



## 1.1 INTRODUCTION

NHAI has been entrusted to implement the development of some of the stretches of National Highways under National Highway Development Programme on EPC/BOT basis. As part of this endeavor, the Public Works Department (PWD) of Government of Goa has decided for the development of existing 2/4 lane road of Goa/Karnataka Border – Panaji Section of NH-4A into 4 lane with configuration. The proposed project road of NH-4A starts at Km. 97.000 in Mollem and ends at Km. 143.400, Panaji city.

## 1.2 PROJECT ROAD DESCRIPTION

The project road runs through three different type of terrains amidst geographically rich Western Ghats that ends at 153.770 bifurcating Madgaonkar and Panaji road of NH-17 at bypass junction at Km. 149.690. A considerable 46 kilometer long Project Highway is a part of NH-4A (Belgaum-Anmod-Ponda-Panaji) which starts at Km. 97.000 at Mollem and passes through some important villages and towns e.g Mollem, Sangod, Dharbandora, Piliem, Tiska, Kandepar, Ponda, Curti, Ambegal, Veling, Boma, Banastarim, Corlim, Velha Goa, Ribandar and Panaji in Goa state. The entire stretch of NH-4A lies in the states of Karnataka and Goa which facilitates as an important link between NH-4 and NH-17. The influenced areas of the proposed project comprise of two districts namely North Goa and South Goa.

**Table 1.1: Description of Project Road**

Road Section	State	Existing Chainage		Existing Length (Km)	Design Chainage		Design Length (Km)
		From	To		From	To	
Mollem to Panaji	Goa	97.000	143.400	47.4	97.000	142.600	46.6

## 1.3 IMPORTANCE OF THE PROJECT ROAD

The existing road holds strategic importance in the state of Goa for the following three reasons (i) NH-4A is one of the two major land transportation routes of the state; (ii) it would give easy access to NH-4 which is the western



arm of golden quadrilateral that interconnects four major metros of the country (iii) it would also increase the connectivity of the project area to the sea port of Goa viz., Madgaon. The project, once completed, is expected to increase the connectivity amongst various settlements in the project area, as well as the state as a whole, to the surrounding region and rest of the country.

#### 1.4 EXISTING CHARACTERISTIC OF THE ROAD

The existing project stretch is of 2/4 lane carriageway. Major portion of the project road is two lane with 7.0m width throughout the corridor except built up locations(four lane carriageway). The project road passes through three Talukas i.e Sangam taluka of South Goa district and Ponda & Panaji (Tiswadi) Taluka of North Goa district.

**Table 1.2: Existing Settlement along the Project Road**

Existing Chainage (Km.)	Name of the Village	Taluka	District
97.000-100.250	Mollem	Dharbandora	South Goa
100.250-104.700	Sangod	Dharbandora	South Goa
104.700-111.800	Dharbandora	Dharbandora	South Goa
111.800-115.050	Peliem	Dharbandora	South Goa
115.050-117.700	Usgao	Ponda	South Goa
118.850-120.280	Candepar	Ponda	South Goa
120.800-122.650	Curti	Ponda	South Goa
124.400-127.550	Bandora	Ponda	North Goa
127.550-130.750	Priol	Ponda	North Goa
130.750-131.200	Velinga	Ponda	North Goa
131.200-133.000	Priol	Ponda	North Goa
133.000-133.800	Cuncolim	Ponda	North Goa
133.800-135.750	Cundaim	Ponda	North Goa
133.750-138.050	Boma	Ponda	North Goa
138.050-138.700	Adcolna	Ponda	North Goa
138.700-141.800	Corlim	Tiswadi	North Goa
141.800-143.400	Ella	Tiswadi	North Goa

Source: Road Inventory Survey, Aarvee Associates, 2015



## **1.5 RoW STATUS**

According to IRC guidelines, minimum Right of Way (RoW) of 45 meter should be available for development of a 4-lane highways. The existing RoW as identified by consultants varies from 30-35 m. The proposed cross sections indicate that about 45 meter land is required to accommodate various features of proposed road. The Land Acquisition Plan has been prepared to have uniform proposed ROW of 45m in accordance with the PWD/NHAI guidelines.

