

# Social Impact Assessment Study of Land Acquisition for Construction of Salegaon-Burhapank-Talcher-Jharpada 3<sup>rd</sup> & 4<sup>th</sup> Line Rail Project in Bhogabereni village under Banarpal Tahasil of Angul District



September, 2019

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Council of Analytical Tribal Studies (COATS)

Koraput

## **PREFACE**

The Social Impact Assessment Study of Land Acquisition for construction of Salagaon-Burhapanka-Talcher-Jarapada 3rd and 4th Line Rail Project was assigned to the Council of Analytical Tribal Studies (COATS) by the State SIA Unit, Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar on 12th December, 2018.

We thank the State SIA Unit, NCDS, Bhubaneswar for selecting COATS to undertake the study. Our special thanks are due to Professor Shibalal Meher, Coordinator, State SIA Unit, NCDS for all the cooperation extended to us for the study.

We are grateful to the District Administration and particularly to the Collector, A.D.M and Sub-Collector, Angul who have extended all cooperation during the survey work. We are also thankful to the Special Land Acquisition Officer (Railway), Dhenkanal and Tahasildar, Banarpal and his staff for the cooperation extended during the survey.

We owe a great deal to the SIA team of COATS especially Prof. Rabinarayan Patra (Project Director), Sri Ashok Kumar Nanda (Research Supervisor), Dr. Narendra Kumar Rath and Sri Gopinath Pradhan (Field Investigators) and Sri Laxmi Narayan Padhi (Computer Operator) as also members of the investigating team for their sincere efforts in completing the work. Our heartfelt thanks are due to Prof. Jagabandhu Samal for his involvement in the study and particularly in preparing this report.

**Director, COATS**

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## **EXECUTIVE SUMMARY**

### **0.1 Project Background**

The existing Sambalpur-Angul line is catering to traffic originating from the MCL and from the IB-Jharsuguda-Sambalpur industrial belt to the Paradeep and Visakhapatnam ports and from / to the several power plants and coal based industries located in the Cuttack-Talcher-Jharsuguda region. Doubling line work is in progress in the Jarapada and Burhapanka section. The proposed 3<sup>rd</sup> and 4<sup>th</sup> Line is necessary to smoothen and expedite rail traffic in the Cuttack- Sambalpur and Bhubaneswar-Sambalpur rail routes most of which may move via Talcher.

### **0.2 Rationale and Public Purpose of the Project**

Construction and operation of the 3<sup>rd</sup> and 4<sup>th</sup> line Rail Project will enable the Railways to handle increasing traffic with ease and reach additional major locations in the country with more trains. Hence, it will serve public purpose.

### **0.3 Need for SIA Study**

The national R & R Policy; RFCTLAR & R Act, 2013 and Odisha RFCTLAR & R Rules, 2016 make the SIA study mandatory. The broad objective is to provide a justification or otherwise of a project such as an infrastructure project on the basis of an assessment of its likely impact on the affected households and the village community in the project area. The other objective is to suggest a SIMP to protect, and if possible, better the existing socio-economic status of the people in the area.

### **0.4 Assignment of SIA Study by NCDS to COATS**

Council of Analytical Tribal Studies (COATS) has been empaneled as one of the organizations with expertise and competency for undertaking Social Impact Assessment Studies of land acquisition required for different development projects in the state by the Social Impact Assessment (SIA) Unit of the Government of Odisha vide their Letter No.759/NCDS dated 12.08.2015.

This SIA study of land acquisition for construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> line rail project of Angul district was assigned to COATS by the State SIA Unit, Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar by an agreement signed between COATS and NCDS on 12.12.2018.

## **0.5 Area of Acquisition of Private Lands**

As per the information supplied by the office of the Special Land Acquisition Officer (Railway), Dhenkanal a total of 14.64 acres of private land is to be acquired from Bhogabereni village of Banarpal Tahasil of Angul district.

## **0.6 Project affected Households**

It has been worked out that the original 23 RoR holder households to be affected by land acquisition have extended to 92 households which have been covered in the survey.

## **0.7 Area of acquisition of Government Lands**

In addition to private lands, an area of 1.350 acres of Government land is to be acquired from the village.

## **0.8 Socio-Economic Profile of the Village**

The project will affect households and CPRs in Bhogabereni village. For proper assessment of socio-economic impact of the project on the affected households, the socio-economic profile of these households has been explored and the findings are highlighted below.

### **0.8.1 Population Profile**

The total population of the surveyed land losing households is 448 comprising 239 male and 209 female indicating a sex ratio of 874 which compares unfavourably with that of the district (943). The average family size for these households is estimated at 5 and is considered reasonable. The child sex ratio for the project affected households is found to be 1333 and is better than that for Angul district (889).

### **0.8.2 Head of the Project affected Households**

Broadly speaking, the patriarchal family system is prevalent among the project affected households with only 22 or 23.91% of the 92 surveyed households being women headed. It may be noted that many of the women-headed households secured headship due to death of spouse.

### **0.8.3 Persons in working age group**

The working age group (15-60 years) population is 328 which constitutes 73.21% of the total population of the project affected households. The surveyed households thus have a high ratio of economically active population in them.

### **0.8.4 Housing and Amenities**

The study shows that all the project affected households have their own houses on their homestead land with RoR. A good number (79 of 92 or 85.87%) of the households have pucca houses with brick walls and concrete roof, 11 of 92 or 11.96% of households have semi-pucca houses having brick wall with asbestos and RCC roofs and only one household surveyed (2.17%) has kutcha house. The average housing space per household is estimated at 800.76 Sq.ft.

### **0.8.5 Education**

Literacy rate is 92.86% with male literacy at 97.07% and female literacy rate at 88.46%. As to the educational level in the households, 16.52 % have read up to elementary level, 14.29% up to under matric level 25.69 % up to secondary level, 8.48% up to higher secondary, 11.61% up to graduation, 0.89% up to post graduation and 12.50% have received professional and technical education.

### **0.8.6 Livelihoods and Occupation**

The affected households own land and agriculture is an important source of livelihood for them. Among the working age male population, 14.88% are cultivators, 2.33% are agricultural labourers, 5.58% are daily wagers, 28.37% are salaried workers, 13.49% are business owners and about 35.35% are engaged in other occupations. Thus, the project affected households have a largely diversified occupational structure.

### **0.8.7 Household Income and Expenditure**

Annual average household income is estimated at Rs.232471/- of which 41.66% comes from salary including migrant remittances, 10.72% from business derived largely from transport operations, 5.29% from self-employment and 7.68% from agriculture. Other sources account for 23.56 % of income. Most of the households have some consumer durables and other assets. These include television, two wheelers, cars and trucks, and cooking gas connections. Many also have livestock.

The average annual household expenditure is found to be Rs.206738/-. The largest share goes to food (32.89%) followed by housing and house repair (16.47%), socio-religious-cultural functions (9.96%), education (8.50%), clothing (4.16 %), health (2.77%) and the like. People seem to be caring about education and health.

#### **0.8.8 Indebtedness**

The extent of indebtedness is not very high. Only 13.04% of the surveyed households have reported to have obtained loans from one source or the other. Business investment including that in transport accounts for about half of total borrowing. Most of the borrowers (11 out of 12) reported to have made some productive investment of the loan.

#### **0.8.9 Health**

In all, 75 of 92 or 81.52 % of the surveyed households reported some member of the family falling ill in the previous year. This shows health problems are bit high among the people. Almost all (74 of 75) cases of illness have been treated institutionally of which 90.7% preferred government hospitals and a combination of government and private allopathic clinics.

#### **0.8.10 Land use pattern**

On the whole 98.86 % of land owned by the affected households is agricultural land. These are largely canal irrigated. People mostly grow paddy and pulses on them. Some also grow vegetables.

#### **0.8.11 Infrastructure and Village level Institutions**

The village is well connected by pucca roads. It has drinking water facilities through pipes connected to electrically lifted points and tubewells. Small shops, market, cremation ground, community hall, temples, AWC, schools and PDS shops are also there. The Village has got electricity connection.

### **0.9 Social Impact Assessment**

The rail project involves acquisition of 14.640 acres of private land and 1.350 acres of government land along with assets and resources on such land. This will have direct effects on the land losing households and the village community. The likely effects have been assessed by COATS SIA Team and the findings are presented below.

### **0.9.1 Loss of land and income from Agriculture**

As has been indicated above, 15.99 acres of land will be acquired for the project (14.64 acres from 92 affected surveyed households and 1.35 acres of government land) from the affected village. Among the affected 30 original RoR holder households, 27 (90.00%) are marginal farmers, two (6.67%) are small farmers and the rest one (3.33%) is a semi-medium farmer. Land acquisition will further deteriorate their land holding status.

Paddy being the major crop cultivated in the area, this loss of land will amount to a loss of Rs.3,90,390 per crop per year for them which is quite substantial. The loss due to pulses and vegetables will be about Rs.36,000 or more.

### **0.9.2 Impact on SC and ST households**

Across social groups, OBCs will lose 3.89%, SCs will lose 4.38 % of their total land, and the general caste people will lose 13.45% of the total land owned by them. Given the small amount of land owned by SCs and OBCs, the loss of land will increase their vulnerability. Fortunately, no ST household is going to lose his land for this project.

### **0.9.3 Gender Issues**

It has been stated above that 23.91% of the surveyed households are women-headed. Their socio-economic position will deteriorate due to land acquisition.

### **0.9.4 Impact on Agricultural Labourers**

Land acquisition will impact the livelihoods of agricultural labourers. However, scope for alternative non-farm employment is manifold in the mining-cum-industrial area. Hence the vulnerability of small and marginal farmers, women workers and agricultural labourers will be greatly reduced. Productive utilization of compensation will be of great help in this regard.

### **0.9.5 Impact on other Productive Assets**

In addition to agricultural land, 55 trees on private land will be axed down of which 25 are fruit bearing and 30 are non-fruit bearing. These trees have great commercial value and are important for livelihood.



### **0.9.6 Impact on Livelihood**

Land acquisition will affect Households dependent on agriculture. Land owning farmers and agricultural labourers will be seriously affected by land acquisition. The project may facilitate creation of increased economic opportunities and more diversified occupational avenues. Direct wage employment may be created in the construction of the project also. Some may take up small business like tea stalls, variety shops etc. The adverse effect on livelihood may be offset by exploiting these opportunities.

### **0.9.7 Impact on Traffic**

During construction phase, movement of vehicles carrying personnel, materials, equipment and workers to the site will increase. This may pose threat to safety of movement of common men, cattle and road users.

### **0.9.8 Impact on Health**

Increase in traffic in the construction phase and increase in number and speed of trains in the post-construction stage is likely to increase noise-dust-air pollution and accidents in the area. Respiratory problem and health risk may increase.

Warning signals, signals, sprinkling of water etc. may be used to minimize these problems.

### **0.9.9 Perception of Project Affected People**

The abstract of the feelings of people about the project are given below.

**0.9.9.1** People's perceptions about the likely benefits and adverse effects of the project are diverse. On the whole, 40.22% feel that the project will have negative impact on their socio-economic condition but majority i.e. 59.78% are of the opinion that the negative impact will be moderated by productive use of compensation and increase in scope for non-farm employment.

**0.9.9.2** Many i.e. 39.13% perceive a serious threat to forest and environment. For 47.83% of respondents, such adverse effect will not be grave while 10.87% see no potential threat because afforestation activities may be taken up on the remaining land. A similar perception is noted in respect of common property resources.

- 0.9.9.3** Cracks in kinship will be a major impact as loss of land may lead to dispersal of extended families across space and quarrels over share in compensation. Family violence and crime may be an offshoot of this impact.
- 0.9.9.4** Increase in consumption of drugs and alcohol will be a likely impact as perceived by many. This is because compensation receipts may be celebrated and alcohol may be used to settle scores in respect of share in compensation.
- 0.9.9.5** Most of the land losing households will be in stress because they will be losing land that they cultivated or stayed in for years, decades and over generations. Another source of stress may be the amount of compensation and uses to which they may be put to.
- 0.9.9.6** Greater health risks and increasing health expenditure have been predicted by many households. These will emerge due to pollution and speeding and increasing traffic.
- 0.9.9.7** A good thing is that many foresee increase in opportunities for new business in the area. But large many perceive harms to existing business due to competition from the new entrants to business.
- 0.9.9.8** Many perceive a favourable impact on the local economy due to improvement in connectivity and growth of non-farm employment including business opportunities.
- 0.9.9.9** A general feeling among the affected households is that the compensation amount is low compared to rocketing increase in the price of land in the area.
- 0.9.9.10** The perception of non-land losing households in the village is more or less similar to those expressed by the land losing households excepting that they will not be directly affected due to land acquisition.

## **0.10 Social Impact Management Plan**

The SIA study has highlighted the broad effects of the rail project and the perceptions of the affected households about the project. Based on that a Social Impact Management Plan has been prepared. An attempt has been made to make the SIMP flexible and workable. Five sets of measures have been suggested.

### **0.10.1 Social Measures**

- Resolution of disputes between land owners and ensuring compensation to the real owner of land.
- Recouping the common property resources, Socio-cultural capital and public utilities that will be damaged due to the project.

### **0.10.2 Income Restoration measures**

- Capacity building and skill development through trainings for the PAPs.
- Absorption of local wage workers in construction work.
- Preference to local youth of land-losing households in employment in the railways as per qualification and expertise.
- Skill development for the youth.

### **0.10.3 Economy measures**

- Updating land records.
- Disbursal of compensation in a stipulated time frame.
- Counseling the PAPs for productive use of compensation.
- Compensation for loss of assets other than land.
- Acquisition of full plot if the remainder land is unviable for any productive use.
- Removal of spilled over materials from the construction sites and agricultural lands.

### **0.10.4 Environmental measures**

- Compensation for loss of trees
- Persuading people to plant trees on remainder land
- Afforestation by the Railways on government land and on the sides of rail lines.

### **0.10.5 Health related measures**

- Adherence to safety standards in construction phase
- Effective traffic management
- Upgradation of roads and intersections.

# CHAPTER-1

## Introduction

### 1.1 Project Background

We live in a global village. This has been possible due to massive expansion of modern transport network. The whole economic, social, cultural and political life of a nation revolves around the transport system. Transport, rail transport in particular, provides an extensive market, facilitates movement of labour and capital as also division of labour and specialisation, promotes large scale production, ensures stable prices that benefits both consumers and producers, lubricates rapid industrialisation and urbanisation, contributes to growth of diversified employment opportunities and of GDP, increases ability of people and institutions to manage natural calamities and enhances well-being of people and communities.

Indian railways are the busiest and third largest in the world. It enables the movement of about 20 million people daily and is the preferred mode of carrying the country's largest amount of bulky goods like fertilizer, food grains, coal, cement, petroleum etc. The railways are indeed the lifeline of India's transport system. The spread, speed and service quality of rail travel have been fast improving; and the pace and ease of freight movement have been rapidly increasing.

Capacity expansion has been one of the important requirements for development of railways. This presupposes reducing spatial inequality in spread and growth of railways, increasing the number of tracks and improving the quality of services. The first two are being addressed through measures of rapid extension and modernization of the railway network. Construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project of Angul district is a part of this programme.

This portion of the railways forms part of the Bhubaneswar – Talcher – Sambalpur and Cuttack – Talcher – Sambalpur section which serves as an important link between Howrah – Mumbai trunk route and Howrah – Chennai main line on the east coast. It also connects the Sambalpur and Khurda Road Divisions of East Coast Railways. Besides facilitating transport of goods – raw materials and finished products – and increasing mobility of people between the western and coastal regions of the state of Odisha, it also significantly contributes to movement of minerals to different countries through ports and works as the

gateway of the state to the western and central parts of India. Additionally, by reducing the distance between Bhubaneswar and New Delhi by about 400 Kms, this link has substantially reduced the traffic burden on Kharagpur – Jharsuguda and Kharagpur – Vizianagaram sections of East Coast Railway. This points to the importance of construction of the Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line rail project. It has, indeed been a long felt necessity. The project will not cause damage to the dense forest and loss of much of fertile farm land due to land acquisition, but there may be some marginal deviations.

## **1.2 Need for the Project**

Jarapada railway station is on the Sambalpur – Angul section of Sambalpur Division of East Coast Railway. It is located 132.7 Km. away from Sambalpur. Burhapanka is a junction station on the Angul – Barang section of Khurda Road Division located at a distance of 174.8 Km. from Sambalpur. The goods traffic in the Angul – Cuttack, Angul – Barang and Angul – Sambalpur – Jharsuguda sections of East Coast Railway is increasing by more than 10% every year due to the need of moving coal and other industrial raw materials and produce originating from the MCL, movement of coal to different power plants, and of coal and other produce to other allied industries coming up in and around that area. Substantial additional volume of freight traffic will also be generated on account of spurt in industrial and other economic activities as a part of the developmental plans being implemented and projected for the region. The Sambalpur-Angul section is single line on which doubling of railway link work is ongoing. It caters to the growing freight traffic, especially coal, from MCL and movement of other industrial produce between the industrial belt of IB valley- Jharsuguda-Sambalpur and several industries in Angul, Dhenkanal and coastal districts. It also links different countries through Paradip and Visakhapatnam ports and other parts of the country through the railways. This line is also helping in the movement of imported coal from the Paradip port to different industries in the Angul – Jharsuguda – Sambalpur belt. The construction of the 3<sup>rd</sup> and 4<sup>th</sup> lines will help smoothen the movement of aforementioned traffic.

The Jarapada – Burhapanka portion of East Coast Railways is presently a single line route on which doubling line work is in progress. It is handling more than 35 coal loaded wagons every day from the Mahanadi Coalfields Limited (MCL) in addition to passenger traffic and hence is operating at more than 100% section capacity. The construction of two more lines between Jarapada and Burhapanka in this mineral rich and industrial region is essential to meet the demand of ever increasing traffic for the next 25-30 years. Hence, construction of the 3<sup>rd</sup> and 4<sup>th</sup> line in this portion of the East Coast Railway is important.

### **1.3 Public Purpose of the Rail Project**

As mentioned above, construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Rail Line will help the railways to handle the forthcoming additional passenger and goods traffic and ease the movement of the existing traffic due to rapid industrialization and spurt in economic as well as other developmental activities in the region. In addition, it will enable running of speedy trains and will help reaching both freight and people to important distant locations in shorter time. The project, therefore, will serve a public purpose.

### **1.4 The Land Issue**

Railways are the single largest users of land in India. Rail transport consumes space for setting the infrastructure including tracks, energy networks, stations, storage and personnel's residence. The land take of railways is really extensive. Land acquisition is the biggest constraint to expansion of railways in India and more so for an agrarian state like Odisha. While the need for and actual acquisition of land by the government has continuously increased over the years because of the pressures of urbanization, industrialization, infrastructure requirements and economic development, acquiring land has become a highly complex issue. Displacing people from their habitations and agriculture, environmental losses, poor compensation at undervalued market price etc. have often become the main recipe for growing dispute between the authorities and the affected people. Popular protests leading to massive loss of life and property, inordinate delays and rocketing project costs have become common place.

Land acquisition means acquiring land (hitherto used for some purpose) for some public purpose by government or a government agency (with due authority of law) from the individual landowner(s) after paying a fixed compensation (as determined by the government) in lieu of losses incurred by the owner(s) due to involuntary surrender of land. Steps involved in land acquisition include: (a) Investigation by the government or through its agency and its satisfaction about the purpose, (b) Objections and confirmation regarding claims of owners in a report form, (c) Claim and award of fair price/compensation, (d) Reference to courts in the event of dispute and (e) Apportionment.

