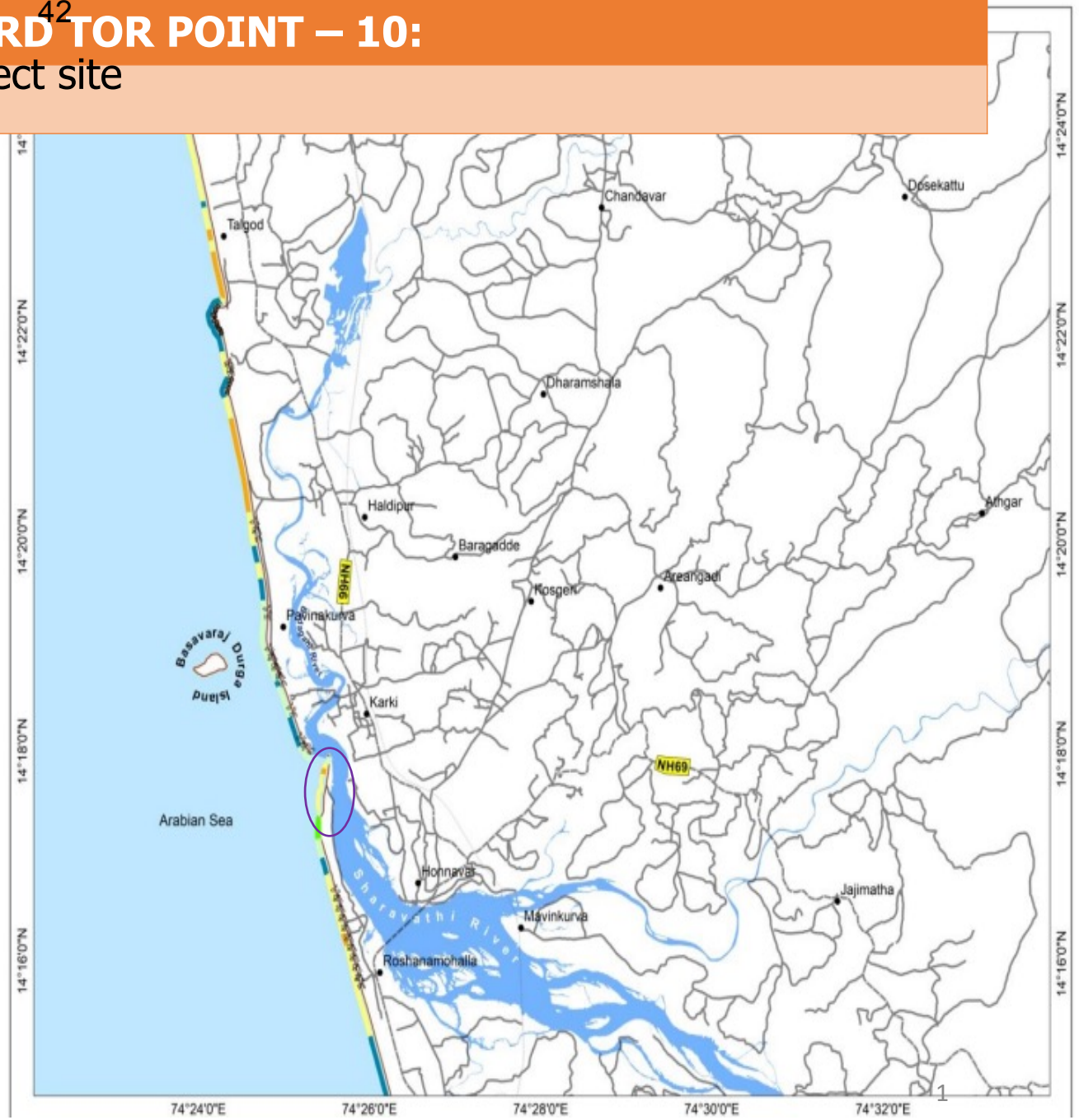


PROJECT STANDARD TOR POINT – 10:

Submit the status of shore line change at the project site

- As per the NCSCM report on shoreline Management Plan, September 2024 the proposed project is in low Erosion & Moderate Accretion