## **1.6 NEED OF SOCIAL IMPACT ASSESSMENT**

The loss of private assets resulting in loss of income and displacement has made social impact assessment an important input into the project design while initiating and implementing developmental interventions. An understanding of the issues related to social, economic and cultural factors of the affected people is critical in the formulation of an appropriate rehabilitation plan. A detailed social impact assessment (SIA) therefore shall be carried out to make project design responsive to social development concerns. SIA also helps in enhancing the project benefits to poor and vulnerable people while minimizing or mitigating concerns, risks and adverse impacts.

## **1.7 OBJECTIVE OF THE STUDY**

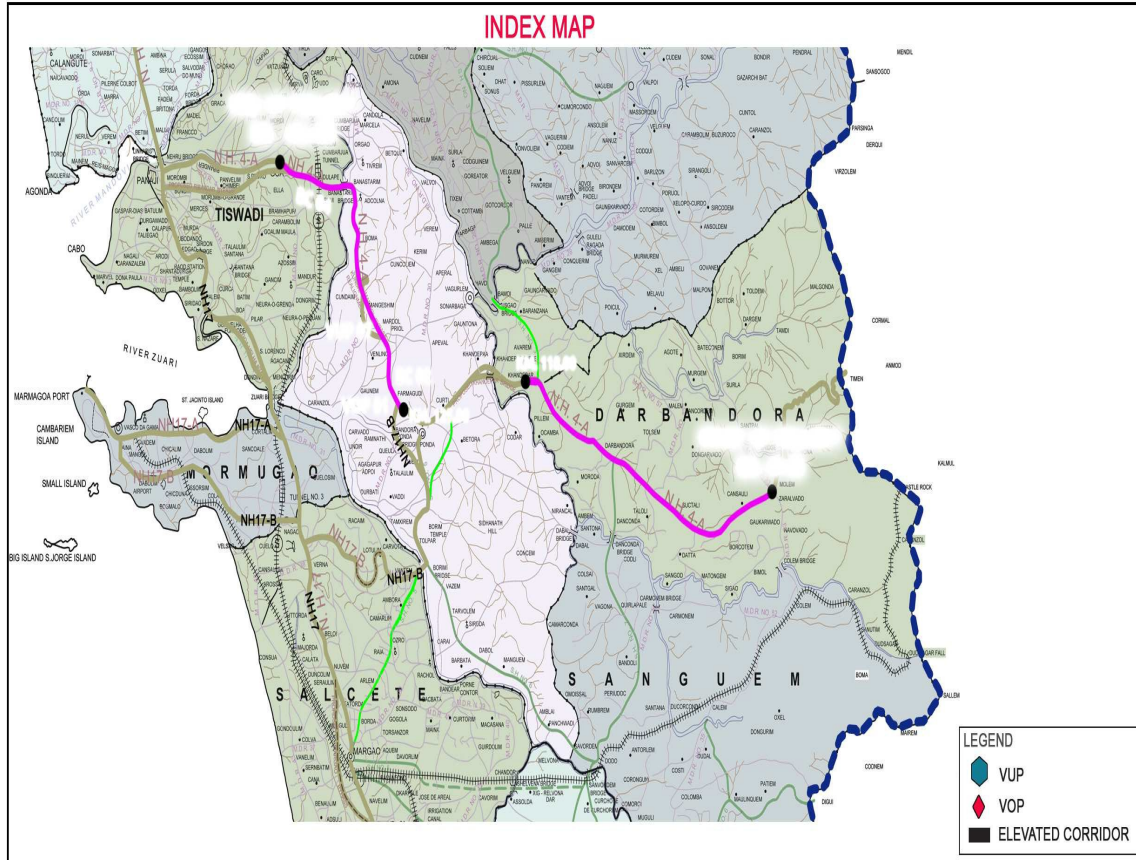
The main objective of the study is to ensure that the project addresses the adverse impacts on the livelihood of the people and that nobody is left worse off after implementing RAP and those affected have access to project benefits, both during project construction as well as operation.

The report aims to highlight the social problems and suggests general and typical mitigation measures to alleviate social problems the project-affected people may face such as loss of livelihood, displacement and loss of access to community facilities through widening of roads, bypasses, service roads,



underpasses and other facilities. The specific objectives of the RAP are as follows:

- To carry out a socio- economic, cultural and political/institutional analysis to identify the project stakeholders and social issues associated with the project;
- To assess the extent of asset loss and undertake the census of potential project affected people;
- Identify likely loss of community assets including the religious structures and common property resources (e.g. forest, grazing land) and to gauge the impacts on the local population;
- To develop a Resettlement Action Plan (RAP) in consultation with the affected people and project authorities;
- To identify likely occurrence of HIV/AIDS resulting from the influx of outside labourers and others and develop a strategy to reduce their incidence; and
- To develop a consultation framework for participatory planning and implementation of proposed mitigation plan.