### **1.5 Need of Social Impact Assessment Study**

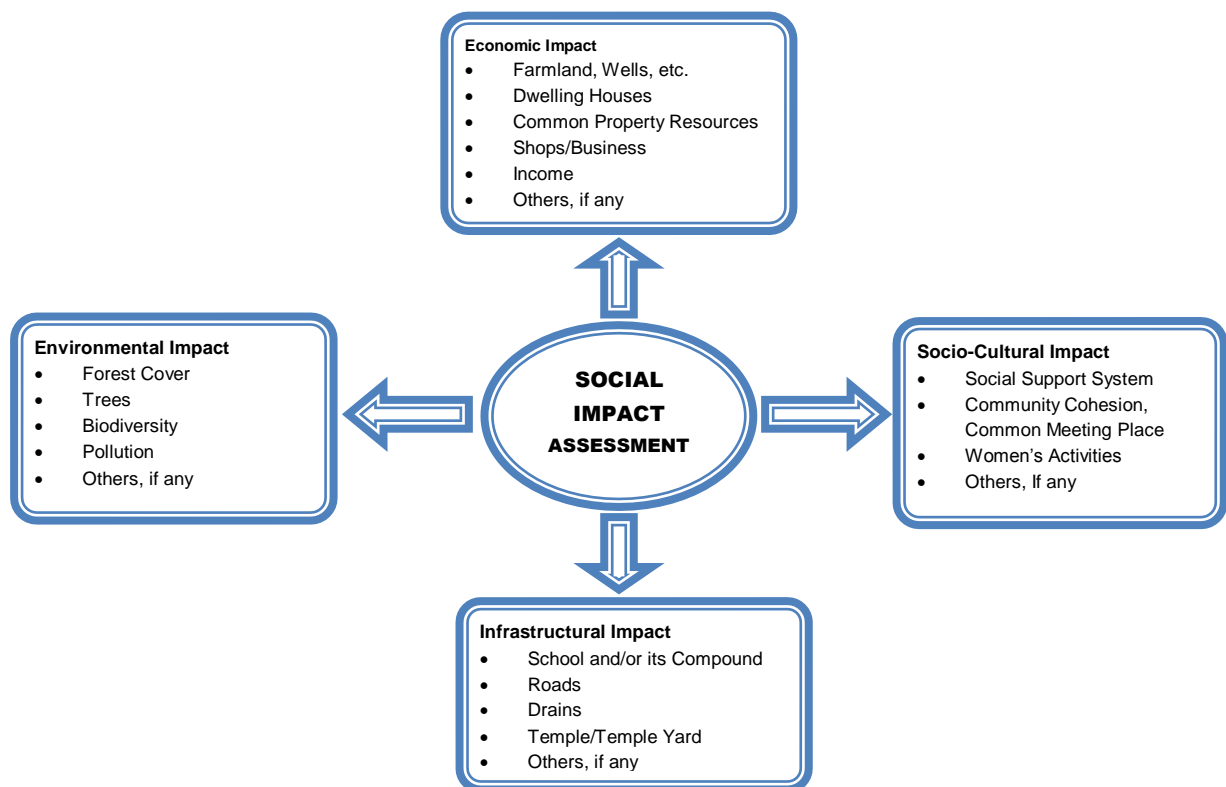
Any development project – infrastructural, industrial, mining and whatever – has both positive and negative impacts. It has substantial effects on employment, production, income, environment, property rights, and health of people in the project area. The basic purpose of an SIA study is to assess and report on a project's economic, socio-cultural, environmental

and infrastructural impacts and the measures to mitigate / minimize its potential negative effects. This includes evaluation of the social impacts of a project that are likely to happen throughout its life-cycle by an independent agency which forms the basis for the larger decision – whether or not to implement the project. It applies to all developmental projects.

Social impacts refer to the intended and unintended positive and negative and direct and indirect consequences of a project on people’s livelihood resources, work option, way of living and social relation as also changes in their beliefs, norms, values and ethics. SIA studies take note of these potential effects of a prospective project looking at the inter-connection involving its social, economic, cultural, bio-physical and infrastructural impacts. These studies collect empirically authentic information about the likely consequences of a project, analyse the same and suggest actions to optimize the outcome.

Construction of the Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project in Angul district is an infrastructural project. It has wide ranging impact in the project and nearby areas. In addition to its physical impact on land due to loss of houses, farm land, trees etc., the project will have long term effects on people’s lives and livelihood, economic activities, social networks, socio-cultural-religious practices etc. This SIA study highlights the economic, socio-cultural, environmental and infrastructural dimensions of the likely impact of the rail project on the affected households and the Bhogabereni village at large. The issues addressed in this study have been clearly shown in the following figure.

### Social Impact Analysis – Dimensions



Social Impact Assessment (SIA) Study is essential for land acquisition required for different development projects in Odisha as per the provisions laid down in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLAR&R) Act, 2013 of Government of India and the Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (ORFCTLAR&R) Rules, 2016.

The present Social Impact Assessment (SIA) Study of Land Acquisition for construction of Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project of Angul district was assigned to the Council of Analytical Tribal Studies (COATS), Koraput by the State SIA Unit, Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar on 12<sup>th</sup> December, 2018.

### **1.6 The Mandate for the SIA Study**

To facilitate land acquisition for construction of the Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project, the Government of Odisha in the Revenue and Disaster Management Department issued a notification under section 4(1) of new RFCTLAR & R Act, 2013 vide Notification No.RDM-LAC-ANG-003-2019-6795 RDM, Dt: 26.02.2019 for conducting Social Impact Assessment Study by COATS, Koraput in Bhogabereni village of Bogabereni Gram Panchayat of Banarpal Block and Tahasil of Angul District to be affected by the said project. Such a study has become mandatory under the RFCTLAR&R Act, 2013 and the ORFCTLAR&R Rules, 2016 prior to the commencement of the project.

### **1.7 Objectives of the SIA Study**

The proposed rail project will have substantial impact on many households and the overall environment in the area. The existing constitutional and legal frameworks and mechanisms aim at not only protecting but also improving the socio-economic conditions of the households as well as the environment likely to be affected consequent upon implementation of the said project. They provide for payment of fair compensation to the affected households and their rehabilitation and resettlement with a view to making the affected people participants and partners in development both during and in the post-project implementation period. The project needs to be implemented in a participative, transparent, consultative and informal manner by involving local people and representatives of local self-government.



The major objectives of this social impact study are:

- a) To assess whether the proposed land acquisition in Bhogabereni village of Banarpal Tahasil of Angul District serves public purpose.
- b) To estimate the number of affected families, magnitude of loss land assets based on the actual holdings of the families and the number of families among them likely to be displaced physically or occupationally due to acquisition of land.
- c) To assess the extent of lands- public and private, houses settlements and other common properties likely to be affected by the proposed acquisition.
- d) To examine whether the extent of land proposed for acquisition is the bare minimum necessity for the commissioning of the proposed project.
- e) To find out whether an alternative site has been considered for the purpose where there is least displacement problem, but the site itself is not suitable for the project.
- f) To study the social impacts (socio-economic, cultural and environmental) of the project by covering both direct land loser households as well as the indirectly affected households due to loss of common property resources (CPRs), socio-economic infrastructures, etc and the impact of these costs on the overall costs of the project vis-à-vis the benefits of the project.
- g) To suggest remedial intervention measures by designing appropriate policies and programmes through designing of a social impact management plan or mitigation plan.

### **1.8 Scope of the SIA Study**

The basic purpose of the SIA study is to prepare a detailed report on the present socio-economic profile of households in the project area, assess and examine the likely impact in the event of completion of project implementation and to suggest appropriate measures of intervention to maintain, and if possible to improve the socio-economic status of the people likely to be affected. Since the impacts of the project are multi-dimensional in nature, they need to be properly identified to help prepare their reasonably accurate assessment and suggest a workable plan of intervention and action and to better the status of the households and people in the area. This again requires collection of detailed information from the project area.

The team commissioned by COATS undertook detailed site visits collected and analyzed a range of both qualitative and quantitative data, used participatory methods such as Social Mapping, Resource Mapping, Focused Group Discussions (FGDs), Participatory Rural Appraisal (PRA) techniques and informant interviews by canvassing of a structured interview

schedule developed jointly by COATS and NCDS at the household level to prepare the Social Impact Assessment Report. The team members involved in the survey work discussed with the functionaries of the affected Gram Panchayat, Banarpal Block and Tahasil to get their advice regarding the conduct of SIA Study and took their considered views for preparation of a Social Impact Management Plan (SIMP).

A detailed assessment based on a thorough analysis of all relevant land records and field data, field verification, review and comparison with similar project (s) was conducted by the SIA Team.

The scope of the study covers three major heads:

- i) Collection of data using participatory methods
- ii) Involving functionaries of the village, gram panchayat, block and taking their views, and
- iii) Making a detailed assessment of the impact

The assessment includes the following aspects in the study report:

- a. Identification of area of impact under the proposed project, land to be acquired and the social, economic, cultural, environmental and other impacts of the project;
- b. Assessment of quantity and location of land proposed to be acquired for the project and ascertaining whether it is the barest minimum requirement for the project;
- c. Findings possible alternative sites and their feasibility;
- d. Assessing if the land to be acquired is scheduled area and it is demonstrable last resort;
- e. Quantifying the land, if any, already purchased, alienated, leased in/out or acquired and stating the intended use for each plot of land required for the project;
- f. Finding the scope for the use of any public unutilized land and examining whether any of such land is under occupation;
- g. Ascertaining the nature of the land, its present use and classification and if it is an agricultural land, its irrigation coverage and cropping pattern;
- h. Assessing impact of land acquisition on food security of the affected families;
- i. Estimating the size of holdings and their ownership patterns, land distribution, number of residential houses and public and private infrastructure and assets to be acquired and,
- j. Recording land prices and recent changes in ownership and use of land over the last three years.

## **1.9 Examination of Alternative Sites**

The project has been meticulously designed so that the land requirement and required amount of land to be acquired is the barest minimum. The new lines will run parallel to the existing ones on their sides with minimum required gap. The area impact will therefore be minimal. There would not be any significant amount of displacement due to loss of dwelling

houses. In such view of the matter examining alternative sites is considered not necessary, more so because they would entail greater adverse socio-economic impact.

### **1.10 Social Impact Management Plan**

On the basis of the afore mentioned exercise a mitigation plan for resettlement and rehabilitation of affected households and a Social Impact Management Plan (SIMP) containing ameliorative measures to address the negative social impacts of the project has been identified in the course of SIA study and the same has been placed in Chapter-7 of this Report.

### **1.11 The SIA Report**

On the basis of the socio-economic and cultural survey of the affected households and the village in the project area, a draft SIA report has been prepared in both regional Odia language and English language. They were distributed to the functionaries for perusal. The same was discussed in the public hearing organized at the Gram Panchayat level involving the stakeholders and officials. The views expressed in the meetings and suggestions received there from have been incorporated and this final report has been prepared accordingly.

### **1.12 Structure of the Report**

The SIA Report is structured in ten chapters in addition to an Executive Summary placed in the beginning. Chapter-I being introductory contains the background of the project, need, objectives and scope of the SIA study. The project profile, methodology of investigation, the constitutional and legal framework, land assessment and land to be acquired have been presented in Chapter-II. Approach, tools, methods, processes and limitations of the study are discussed in Chapter-III. A summary picture of land assessment are given in Chapter-IV while a detailed description of the socio-economic profile of the project affected village and households and ten indirectly affected households is given in Chapter-V. Basing on primary survey the possible socio-economic impact of the project is analysed in Chapter-VI. A cost-benefit analysis of the project is presented in Chapter-VII. Chapter-VIII contains a Social Impact Management Plan. Chapter-IX concludes with some recommendations. In Chapter-X a summary of the proceedings of the Public Hearings conducted in the affected villages is presented with a detailed report on the proceedings with signatures of participants.

## **CHAPTER-2**

### **Project Profile and Constitutional Provisions**

#### **2.1 Project Profile**

Construction of the Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Rail Line aims at capacity expansion in this segment of East Coast Railway. It will smoothen the link for the fast growing coal and other industrial goods as well as passenger traffic between western Odisha (Sambalpur, Jharsuguda, IB Valley) and Raipur and between these regions and the coastal areas including Bhubaneswar. Increase in the capacity and efficiency of the railway link due to increase in number of lines would draw off road traffic and reduce stress on roadways thereby contributing to lowering travel time, fuel consumption, costs, pollution and accidents. Considering the above noted potential benefits from this section of the rail link, the Railway Board sanctioned the construction of the 3<sup>rd</sup> and 4<sup>th</sup> line rail link work in the Salagaon-Burhapanka-Talcher-Jarpada portion of East Coast Railway.

##### **2.1.1 Methodology of Investigation**

The DPR for 3<sup>rd</sup> and 4<sup>th</sup> line between Jarapada and Burhapanka has been prepared based on the existing topography, local constraints and projected requirement. The best route has been selected parallel to the existing lines (to the left and right of the existing lines) with the intention to utilize the existing railway land and minimise acquisition of private and government land.

##### **2.1.2 Category**

The existing Sambalpur – Angul – Talcher route comes under ‘D’ Special Route and hence the proposed 3<sup>rd</sup> and 4<sup>th</sup> line will be of ‘D’ Special Route standards having speed potential of 110 Kms. per hour.

###### **2.1.2.1 Alignment**

The alignment is proposed to be on either side (left and right) of the existing lines, parallel to it, in order to utilize the existing railway land to the maximum extent and to minimize the acquisition of additional land. The 3<sup>rd</sup> line will run parallel on UP line side (towards Burhapanka) with a flyover arrangement which crosses the existing Talcher Road – Talcher Thermal PH line and doubling line between Burhapanka and Talcher Thermal PH and also crosses the NH 149 before joining the Burhapanka station. The 4<sup>th</sup> line will be

parallel to DN line towards Sambalpur. The total route length for 3<sup>rd</sup> line with flyover is 47 Kms. and that of the 4<sup>th</sup> line is 44 Kms. It has also been proposed to provide connectivity to each station en-route so as to have better operational flexibility and to maximize the sectional capacity.

#### **2.1.2.2 *Obligatory points***

The alignment is proposed on either side of the existing line connecting to all important stations like Angul which is a district head-quarters and Burhapanka Junction.

#### **2.1.2.3 *Bridges***

It has been proposed to construct 17 major Bridges (including the flyover) and 178 minor bridges (existing bridges which will be extended on both the sides are taken as two bridges). All minor bridges will be RCC Box culverts and will be extensions of the existing bridges.

#### **2.1.2.4 *Platforms***

High level platforms are proposed to be provided at Jharpada and Kerejang stations. Provision of passenger amenities has been proposed as per the guidelines of Railway Board in all stations.

#### **2.1.2.5 *Level Crossings***

A total of 34 level crossings (LCs) are existing in this section out of which 18 are manned and 16 are unmanned. All these level crossings are proposed to be extended for new lines. As per the plan of elimination of unmanned LCs, the above 16 unmanned LCs will be manned in future.

#### **2.1.2.6 *Traction***

The existing route is a partially electrified route. Now electrification of Angul-Kerjanga is going on. Hence, provision of electrification of the new lines is kept in the estimate.

## **2.2 The Legal framework**

Assessment of social impact of an infrastructure development project needs to be done in line with the law of the land and in compliance with the government guidelines. The assessment report is based on primary data collected from the affected households and village; on secondary data secured from various published sources, government offices and records and in accordance with RTFCTLAR & R Act, 2013 and ORFCTLAR & R Rules,

2016. Since land acquisition is a necessary concomitant of a public infrastructure project, the land losing households who bear the brunt of loss of property, including dwellings and livelihood in many cases, have to be reasonably compensated.

The construction of Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line with provision of a flyover at Talcher Road is in line with existing law, acts and rules in place. The 3<sup>rd</sup> and 4<sup>th</sup> line rail work was included in item No.25 of the Pink Book 2015-16. The gross cost of the project will be Rs.701.61 crores.

## **2.2.1 Constitutional Provisions**

The Constitution of India originally provided the right to property under Articles 19 and 31; Article 19 guaranteed that all citizens have right to acquire, hold and dispose of property while Article 31 stated that “no person shall be deprived of his property save by authority of law”. It also provided that compensation would be paid to the person whose property has been acquired for public purpose. The right to property was eliminated by the 44<sup>th</sup> Amendment Act of the Constitution in 1978. Instead a new provision has been included in Article 300A which states “Persons not to be deprived of property save by authority of law”. This implies that short of consent of the owner, a man’s property can be taken only by the consent of the nation as embodied in the laws passed according to Constitution (Basu, 2015: 137). “If the State seeks to acquire the land which is personally cultivated by the owner and such land does not exceed the statutory ceiling, the State must pay to such owner full market value of his land as well as any building or structure standing there on” (Ibid: P.41).

### **2.2.1.1 Samatha Judgment**

In this context it would be relevant to put the historic ruling by the Hon’ble Supreme Court of India delivered by a three judge bench on 11<sup>th</sup> July, 1997 in Samatha Vrs. State of Andhra Pradesh and others (1997 Supp.2 SCR, 205). The Constitution 73<sup>rd</sup> Amendment Act, 1992 stated that every Grama Sabha shall be competent to safeguard and preserve community resources and enjoys the power to prevent alienation of land in Scheduled Areas and to take appropriate action to restore any unlawful alienation of the land of a Scheduled Tribe.

### **2.2.1.2 Bhuria Committee Report**

The question of land acquisition in the Scheduled Areas was carefully examined by the Bhuria Committee. It noted that the Land Acquisition Act which enables the state to takeover any land for a “Public Purpose” is based on the principle of individual land

ownership and does not take cognizance of the customary regulation of common property resources in tribal areas. Among many tribal communities, land and such other natural resources are owned jointly by the community and its use by an individual is sanctioned by the community. Since the Land Acquisition Act does not recognize this basic principle in tribal areas, it is not based on realistic grounds. The committee opined that the basic lacunae in the Act have to be removed by making the consent of the local community in this matter obligatory. In other words, land in the Scheduled Areas should be acquired with the consent of Grama Sabha and the proposed alternative livelihood should be acceptable to them (Bhuria Committee Report, 1995 (mimeo), P.11).

### **2.2.1.3 PESA Act, 1996**

The recommendations of the Bhuria Committee were considered in the Parliament and in December, 1996 the Parliament of India approved the provisions of the 73<sup>rd</sup> Constitutional Amendment Act, 1993 to the Scheduled-V Areas of the country. This Act is quite significant as it accords statutory status to the Grama Sabhas in the Scheduled Areas with wide ranging powers and authority.

This Act has assigned consultative powers to the Grama Sabha with regard to acquisition of land. It states that before making acquisition of land in the Scheduled Areas by the concerned authorities for development of projects and before resettling or rehabilitating persons affected by such projects, the Grama Sabha or the Panchayat at appropriate level (i.e. intermediate and district levels) will be consulted.

### **2.2.2 Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013**

The Land Acquisition Act, 1894 was repealed and replaced by the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013. The Act came into force on 1<sup>st</sup> January 2014 and is designed to regulate acquisition of land by Central and State Governments, except Jammu and Kashmir, for purposes of industrialization, infrastructural development and urbanization. The Act has taken into account the essence of Panchayat Extension to Scheduled Areas (PESA) Act, 1996. This Act ensures consultation with the institutions of Local Self Government and Grama Sabha established under the Constitution. The Act ensures, “a human, participative, informed and transparent process for land acquisition for industrialization, development of essential infrastructural facilities and urbanization with the least disturbance to the owners of

the land and other affected families and provide just and fair compensation”. It has made adequate provisions for such affected persons for their rehabilitation and resettlement and for ensuring that affected persons become partners in the development leading to an improvement in their post-acquisition social and economic status. The provisions of this Act shall apply to land acquisition by government for strategic purposes and infrastructural development.

The main provisions of the Act include the following:

a) Payment of fair compensation to land losers, b) Transparent process of land acquisition, c) Rehabilitation of displaced persons, d) Least socio-economic disturbance to affected households, e) Consulting Grama Sabhas, f) Preparation of an action plan for mitigation of adverse impact and g) Consent of 70% of affected people for land acquisition.

In order to ensure this the Act has laid down in Chapter-II provisions for determination of Social Impact and Public Purpose and Preparation of Social Impact Assessment Study by detailed investigation of affected families, extent of lands, houses, settlements and other common property resources likely to be affected both in the private and public sectors and study of the social impacts of the project. It has also laid down guidelines for preparation of Social Impact Management Plan, listing the ameliorative measures required to be undertaken. In chapter-IV Section: 209, it has detailed the process of determination of value of things attached to land and building by experts. It has also provided award of ‘Solatium’ amount equivalent to 100% of compensation amount.

All these provisions have been made to ensure that the affected families will lead a life of better social and economic standard during post land acquisition period.

### **2.2.3 The Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016**

In exercise of the powers conferred by sub-section (I) of Section 109 of RFCTLRRR Act, 2013, the Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2015 was published in an extraordinary issue of Odisha Gazette No.1480, dated: 19.10.2015 under the notification of Government of Odisha in Revenue and Disaster Management Department. Objections and suggestions were invited from all persons likely to be affected. As no objection or suggestion on the said draft was



received, the Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016 came into force from 19<sup>th</sup> October, 2016.

The details of the process of the proposal for acquisition of land by the requiring Body, the scrutiny of application of Land Acquisition by the District Collector, and updating of the Land Records by the concerned Tahasildar within a period of three months after receiving land particulars from the Collector has been dealt in the said Rule, 2016.

Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar, an independent organization of academic research and evaluation, has been recognized as the State SIA Unit. This unit is responsible for ensuring that SIA studies are conducted as per the provisions of the Act. Institutions / Organizations empaneled for the purpose on the basis of expertise and competency are selected for undertaking SIA study.

The important provisions of the said Rule - 2016 which are relevant for conduct of Social Impact Assessment Study are as follows:

<b>Sl. No.</b>	<b>Clause No.</b>	<b>Contents of the Clause</b>
1.	6	Establishment of an independent organization as State SIA unit.
2.	8	Notification by the State Government for carrying out SIA study.
3.	9	Conduct of SIA study in consultation with concerned Panchayat.
4.	10	Selection of SIA team for each project from the individuals and institutions registered or empanelled as qualified SIA Resource partners.
5.	11	Process of conducting Social Impact Assessment.
6.	12	Social Impact Management Plan (SIMP) including R & R entitlement matrix.
7.	13	SIMP to include Development Plan in case of land acquisition in Scheduled Areas.
8.	14	Process of conducting Public Hearing in Grama Sabhas on the findings of SIA.
9.	15	Publication of SIA Report and SIMP.
10.	16	Publication of the recommendation of the Expert Group.
11.	17	Publication of the decision of the State Government.

The construction as well as extension of railway line is meant for the welfare of the public. The present Land Acquisition for construction of Salagaon–Burhapanka–Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> line Rail Project in Angul District is necessary for meeting the increase in the volume of materials, goods as well as human traffic. As these new lines will be constructed on both the sides of the existing lines, there will be the minimum need of land acquisition.

## CHAPTER-3

### Approach, Tools, Methods and Processes

#### 3.1 The SIA Team

This SIA study is based mostly on primary data collected through personal face-to-face interview method by canvassing a well designed household schedule. The same were processed for analytical purposes. Secondary data have been used at appropriate stages and points in the report. A five-member Social Impact Assessment Study Team was constituted for doing all that is required to complete the work. The members of the team are professionals with previous experience in evaluation and research studies. The constitution of the team is given in the following table:

**Table-3.1: Structure of the SIA Study Team**

Sl. No	Name	Position in SIA Team	Designation	Qualification	Responsibility
1.	Prof. R.N. Patra	Team Leader/ Project Director	Visiting Professor	M.A., Ph.D.	Overall Supervision, Collection of Secondary Data, Stakeholder Consultation, Data Interpretation & Report Preparation
2.	Sri A.K. Nanda	Research Supervisor	Lecturer	M.A.,M.Phil	Coordination of field work, FGD, Data validation, Assisting in Report preparation
3.	Dr. N.K. Rath	Field Investigators	Reader	M.A., Ph.D.	Data Collection from fields, PRA, FGD, Stakeholder Consultation
4.	Sri G.N. Pradhan		Lecturer	M.A, M.Phil.	
5.	Sri L.N. Padhi	Computer Operator	Librarian & Accountant	M.A., MLIS, MBA, PGDCA	Data Entry, Tabulation, Data Analysis and Report typing

*Source: COATS, Koraput*

#### 3.2 The Team Leader

The SIA study involving field survey, data processing, preparation of SIA report including SIMP in respect of Land Acquisition for construction of SalAgaon – Burhapanka – Talcher – Jarapada 3rd and 4th line Rail Project in Angul district were done under the supervision and guidance of the Team Leader Dr. Rabinarayan Patra, Visiting Professor of COATS. Dr. Patra has 36 years of teaching experience and 30 years of research experience. He has supervised eight Ph.D. scholars and 16 M.Phil. scholars under Utkal University and

Ravenshaw University. He has to his credit holding the post of Secretary of Orissa Economics Association for a period of more than two decades, 21 years to be precise. As the Deputy Director of Gopabandhu Academy of Administration, he has successfully supervised and was deeply involved in the preparation of Gazetteers of 30 districts in Odisha in addition to his own duties of taking training classes for OAS, IES and IAS freshers, and other Line department in-service personnel.

### **3.3 Approach**

Social Impact Assessment requires knowledge about the present socio-economic status and the overall environment as well as the likely changes due to implementation of the project in a particular area. The project is worth pursuing if its implementation is expected to better the lives of the people in the project area. A resettlement and rehabilitation plan is in place because the project requires acquisition of land and may involve loss of livelihood and displacement.

As discussed above, this SIA study is based on both primary and secondary data. Primary data for the study were collected through a census survey of households in Bhogabereni village assigned to the SIA team by special land acquisition officer (LAO), Dhenkanal. A community level public survey was conducted and participatory rural appraisal was done by applying appropriate techniques. Secondary data obtained from various published sources were also used and they were found useful in validating the results derived from information collected and by analyzing primary data.

Broadly speaking, the study provides 6 sets of information viz. (a) Baseline information about the socio-economic status of households and community in the pre-project period, (b) information about the likely socio-economic impact, their magnitude, distribution and time frame, (c) Information about the positively and negatively affected groups, (d) Information on the perception of the people to be affected directly and indirectly by the project about the project benefits and harms, (e) Information on potential action and measures of intervention to mitigate / minimize the adverse impact and (f) Information on institutional capacity and preparedness to implement the action plan and corrective measures. Additionally, it also gives an approximate cost-benefit analysis of the project and some suggestions/recommendations.

### **3.4 Broad Methodology**

The methodology of the SIA study has been formulated in accordance with the objectives and scope of the study and provisions of law. It involves the following steps.

- i. Identification of the assigned village
- ii. Specifying data requirements with sources, training personnel and collection of data.
- iii. Identification of stakeholders and securing their involvement in the SIA Study.
- iv. Conducting field level scoping study.
- v. Conducting baseline survey by applying census method.
- vi. Assessment of likely impact of the project and informal discussion on compensation and income restoration programmes.
- vii. Designing a Social Impact Management Plan indicating entitlements of all affected parties – individuals, households, community.
- viii. Preparation of Draft SIA study report.
- ix. Organizing public hearing to elicit reactions and views of stakeholders.
- x. Preparation of final report by incorporating the inputs derived from public hearing and submission of the report to the state SIA Unit.

#### **3.4.1 Schedules**

Keeping in mind the objectives and in compliance with relevant Acts and Rules, two sets of schedules were designed – one each for the directly and indirectly affected households and the village. They were submitted to the State SIA Unit for vetting and approval. Census Survey was conducted in the project affected Bhogabereni village for the 92 affected households and 15 directly non-affected households. Social mapping, Resource mapping, Focused Group Discussions, key informants interview and consultation with officials and people's representatives were done to collect required information.

#### **3.4.2 Social Impact Assessment Process**

Selection and training of Research Supervisor and Field Investigators was an important step in the conduct of the SIA study and it precedes the collection of data from the field. Two Investigators, one Research Supervisor were selected basing upon their educational qualification and past research study experience. The Research Supervisor has sufficient experience of collection of data from the field, conduct of Focused Group Discussions and Participatory Rural Appraisal in a number of research studies conducted by COATS during the last two decades. The Field Investigators have also the past experience of

collection of necessary data from the field and conduct of FGDs in seven research projects conducted by COATS during the last decade.

The Research Supervisor and Field Investigators were given a one-day intensive training on the purpose of the study, the broad issues, the time line, importance of the conduct of SIA study and the steps necessary to fill up the structured schedules. The important aspects of the study on which training was imparted were:

- a) Description of dimensions of socio-economic profile of households and the village to be affected by the project.
- b) A detailed assessment of the socio-economic conditions of the households whose lands are proposed to be acquired;
- c) A detailed study of impacts in terms of loss of income and means of livelihood including land and displacement (if any) after the acquisition of land by the government;
- d) A detailed study of the loss of common property resources (CPRs) of the affected village;
- e) The manner in which cost and benefit analysis was to be made and
- f) To prepare an appropriate SIMP for the affected families to mitigate the loss of common property resources and adverse impact of the project.

#### ***3.4.2.1 Collection of Records and Desk Research***

Relevant documents, RoRs, reports, baseline information on the project affected village and area, legal framework, institutional mechanisms governing the project etc. were studied. The 2011 census data were used to validate field data.

The Director of COATS, Team Leader and the Research Supervisor of the SIA study team met the concerned officer of the Railway Board at Bhubaneswar and collected the details about the 3<sup>rd</sup> and 4<sup>th</sup> Rail line and the lands to be acquired from private persons and government. Relevant records and reports were obtained from designated sources.

#### ***3.4.2.2 Identification of the Impact Area***

As per the land particulars provided by the Coordinator, SIA Unit, Bhogabereni village of Bogabereni Panchayat of Banarpal Tahasil is going to be affected. It was worked out that the number of households that are likely to be affected are 92. In all, 14.64 acres of land are proposed to be acquired from the affected households.

### **3.4.2.3 Collection of Data**

As indicated above, both Secondary and Primary data have been used in this SIA study.

#### **I. Secondary Data**

The sources from which secondary data were obtained have been (a) Reports about the Project and the area to be affected by it, (b) Census reports, and (c) Records of Government of Odisha and East Coast Railway. Land schedule, demography of affected village, map of the project area and project details, Records of Acts and Rules, Policy Guidelines, District Statistical Handbook, and other Reports have been the main documents used for obtaining required secondary data.

#### **II. Primary Data**

The sources of primary data are: a) household survey, b) site visits, c) FGDs, d) PRAs, e) Interviews with key informants, people's representatives and stakeholders and f) public hearing meeting. Primary data were collected through door-to-door survey of affected households and indirectly affected households using schedules and they relate to socio-economic profile, livelihood sources, infrastructure and socio-economic status of the village. FGDs were organized to elicit response of project affected and unaffected people, and of Panchayat level functionaries to collect information on possible project impact in the area including compensation. Key informants, field level government functionaries of Line Departments, and officials of East Coast Railway have also been interviewed and consulted.

### **3.4.2.4 Site Visits**

The Team Leader along with the Research Supervisor visited all the affected areas to explore the project area and obtain a clear understanding of its geography, topography, infrastructure, affected households and people and their socio-economic life. The team also met all concerned District Level, Sub-divisional level and Tahasil level officers and PRI representatives. The detailed field study, Focused Group Discussions and Participatory Rural Appraisal were made by the SIA team. The team consulted different stakeholders and organized a number of meetings.

### **3.4.2.5 Analytical Tools and Consultation Methods**

#### **A) Baseline Survey and Census Method**

The SIA team at the first stage administered the pre-tested interview schedule to the stakeholders. The schedules contain questions on socio-economic profile including family details, occupation, source wise income, head wise expenditure, household assets, employment and views on compensation, resettlement and rehabilitation. The respondents extended their full cooperation in answering all the questions of the field investigators. The role of women in making decision in the family matters was also discussed. Collection of households level data were not restricted to those contained in the schedule. Queries of respondents were taken care of for gaining their confidence, securing their support and eliciting required information. Cross checking and validation of field level primary data were done.

#### **B. Preparation of the Socio-economic Profile**

The interview schedule was administered to 92 affected and 10 indirectly affected households of Bhogabereni village. All the households in a patch / part of the village could not be covered up in one go. To each patch of a village the investigators have gone several times to get the information from the affected families.

Individual opinions were also collected about the extent of loss of their means of livelihood because of the proposed Land Acquisition. Opinions of the people about the negative Social Impacts because of the proposed loss of common property resources were also collected.

#### **C. Focused Group Discussion**

The SIA team also conducted Focused Group Discussions (FGD) in the village. Semi structured schedules prepared for the purpose were administered to the villagers present. The Ward Member of the concerned village, the Sarpanch of the concerned Panchayat, the Anganwadi workers, teachers and retired employees living in the concerned village were consulted along with the affected households to elicit the views of different sections of the people on the socio-economic, cultural and environmental impacts. The findings of these discussions helped the SIA team to prepare a write up on the positive and negative impacts of the proposed acquisition of land and loss of common property resources. Detailed discussions were also made about their expectation of compensation for loss of private land and common property resources. These discussions also helped the SIA team to provide a Comprehensive SIMP of the project.

Information relating to the availability of different infrastructure facilities in the village, the number of artisans in different crafts etc. which were collected from the individual households were also cross-verified in the FGD meeting.

#### **D. Key Informant Interviews**

Key Informant Interviews were held with local knowledgeable persons, community leaders, social engineers, civil society heads, professionals and government officials who are supposed to have knowledge about the people and the project. They provide qualitative information which facilitated mapping a perspective on the potential impact of the project.

#### **E. Participatory Rural Appraisal (PRA)**

The study also adopted the Participatory Rural Appraisal (PRA) method to enable the SIA team to get information about the location of houses, location of individual lands, and location of common property resources for construction of the 3<sup>rd</sup> and 4<sup>th</sup> Rail line. Wealth ranking or wellbeing ranking methods were done through the local people to find out vulnerable groups in the village.

#### **F. Data Compilation and Data Analysis**

Collected data were consolidated in a database and were subjected to analysis to draw generalized results for preparing the report. The report is prepared on the basis of such analysis.

#### **F. Preparation of a Social-Impact Management Plan**

The SIA study team prepared a Social Impact Management Plan (SIMP) containing ameliorative measures to address the negative social impacts of the project identified in the course of SIA study. Due care has been taken to provide a comprehensive analysis of social costs to be incurred and benefits to be accrued from the project and the impoverishment risk of the families depending upon land or getting displaced from their houses and the mitigation plan for resettlement and rehabilitation of such displaced and project affected families. The implementation of SIMP will help improve the socio-economic status of the households and the village in the affected area.

#### **G. Draft Report**

A Draft Report has been prepared basing on the assessment and analysis of primary and secondary data. The SIA draft report and SIMP have also been prepared in the regional language (Odia). The same was be submitted to the State SIA Unit, NCDS, Bhubaneswar by



COATS and to the Bogabereni Gram Panchayat and appropriate officials by Special Land Acquisition Officer, Dhenkanal more than two months before the public hearing.

#### **H. Public Hearing**

A Public Hearing was organized in the Bhogabereni village of Bhogabereni Gram Panchayat as per the date and time fixed by the Special Land Acquisition Officer, Dhenkanal with the help of the local administration and East Coast Railway authorities. The Public hearing meeting was organized in a central place in Bhogabereni village involving the local administration and land requiring body to disseminate the main findings of the SIA study in the affected areas. Views on the project impact and additional suggestions for amelioration of negative impacts have been recorded. Issues relating to land acquisition, compensation, employment generation, grievance redressal, role of administration etc. were discussed in the public hearing. The views of women and the under privileged were done. The proceedings of the meeting have been appended in the final SIA report.

#### **I. Final Report**

The Draft SIA Report was recast in the light of feedback received on findings, and additional information including suggestions. This final SIA report has been prepared accordingly.

#### **3.5 Limitations of the Study**

The design of the SIA study as also the approach, tools, methods and processes used to collect and analyse data, draw the results there from and interpret the conclusions are all in line with similar studies conducted earlier. But despite special efforts, the work is not fool proof and cannot claim perfection. Still there remained something to be desired. The study has the following limitations:

- i. The actual impact is likely to be different from those assessed in the study. This is because the real situation is difficult to correctly assess. Quantitative assessment is not possible in many cases.
- ii. Comprehensive secondary data were not available to cross check the primary data in all cases. Therefore, marginal errors in the report cannot be ruled out.

However, all care has been taken to make the study reasonably realistic.

## **CHAPTER-4**

### **Land Assessment**

#### **4.1 Introduction**

The basic objective of this SIA Study of the rail project is to assess the socio-economic profile of Bhogabereni village and its people, details of affected property along with its type and ownership, nature and extent of land to be acquired, social impacts on the people affected by the project, the type of impact and its magnitude. A socio-economic survey covering all affected families and ten other households was carried out in the months of March and April 2019 with the use of a structured interview schedule.

Expansion of railways through construction of additional lines is a significant investment and the land costs can greatly influence the overall budget of the project. Most rural lands are agricultural and undeveloped land and require improvements to make them fit for the railways. The property may also need tree clearing, stump removal, fill dirt, land levelling, driveways etc. Additionally, land is very scarce and the land-losers have to be heavily compensated.

Land assessment has therefore become an extremely important issue in land acquisition for a developmental project like the railways.

#### **4.2 Land requirement for the project**

The proposed construction of Salagaon-Burhapanka-Talcher-Jarpada 3rd and 4th Line shall require 15.99 Acres land for the implementation of the Rail Project. This constitutes 14.64 Acres of private land and 1.35 Acres of Government land. The Odisha Government has agreed to part with 1.35 Acres of Government land to the East Coast Railways for the project.

#### **4.3 Land Holding Status**

The original schedule for land acquisition supplied by the special land acquisition office at Dhenkanal for the SIA study of the Bhogabereni village to be affected by the proposed expansion of railways contained a list of 30 RoR holders in which 07 repetitions were noted leaving 23 as the net RoR households. These 23 have extended to 92 households as per genealogy and all the 92 households have been covered in this study. At present there are 92 claimants. A summary picture is given in Table-4.1.

**Table-4.1: Summary of affected households**

No. of households in the original RoR list	Repetitions	Balance households	No. of extended claimant households	No. of households surveyed
30	7	23	92	92

*Source: RoR list and Primary Survey*

Table-4.2 presents the details of area of government land to be acquired, total land with RoR of the affected households, and total affected land out of which the area of private land is proposed to be acquired.

**Table-4.2: Land Holding Status of Project Affected Households of Bhogabereni**

Total ROR Land of A.H in the village (Acre)	Total Affected Land out of which land will be acquired	Area of land proposed to be Acquired (In Acre)	Are of Government Land to be acquired (Acres)	Total land to be acquired (Acres)	Land Holding Status of Total original Households				Total Extended HHs Surveyed
					Marginal Farmers 0-2.5Ac	Small Farmers 2.5-5 Ac	Semi-Medium Farmers 5-10 Ac	All Farmers	
61.79	35.67	14.64	1.35	15.99	27	2	1	30	92

*Source: Bhulekha, Govt. of Odisha*

It may be observed from the table that the total land with the 30 RoR households in the affected village is 61.79 acres and the total area of affected land is 35.67 acres out of which an area of 14.64 acres is proposed to be acquired for the rail project. The area of private land to be acquired from the affected households (14.64 acres) constitutes 23.69% of the total RoR land (61.79 acres) possessed by them but 41.04% of the total affected land (35.67 acres) under their possession. It is important to note that 27 or 90% of the 30 original RoR holder households are marginal farmers, two or 6.67% are small farmers and only one or 3.33% is a semi-medium farmer.

Hence, the proposed land acquisition will further reduce the amount of land owned by the affected households and cause deterioration in their socio-economic status.

#### **4.4 Land Use Pattern**

In addition to the ownership of land to be acquired for the project, another factor that deserves mention is the use to which land is put at the individual household level and by the government. While a household may use its land mostly for housing and agriculture, government land is used for common benefits like roads, pathways, pasture, school, forest

and temples. Land acquisition is likely to have an adverse effect on them. A brief description of the land use pattern of the project affected households is given in Table-4.3.

<b>Table-4.3: Land Use Pattern of Project Affected Households of Bhogabereni village and Land Assessment for the Rail Project</b>						
Social Group	No. of PAHs	Area & Uses of Land (Acres)				
		Residential	Agricultural	Others	Total	Area to be Acquired
SC	14	0.28 (3.41)	7.94 (96.59)	-	8.22 (100.00)	0.36 ( 4.38)
OBC	40	0.66 (0.96)	68.01 (98.75)	0.20 (0.29)	68.87 (100.00)	2.68 (3.89)
General	38	0.71 (0.82)	85.53 (99.18)	-	86.24 (100.00)	11.60 (13.45)
All	<b>92</b>	<b>1.66 (1.02)</b>	<b>161.48 (98.86)</b>	<b>0.20 (0.12)</b>	<b>163.34 (100.00)</b>	<b>14.64 (8.96)</b>

Note: Figures in brackets indicate percentages of respective totals. *Source: Primary Survey*

The table makes interesting reading. At the aggregate level 98.86% is agricultural land, 1.02% is used for residential purposes and other uses have a share of 0.12%. A similar pattern is observed across social groups. For the SCs, 3.41% is homestead land while 96.59% is agricultural land. Agricultural land, homestead land and land put to other uses have the shares of 98.75%, 0.96%, and 0.29% respectively in the case of OBCs. For the general castes people, agricultural land constitutes 99.18% and homestead land accounts for 0.82% of the total land possessed by them.

Government of Odisha has agreed to give 1.35 acres of government land to the East Coast Railways for construction of the project. Private land, as mentioned in the above table, which are mostly farm land has to be purchased from the people on payment of due compensation.

#### **4.5 Previous transaction in the project area for the last 3 years**

As per the information given by the respondents, no transactions had taken place in the affected area for the last three years.