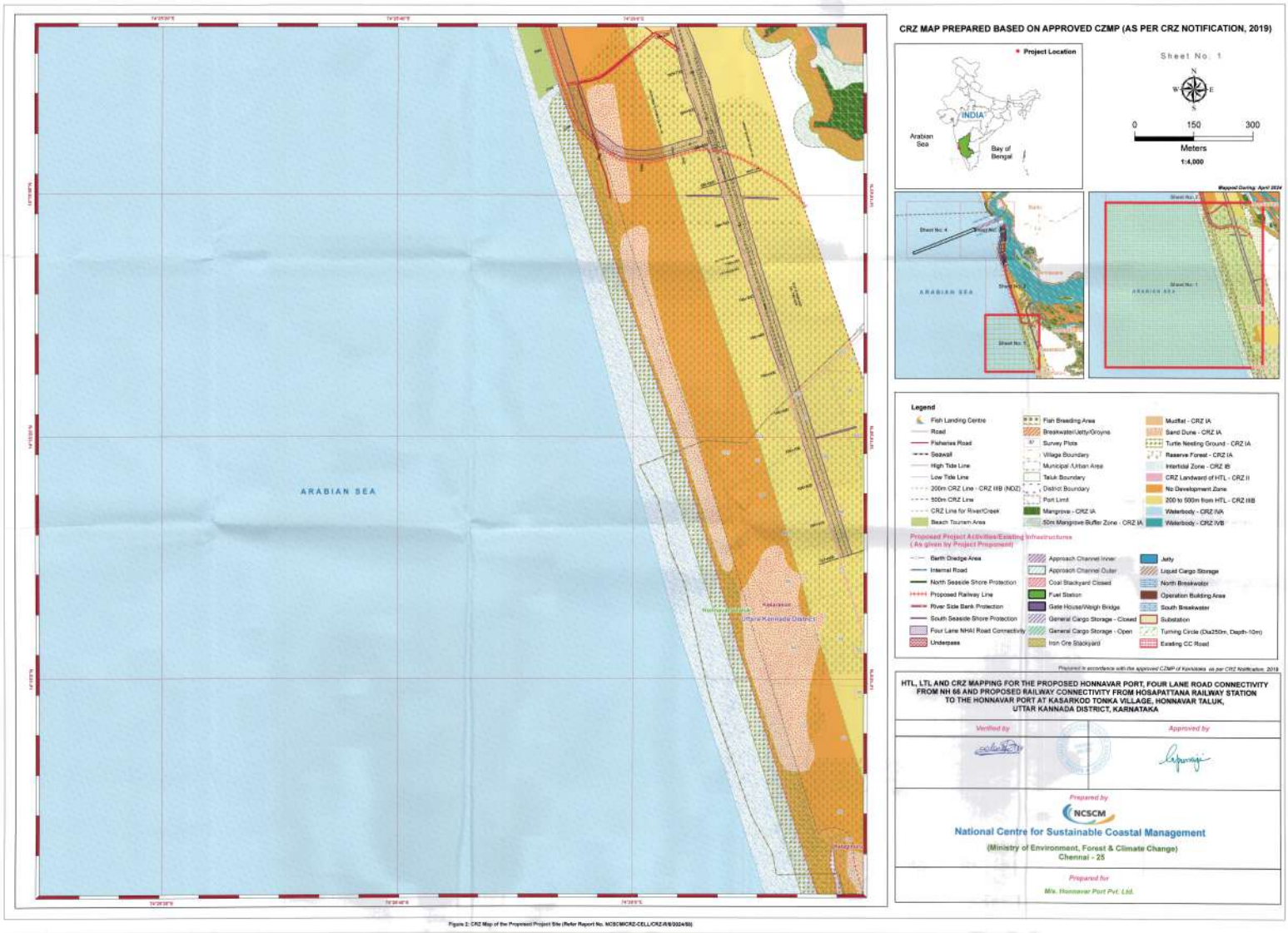


Figure 2: CRZ Map of the Proposed Project Site (Refer Report No. NCSCM/CRZ-CELL/CRZ-R/8/2024/50)