**Fig 1: Location Map shows the Project Road Stretch**

## 1.8 TYPE OF LAND ALONG THE PROJECT ROAD

In project districts, the land usage is characterized by agricultural lands, barren, built up area, forest, plantation, marsh land and water bodies etc. Apart from Ponda and Panaji city, the project road traverse through 22 villages having residential and commercial establishments along the road. Most of these forest are tropical evergreen type but it also has a mixed vegetation of wet deciduous type at higher altitudes of ghat. Agricultural and plantation fields are also observed in some stretch of the project road.

## 1.9 PROJECT IMPACTS

Reconnaissance and initial social assessment survey was undertaken to take a detailed note of affected properties within proposed RoW. However, detailed



survey needs to be undertaken for preparation of the Resettlement Plan as per the policy and guidelines of Central Government and State Government. In this regard, surveys relating to social assessment of the impact will be conducted within 22.5 m on either side of the road from the proposed centre line.

As per the preliminary assessment and land records obtained for ascertaining ownership status, it is found that no scheduled tribe household is getting affected by the widening of the existing road. The exact number of likely to be affected population and thereby magnitude of impact can be determined after the completion of survey.

### 1.9.1 Need of Land Acquisition

The proposed road improvement including widening involves expropriation of land from the current owners/users. It is assessed that land acquisition would be required only in 35 km. along the existing road from both private and government constituting 89.5 hectares. Land acquisition in Wild Life Sanctuary and some pockets of reserved forest area is restricted. With regard to widening, upgradation and improvement of existing alignment, a major extent of 85 ha. land is required.

A land acquisition plan is separately prepared for this proposed project. The plan includes land acquisition maps of the affected villages showing proposed right of way and land schedule for the affected survey numbers. The land plan schedules include details like ownership status and the survey numbers with required area.

Table 1.3: Requirement of Land in Revenue Villages			
Sl. No.	Village/Town	Total Required Land (Sq. mt.)	Total Required Land for Project (Ha.)
South Goa District			
1	Mollem (Option-2)	303753.51	30.375
2	Sangod	19619.64	1.962
3	Dharbandora	72316.49	7.232



4	Piliem	73000.00	7.300
5	Usgao	29073.46	2.907
6	Candepar	10478.25	1.048
7	Kurti	20745.97	2.075
<b>North Goa District</b>			
8	Bandora	81719.42	8.172
9	Priol	64917.44	6.492
10	Velinga	2180.26	0.218
11	Cuncolim	5759.35	0.576
12	Cundaim	20878.51	2.088
13	Boma	81331.08	8.133
14	Adcolna	15873.21	1.587
15	Corlim	57618.15	5.762
16	Ella	36017.91	3.601
<b>Total</b>		<b>895283</b>	<b>89.528</b>

Source: Land Plan Schedule, Aarvee Associates, Hyderabad, 2015-16

### 1.9.2 Magnitude of Impact on Structure

Census of all the structures lying within proposed RoW is undertaken to assess the project impact on the population for displacement, resettlement and rehabilitation. As per our preliminary survey it was estimated that about 377 structures consisting of private [residential, commercial, mixed structure(res+com)], government, religious, community and others might be affected by the proposed road. The project affected person may be titleholder or non titleholder e.g., encroacher, squatter, tenant, kiosk owner etc. About 108 structures belonging to non titleholders were found within existing RoW. Of the 269 Titleholders' properties, 63 structures owned by religious and government would be affected. Of the total likely to be impacted structures, commercial structures constitute a major chunk.

The impact on structures owned by schedule tribe households/community can be ascertained after the completion of census survey exercises. The survey



activities are underway and as per firsthand information and discussion with various stakeholders it is reached into conclusion that people belonging to ST community may hardly get affected.

**Table 1.4: Ownership Status of the Structure**

Titleholder			Non- Titleholder	Total
Private	Religious	Government		
206	24	39	108	<b>377</b>

Source: Preliminary Survey Data, Aarvee Associates, 2015-16