## **CHAPTER-5**

### **Socio Economic Profile**

#### **5.1 Introduction**

Documenting relevant information about human habitations – demographic, social, cultural and economic conditions, land utilization pattern etc. of people as also bio-physical situation of the project affected area through a baseline survey is a logical necessity in a Social Impact Assessment study. Potential effects of the project on community well-being need to be assessed in the context of the existing socio-economic – physical condition in the area. Hence, the survey needs to be well-defined and properly synchronized. As mentioned in Chapter-II of this report, all the 92 affected households in Bhogabereni village have been surveyed by the study team. The socio-economic profile of the families surveyed for the SIA study has been presented in this Chapter.

#### **5.2 Angul District and Banarpal Block / Tahasil**

Angul district has a geographical area of 6375 Sq. Km. and the area of Banarpal Tahasil is 338.51 Sq. Km. Mahanadi and Brahmani Rivers flow in the district while some small tributaries are flowing in the Banarpal block which provide a great advantage to the area and particularly to its agriculture. Coal reserve is huge and the growth of small business in the affected village is encouraging. The humidity is bit high and winds generally blow at light to moderate speed with little high speed during summer and rainy seasons. The broad demographic profile of the district and the block give a more or less similar picture obtained at the state level. A summary picture of the relevant broad demographic characteristics is given in Table-5.1. Majority of the people depend on agriculture. Agriculture, animal husbandry and small business constitute an important source of livelihood of people. Industrialization has greatly influenced the occupational pattern of the people because of the growth of direct and indirect employment opportunities in the non-farm sector. The main crops grown in this area include paddy, ragi, pulses, groundnut, mustard and vegetables. People rear cows, buffaloes, goats, pig and sheep. Fishery activities are taken up in reservoirs and poultry in backyards. A large number of MSMEs have come up since long and they absorb a good number of workers. As in other areas in the state, Angul district and Banarpal Tahasil also face scarcity of healthcare infrastructure. School education system is

up to mark and some institutions for higher and technical educations have come up in the block to cater to the needs of people.

**Table-5.1: Demographic Profile of Angul District and Banarpal Tahasil**

Indicator	Magnitude	
	Angul District	Banarpal Block
Population	1273821	78771
Male	655718	40693
Female	618103	38078
Sex ratio (per 1000 M)	943	936
Child Sex ratio (0-6 years)	889	849
Literacy rate	77.53	77.89
Male literacy	85.98	81.1
Female literacy	68.64	64.81
Density of population (per Sq.Km)	200	233
Total workers	526520	25230
Cultivators	107607 (20.44%)	3182 (12.6%)
Agricultural labourers	172414 (32.75%)	5080 (20.1)
Household Industry workers	35069 (6.66%)	1513 (6.0%)
Other workers	211430 (40.16%)	15455 (61.3)

*Source: District Census Handbook, Directorate of Census Operations Odisha 2011*

### 5.3 Land Acquisition

According to the schedule for land acquisition supplied by the special land acquisition office at Dhenkanal for the SIA study of and the genealogy prepared by the Team 92 households of the Bhogabereni village will be affected directly by the proposed expansion of railways. All the 92 households have been surveyed for this study. On the whole 15.99 acres of land comprising 14.64 Acres of private land and 1.35 Acres of Government land have been proposed to be acquired for the Rail project.

### 5.4 Population Profile of the Project affected village

The present study relates to Bhogabereni village that will be affected by land acquisition for the Rail Project in Banarpal Tahasil of Angul district. The project will not only affect the land losing household directly but will also have an effect on day to day living of others in the village. The broad demographic profile of the village to be affected by the Rail project is given in Table-5.2.

**Table-5.2: Population Profile of Project Affected Bhogabereni village**

Social Group	No. of HHs	Broad Population Profile					Child Population (0-6 Years)				
		Male	Female	Total	Sex Ratio	Average family size	Male	Female	Total	Sex Ratio	Share in total population (%)
SC	NA	184	151	335	821	4	106	88	194	830	10.96
ST		6	9	15	1500						
Others		722	698	1420	967						
All	432	912	858	1770	941						

*Source: District Census Handbook, Directorate of Census Operations Odisha 2011*

It may be seen from the table that as per Census 2011 figures, the village has 432 households with a population of 1770 of which 912 are male and 858 are female indicating a sex ratio of 941 which compares little unfavourably with the sex ratio for Angul district (943). The average family size in the village is four. The population in the 0-6 years bracket is estimated at 194 of whom 106 are male and 88 are female with a child sex ratio of 830 which also compares unfavourably with that for the district (889). Scheduled castes account for about 19% and Scheduled Tribes constitutes 0.85% of total population of the village. The sex ratios for SCs and STs are 821 and 1500 respectively. The literacy rates have been 80.81% for male, 70.40% for female and 75.59% for the whole population in the village. Classification of workers indicates that 18.5% are cultivators, 7.09% are agricultural labourers, 7.87% are household industry workers and 66.54% are other workers in the village.

### 5.5 Social Group-wise Project Affected Households and Population

The project area has a typically traditional society divided into social groups by castes. Caste of a household is a reflection of its social status and economic condition. It broadly indicates the choices open to and well-being of a household and its ability to network, exploit opportunities and gain therefrom as also the extent to deprivation and vulnerability. Only 92 of the 432 households in the village are going to lose some portion of their land and other assets. A summary picture of the caste distribution of project affected households along with broad population profile is given in Table-5.3.

Caste	No. of HHs	% share	Population					Child Population (0-6 Years)				
			Male	Female	Total	Sex Ratio	Average Family Size	Male	Female	Total	Sex Ratio	Share in Total (%)
SC	14	15.22	39	41	80	1051	6	1	5	6	5000	7.50
OBC	42	45.65	106	75	181	708	5	1	1	2	1000	1.10
General	36	39.13	94	93	187	989	5	4	2	6	500	3.21
<b>All</b>	<b>92</b>	<b>100.00</b>	<b>239</b>	<b>209</b>	<b>448</b>	<b>874</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>14</b>	<b>1333</b>	<b>3.13</b>

*Source: Primary Survey*

The total population of the surveyed land losing households is 448 comprising 239 male and 209 female indicating a sex ratio of 874 which compares unfavourably with that for the district (943). The average family size for these households is estimated at five and is

considered reasonable. The child sex ratio for the project affected households is found to be 1333 and the share of child population in total population of these households comes to 3.13%. In view of the high child sex ratio in the land losing households, the proposed land acquisition is expected to entail heavy losses at the household level. SCs constitute 15.22% of the land-losing households while OBCs account for 45.65% and General castes have a share of 39.13%. The sex ratio is the highest for SCs followed by general castes and OBCs in that order.

Since a sizeable number of the households to be affected by the project belong to the lower social castes – i.e. 14 or 15.22% (SCs) and 40 or 45.65% (OBCs) - land acquisition will affect their economy very adversely.

## 5.6 Marital Status and Socio-Economic Profile

A broad outline of the marital status and heads of project affected households in the Bhogabareni village is presented in Table-5.4.

<b>Table-5.4:</b>		<b>Marital Status of Project Affected Population &amp; Socio-Economic Position</b>							
<b>Social Group</b>	<b>No. of PAFs</b>	<b>Marital Status of Population</b>				<b>Household Head</b>		<b>BPL Households</b>	<b>No. of PAFs to be Displaced</b>
		<b>Total</b>	<b>Married</b>	<b>Unmarried</b>	<b>Widowed</b>	<b>Women Headed Household</b>	<b>Dibyang Headed Household</b>		
SC	14	80 100.00%	45 56.25%	34 42.50%	1 1.25%	2 14.29%			Nil
OBC	42	181 100.00%	96 53.04%	78 43.09%	7 3.87%	5 12.50%	2 5.00%	6 15.00%	Nil
General	36	187 100.00%	112 59.89%	61 32.62%	14 7.49%	15 39.47%	1 2.63%	3 7.89%	Nil
<b>All</b>	<b>92</b>	<b>448</b> <b>100.00%</b>	<b>253</b> <b>56.47%</b>	<b>173</b> <b>38.62%</b>	<b>22</b> <b>4.91%</b>	<b>22</b> <b>23.91%</b>	<b>3</b> <b>3.26%</b>	<b>9</b> <b>9.78%</b>	<b>Nil</b>

*Source: Primary Survey*

It is revealed from the table that the married outnumber the unmarried in the total population of the village. Those married account for 59.89% of the total population. The unmarried constitute 32.62% and the widowed 47.49%, the separated 1% and the widowed have a share of 4.91%. Among the heads of 92 households surveyed, only 22 or 23.91% are women headed households and the rest 70 or 76.09% households are headed by male. This conforms to the prevailing male dominated social system broadly found in the county and at



the disaggregate level. Only three households (3.26%) are headed by dibyangs and nine (9.78%) households are below poverty line. Fortunately, none of the households will be displaced due to land acquisition. A more or less similar picture is discernible across the social groups. This means that the proposed land acquisition will impose a heavy burden on the land-losing households and more so, on the socio-economically weaker households.

## 5.7 Family Type

Two types of families are observed among the project affected households, namely, nuclear and joint families. Broad categorization is given in Table-5.5.

Table	5.5	Distribution of Project Affected Households by Family Type	
Social Group	Family Type	No. of Households	
SC	Joint	8 (57.14 %)	
	Nuclear	6 (42.86 %)	
	All	14 (100.00 %)	
OBC	Joint	13 (30.95 %)	
	Nuclear	29 (69.05 %)	
	All	42 (100.00 %)	
General	Joint	11 (30.56 %)	
	Nuclear	25 (69.44 %)	
	All	36 (100.00 %)	
All	<b>Joint</b>	<b>32 (34.78 %)</b>	
	<b>Nuclear</b>	<b>60 (65.22 %)</b>	
	<b>Total</b>	<b>92 (100.00 %)</b>	

*Source: Primary Survey*

It may be seen from the table that majority of the surveyed households are nuclear families. Their number is 60 or 65.22%. Joint families constitute about 34.78% (32 of 92) of the total. There are no individual (one-man) families. Since more than 65% of households are nuclear families, there is low social security and the economic problem due to land acquisition will not be shared; the land losing families have to bear the brunt. A similar pattern is observed across social groups excepting the SCs in whose case joint families (8) outnumber nuclear families (6).

## 5.8 Age Distribution of Head of Project Affected Households

Broadly speaking, the patriarchal family system is prevalent among the project affected households. Monogamy is practiced across social groups i.e. castes. The problem due to land acquisition is likely to be more acute in the case of the few women headed households because headship in these families is normally held by a woman in an adverse situation, namely, when the husband dies and the children are not sufficiently grown up to handle family affairs and household economy. The age of the head of the household is important because it has obvious socio-economic significance. Relevant information is given in Table-5.6.

Table	5.6	Age Distribution of Head of Project Affected Households			
Social Group	Household	Age Group			
		<45	45-60	60+	All
SC	Women Headed	1		1	2
	Men Headed		7	5	12
	Total	1	7	6	14
OBC	Women Headed		3	2	5
	Men Headed	1	20	16	37
	Total	1	23	18	42
General	Women Headed		1	14	15
	Men Headed	2	10	9	21
	Total	2	11	23	36
All	Women Headed	1 4.55%	4 18.18%	17 77.27%	22 100%
	Men Headed	3 4.29%	37 52.85%	30 42.86%	70 100%
	Total	4	41	47	92

*Source: Primary Survey*

Table-5.6 reveals that only 22 or 23.91% of the surveyed households are women headed and 70 or 76.09% are male headed. Majority of the women headed families 17 or 77.27% are in the 60 plus age group followed by 4 (18.18%) in the 45-60 age group and only one is in the age group below 45 years. Among the male headed households, these age groups account for 42.86 %, 52.85 % and 4.29% respectively. The same pattern is seen across social groups except in the case of OBCs. It follows that families headed by women will be worst affected by land acquisition as more than 77% of them are in the 60+ age bracket.

## 5.9 Age Composition of Project Affected Households

Age composition refers to the structure of population by age groups. It gives an idea about the potential workforce and dependency load in a population. According to Census-2011 the number in the 15-59 age group constitute the working population and those below 0-15 are children supposed to be in schools while the population in the 60+ age group is considered elderly. Together those in 0-15 and 60+ age groups are taken as dependents and the number in the 15-60 working age group constitutes the workforce and is an indicator of the economic status of a household / population. In the surveyed households some persons in the 60 years and above age group were also found to be working. The age distribution of the project affected households is given in Table-5.7.

Social Group	No. of persons in Project Affected HHs			0-6 Years			6-15 Years			15-60 Years			60 Years Above		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
SC	39	41	80	1	5	6	5	2	7	28	33	61	5	1	6
	48.75%	51.25%	100.00%			7.50%			8.75%			76.25%			7.50%
OBC	106	75	181	1	1	2	8	3	11	80	58	138	17	13	30
	58.56%	41.44%	100.00%			1.10%			6.08%			76.24%			16.57%
General	94	93	187	4	2	6	8	8	16	67	62	129	15	21	36
	50.27%	49.73%	100.00%			3.21%			8.56%			68.98%			19.25%
All	239	209	448	6	8	14	21	13	34	175	153	328	37	35	72
	53.35%	46.65%	100.00%			3.13%			7.59%			73.21%			16.07%

*Source: Primary Survey*

The table reveals that population in the working age group is 328 which constitutes 73.21% of the total population of the project affected households. This population is greater than the child population (14 or 3.13%), those supposed to be in schools (34 or 07.59%) and the elderly (72 or 16.07%) taken together (26.79%). Thus, land acquisition will affect the land-losing households adversely as many in these households are engaged in agriculture as cultivators and agricultural labourers.

## 5.10 Housing and Amenities

Normally, people spend substantial part of the time in a day with family at home. Hence dwelling condition and access to amenities are important for a decent living. The type of house one lives in and the utility provisions are important in this context. They are a determinant of a household's socio-economic status and well-being. Information on the dwelling condition of affected households is given in Table-5.8.

<b>Table- 5.8: Distribution of Project Affected Households by House Type</b>						
Social Group	Total PAHs	House Type				
		Pucca	Semi-Pucca	Katcha	Average Housing Area (in Sq.ft.)	Average No. of Rooms
SC	14	14			901.43	4
OBC	40	36	3	1	732.50	3
General	38	29	8	1	835.53	4
<b>Total</b>	<b>92 (100)</b>	<b>79 (85.87)</b>	<b>11 (11.96)</b>	<b>2 (2.17)</b>	<b>800.76</b>	<b>3</b>

*Source: Primary Survey*

It came out in the household survey that all the project affected families have their own houses on their homestead land with patta i.e. RoR. A good number (79 of 92 or 85.87%) of households have pucca houses with brick walls and concrete roof, 11 or 11.96% households have semi-pucca houses having brick walls and asbestos and RCC roofs and only 2 of the 92 or 2.17% have Katcha houses. Barring pucca houses with good dwelling condition, the condition of semi-pucca houses is manageable while those of Katcha houses are not good. Surprisingly, all the SC households have pucca houses and it surfaced that many have constructed them with financial assistance under the IAY Scheme. Equally amazing is the fact that the average number of rooms and the average housing area are higher for SCs compared to other social groups.

The dwelling space as measured by area of house in square feet does not indicate a definite pattern. It varies and the average space measures 800.76 sq.ft. The number of rooms in houses varies from one to five and the average number of rooms per household comes to 3.

The situation regarding access to utilities for the houses of affected households is given in Table-5.9.

<b>Table-5.9: Distribution of Project Affected Households by Access to Utilities</b>								
Social Group	Total PAHs	No. of PAFs with Live Stock	House Type					
			Separate Place for Animal	Bathroom within the House	Toilet within or adjacent to the House	Washing Place within the House	Electricity Connection	Drinking Water Facility
SC	14	1	1	12	12	12	14	14
OBC	42	22	20	22	23	20	40	40
General	36	8	6	17	26	25	35	36
<b>Total</b>	<b>92</b>	<b>31</b>	<b>27</b>	<b>51</b>	<b>61</b>	<b>57</b>	<b>89</b>	<b>90</b>

*Source: Primary Survey*

The table shows that 31 of 92 or 33.7% of households have livestock of which 27 or 87.1% have separate space for animals either inside the main house premises or the animal

space shares the same wall with the main house. In all the Katcha houses animal space shares the same wall with living rooms for humans and it holds for some of the semi-pucca and pucca houses. Most of the houses 51 of 92 or 55.43% have bathroom within the house and the rest have bathing space outside the house. A good thing is that, as many as 61 or 66.3% houses have toilets within the houses or share a common wall with the main house. This is the case with brick wall – concrete roof houses. The balance 31 households including all the katcha and semi-pucca houses have toilets outside the main house. Many i.e. 57 of the 92 or 61.96% houses have washing space within the houses. This is the case with some pucca and semi-pucca houses. All the Katcha houses and some of the Pucca and semi-pucca houses do not have washing place inside the houses but outside. As many as 89 or 96.74% of the 92 households surveyed have electricity connection. The three remaining households manage with lines borrowed from neighbours. As many as 90 households or 97.83% have their own drinking water facility – either tube wells or piped connection from borewells – and the rest two households use public tube wells.

It follows that the dwelling condition is good for most of the houses. Additionally, the dwelling situation in many of the Katcha houses is grossly deplorable. These households will be badly affected due to land acquisition for expansion of railways.

### **5.11 Educational Status**

Education is an important indicator of human development. It broadens knowledge, increases awareness, enhances skill and capabilities of a person and contributes to human capital formation and economic development. Relevant data relating to this aspect of project affected households are given in Table-5.10.

It may be seen from the table that of the 448 persons to be directly affected by the Rail project, 32 (7.14%) are illiterate, 13 (2.90%) are just literate, 74 (16.52%) have education up to elementary level, 64 (14.29%) have education between class VIII and X, 115 (25.69%) have passed matriculation, 38 (8.48%) have higher secondary level education, 52 (11.61%) are graduates, only four (0.89%) are post graduates and 56 (12.50%) are technically qualified with some technical and professional qualification. The literacy rate for male (97.07%) is far higher than that for female (88.46%). High educational level of the project affected population will enable them to take advantage of the diversified employment opportunities that may accrue from expansions of railways.

<b>Table-5.10</b>		<b>Distribution of Project Affected Population by Educational Status</b>									
<b>Social Group</b>	<b>Sex</b>	<b>Education</b>									<b>Total</b>
		<b>Illiterate</b>	<b>Just Literate</b>	<b>Elementary Level</b>	<b>High School</b>	<b>Matriculate</b>	<b>Intermediate</b>	<b>Graduate</b>	<b>Post Graduate</b>	<b>Technical Degree</b>	
SC	Male	1	1	6	4	4	3	4		16	39
	Female	3	1	7	7	7	1	4	2	9	41
	Total	4	2	13	11	11	4	8	2	25	80
OBC	Male	3	4	16	15	39	8	5	2	14	106
	Female	12	1	16	13	14	10	6		3	75
	Total	15	5	32	28	53	18	11	2	17	181
General	Male	3	2	11	10	34	7	17		10	94
	Female	10	4	18	15	17	9	16		4	93
	Total	13	6	29	25	51	16	33		14	187
All	Male	7	7	33	29	77	18	26	2	40	239
	Female	25	6	41	35	38	20	26	2	16	209
	Total	32	13	74	64	115	38	52	4	56	448

*Source: Primary Survey*

## 5.12 Occupational Pattern of the Project Affected Working Age Population

The project affected working age population in Bhogabereni village is observed to be engaged in six occupations viz. as cultivators, agricultural labourers, daily wagers, salaried work, business and others. Work participation of women is observed to be very low. The details are given in Table: 5.11. At the aggregate level, 215 male workers are having main occupations as cultivators (32 or 14.88%), salaried job (61 or 28.37%), business (29 or 13.49%), other activities (76 or 35.35%), daily wagers (12 or 5.58%), and agricultural labourers (5 or 2.33%). Among the subsidiary occupations for male workers, cultivation (62.12%) and agricultural labour (21.12%) are prominent. The female workers are engaged in salaried jobs, and agriculture. This holds across social classes as well. Since a good number of male and female workers are engaged in agriculture, land acquisition is likely to have an adverse impact on the socio-economic status of the project affected households.