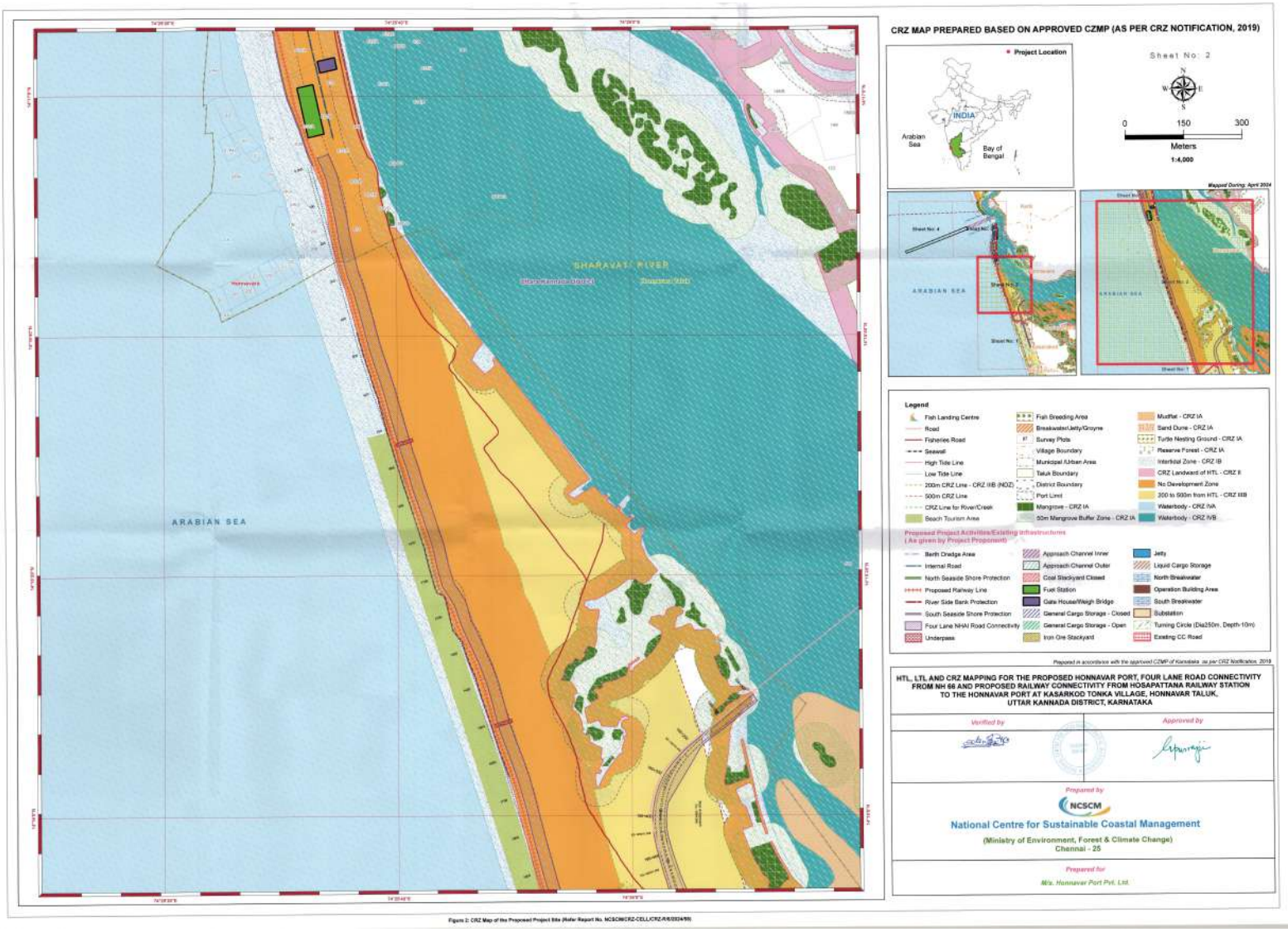


Figure 2: CRZ Map of the Proposed Project Site (Refer Report No. NCSCM/CRZ-CELL/CRZ-R/E/0304/99)