<b>Table-5.11</b>		<b>Occupational Pattern of Project Affected Families</b>													
<b>Social Group</b>	<b>Category</b>	<b>Occupation</b>													
		<b>Cultivator</b>		<b>Agricultural Labourer</b>		<b>Daily Wage Earner</b>		<b>Salaried work</b>		<b>Business work</b>		<b>Others</b>		<b>Total</b>	
		<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
SC	Main	1				1		8	3	6		19	27	35	30
	Subsidiary	2								1		2	2	5	2
	<b>Total</b>	<b>3</b>				<b>1</b>		<b>8</b>	<b>3</b>	<b>7</b>		<b>21</b>	<b>29</b>	<b>40</b>	<b>32</b>
OBC	Main	20	1	1		7		21	3	17		38	62	104	66
	Subsidiary	18	1	13		2				2		2		37	1
	<b>Total</b>	<b>38</b>	<b>2</b>	<b>14</b>		<b>9</b>		<b>21</b>	<b>3</b>	<b>19</b>		<b>40</b>	<b>62</b>	<b>141</b>	<b>67</b>
General	Main	11	3	4		4		32	2	6	1	19	26	76	32
	Subsidiary	21	5	1				1				1		24	5
	<b>Total</b>	<b>32</b>	<b>8</b>	<b>5</b>		<b>4</b>		<b>33</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>20</b>	<b>26</b>	<b>100</b>	<b>37</b>
<b>All</b>	<b>Main</b>	<b>32</b>	<b>4</b>	<b>5</b>		<b>12</b>		<b>61</b>	<b>8</b>	<b>29</b>	<b>1</b>	<b>76</b>	<b>115</b>	<b>215</b>	<b>128</b>
	<b>Subsidiary</b>	<b>41</b>	<b>6</b>	<b>14</b>		<b>2</b>		<b>1</b>		<b>3</b>		<b>5</b>	<b>2</b>	<b>66</b>	<b>8</b>
	<b>Total</b>	<b>73</b>	<b>10</b>	<b>19</b>		<b>14</b>		<b>62</b>	<b>8</b>	<b>32</b>	<b>1</b>	<b>81</b>	<b>117</b>	<b>281</b>	<b>136</b>

*Source: Primary Survey*

### 5.13 Material Assets, Livestock and Consumer Durables

Ownership of material assets, livestock and consumer durables is an important indicator of socio-economic status of a rural household. Information relating to the holding of such assets by the project affected households is furnished in Table-5.12.

It is revealed from the table that 90 out of 92 project affected households in Bhogabereni village have some consumer durables. Most of the households have television (75/92), telephone (76/92), bicycle (55/92), motorised two wheelers (62/92), cooking gas etc. Many households have livestock as an income earning activity. A summary picture of this is given in Table-5.13. Seventy-eight cows are owned by 29 families. Very few of them own buffaloes, goats, poultry and other livestock.

**Table-5.12 Possession of Material Assets by the affected Households**

Social Group	Television			Tape Recorder			Radio			Refrigerator			Telephone			Vehicles			Cycles			Three Wheeler		
	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)
-01-	-02-	-03-	-04-	-05-	-06-	-07-	-08-	-09-	-10-	-11-	-12-	-13-	-14-	-15-	-16-	-17-	-18-	-19-	-20-	-21-	-22-	-23-	-24-	-25-
SC	15	12	139000	0	0	0	0	0	0	5	5	36000	33	13	143000	0	0	0	13	9	33000	0	0	0
OBC	34	34	241000	2	2	4000	1	1	1500	14	14	126000	63	34	276000	3	1	10000	32	26	71900	3	3	292000
General	29	29	420000	1	1	4000	0	0	0	14	14	134000	67	29	401000	0	0	0	32	20	113000	0	0	0
<b>Total</b>	<b>78</b>	<b>75</b>	<b>800000</b>	<b>3</b>	<b>3</b>	<b>8000</b>	<b>1</b>	<b>1</b>	<b>1500</b>	<b>33</b>	<b>33</b>	<b>296000</b>	<b>163</b>	<b>76</b>	<b>820000</b>	<b>3</b>	<b>1</b>	<b>10000</b>	<b>77</b>	<b>55</b>	<b>217900</b>	<b>3</b>	<b>3</b>	<b>292000</b>

*Source: Primary Survey*

Two Wheeler			Four Wheeler			Bus/Truck			Cooking Gas			Utensils			Ornaments			Any Other Assets			Average	
Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	No. of PAFs	Value (Rs.)
-26-	-27-	-28-	-29-	-30-	-31-	-32-	-33-	-34-	-35-	-36-	-37-	-38-	-39-	-40-	-41-	-42-	-43-	-44-	-45-	-46-	-47-	-48-
16	10	815000	2	2	950000	0	0	0	11	11	30500	135	3	25500	111	9	397000	5	1	52000	14	187214
35	27	1695000	2	2	840000	0	0	0	27	27	66400	1035	33	199000	402	23	1287000	8	4	2212000	40	183045
33	25	1706002	120001	2	600000	1	1	0	24	22	88000	601	23	101200	217	10	1565000	19	6	83000	36	144867
<b>84</b>	<b>62</b>	<b>4216002</b>	<b>120005</b>	<b>6</b>	<b>2390000</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>62</b>	<b>60</b>	<b>184900</b>	<b>1771</b>	<b>59</b>	<b>325700</b>	<b>730</b>	<b>42</b>	<b>3249000</b>	<b>32</b>	<b>11</b>	<b>2347000</b>	<b>90</b>	<b>168422</b>

*Source: Primary Survey*



<b>Table-5.13 Possession of Livestock Assets by affected Families</b>																				
Social Group	Cows			Buffaloes			Sheep			Goats			Poultry			Any Other Livestocks			Average	
	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	Qty. (No.)	No. of PAFs	Value (Rs.)	No. of PAFs	Value (Rs.)
SC	3	1	60000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	60000
OBC	62	22	936500	0	0	0	0	0	0	3	1	13000	4	1	2000	0	0	0	22	43250
General	13	6	74500	2	1	20000	0	0	0	0	0	0	0	0	0	5	3	47000	8	17688
<b>Total</b>	<b>78</b>	<b>29</b>	<b>1071000</b>	<b>2</b>	<b>1</b>	<b>20000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>13000</b>	<b>4</b>	<b>1</b>	<b>2000</b>	<b>5</b>	<b>3</b>	<b>47000</b>	<b>31</b>	<b>37194</b>

*Source: Primary Survey*

## 5.14 Household Income

Income is the most important measure of socio-economic position of a household. It determines the standard of living, quality of life and level of well-being at the household level. Project affected households are found deriving income from cultivation, wage labour in agriculture and non-farm work, livestock, business, industry, salaried jobs, self employment etc. A summary picture is presented in Table-5.14. Income from migrant remittances is included in the Column showing income from service/salary.

The table makes interesting reading. Majority of households derive their income from agriculture, salaried work, business etc. A large part of the income is seen sourced in salaried job work (41.66%), business (10.72%), agriculture (7.68%), non-agricultural wage work (4.93%), self employment (5.29%) and others (23.56%). The annual average household income is estimated at Rs.2,32,471 which looks very high but is characteristic of an industrial area like Angul.

<b>Table-5.14:</b>		<b>Socio-Economic Status : Income from Various Sources</b>											
<b>Social Groups</b>	<b>particulars</b>	<b>Source of Income</b>										<b>Total</b>	<b>Average Annual Income per Household</b>
		<b>Agriculture</b>	<b>Livestock</b>	<b>Wage (Agriculture) Labour</b>	<b>Wage (Non-Agriculture) Labour</b>	<b>Caste Based Occupation</b>	<b>Own Business</b>	<b>Own Industry</b>	<b>Service/ Salary</b>	<b>Self Employment</b>	<b>Other Sources</b>		
SC	No. of Households	14	2	0	3	0	6	1	7	1	5	5964500	426036
	Total Income	135000	15800	0	313500	0	1032000	216000	3816000	45000	391200		
		2.26%	0.26%	0.00%	5.26%	0.00%	17.30%	3.62%	63.98%	0.75%	6.56%		
OBC	No. of Households	36	8	7	14	0	9	0	8	6	25	7542300	188558
	Total Income	849400	554800	70000	450500	0	828000	0	1680000	443600	2666000		
		11.26%	7.36%	0.93%	5.97%	0.00%	10.98%	0.00%	22.27%	5.88%	35.35%		
General	No. of Households	35	1	4	6	1	6	1	17	8	22	7880500	207382
	Total Income	657800	48000	92000	290000	24000	432000	300000	3414000	642000	1980700		
		8.35%	0.61%	1.17%	3.68%	0.30%	5.48%	3.81%	43.32%	8.15%	25.13%		
<b>Total</b>	<b>No. of Households</b>	<b>85</b>	<b>11</b>	<b>11</b>	<b>23</b>	<b>1</b>	<b>21</b>	<b>2</b>	<b>32</b>	<b>15</b>	<b>52</b>	<b>21387300</b>	<b>232471</b>
	<b>Total Income</b>	<b>1642200</b>	<b>618600</b>	<b>162000</b>	<b>1054000</b>	<b>24000</b>	<b>2292000</b>	<b>516000</b>	<b>8910000</b>	<b>1130600</b>	<b>5037900</b>		
		<b>7.68%</b>	<b>2.89%</b>	<b>0.76%</b>	<b>4.93%</b>	<b>0.11%</b>	<b>10.72%</b>	<b>2.41%</b>	<b>41.66%</b>	<b>5.29%</b>	<b>23.56%</b>		

*Source: Primary Survey*

## 5.15 Household Expenditure

The size and structure of household expenditure is an important index of the level of well-being of a household and of its socio-economic condition. Relevant data are given in Table-5.15.

Food, cultivation, housing, fuel for cooking, clothing, health, education, transport and communication, social functions etc. are the items on which a rural household may spend. A project affected household spends Rs.206738 on an average. Food is the single largest claimant with 32.89% of total expenditure. Housing figures next with 16.47% followed by education (8.5%), social ceremonies (9.96%), clothing (4.16%), health (2.77%) and so on. A reasonable share of education in household spending suggests households' concern for education of their children. The average annual household expenditure has been found to be Rs.206738.

<b>Table-5.15</b>		<b>Socio-Economic Status : Expenditure Pattern</b>												
<b>Social Class</b>	<b>particulars</b>	<b>Heads of Expenditure (per Annum)</b>											<b>Total</b>	<b>Average Annual Expenditure per Household</b>
		<b>Food</b>	<b>Agriculture/ Occupation Related</b>	<b>Housing</b>	<b>Cooking Fuel</b>	<b>Clothing</b>	<b>Health</b>	<b>Education</b>	<b>Transport</b>	<b>Communication</b>	<b>Social Function</b>	<b>Others</b>		
SC	No. of Households	14	14	14	14	14	14	10	14	14	14	13		
	Total Expenditure	1992000	30250	1129800	71600	191000	176850	588500	137850	28000	303500	664700	5314050	379575
		37.49%	0.57%	21.26%	1.35%	3.59%	3.33%	11.07%	2.59%	0.53%	5.71%	12.51%	100.00%	
OBC	No. of Households	40	36	39	39	39	34	24	39	40	38	39		
	Total Expenditure	2116800	180800	964400	194700	292700	201950	664100	102850	71600	621950	1324900	6736750	168419
		31.42%	2.68%	14.32%	2.89%	4.34%	3.00%	9.86%	1.53%	1.06%	9.23%	19.67%	100.00%	
General	No. of Households	38	35	37	36	37	36	23	36	33	37	36		
	Total Expenditure	2146600	165300	1038800	204000	308000	148250	365000	84900	56850	968500	1482900	6969100	183397
		30.80%	2.37%	14.91%	2.93%	4.42%	2.13%	5.24%	1.22%	0.82%	13.90%	21.28%	100.00%	
Total	No. of Households	92	85	90	89	90	84	57	89	87	89	88		
	Total Expenditure	6255400	376350	3133000	470300	791700	527050	1617600	325600	156450	1893950	3472500	19019900	206738
		32.89%	1.98%	16.47%	2.47%	4.16%	2.77%	8.50%	1.71%	0.82%	9.96%	18.26%	100.00%	

*Source: Primary Survey*

## 5.16 Indebtedness

Although the amount of household income is seen to be higher than household expenditure on an average some of the project affected households are observed to be spending more than what they earn. They meet the deficit by borrowing. This aspect of the household economy is portrayed in Table-5.16. The table indicates that 12 of the 92 households have resorted to borrowing and ten of them borrowed from banks while two obtained loans from friends and relations. A good thing is that 11 of the 12 households who took loans made productive investment of the same. The average amount of loan is estimated at Rs.51333 per borrower household and the average amount of productive investment is Rs.25545. The Loan profile relates to the previous year (2018).

Table	5.16	Indebtedness of Project Affected Households	
Particulars			Description
Total PAFS			92
Indebted PAFS			12
Average Amount of Loan			51333
	Bank	No. PAFs	10
		Average Amount	58100
Sources of Loan & Interest Rate	Others	No. PAFs	2
		Average Amount	17500
Purpose of Borrowing	Productive Investment	No. PAFs	11
		Average Amount	25545
	Others (Specify)	No. PAFs	1
		Average Amount	300000
Repayment of Loan	No. PAFs	0	
	Average Amount	0	

*Source: Primary Survey*

### 5.17 Health status

Health influences well-being. Hence a study of health status of affected households is warranted. Relevant data are given in Table-5.17. The table indicates high incidence of diseases among the project affected households. It may be seen that 75 of the 92 households or 81.52% reported some member of their families falling sick and availing health care in the year preceding the survey. As many as 47 of them took recourse to government allopathic healthcare; 21 availed allopathic care from both government and private providers and only one took the help of faith healers. Many people took the healthcare provided by public hospitals run by NALCO, MCL and the District Headquarters Hospital at Angul. The expenditure on health does not appear to be very high. Health expenditure runs up to Rs.500 for 60 households among the 75 households reporting sickness, it is in the range of Rs.500-1000 for six households, Rs.1000-5000 for five households, Rs.5000-10,000 for two households and above Rs.10,000 for two households. The expenditure seems to be moderate in the context of an industrial area like Angul.

Table		5.17	Health Status of Project Affected Households
Particulars		Description	
Total Project Affected Households		92	
Total PAH suffered		75	
Type of Facility Availed	Allopathic Government	47	
	Allopathic Govt. & Pvt. Both	21	
	Homeopath	6	
	Faith Healers	1	
Amount of Expenditure(Rs.)	Upto 500	60	
	500 to 1000	6	
	1000 to 5000	5	
	5000 to 10000	2	
	Above 10000	2	

*Source: Primary Survey*

### 5.18 Status of Infrastructure and Services

Infrastructure is important for a decent individual, family and social life. A broad picture of infrastructure and services available in Bhogabereni village is given in Table-5.18. The village is connected with Angul by all weather pucca roads. It has four pucca roads of 2 Km total length, eight semi-pucca roads with a total length of 1.5 Km and two Katcha roads

measuring 0.5 Km. Drinking water facility is good in the village. The villagers get water through piped supply and tube wells. The village has two Anganwadi centres, a cooperative society, one each – primary school, high school, ANM Centre and PDS shop, three grocery shops, two tea and snacks units, 10 SHGs, a sports club, one common puja and yatra ground, a cremation ground and such other common facilities. The village is electrified and has three temples and a community hall.

<b>Table</b>		<b>5.18 Social Infrastructure</b>	
		<b>Particulars</b>	<b>Magnitude</b>
Roads		Pucca (Black Top)	4 Numbers = 2 KM
		Pucca (C C Road)	8 Numbers = 1.5 KM
		Katcha (Metal- Morum Road)	2 Numbers = 0.5 KM
Water Sources		Open Well	8
		Pipe Water	12
		Tube Well/Hand Pump	11
		Canal	1
Institutions		AWC	2
		Cooperative Society	1
		PDS/Fair Price Shop	1
		Primary School	1
		High School	1
		ANM Centre	1
Service Centres		Grocery Shop	3
		Tea Stall/Hotel	2
		Blacksmith	2
		Variety Store	3
Social Infrastructure		SHG	10
		Sports Club	2
		Puja Space	1
		Bhagabata Tungji	2
		Bhajan Mandal	3
		Yatra Ground	1
Others		Electricity	The Village is Connected
		Crematic Ground	1
		Community Hall	1
		Temple	3

*Source: Primary Survey*

## CHAPTER-6

### Socio-Economic Impact

#### 6.1 Introduction

Construction of the Salagaon – Burhapanka – Talcher – Jarpada 3rd and 4th Line Rail Project in Banarpal Tahasil of Angul district will entail acquisition of 14.64 acres of private land and 1.35 acres of Government land. Government land amounts to 8.44% of total land to be acquired from the Bhogabereni village for the Rail project. The Odisha Government has agreed to give 1.35 acres of Government land to the East Coast Railways for the project.

As per the records provided by Special Land Acquisition Officer, Dhenkanal, originally there were 30 owners with RoR whose private lands are to be acquired. At present there are 92 claimants on this land. The details of land proposed to be acquired household-wise with successor-claimants have been presented at *Annexure-I* appended to this report.

The construction of the 3rd and 4th Line Rail Project will affect 92 families whose lands will be acquired for the project. The land-losing households will be affected directly as they lose some of their land for the project. However, all the households living in the area including the directly affected ones will be impacted due to construction and operation of the project. The likely impacts of the project on the families residing in the area are covered in this chapter.

A census and socio-economic survey was conducted in January -February 2019 in the affected Bhogabereni village. A structured census questionnaire was used to collect detailed information from the land-losing households on affected property and to document impacts on private assets, incomes and livelihood for a full understanding of impacts. The details are given below.

#### 6.2 Loss of Land and Concerns of The Land Owners

Land is a valuable asset and a cushion against economic insecurity – the only one in majority of the cases – in the rural areas. People also have emotional attachment to land; more so to ancestral land and it is a symbol of socio-economic status in the village community. The value of land is augmented when some improvements are made on it by putting on extra effort in terms of leveling, preserving and enhancing soil health and fertility

and constructing water management sources and structures, as is the case with farm land and making it habitable in the case of homestead land. Most often land records are not updated and / or traceable leading to suspicion among the holders as to the receipt of due compensation in the event of acquisition. There are two major causes of people's unwillingness and (sometimes) resistance against land acquisition. First, there is a wide fear of slow processing with regard to the compensation dispensation. Second, land-losers are worried whether the compensation will be adequate for their losses.

Hence, the Government authorities have to take extra care to limit land acquisition to the minimum possible extent so as to cause the least hardship to the land holders and land owners as well as to the land acquiring authority. This has also been the case with land acquisition for the Rail Project under consideration.

It has already been stated above that 14.64 acres of private land and 1.35 acres of government land will be acquired from Bhogabereni village for the Rail Project. The proposed acquisition of land will primarily have impacts on the income and livelihoods of those who are dependent on it. It surfaced during the survey that Land owners are cultivating land and are not leasing out quite for some years. Hence the Land Owners-cum-Owner Farmers and the Agricultural Labour Households are the two groups who will suffer the problem that will arise from land acquisition. There will be significant impacts on these two groups and, more so, on those who earn a farm income by cultivating crops and selling them.

### **6.3 Loss of Immoveable Assets**

The Owner Farmers have invested in several immoveable assets in their fields that will be affected due to land acquisition. Some of the assets may yield incomes directly (like fruit bearing trees) and others are productivity-enhancing assets meant to improve farm output (tube wells, water harvesting structures etc.). Some trees are of great religious significance for the farmer households on whose land they stand. The primary survey carried out by the SIA unit identified all the immoveable assets; their type and numbers and in certain cases, cost of construction. Many farmer households have shops and businesses apart from their farming livelihoods, but they are located in and around the village.

### **6.4 Loss of Land – The Marginal and Small Holders and Agricultural Labourers**



Agricultural labourers are workers who work on others' farm on wages. Hence, land acquisition in the instant case will impact the land owners and agricultural workers. Since agricultural labourers belong to the lower socio-economic strata, they will be worst affected by land acquisition. Next in order will come small and marginal farmers who constitute 96.67% of the surveyed land-losing households (90% are marginal and 6.67% are small farmers).

It is pertinent to note that in many cases of affected households, the remainder of land in the plots from which land will be acquired will be rendered unviable for cultivation in the post-land acquisition period as their size will be reduced below the area required to move round a plough. It thus follows that land acquisition will have significant impact in the project affected village and on the vulnerable agricultural labourers and marginal and small farmers in particular.

Table-6.1 summarises the economic impact of the proposed acquisition on the Project Affected Households and the major findings and magnitude of impacts are discussed in the following sections.

**Table-6.1: Summary of Impacts on Project Affected Households and Village**

<b>Project Affected Households</b>	<b>Impacts</b>
Land Owner Households	Loss of Land
Owner Farmer Households	Loss of farm income & livelihood Loss of immovable assets like trees, tube wells, etc.
Agricultural Labour Households	Loss of Wage work in Agriculture
All Households in the Project Affected Area	Health hazards, Environmental degradation, Loss of CPRs, Increase in Crime, Consumption of Drugs & Alcohol

*Source: Primary Survey*

### **6.5 The Issue of Inclusion- Who will lose how much?**

A summary picture of land to be acquired from the project affected households across social groups in the Bhogabareni is given in Table-6.2.

**Table-6.2: Extent of Owned Land and Land to be Acquired**

<b>Social Group</b>	<b>No. of PAHs</b>	<b>Total Owned Land (Acres)</b>	<b>Area to be Acquired (Acres)</b>

SC	14	8.22	0.36 ( 4.38)
OBC	42	68.87	2.68 (3.89)
General	36	86.24	11.60 (13.45)
All	<b>92</b>	<b>163.34</b>	<b>14.64 (8.96)</b>

Note: Figures in Brackets are percentages

Source: Primary Survey

It may be seen from the table that only 8.96% of the total land owned by households will be acquired by East Coast Railway for the proposed project. The respective proportions across the social groups are 4.38% for SCs, 3.89% for OBCs and 13.45% for General castes households.

## 6.6 Loss of Farm Income

As was shown in Table-5.11 of Chapter-5, cultivation is the main occupation of 17.21% of workforce (Cultivators-14.887%+Agricultural Labour- 2.33%) in the project affected households. Agriculture is thus the major source of earning for these households. Many of them will lose a substantial portion of their landholdings they have been cultivating for many years.

The average yield of paddy taking into account the autumn, winter and summer crops in 2014-15 was 37.66 Qtls./ha. (District Statistical Hand Book, Angul, 2015, P.26-27). Considering the present procurement rate of Paddy (Common Variety) @Rs.1750/QtL., the amount due to loss of paddy from 14.64 acres is  $(14.64/2.47105) \times 37.66 \times 1750 \times 2 = \text{Rs.}7,80,922/-$  for two crops per year. In a canal irrigated area like Angul where more than one crop is grown in a year.

In addition, the loss of production of pulses from the Agricultural lands would be an average Rs.3000/- per acre which will come to Rs.18000/- for 6 acres and the loss of production of vegetables @Rs.4000/- per acre for two acres will be Rs.8000/- per year.

A summary picture of probable loss of farm income per annum is given in table

**Table-6.4: Value of Loss of Farm Income**

Sl. No.	Description	Rate (₹)	Amount (₹)
1	Value of crops on 14.64 Acres ( <u>Output@37.66Qtl./Ha.</u> ) for two paddy crops	1750/QtL.	7,80,922
2	Value of Pulses on 6 Acres	3000/Acre	18,000
3	Value of vegetables 2 Acres	4000/ Acre	8,000

## 6.7 Loss of Trees

It is pertinent to note that when land will be acquired, so will the assets on it. These mostly include trees which may be fruit-bearing or non-fruit bearing. But all trees have commercial value and losing them with land entails a loss on the land holder. Information relating to loss of trees is provided in Table-6.4.

Social Group	No. of PAHs	No. of PAHs who will suffer Loss of Trees		No. of Trees				
				Fruit Bearing Trees		Non-Fruit Bearing Trees		Total
SC	14	1	(7.14%)	4	(66.67%)	2	(33.33%)	6 (100%)
OBC	42	11	(26.19%)	14	(45.16%)	17	(54.84%)	31 (100%)
General	36	5	(13.88%)	7	(38.89%)	11	(61.11%)	18 (100%)
<b>All</b>	<b>92</b>	<b>17</b>	<b>(18.48%)</b>	<b>25</b>	<b>(45.45%)</b>	<b>30</b>	<b>(54.55%)</b>	<b>55 (100%)</b>

*Source: Primary Survey*

It is observed that 55 trees will be lost with land acquisition. Of these, 25 (45.45%) are fruit bearing and the rest 30 (54.55%) are not fruit bearing. These cause losses to 17 (or 18.48%) of the 92 affected households surveyed. SCs and OBCs are a significant loser as together they bear loss of 37 (67.27%) of the 55 trees that will be lost due to land acquisition.

## 6.8 Awareness about Land Acquisition

Land acquisition is common among people in a mining-cum-industrial area like Angul. Many of the households surveyed have lost land earlier for expansion of railways, establishment of NALCO, construction of Captive Power Plant etc. No wonder then that majority of them were aware of land acquisition before while some came to know of it from the SIA study team. Relevant information is provided in Table-6.5.

Social Group	Are You Aware of the Project		
	Known Earlier	Informed by SIA Team	Total
SC	12 (85.17%)	2 (14.29%)	14
OBC	39 (92.86%)	3 (7.14%)	42
General	33 (91.67%)	3 (8.33%)	36
<b>Total</b>	<b>84 (91.30%)</b>	<b>8 (8.70%)</b>	<b>92</b>

*Source: Primary Survey*

It may be seen from Table-6.4 that 91.30% of the affected households were aware of the rail project and the land acquisition before the survey team reached their village. They could know of it from people of nearby habitations. Only 8.70% of affected households came to know of land acquisition for the project from the SIA Team. A similar pattern is discernible across the social groups.

## 6.9 Perceptions of Project Affected Households

During the household level census survey and Focused Group Discussions, affected persons were asked questions as to their perception on the proposed rail project. Their views have been recorded and presented in this section.

### 6.9.1 Overall Feeling

Interviews were conducted at the individual and informal group levels to elicit views on the potential benefits and problems of the proposed project. The abstracts of their general feeling are captured in Table-6.6.

Social Group	Project will have overall benefits on Affected Households				Total
	Yes		No		
SC	9	(64.29%)	5	(35.71%)	14 (100%)
OBC	24	(57.14%)	18	(42.88%)	42 (100%)
General	22	(61.11%)	14	(33.89%)	36 (100%)
<b>Total</b>	<b>55</b>	<b>(59.78%)</b>	<b>37</b>	<b>(40.22%)</b>	<b>92 (100%)</b>

*Source: Primary Survey*

Of the total 92 project affected households, 55 or 59.78% feel that the project will have a positive impact on their overall socio-economic condition and the rest i.e. 40.22% expressed that the project will affect them negatively. Those who were positive cited improving communication facilities and scope for diversified high wage employment as the benefits of the project. The negative impacts perceived by people include loss of farm – linked livelihoods, increase in accidents and loss of human and animal life, noise-dust-air pollution, environmental degradation and loss of CPRs. Across the social groups majority of households feel that the project will help to improve their condition.

### 6.9.2 Socio-Economic Status of Households and Livelihood

The perceptions of the project affected households on the impact of the land acquisition on the socio-economic status and livelihood were captured during the survey and informal discussions. Their views are shown in Table-6.7.

**Table-6.7: Perception of the Households regarding the Project : Socio-Economic Status & Livelihood**

Social Group	Socio-economic status of Household				The project will ruin the sustainable livelihood of family			
	Strongly Agree	Agree	No Opinion	Total	Strongly Agree	Agree	No Opinion	Total
SC	7 50.00%	7 50.00%	0 0.00%	14 100.00%	3 21.43%	11 78.57%	0 0.00%	14 100.00%
OBC	15 37.50%	24 60.00%	1 2.50%	40 100.00%	17 42.50%	23 57.50%	0 0.00%	40 100.00%
General	5 13.16%	32 84.21%	1 2.63%	38 100.00%	16 42.11%	20 52.63%	2 5.26%	38 100.00%
<b>Total</b>	<b>27</b> <b>29.35%</b>	<b>63</b> <b>68.48%</b>	<b>2</b> <b>2.17%</b>	<b>92</b> <b>100.00%</b>	<b>36</b> <b>39.13%</b>	<b>54</b> <b>58.70%</b>	<b>2</b> <b>2.17%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

At the aggregate level, 97.83% of the affected households surveyed opined that the project led and acquisition will improve their socio-economic status. Among them, 29.35% have a strong positive opinion while 68.48% hold a moderate view in this regard. In their view, productive use of compensation and the scope for a more diversified non-farm employment prospect will more likely offset the negative impact of loss due to land acquisition and the consequential reduction in farm income. About two per cent of the respondents have no opinion to offer on this issue. Looking at the issue across social groups it is observed that all are overwhelmingly positive on the potential beneficial effects of the project on their socio-economic status. However, the proportion of respondents who hold a strong positive opinion is revealed to be higher among SCs (50%) as compared to OBCs (37.50%) and general castes (13.16%).

Paradoxically, as high as 91.83% of respondents were of the view that land acquisition for the project is likely to ruin the sustainability of their livelihood. Among them 39.13% expressed a strong fear and the majority i.e. 58.70% apprehend that the land acquisition will ruin their sustainable livelihood resource i.e. agricultural land. They believe that agriculture provides sustainable livelihood to the households but the non-agriculture sector, though incurative and promising, may not do so.

### **6.9.3 Local Forest, Environment and Common Property Resources**

Angul district is unique in high forest coverage. The project affected village has trees on private land and government land, wet land, ponds and other common property resources

(CPRs). One big common pond and a part of a black top road will also be affected. People's perceptions regarding the project impact on the ecosystem and CPRs are given in Table-6.8.

<b>Table-6.8: Perception of the Households regarding the Project : Local Forest, Environment &amp; Common Property Resources</b>										
<b>Social Groups</b>	<b>The project will ruin local forest</b>					<b>The project will affect common property resources</b>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>No Opinion</b>	<b>Total</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Strongly Disagree</b>	<b>No Opinion</b>	<b>Total</b>
SC	7 50.00%	2 14.29%	5 35.71%	0 0.00%	14 100.00%	5 35.71%	9 64.29%	0 0.00%	0 0.00%	14 100.00%
OBC	14 35.00%	24 60.00%	2 5.00%	0 0.00%	40 100.00%	19 47.50%	20 50.00%	1 2.50%	0 0.00%	40 100.00%
General	15 39.47%	18 47.37%	3 7.89%	2 5.26%	38 100.00%	14 36.84%	21 55.26%	1 2.63%	2 5.26%	38 100.00%
<b>Total</b>	<b>36</b> <b>39.13%</b>	<b>44</b> <b>47.83%</b>	<b>10</b> <b>10.87%</b>	<b>2</b> <b>2.17%</b>	<b>92</b> <b>100.00%</b>	<b>38</b> <b>41.30%</b>	<b>50</b> <b>54.35%</b>	<b>2</b> <b>2.17%</b>	<b>2</b> <b>2.17%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

It is clear from the table that 39.13% of respondents perceive a serious threat to forest and environment while 47.83% perceive that there will be some threat but 10.87% perceive no potential threat to them. Only 2.17% had no view to offer on this issue. Across the social groups, a high proportion i.e. 35.71% of respondents disagree on the ruinous effect on local forests. They say that compensatory afforestation will more than offset the loss. A more or less similar picture is painted in respect of CPRs. Among the respondents 41.30% perceive strong threats, 54.35% some threat and 2.17% foresee no threat to CPRs due to land acquisition. About 2% of respondents gave no opinion on this aspect of the negative impact. The opinion seems to be similar across the social groups.

#### **6.9.4 Kinship and Crime**

It is believed widely that land acquisition for a public project will create cracks in the kinship structure and may lead to crimes because of the greed to grab a greater share of the compensation to be received from land acquisition. This issue was probed during the survey and respondents' perceptions are given in Table-6.9.

Social Groups	The project will cause breakdown in kinship structure and affect the community life						The project will lead to increase in crime					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total
SC	2 14.29%	6 42.86%	1 7.14%	0 0.00%	5 35.71%	14 100.00%	2 14.29%	10 71.43%	1 7.14%	0 0.00%	1 7.14%	14 100.00%
OBC	17 42.50%	18 45.00%	3 7.50%	2 5.00%	0 0.00%	40 100.00%	26 65.00%	9 22.50%	3 7.50%	2 5.00%	0 0.00%	40 100.00%
General	14 36.84%	14 36.84%	5 13.16%	1 2.63%	4 10.53%	38 100.00%	13 34.21%	15 39.47%	6 15.79%	0 0.00%	4 10.53%	38 100.00%
<b>Total</b>	<b>33</b> <b>35.87%</b>	<b>38</b> <b>41.30%</b>	<b>9</b> <b>9.78%</b>	<b>3</b> <b>3.26%</b>	<b>9</b> <b>9.78%</b>	<b>92</b> <b>100.00%</b>	<b>41</b> <b>44.57%</b>	<b>34</b> <b>36.96%</b>	<b>10</b> <b>10.87%</b>	<b>2</b> <b>2.17%</b>	<b>5</b> <b>5.43%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

A sizeable number of project affected households i.e. 33 of 92 or 35.87% strongly agree that the project will lead to a breakdown in kinship structure and community life, 41.30% agree on this impact, only 13.04% disagree and 9.78% gave no opinion. Among the SCs only 14.29% of the respondents feel that kinship will be negatively affected due to land acquisition. Barring this exception, the response is more or less matching across the social groups. One reason for the large negative impact is that land acquisition may cause divisions in ownership over land for receiving compensation and spatial dispersal of families. A matching pattern is discernible in respect of increase in crimes due to land acquisition and payment of compensation. As high as 44.57% strongly agree and 36.90% agree that crimes will be increased while 10.87% disagree, 2.17% strongly disagree and 5.43% had no view on the issue of potential increase in crimes due to land acquisition. Crimes are apprehended following quarrels among claimants in a family over the compensation to be received in lieu of land to be acquired for the rail project.

### **6.9.5 Increase in Consumption of Drugs and Alcohol**

A parallel perception relates to the issue of increase in addiction to drugs and alcohol following receipt of compensation on account of land acquisition for the proposed project. Information on this issue is contained in Table-6.10.

**Table-6.10: Perception of the Households regarding the Project :  
Addiction to Drugs and Alcohols**

Social Groups	The compensation will increase drugs and alcohol addiction					Total
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	
SC	1 7.14%	9 64.29%	2 14.29%	2 14.29%	0 0.00%	14 100.00%
OBC	3 7.50%	11 27.50%	7 17.50%	9 22.50%	10 25.00%	40 100.00%
General	2 5.26%	1 2.63%	18 47.37%	6 15.79%	11 28.95%	38 100.00%
<b>Total</b>	<b>6</b> <b>6.52%</b>	<b>21</b> <b>22.83%</b>	<b>27</b> <b>29.35%</b>	<b>17</b> <b>18.48%</b>	<b>21</b> <b>22.83%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

As the table shows, it is strongly held by 6.52% of respondents that drug and alcoholic addiction will rise fast while 22.83% held that there will be some increase in this problem. But 14.48% strongly disagree and 29.35% disagree on the issue of increasing consumption of intoxicants, while 22.83% had no opinion to offer. Across the social groups, the fear of likely increase in addiction is very high among the SCs (71.43%), followed by OBCs (35%) and general castes (7.89%).

### **6.9.6 Stress and Violence**

A related negative impact that is likely to emanate from land acquisition for the rail project is increase in stress and concomitant family violence. It may be appreciated that loss of land is likely to bring stress for the land losing household because land being a valuable asset, a premium for insurance and a status symbol, its loss will be irreparable and will damage the socio-economic position of the land losing household. The stress is higher, the greater the attachment to land and more so to ancestral land. The compensation following land acquisition is also a cause of stress. The thinking that compensation is inadequate, will not be delivered prompt, the use to which it will be put to etc. are the possible sources of such stress. It is obvious that stress is reflected in family violence. This dimension is explored in the course of the survey and the findings are presented in Table-6.11.



Social Groups	The project is likely to increase physical and social stress						Family violence increases in times of stress					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total
SC	5 35.71%	4 28.57%	4 28.57%	0 0.00%	1 7.14%	14 100.00%	3 21.43%	8 57.14%	2 14.29%	0 0.00%	1 7.14%	14 100.00%
OBC	1 2.50%	17 42.50%	3 7.50%	9 22.50%	10 25.00%	40 100.00%	1 2.50%	17 42.50%	4 10.00%	9 22.50%	9 22.50%	40 100.00%
General	2 5.26%	11 28.95%	9 23.68%	5 13.16%	11 28.95%	38 100.00%	0 0.00%	10 26.32%	12 31.58%	5 13.16%	11 28.95%	38 100.00%
<b>Total</b>	<b>8</b> <b>8.70%</b>	<b>32</b> <b>34.78%</b>	<b>16</b> <b>17.39%</b>	<b>14</b> <b>15.22%</b>	<b>22</b> <b>23.91%</b>	<b>92</b> <b>100.00%</b>	<b>4</b> <b>4.35%</b>	<b>35</b> <b>38.04%</b>	<b>18</b> <b>19.57%</b>	<b>14</b> <b>15.22%</b>	<b>21</b> <b>22.83%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

It is revealed from the table that 43.48% of the respondents perceive increase in stress due to proposed land acquisition among whom 8.70% strongly agree and 34.78% agree, while 32.61% disagree on the increase in stress on account of loss of land. About 24% expressed no opinion. The stress perception is observed to be very high among SCs. An analogous picture is portrayed in respect of increase in family violence with 42.39% agreeing on increase in violence, 34.79% expressing disagreement and 22.83% presenting no opinion on this aspect. Across the social groups, SCs apprehend greater family violence compared to others. These findings establish a strong positive link between stress and family violence.

### **6.9.7 Health, Health Risk and Health Expenditure**

It has already been pointed out above in this report that the proposed rail project will lead to increasing frequency of number of and speed in running of trains. This is likely to accompany greater noise, more dusts, heavy air pollution, increase in accidents and injury, and threat to life of animals and humans in the nearby area, and increase in health expenditure. Table-6.12 portrays relevant information in this regard.

Social Groups	The project would affect the health status of local people due to increasing pollution and high frequency and increasing speed of trains						The project will increase health risks					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total	Strongly Agree	Agree	Disagree	No Opinion	Total	
SC	9 64.29%	2 14.29%	2 14.29%	0 0.00%	1 7.14%	14 100.00%	6 42.86%	3 21.43%	4 28.57%	1 7.14%	14 100.00%	
OBC	16 40.00%	23 57.50%	0 0.00%	1 2.50%	0 0.00%	40 100.00%	29 72.50%	11 27.50%	0 0.00%	0 0.00%	40 100.00%	
General	20 52.63%	16 42.11%	0 0.00%	0 0.00%	2 5.26%	38 100.00%	33 86.84%	4 10.53%	0 0.00%	1 2.63%	38 100.00%	
<b>Total</b>	<b>45</b> <b>48.91%</b>	<b>41</b> <b>44.57%</b>	<b>2</b> <b>2.17%</b>	<b>1</b> <b>1.09%</b>	<b>3</b> <b>3.26%</b>	<b>92</b> <b>100.00%</b>	<b>68</b> <b>73.91%</b>	<b>18</b> <b>19.57%</b>	<b>4</b> <b>4.35%</b>	<b>2</b> <b>2.17%</b>	<b>92</b> <b>100.00%</b>	

It is revealed from the table that most of the respondents i.e. 86 of 92 or 93.48% of the surveyed households perceive adverse health effects due to the project and a similar number feel that the health and safety risks will be higher once the project is completed. Only 3.26% do not subscribe to deterioration in health status and 4.35% do not buy the idea that the project will cause greater health risks in the area. A little above three per cent had no opinion to offer on adverse effects on health and about two per cent were silent on the health risks due to the project.

### 6.9.8 Business Opportunities

Many feel that new business opportunities will be created in the area while some hold the view that emergence of new business will out compete and harm existing business. The views of respondents on this point are summarised in Table-6.13.

Social Group	The project will create business opportunities						New businesses opportunities will harm existing businesses					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total
SC	2 14.29%	8 57.14%	0 0.00%	2 14.29%	2 14.29%	14 100.00%	8 57.14%	6 42.86%	0 0.00%	0 0.00%	0 0.00%	14 100.00%
OBC	0 0.00%	9 22.50%	5 12.50%	9 22.50%	17 42.50%	40 100.00%	6 15.00%	20 50.00%	1 2.50%	5 12.50%	8 20.00%	40 100.00%
General	0 0.00%	8 21.05%	12 31.58%	5 13.16%	13 34.21%	38 100.00%	16 42.11%	11 28.95%	1 2.63%	3 7.89%	7 18.42%	38 100.00%
<b>Total</b>	<b>2</b> <b>2.17%</b>	<b>25</b> <b>27.17%</b>	<b>17</b> <b>18.48%</b>	<b>16</b> <b>17.39%</b>	<b>32</b> <b>34.78%</b>	<b>92</b> <b>100.00%</b>	<b>30</b> <b>32.61%</b>	<b>37</b> <b>40.22%</b>	<b>2</b> <b>2.17%</b>	<b>8</b> <b>8.70%</b>	<b>15</b> <b>16.30%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

The perception is remarkably divided in respect of business opportunities. It may be seen that 27 of 92 or 29.34% households surveyed foresee the prospects of increase in lucrative business opportunities while 33 or 35.87% find no reason for creation of new business opportunities. A sizeable number of respondents i.e. 32 or 34.78% are confused as to what will happen in this regard. Similarly, 67 (72.83%) perceive harms from competition of new business to the existing business, 10 (10.87%) do not see any threat from them and 15 or 16.30% had no views to offer. Broadly speaking, the same scenario is visualised by the different social groups of affected households.