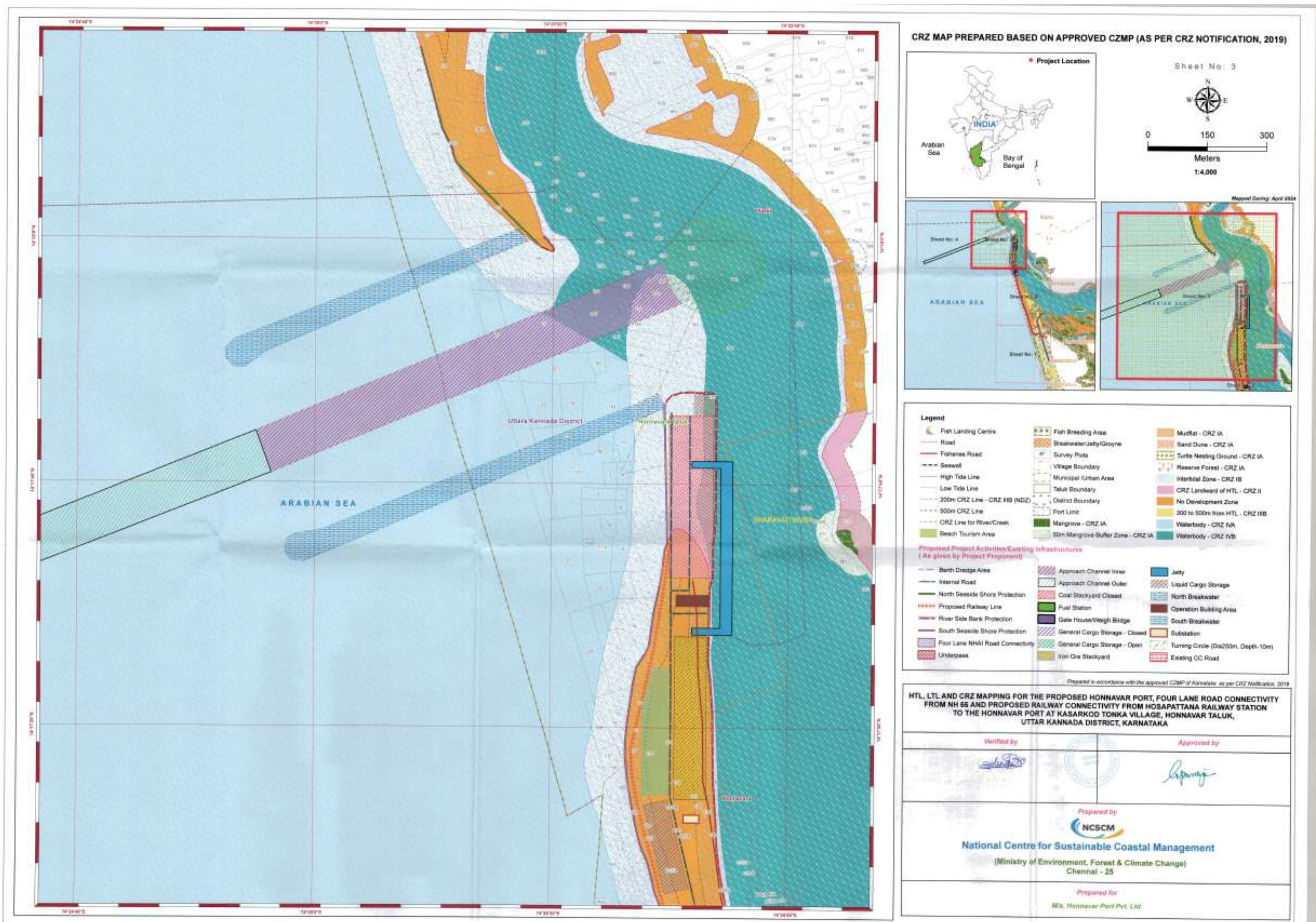


Figure 2: CRZ Map of the Proposed Project Site (Refer Report No. NCSCM/CRZ-CELL/CRZ-R/8/2024/80)

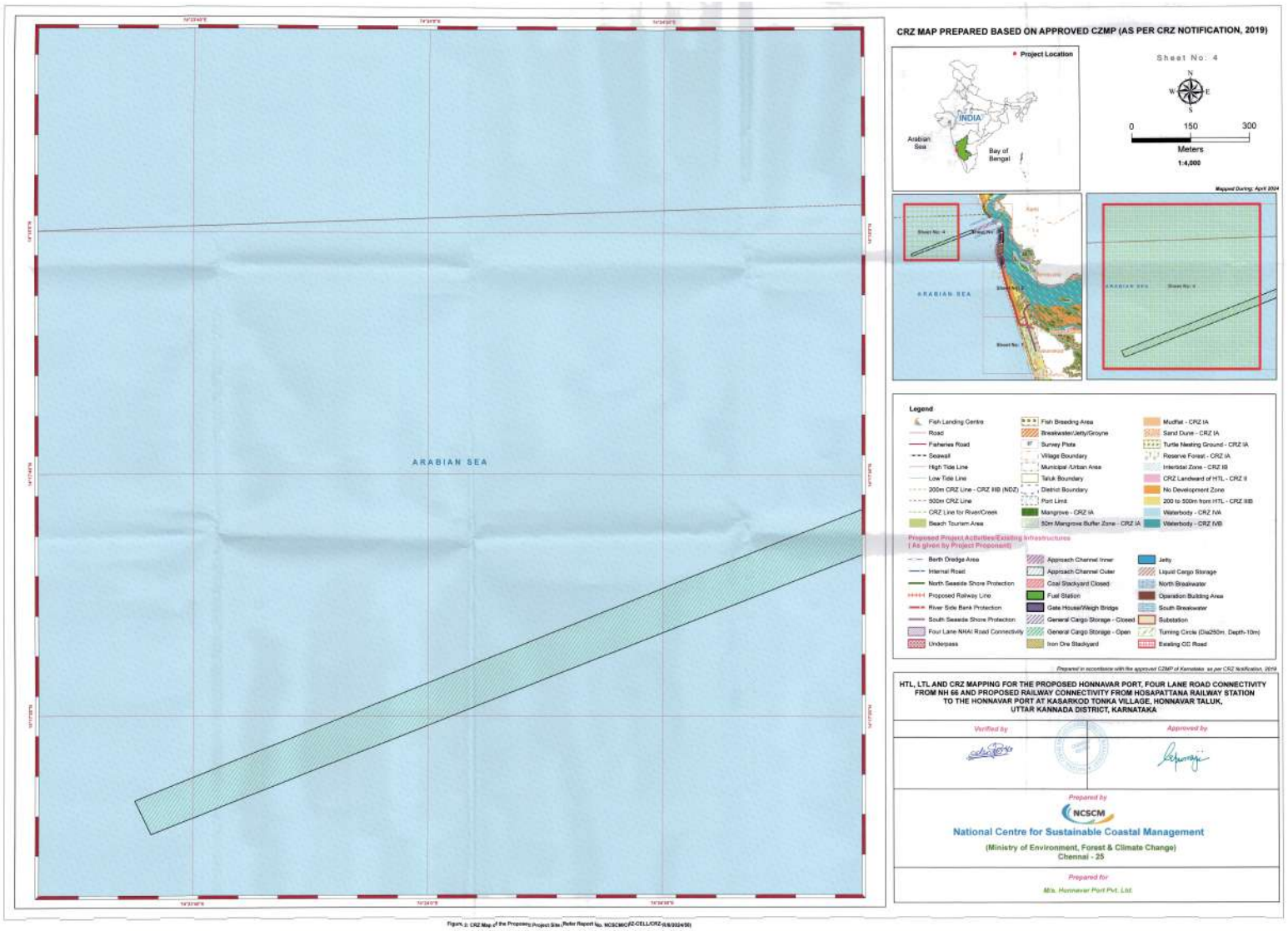


Figure 2: CRZ Map of the Proposed Project Site (Refer Report No. NCSCM/CZ-CELL/CRZ-IS/6/2024/58)

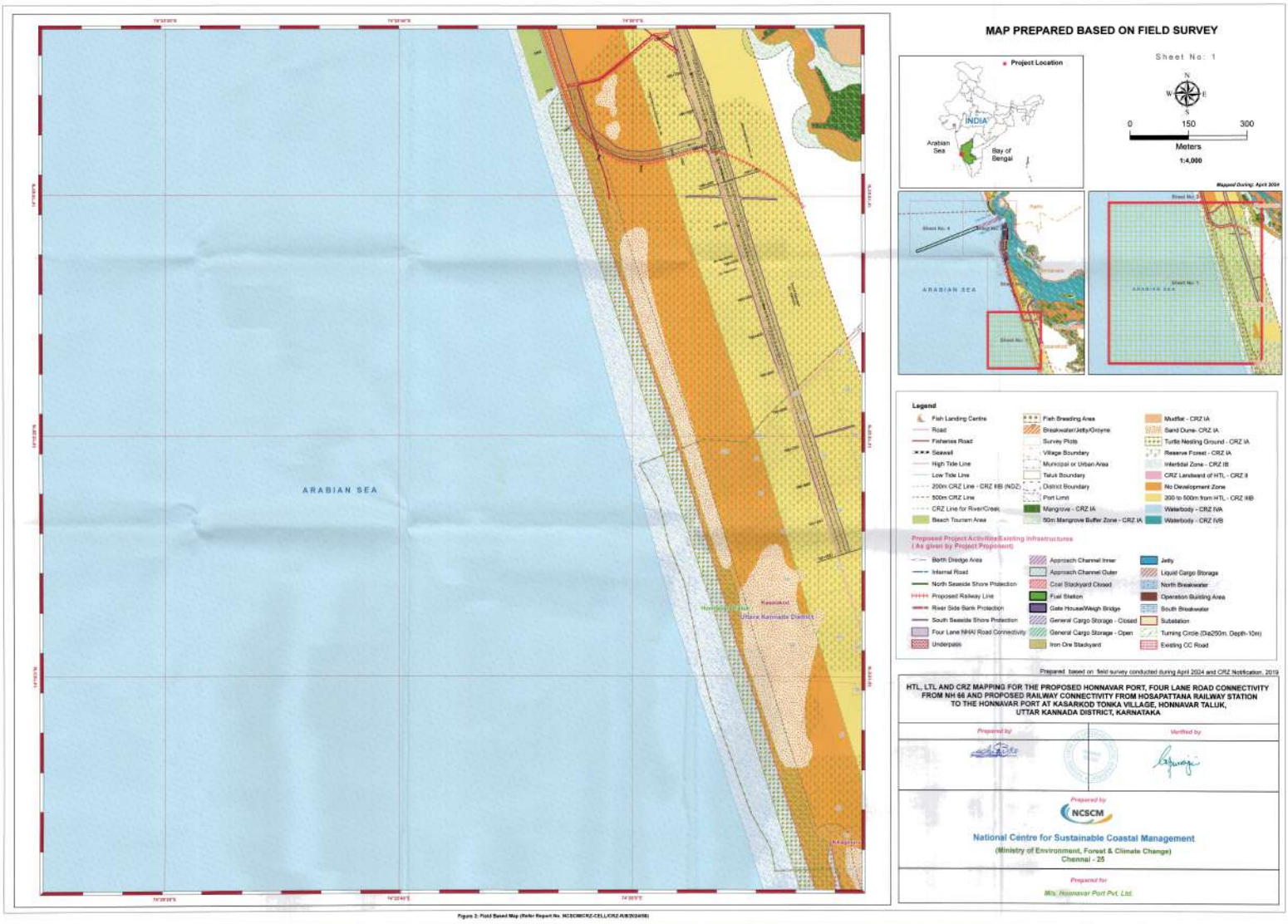


Figure 2: Field Based Map (Refer Report No. NCSCM/CRZ-CELL/CRZ-KA/B/2024/58)