### 6.9.9 The Local Economy Impact

Any infrastructure project promises good fortunes for the local area in terms of increase in markets, larger assortment of better services, improvement in transport and communication and expansion of the local economy. The perceptions of the respondents on the local economy effects of the rail project are given in a summary form in Table-6.14.

<b>Table-6.13: Perception of the Households regarding the Project : Overall Impact on the Local Economy</b>					
Social Groups	The project will improve the local economy				
	Strongly Agree	Agree	Strongly Disagree	No Opinion	Total
SC	8 57.14%	6 42.86%	0 0.00%	0 0.00%	14 100.00%
OBC	12 30.00%	23 57.50%	1 2.50%	4 10.00%	40 100.00%
General	21 55.26%	14 36.84%	0 0.00%	3 7.89%	38 100.00%
<b>Total</b>	<b>41</b> <b>44.57%</b>	<b>43</b> <b>46.74%</b>	<b>1</b> <b>1.09%</b>	<b>7</b> <b>7.61%</b>	<b>92</b> <b>100.00%</b>

*Source: Primary Survey*

It may be read of the table that the vast majority of persons interviewed have a favourable opinion on the local economy impact of the proposed project. As many as 43 or 46.74% of households surveyed agree that the project will have favourable expansionary effects on the local economy and 41 or 44.57% strongly agree on its positive local economy effects. Only one person feels that there will be no positive impact of the project on the economy at the local level while seven or 7.61% have not given any opinion as to whether the rail project will help to improve the local economy scenario or not in the post-completion phase. Across the social groups, SCs are more hopeful of the positive local economy effect compared to the affected households belongs to OBCs and general castes.

### 6.10 Perceptions of Non-Land-Losing Households

Some ten sample non-land-losing households have also been surveyed to elicit their views on the project. The objective of the sample survey was to have a comparative assessment of the views of land losing and non land losing households on the proposed rail project.

The villagers whose land will not be acquired for the expansion of railways have similar perceptions as that of the directly affected land losing households, the only exception being that they are not losing land and hence do not suffer directly.

Alike the land losing families they also believe that construction of the Salagaon-Burhapank-Talcher-Jarpada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project will lead to loss of trees, increase in sound and air pollution, warming of atmosphere and hence bring deterioration in the local environment.

Land acquisition for the project will cause sub-division and fragmentation of agricultural holdings, make them unviable and induce some of the land losing households to sell the remaining land and shift to other locations. This will weaken the kinship structure and community life in the village.

Some people strongly believe that the land losing households will treat the receipt of compensation as easy money and will feel excited and elevated. Rather than investing them in productive ventures, they may waste the compensation money in drinking liquor, taking drugs and engaging in momentary enjoyment. This will have serious negative social repercussions.

A general feeling among the villagers is that the running of more number of trains, increasing speed of trains and deterioration in environment in the area will give rise to increasing health problems. The risk of injury and casualty for the cattle and human populations will also rise. Air-borne diseases and increasing laundry bills will more likely be acute.

However, the construction of the rail project will not only cause losses and increase problems in the local area but also generate significant economic opportunities in the locality. The improvement in transportation will ease movement of people and freight, reduce waiting and movement time and create new business opportunities and non-farm employment prospects for the people. Expansion of markets, provision of new assortment and better quality products, increase in the flow of information and greater awareness etc. will help remarkable improvements in the local economy.

## **CHAPTER-7**

### **Social Impact Management Plan**

#### **7.1 Introduction**

Social Impact Assessment (SIA) involves the processes of assessing, analyzing and managing the intended and unintended positive and negative social consequences of projects and other planned interventions for development. It is a tool for predicting and mitigating the potential negative impacts of development projects, such as railways, dams, roads, etc. SIA alerts the public and private project planners as to the likely social and economic costs and benefits of a proposed project. Its basic objective is to help bring about a more sustainable and equitable biophysical and human environment. The knowledge of the potential costs, when weighed against the likely benefits of a project, helps decision-makers in deciding whether the project should be carried out, with or without modifications, or abandoned completely. The agency carrying out the SIA study is required to prepare a mitigation plan known as the Social Impact Management Plan (SIMP) to overcome the potential negative impacts on individuals and communities.

An exhaustive and circumstantial exploration of the broad socio-economic profile of the village and the affected households as also the likely impacts along with perceptions and attitude of the people towards the proposed land acquisition for the construction of the Salagaon – Burhapanka – Talcher – Jarpada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project in Banarpal Tahasil of Angul district has been presented in the preceding chapters of the report. It is reported that the Rail Project will entail acquisition of 14.64 acres of private land and 1.35 acres of Government land. The SIA study has identified a number of significant socio-economic impacts on the land-losing and non-land-losing households in Bhogabereni village which may potentially result from the construction and operation of the Rail Project.

In addition, one Shanischar temple, a portion of a black top road and a big common village pond will be affected in Bhogabereni due to land acquisition for the proposed rail project. A common complaint made by all the villagers is that there is loss of human and animal life due to operation of the existing railway line. This problem will be accentuated due to the construction and operation of the 3<sup>rd</sup> and 4<sup>th</sup> Lines. The loss of fruit bearing trees and other trees having good timber value will lead to loss of income and will also affect the

environment adversely. The additional lines will facilitate the increase in frequency of the running of trains that will cause air and sound pollution and environmental degradation in the area. Additionally, the villagers will have to walk extra distance to move to the other side of the tracks.

In order to manage and mitigate these impacts a range of measures need to be developed to reduce the overall negative impacts to an acceptable level. In this chapter, a detailed Social Impact Management Plan (SIMP) has been outlined with the chief objective of highlighting the interventions that are to be taken up by the Project authorities and the Government to mitigate the adverse impacts and enhance the beneficial effects of the project.

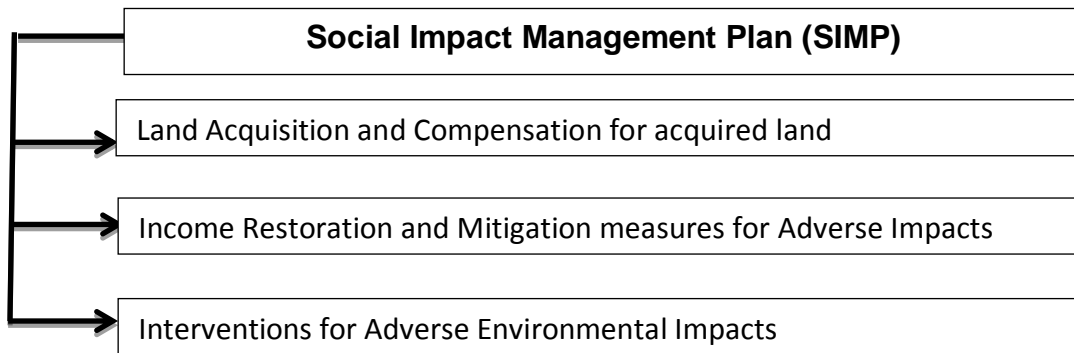
The objectives of this Social Impact Management Plan (SIMP) are two-fold, viz. (i) To discern the potentially effective management measures to minimise the adverse effects that may emanate from the project, and (ii) To collate the different management mechanisms and measures of intervention into a single point. The sole aim of the proposed SIMP is to ensure that its effective implementation will improve the standard of living of the land-losing households and the overall level of well-being of the people in the project affected village.

The scope of this SIMP encompasses both construction and operation phases of the project that has the potential to affect, positively or negatively, the land-losing households and the village communities in the project area. The responsibilities of the implementation of measures envisaged in SIMP lay with the East Coast Railways and Government of Odisha.

It may be mentioned here that the impact due to acquisition of agricultural land will no doubt affect income of affected families, but it may not be very large as only 11.33% of average household income is sourced in farming including livestock and agricultural wage earning. This is typical of a mining-industrial area as Angul. Moreover, affected families will lose on an average 0.15 acre (14.64 acres ÷ 92 households) of their total land holding. Hence, adverse impact is expected not to be titanic.

## **7.2 Social Impact Management Plan**

Keeping all the above facts in view, the SIMP for the 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project has been prepared. The details are presented below.



## 7.2.1 Land Acquisition and Compensation for acquired land

The existing RFCTLAR&R Act, 2013 ensures right of affected households and the community to fair compensation and transparency at each and every stage of land acquisition and rehabilitation process. Land acquisition is the responsibility of District Administration and Government of Odisha and will be executed in accordance with provisions of RFCTLAR&R Act, 2013 and Odisha RFCTLAR&R Rules, 2016 and notifications/guidelines issued by R & DM Department, Government of Odisha from time to time.

### 7.2.1.1 Compensation Entitlements

Compensation is to be determined as per First Schedule of RFCTLAR&R Act, 2013 that includes the following components

**Table-7.1: Compensation Entitlements**

Components	Remarks
Market value of land	This is to be determined as per the process described U/s 26 of RFCTLAR&R Act, 2013. The date of determination of market value shall be the date of notification issued u/s 11. Since the land is to be acquired in a rural area, the market value is to be multiplied by a factor on sliding scale as per R&DM Department, Government of Odisha notification no. LA (A)-23/2014/9068 dated 19.03.2016.
Value of trees and other assets	In the instant case, trees on land to be acquired for the project will be covered under compensation scheme to be paid to respective land owners. As per the findings of SIA study, majority of these trees have commercial timber value and keeping in view demand of owners, valuation need to be made properly as per guideline prescribed in section 23, Chapter III of Odisha RFCTLAR&R Rules, 2016.
Demurrage	The compensation towards standing crops which may be on the land at the time of taking possession of land, need to be paid as per provisions u/s 28 RFCTLAR&R Act, 2013

<b>Components</b>	<b>Remarks</b>
Solatium	Solatium amount shall be in addition to the compensation and equivalent to 100% of the compensation amount (u/s 30 RFCTLAR&R Act, 2013)
Additional component	In addition to the market value of the land, the authority shall, in every case award an amount calculated at the rate of 12% per annum on such market value for the period from SIA notification date u/s 4 till the date of the award or the date of taking possession of the land, whichever is earlier (u/s 30 (3) RFCTLAR&R Act, 2013).

### **7.2.1.2 Multiplier factor on sliding scale for assessment of land rate for compensation**

The multiplier factor on sliding scale for assessment of land rate for compensation will be decided in accordance with the provisions of Revenue & Disaster Management Department, Government of Odisha notification no. LA (A)-23/2014/9068 dated 19.03.2016. A summary picture of the same is given below.

**Table-7.2: Radial Distance and Multiplier Factor**

<b>Radial Distance from nearest town</b>	<b>Multiplier factor</b>
From 0 km up to 10 km	1.00
More than 10 up to 20 km	1.20
More than 20 up to 30 km	1.40
More than 30 up to 40 km	1.80
More than 40 km	2.00

Since Bhogabereni village and the land to be acquired for the rail project are within 10km from the nearest town Angul, the multiplier factor has no relevance in the instant case.

### **7.2.1.3 Rehabilitation entitlements**

The RFCTLAR&R Act, 2013 provides that each land-loser family is entitled to rehabilitation and the rehabilitation plan will be prepared by the Administrator for Rehabilitation and Resettlement as per provisions in the said Act.

### **7.2.1.4 Updating of land records, Restoration of titles and Settlement of rights**

This is a key issue of the affected community and need to be adequately addressed as per provisions in the Odisha RFCTLAR&R Rules, 2016. As per provisions in the said Rules, this exercise is to be conducted prior to notification. This issue came up vocally in course of SIA Survey in Bhogabereni village.



#### **7.2.1.5 Public Consultation**

Public consultation is one of the essential requirements of both RFCTLAR&R Act, 2013 and Odisha RFCTLAR&R Rules, 2016 and needs to be conducted diligently to ensure transparency in the entire process. As per the provisions of RFCTLAR&R Act, 2013 public hearing is required **(i) on Draft SIA Study Report to be conducted as per the process prescribed in Odisha RFCTLAR&R Rules, 2016; and (ii) on draft R and R scheme prepared by Administrator, R and R as per provisions of Odisha RFCTLAR&R Rules, 2016 in the affected village before final approval.**

#### **7.2.1.6 Proper use of compensation amount**

It is important to note that in many cases affected families make wasteful expenses out of compensation for land acquisition resulting in impoverishment. The authorities may make people aware of the evils of misuse with a view to promoting productive utilisation of compensation amount.

#### **7.2.2 Income Restoration and Income Augmentation**

In addition to payment of compensation, the affected households may be tagged with ongoing programmes of agriculture department to benefit from improved farming practices to realise higher productivity from leftover land that may compensate the loss of production due to land acquisition. Creating awareness among affected farm households and facilitating their inclusion in the ongoing agricultural development programmes will help. The land-losing households may also be tagged with other income diversifying and gainful employment generation programmes to secure benefits from these schemes.

#### **7.2.3 Environmental Interventions**

The Rail expansion Project and accompanying land acquisition will have some adverse environmental impacts in terms of loss of trees and plants, increasing noise and dust from high speed trains and greater frequency of running of trains, and air pollution in the adjacent areas. Compensatory afforestation and other measures for dealing with the pollution problem will be of great help.

#### **7.3 Social Impact Management**

As per section 29(1) of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (RFCTLAR & R) 2013, the Collector will determine the market value of the buildings and other immovable properties and assets

attached to the land which are to be acquired by using the services of a competent engineer or any other specialist as may be considered necessary by him. Similarly, the Collector will determine the values of tree and plants attached to the land to be acquired by using the services of experienced person in the field as may be considered necessary by him. In determining the value of standing crops to be damaged during the process of land acquisition, the Collector may use the services of experienced person in the field of agriculture.

Section 30 of RFCTLAR & R, 2013 provides for award of ‘solatium’ by the Collector. It reads “the Collector having determined the total compensation to be paid, shall to arrive at the final award, impose a ‘solatium’ amount equivalent to one hundred percent of the compensation amount.”

Thus the compensation amount for land acquisition in case of agriculture land will be the market value of land + value of trees and plants + value of standing crops. A 12 % rate of interest will be added to the value so arrived, both in case of land and buildings. While determining the compensation of a building, the market value of the building and other immovable properties attached to it will be taken into account. It will also include a ‘solatium’ amount equivalent to 100% of the compensation so determined.

In brief, the compensation will be given as per the following guidelines.

**Table-7.3: Valuation of Private Land**

<b>Description</b>
Value of Land
Add value as per distance from the nearest town
Total value
Add 12% interest
Value of House, well, tank, tube well etc.
Value of Trees and plants including fruit bearing trees, and standing crops
Total value
Add 100% ‘Solatium’
Grand Total

In the instant case (Bhogabereni village) the valuation will be as follows.

**Table-7.4: Valuation of Acquired Land**

Sl. No.	Description	Benchmark Value		Value asserted by Claimants (₹)
		Rate (₹)	Amount (₹)	
1	Value of Land (14.64 Acres)	30,00,000/Acre	4,39,20,000	5,50,00,000
2	Add value as per distance from the nearest town		0	
3	Total value		4,39,20,000	

4	Add 12% interest		52,70,400	
5	Total value of land		4,91,90,400	
6	Value of fruit bearing trees (25)	6,000	1,50,000	
7	Value of non-fruit bearing trees (30)	3,500	1,05,000	
8	Value of crops ( <u>Output@37.66Qtl./Ha.</u> ) for two paddy crops on 14.64 Acres	1750/Qtl.	7,90,922	
9	Value of Pulses on 6 Acre	3000/Acre	18,000	
10	Value of vegetables on 2 Acre	4000/Acre	8,000	
11	Total value		5,02,62,322	
12	Add 100% 'Solatium'		5,02,62,322	
13	Grand Total		10,05,24,644	

*Source: District Registrar Office & Primary Survey*

### **7.3.1 Compensation for Acquisition of Private Land**

Annexure-I presents the household-wise claimants for compensation due to acquisition of land. The SIA team recommends that on the basis of present market value of different categories of land compensation should be paid as detailed above.

The SIA study appreciates that the Project is likely not to cause any gigantic negative overall socio-economic impact except that on land and land based activities and that such adverse impact will be undistinguished, unexceptional, unexciting, and unremarkable, as the amount of land to be acquired from the affected families is 14.64 acres in the affected village and the acquisition of Government land is modest at 1.35 acres. However, it will have serious repercussions on the low income families and those on the lowest echelons of the socio-economic ladder who derive a substantial portion of their income from farming including livestock activities. So, care must be taken to restore the loss of agriculture-based income of the affected families and those who will be reduced to a state of landless, marginal or small farmers due to acquisition of agricultural land for the project.

Steps need to be taken for non-agro-based skill development of project affected persons, so that they will not only be able to earn their living from pursuing non-farm activities and switching to non-agricultural occupations in the short run but also earn more than the income they will lose over the medium to long run due to acquisition of agricultural land and government grazing land. This is practicable, workable, achievable and attainable, given the reasonably good educational level of project affected persons and the greater scope for development of non-agro-based gainful employment opportunities in the mining-cum-industrial area of Angul region.

Moreover, many of the potential impacts shall be confined to the adjacent areas of the project and will also more likely to be limited to the short term. They may be addressed by mitigation measures suggested in the Social Impact Management Plan. It is expected that effective implementation of the suggested Social Impact Management Plan will help in minimizing the negative impacts to tolerable levels. Discussions with stakeholders and PRI representatives unfolds that most of the affected families are by and large positive towards the Rail Project. The good thing is that none of the affected households is losing his house or animal shed and many of the affected households perceive any disturbance and retardation likely to be caused by the project will be temporary and will be amply neutralised and/or compensated by corrective interventions and potential economic benefits. They are not strongly opposed to the project.

The payment of compensation and the benefits likely to be derived from the project are expected to outweigh the costs. In particular, the benefits in terms of a speedier and expeditious rail transport system will be remarkable and will serve public purpose. It will also safeguard the interest of project-affected households and community in terms of restoration and increase in income, creation of gainful occupational diversification and improvement in socio-economic well-being of the affected village.

### **7.3.2 Compensation for Acquisition of Government land**

It has been already noted above that one temple, a common pond and a road are going to be affected because of acquisition of Government land. Since these are the common property resources of the concerned village, the principle of natural justice demands that the villagers are to be duly compensated. Necessary provision of funds be made for recouping the loss.

### **7.3.3 Loss of animal and human life due to the operation of existing railway line**

There was a common complain made by all the villagers of Bhogabereni that there is loss of animal and human life due to the operation of the existing railway line. The losses of animal and human lives are expected to increase after the operation of 3rd and 4th rail lines. It was suggested by all the villagers that there should be level crossing provisions in the village and provision of Guard Walls should be made on both the sides of the rail line to eliminate the possibility of loss of animal life. The SIA team recommends that manned level crossings are to be provided or under-pass provisions be made on priority basis and in

necessary places provision of guard wall be made by the railway authorities so as to ensure safe movement of people and animals and eliminate the possibility of loss of animal life.

#### **7.4 Social Impact Management Plan**

The broad features of the SIMP prepared on the basis of the assessment survey are highlighted below. Attempt has been made to make the SIMP flexible and workable. In all, five sets of measures have been conceived as follows.

##### **Social Measures**

- Resolution of disputes between land owners and ensuring compensation to the real owner of land.
- Recouping the common property resources, socio-cultural capital and public utilities that will be lost / damaged due to the project.

##### **Income Restoration measures**

- Capacity building and skill development through trainings for the PAPs.
- Absorption of local wage workers in construction work.
- Preference to local youth of land-losing households in employment in the railways as per qualification and expertise.
- Skill development for the youth.

##### **Economy measures**

- Updating land records
- Disbursal of compensation in a stipulated time frame.
- Counseling the PAPs for productive use of compensation.
- Compensation for loss of assets other than land.
- Acquisition of full plot if the remainder land is unviable for any productive use.
- Removal of spilled over materials from the construction sites and agricultural lands.

##### **Environmental measures**

- Compensation for loss of trees.
- Persuading people to plant trees on remainder land.
- Afforestation by the Railways on government land and on the sides of lines.