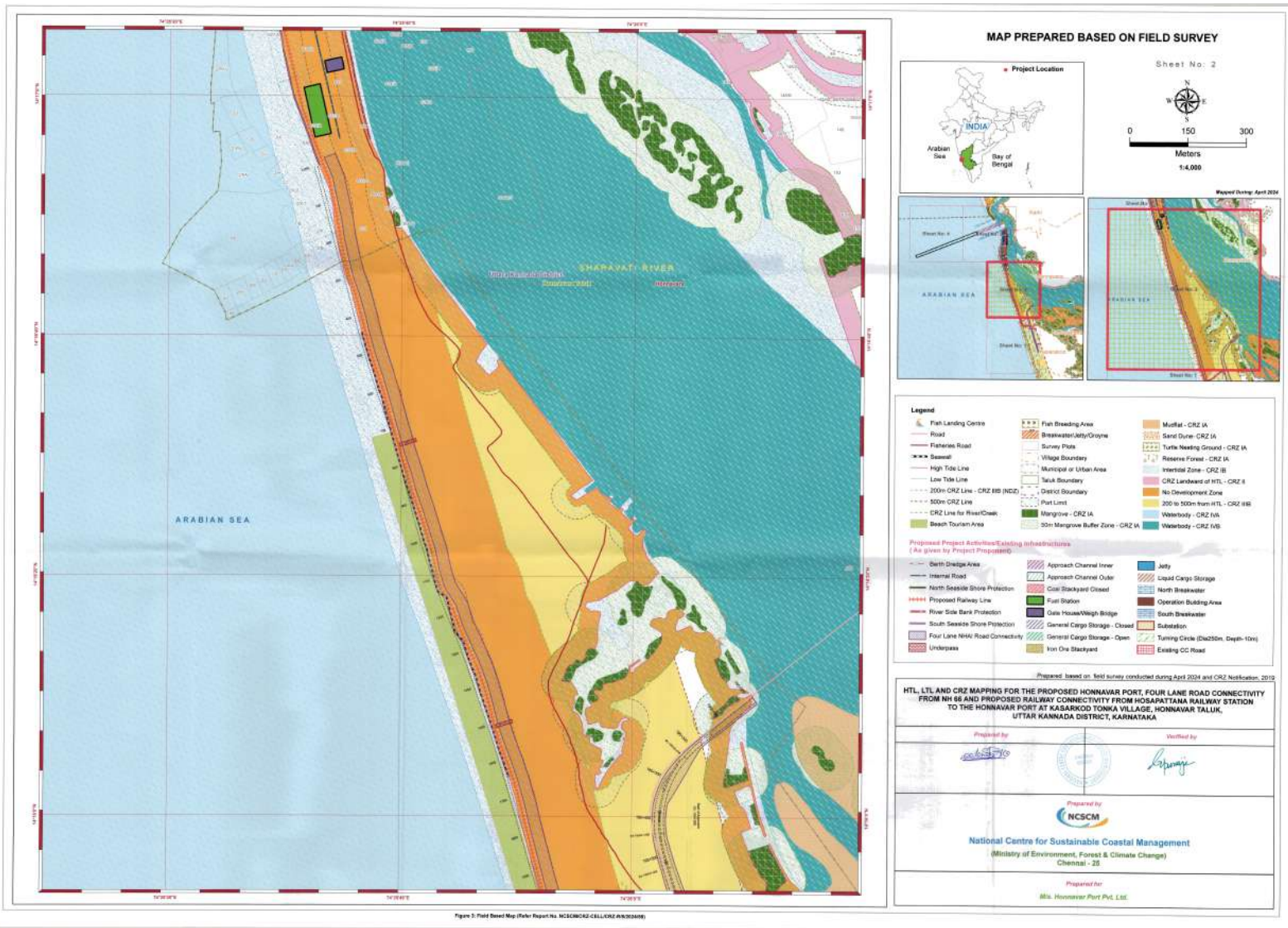


Figure 3: Field Based Map (Refer Report No. NCSCM/CRZ-CELL/CRZ-WB/2024/68)

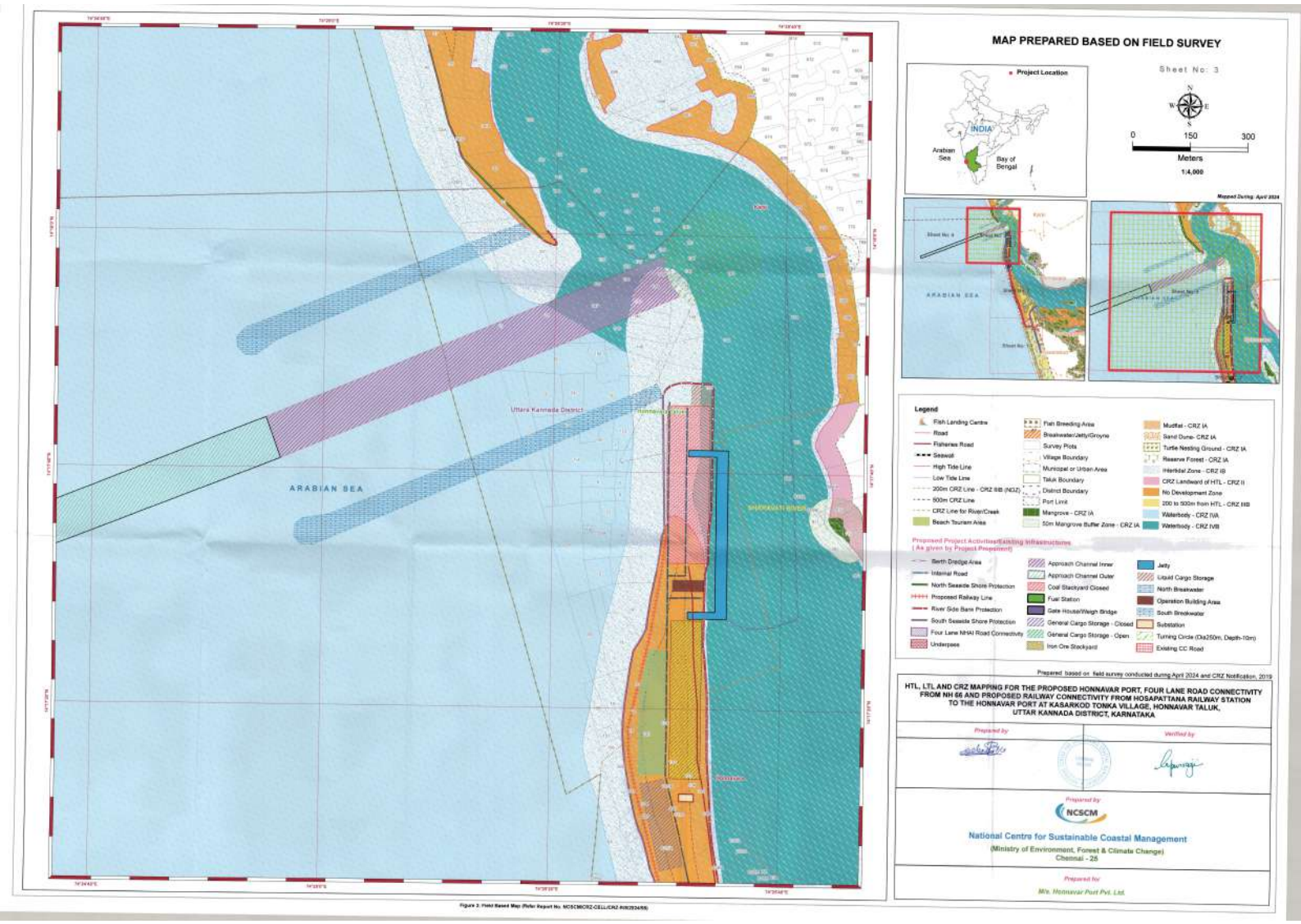


Figure 2: Field Based Map (Refer Report No. NCSCM/CRZ-CELL/CRZ-RIR/2304/55)

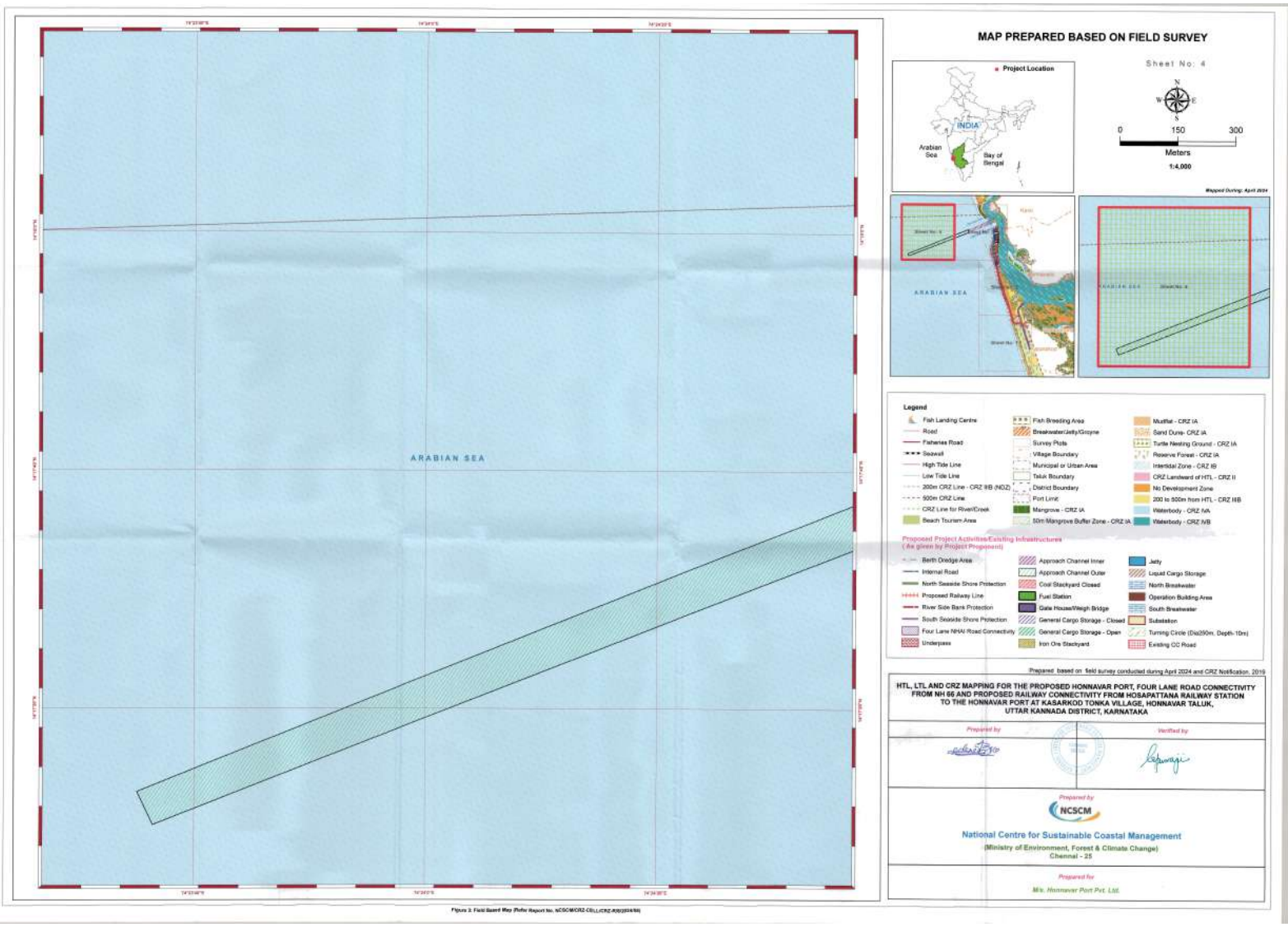


Figure 2: Field Based Map (Refer Report No. NCSCM/CRZ-CELL/CRZ-R(E)/2024/66)

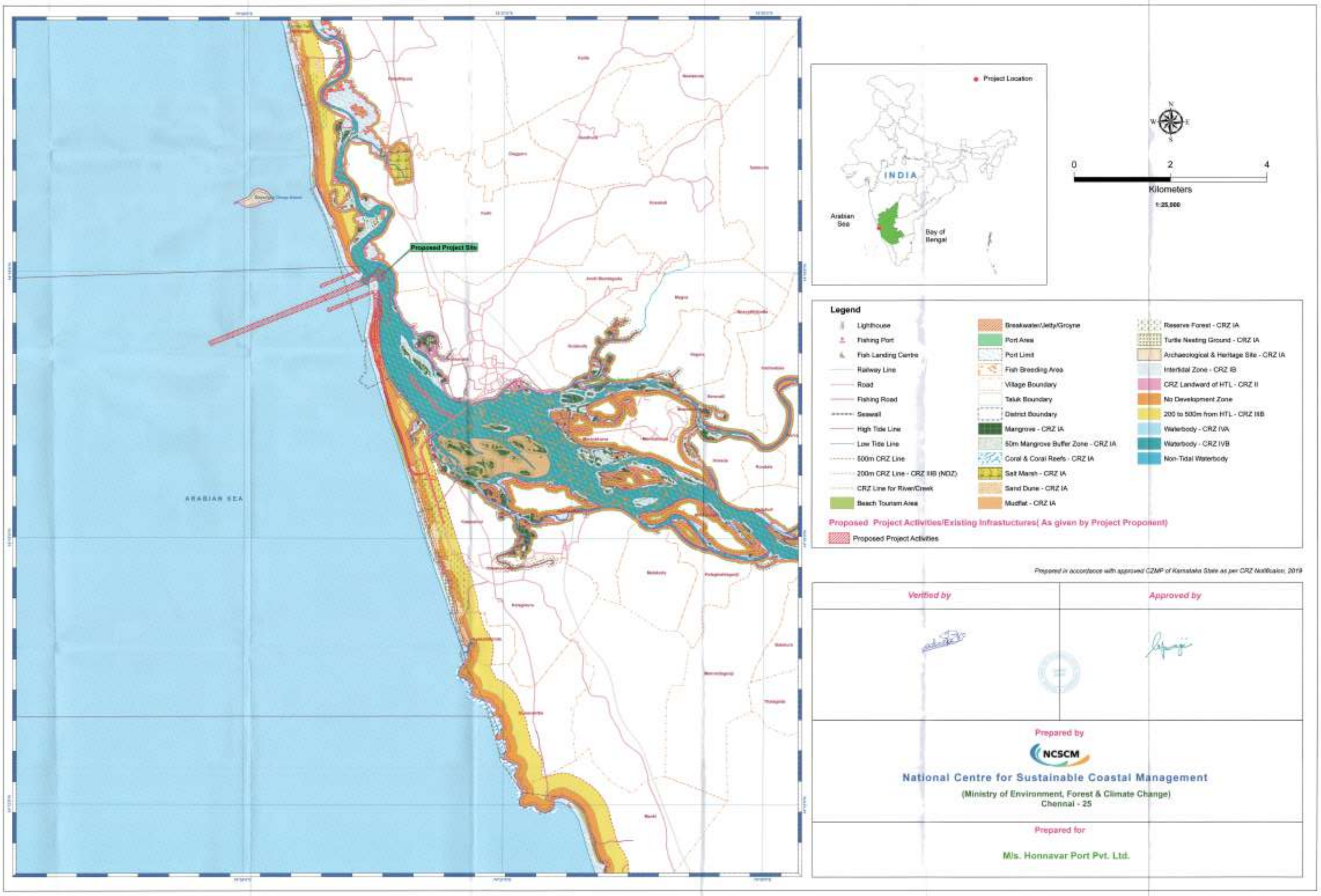


Figure 4: CRZ Map covering about 7 Km around the Project Site (Use with report No. NCSCM/CRZ-Cell/ CRZ-R/[illegible])