##### **Health related measures**

- Adherence to safety standards in construction phase.
- Effective traffic management.
- Upgradation of roads and intersections.

The SIMP as above is presented in the following table.

**Table-7.5: Social Impact Management Plan**

<b>Potential impacts</b>	<b>Proposed mitigation and/or enhancement measures</b>	<b>Responsibility for mitigation implementation</b>
Loss of Land and Land Based Livelihood	Income restoration and income augmentation activities by means of Fair and transparent compensation of acquired land, Immediate payment of compensation, and Training farmers to grow high yielding and high value crops to increase yield rate and production in order to increase income.	Railway Management and Government of Odisha
Loss of Employment and Economy	Creation of Employment opportunities and local business opportunities by Developing and implementing a local content plan in consultation with stakeholders including business-industrial houses and government authorities and establishing a skills training programme to see that local employment levels are maximized. Engaging local labourers in construction work for the 3 <sup>rd</sup> and 4 <sup>th</sup> line, preference to the affected households in employment in railways as per qualification. Counseling for productive utilization of compensation.	Railway Management and Government of Odisha
Increase in accidents and injuries	Develop and implement a traffic management plan. Construction of flyover, underpass and guard wall.	East Coast Railways
Increase in Noise and Dust leading to Pollution	Use equipment designed with noise and dust control elements	East Coast Railways
Loss of Social Networks, increase in the use of drugs and alcohol, and change in social interactions	Develop and implement a content plan that addresses unsocial and anti-social behaviour and drug and alcohol consumption, and crime.	Railway Management and Government of Odisha
Environmental damage	Afforestation on government land and planting trees by the outer sides of the rail lines. Incentivize plantation by local people.	Railway Management and Government of Odisha
Loss of Socio-cultural capital	Construction of Temple, Restructuring pond and repair of road.	Railway Management and Government of Odisha

## 7.5 Outlay for SIMP Implementation

The final compensation amount for the land acquisition and structures will be determined by the Competent Authority as per provisions of Act and Rules. The implementation of the SIMP is the responsibility of the East Coast Railways and the Government. The outlay for SIMP implementation will also be determined by the Competent Authority. On the basis of the SIMP outlined above, a budget has been prepared highlighting the components and tentative expenditure requirement, a sketch of which is given in Table-7.6.

**Table-7.6: Budget for SIMP**

Sl. No.	Particulars	Unit	Magnitude	Rate (₹)	Budget Amount (₹)
1.	Compensation for Loss of Land to Title Holders (+) 12% interest	Acre	14.64 Acres	30,00,000	4,39,20,000 52,70,400
2.	Compensation for Crop Loss (2 paddy crops and a pulse crop)	Paddy	14.64 Acres	1750/Qtl.	7,90,922
		Pulses	6 Acres	3000/Acre	18,000
		Vegetables	2 Acres	4000/Acre	8,000
3.	Compensation for Loss of Trees (Fruit Bearing)	Number	25	6000	1,50,000
4.	Compensation for Loss of Trees (Non Fruit Bearing)	Number	30	3500	1,05,000
Total value					5,02,62,322
Add 100% 'Solatium'					5,02,62,322
Total value					<b>10,05,24,644</b>
5.	Compensatory Afforestation	Acre	1 Acre	10,000	10,000
6.	Compensatory Common Resource Creation/Repair	Temple	One	1,00,000	1,00,000
		Road	One	2,00,000	2,00,000
		Pond	One	10,00,000	10,00,000
		CC Drainage	One	2,00,000	2,00,000
7.	Construction of Guard Wall	Number	Both sides of track	25,00,000	25,00,000
8.	Construction of Under Pass	Number	One	7,00,000	7,00,000
9.	Construction of Flyover	Number	One	75,00,00,000	75,00,00,000
	Construction of overhead water tank	Number	One	2,40,00,000	2,40,00,000
10.	Compensatory Skill Development	Persons	50	4000	2,00,000
11.	Training of Farmers	Persons	92	400	36,800
12.	Miscellaneous Development Work in the village				50,000
<b>Total</b>					<b>87,95,21,444</b>
<i>N.B.: If a flyover near village is not permissible then the SIMP Budget will be lower by the estimated cost of the Flyover i.e. Rs.75,00,00,000</i>					<b>12,95,21,444</b>

Summing up, it may be said that the Rail Project raises some concerns on land acquisition and potential loss of livelihood for the project affected households; possible damage to common resources, community social and cultural capital; and environmental harms in terms of noise and air pollution. These issues may be resolved by implementing appropriate compensatory packages and corrective action outlined in the SIMP above. It is appreciated that the construction and operation of the project will bring short term, medium term and long term benefits to the land-losing households, the villagers and the macro economy. These are likely to offset the short term negative impacts. The project is thus worth having.

## **CHAPTER-8**

### **Cost Benefit Analysis**

#### **8.1 Introduction**

Cost Benefit Analysis (CBA) technique is being widely used to underpin and assist the decision making process in determining the justification for a development project by evaluating its potential social and economic impacts popularly known as costs and benefits vis-à-vis possible alternative(s). CBA aims to evaluate a set of direct and indirect impacts of a project, its financial and non-financial effects on a set of economic agents, quantifying them in terms of money, synthesizing them, and taking a final decision as to whether the project is worth having.

The use of CBA can be traced back to flood control projects implemented in America in the 1930s. The accuracy of CBA technique has been greatly improved over the years with the development and incorporation of new evaluation criteria like the measurement of the willingness to pay by the potential beneficiaries, the diminution of pollution and reduction of accident risks, etc. The technique of CBA has become one of the most universally accepted and applied methods in project appraisal for large-scale public infrastructure investments like the railways and highways.

The social costs and benefits of a rail infrastructure project to the society are unlike and may be opposed to their private costs and benefits. This is largely because these projects have significant negative and positive social externalities for which exact pecuniary evaluation may be difficult and there is market failure. This is true of the construction of Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail project in Bhogabereni village of Banarpal Tahasil in Angul district.

The examples of non-market costs of the said rail project include environmental pollution, contribution to global warming, accidents, injury and loss of life of humans and pet animals etc. and the benefits are saving in time to access, on waiting and within trains; avoiding congestion and delays; reduction in road traffic etc. These costs and benefits do not relate to the present alone but stretch over a period to future. This necessitates discounting the future costs and benefits to estimate their present values and comparing them with the investment cost. Needless to say, the discount rate is subjective and future being uncertain it



is difficult to factor in them into exact evaluation. Valuation of environmental costs and benefits is all the more difficult. Hence, CBA in the instant case involves conjectures and may not be exact for policy purposes.

## **8.2 Costs and Benefits of the Project**

The costs due to construction of 3<sup>rd</sup> and 4<sup>th</sup> lines include economic, operational and environmental costs.

(i) Economic and infrastructure costs include (a) costs involved in planning the project, (b) cost of land required for it, (c) cost of building, (d) cost linked to tracks, siding, signalling etc., (e) cost of electrification and (f) cost of safety equipment. These entail heavy expenses and these constitute economic costs.

(ii) Operating costs encompass (a) costs of energy and power, (b) labour costs, (c) cost of materials and (d) annual maintenance costs. Operating costs are also economic costs but will arise at a later time.

(iii) External, environmental and social costs of the project consist of (a) costs of air, water and noise pollution, (b) costs attributed to contribution to global warming and (c) barrier effects i.e. delays, discomfort and lack of access that rail traffic imposes on non-rail modes. Construction of additional railway lines split the landscape and constitutes barriers for many living species. Traffic is an immediate danger for some animals trying to cross the railway lines. Railways are both migration barriers and death traps for many, perhaps most, terrestrial animals. The traffic barrier may also have more long-term ecological consequences for populations. Loss of trees, open cargo movements, increasing frequency and high speed trains will raise noise and dust pollution. There will be a four-fold increase in horns following operationalization of the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> lines and this will cause early waking, sleep disorders and such other diseases. Injuries and casualties caused by accidents are serious costs. Air pollutants in terms of NO<sub>x</sub> and CO<sub>2</sub> emissions may play havoc with the natural resource system and the human society. The impacts are obstacles to fulfilling environmental goals.

Adding up (i), (ii) and (iii) yields total cost and viewing these costs over an assumed life period of the project will give the cumulative total cost. When this total is discounted at a social discount rate, the present value of cumulative total cost (PVC) is obtained.

The formula for this is:

$$C_0 = \sum_{t=1}^n \frac{C}{(1+i)^t}$$

where  $C_0$  = present value of total costs or PVC,  $C$  = cumulative total cost,  $t$  = life of the project and  $i$  = social discount rate.

The benefits that will accrue from the rail project on its completion and functioning include the following.

(i) Economic benefits. These include (a) increase in revenue, (b) low cost transport, (c) increase in land value, (d) business opportunities, (e) livelihood options, (f) employment & income, and (g) strong market forces. With increase in the number of rail lines and the consequential increase in number and speed of trains revenue from passenger tickets and freight collections will increase; cost of movement of people and of transport of freight will lower; new business opportunities will be created; livelihood options will increase due to expansion of widening and diversifying economic activities; strong market forces will be generated; and all these will help generation of gainful employment avenues and increase in income. Low cost transportation, increasing land values, access to new locations for jobs and trade, and ease of doing business will improve.

(ii) External or social benefits. These encompass (a) the ease of movement of people and goods, (b) saving in access time, waiting time and in-train time, (c) reduction in pollution due to reduced road transport and use of sustainable and environment friendly technology in railways leading to lower  $\text{NO}_x$  and  $\text{CO}_2$  emissions, (d) reliability improvement in transport by avoiding congestion and delays and (e) safety improvement which helps reduction in traffic accidents and lifesaving. Saving in terms of lower expenses on road infrastructure may also be an example of external benefit of the project. It is hoped that with the construction and operationalization of additional lines access time, waiting time and within train time of travel will substantially lower; congestion and delays will reduce and reliability of transport will remarkably improve; and traffic accidents and injury and loss of life arising there from will come down. Improved access, smaller waiting time and lower in-train time and higher speed will save about 15 minutes per hour for passengers and about 30 minutes per hour for movement of freight.

(iii) Cultural benefits. With construction and operationalization of the 3<sup>rd</sup> and 4<sup>th</sup> lines a kind of business and commercial culture will be promoted which along with creation of new business opportunities, livelihood options, strong market forces, generation of gainful employment avenues, and rise in income will enhance the consumption of comfort and luxury goods and augment standard of living of the people in the locality.

(i), (ii) and (iii) add up to cumulative total benefits of the rail project. The present value of total cumulative benefits (PVB) will be obtained by using the following formula:

$$B_0 = \sum_{t=1}^n \frac{B}{(1+i)^t}$$

where  $B_0$  = present value of total benefits or PVB,  $B$  = cumulative total benefits,  $t$  = life of the project and  $i$  = social discount rate.

By deducting  $C_0$  from  $B_0$  we get net present value (NPV) of the project. Thus

$$NPV = B_0 - C_0$$

If  $B_0 > C_0$  i.e. NPV is positive, then the project is worth having. In the instant case, the NPV is expected to be positive and substantial.

The results of the cost, benefit and NPV comparison are summarized in Table –8.1.

Investing in the rail project is a significant social decision. One of the major drawbacks of the expansion project is land acquisition and cost attached to it. However, the public decision makers should not only focus on the financial cost, but also the potential positive impacts on the society. The CBA shows that this project has a positive NPV which fully demonstrates that the project is worth implementing. Moreover, other relevant transport alternatives (i.e. the existing roadways and conventional railway) are also examined and compared with the new project. Because of the ticket revenue, travel time savings and safety improvement considerations, the project will be cost-effective and worth having.

**Table-8.1: Cost - benefit comparison**

Costs		Benefits	
Economic & Infrastructure cost	Planning Land Building Tracks Sidings Signaling Electrification Safety Equipment	Economic Benefits	Passenger and freight revenue Low cost transport Increase in land value Business opportunities Livelihood options Employment & Income Strong market forces
Operating cost	Energy Labour Materials Annual Maintenance	Social Benefits	Developed transport Access to new locations Saving in travel time Reliability of transport Improvement in safety Saving in Road Infrastructure
External & Environmental cost	Accident & casualties Pollution & Warming Barrier effects Cultural invasion	Cultural Benefits	Promotion of Business Culture Consumption of Comforts & Luxuries
Total cost		Total cost	
Present value of total cost (C <sub>0</sub> )		Present value of total benefit (B <sub>0</sub> )	

### 8.3 Problems in applying Cost-Benefit Analysis

Cost-benefit analysis is a useful tool in decision making in respect of a project. But the correctness and reliability of CBA is conditioned by the accuracy of estimation of costs and benefits. In a CBA, both the costs and benefits have monetary and non-monetary elements and have reference to directly impacted and indirectly impacted stakeholders. Social benefits also relate to posterity and non-human stakeholders. The economic valuation of all costs and benefits of a project is therefore not possible. In many cases, values have to be imputed and guess works have to be made. Therefore, CBA is a highly complex and very challenging exercise and the valuation is more likely to be inaccurate.

In such view of the matter, no attempt has been made to estimate costs and benefits of the construction of Salagaon-Burhapank-Talcher-Jarpada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail project. But by intuitive logic it is expected that the benefits from the project will far outweigh its costs and hence the project is worth the time, money, and effort to be directed at it and would make a worthwhile contribution to the development of railways and the economy at large.

## **CHAPTER-9**

### **Recommendations and Conclusion**

#### **9.1 Introduction**

This Social Impact Assessment (SIA) study report has been prepared on the basis of the technical information provided by East Coast Railway, existing studies and reports relevant to the project, facts gathered from knowledgeable locals, office records, site visits, baseline survey of households and stakeholders' interaction & participation. Assessments of potential social impacts attributable to the construction of the Salagaon – Burhapanka – Talcher – Jarpada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project on households and overall area effects on Bhogabereni village of Banarpal block of Angul district have been conducted along set guidelines and presented in the Report. Various aspects of the potential impacts have been identified and thoroughly examined, their significance has been discussed, and management plans to enhance positive benefits and to minimise and/or efface negative impacts have been suggested.

#### **9.2 Recommendations**

The SIA team recommends that valuation of the land proposed to be acquired may be made by taking into account the actual market value prevalent in the area which stands higher than the benchmark value documented in the records of the District Registration Office.

In the household surveys, in Focused Group Discussions, and in conversations with knowledgeable persons certain concerns were raised which need to be addressed in the context of land acquisition.

- i) Land is a sustainable source of livelihood and income, an asset. It is also an insurance against economic emergencies. Land losing households need to be provided alternative sustainable means of livelihood.
- ii) Water bodies in the project affected area are likely to be affected due to pollution caused by vehicular traffic, movement of materials and construction of the project. Adoption of protective measures by the railways has figured in the demands of the people in the project area. This being a genuine demand has to be considered.

- iii) People raised complaints of difficulties faced by humans and animals in crossing the rail tracts and apprehend increase in this problem due to construction of additional lines. They demand more cause ways, under passes, over bridges and manned level crossings to minimise the problem. This is justified and provision needs to be made on this account.
- iv) Since growth of plants to trees involves a very long period, land losing households demand extra compensation in addition to the valuation for loss of trees provided for in the rules.

To compensate the loss of trees on private lands and on government land there is a demand for afforestation on remaining land and planting trees on outer sides of the rail lines through government funding and effort. These will also contribute to ecological sustainability.

These demands need to be addressed.

- v) Land records are outdated which pose problems in identifying the real owner of land and litigation for payment of compensation. Updating land records at regular interval figured as a genuine demand of the villagers. Digitisation of records and updating work should be taken as a routine affair.
- vi) Most of the project affected land losing households are smallholders with fragmented plots scattered over different locations. In many cases, the remainder land after acquisition from a plot/patch may be too tiny to allow a plough making cultivation difficult. In such cases the farmer may be forced to keep it fallow. Hence, the possibility of acquisition of the whole plot may be explored with payment of due compensation.

### **9.3 Conclusion**

Acquiring the land, both private and government, is inevitable for this project. The land acquisition may cause many people to lose their lands, farms, livelihood and other amenities but on the other hand a great and improved transportation facility will be created and that is for a great cause. Comparing the likely losses and the promising gains, it may be appreciated that the Rail project will be purposeful and rewarding.

## **CHAPTER-10**

### **Key Outcomes of Public Hearing Meeting**

**(English Translated Version)**

#### **10.1 Public Hearing in Gram Panchayats**

Public Hearing on the Draft SIA report on land acquisition in Bhogaberini village for the construction of the Salagaon – Burhapanka – Talcher – Jarapada 3rd and 4th Line Rail Project in Banarpal Tahasil of Angul district was conducted in Bhogaberini Gram Panhayat on 13.08.2019. The public hearing meeting was chaired by the Project Director from COATS, Koraput and attended by Head of the village committee; Special Land Acquisition Officer (Railways), Dhenkanal; Executive Engineer and SSE of East Coast Railways at Angul; and by the local village residents.

In the meeting Sri Ashok Kumar Nanda, Research Supervisor of the SIA Team from COATS opened the discussion with welcome address followed by a brief introduction on the project and land acquisition therefore by the Project Director from COATS, Koraput with the village residents and a summary presentation of the Draft SIA Report. After that the project affected village residents expressed their valuable views and placed some demands and suggestions before the panel. To ease out the insecurities and doubts of the village residents, the Special Land Acquisition Officer and Executive Engineer of East Coast Railways at Angul, assured the affected village residents with their well-thought suggestions. The details of proceedings of the public hearing meeting and the scanned copy of the signatures of the public hearing participants have been attached in the subsequent pages of this report.

#### **10.2 Key Outcomes of Public Hearing Meeting**

The Public hearing on Draft SIA Report are a great support for the concerned authorities to comprehend various demands, objections and complaints made by the project affected village residents regarding the land acquisitions. The main demands and objections highlighted by the affected village residents in the public hearing were mentioned below.

1. During the public hearing meeting, the affected village residents expressed their keen desire to know in detail the exact demarcation of land that would be acquired from the village for the proposed rail project.

2. They also enquired about the amount of monetary compensation and other benefits they would receive for the acquisition of their land. They apprehend undervaluation because land transactions are made at prices that are invariably much higher than that recorded in the sale deeds. This people do to evade registration fees that are to be paid on the amount quoted on the deeds.
3. They expressed their disappointment over the decision of the land acquisition authorities for not acquiring their remaining small surplus land in the plot which can't be used for agricultural purposes after land acquisition, and hence they demanded that their entire plot should be acquired by the concerned authorities.
4. They requested the panel about the valuation of the land in their respective villages where land had neither been sold nor purchased since last so many years because possessions were not given to them on the basis of consolidation records and they continue to own, possess and use land according to pre-consolidation- *SABAK*-records for which transactions in land have not been possible for long.
5. The affected villagers present in the meeting pressed for payment of compensation to the possessors of land on the basis of 1952-62 *SABAK* Record.
6. The affected village residents also requested to know about the compensation and entitlements that they will receive for acquisition of the encroached land that they use for business and other purposes.
7. Affected villagers demanded that, permanent employment should be guaranteed in the Railways to the youth of each of the project affected families.
8. Most of the villagers complained that the project will hamper and damage the rain-fed, pond and canal irrigation system as well as excess flow of water from the railway system washing away the top soil and damaging crops in the project area. Therefore, they demanded proper drainage facilities in their respective villages.
9. They demanded construction of guard walls, over-bridges and underpasses to cross the four-line rail road to avoid any mishap.
10. The locals expressed their concerns for environmental pollution (air, noise, dust, warming) and degradation of agriculture land on both sides of rail lines and more so due to the coal transportation in the project area.
11. They suggested the Railway authorities to construct and widen roads for foot walk way at appropriate places on both sides of the rail road.
12. They demanded plantation on the both sides of the rail lines to compensate the loss of trees and neutralise pollution due to land acquisition for the project.



13. Project affected village residents raised a complaint that due to the project the local water bodies will be acquired in some places and will be affected and polluted. They sought proper drinking water arrangements, renovation/repair of the affected water bodies and/or construction of new ones by the project authorities.

The Bhogaberini villagers pointed out that the overhead water tank near the Talcher Road station from where they are getting piped water supply at the present will be demolished due construction of the 3<sup>rd</sup> and 4<sup>th</sup> lines. They therefore sought compensatory proper drinking water arrangements for the village.

14. Some affected villagers asked the panel members to tell about the compensation amount that would be provided for the partially affected houses.

15. The participants from Abhimanpur village- a hamlet of 17 households- expressed their concern about abolition of the entire village in the event of land acquisition and their relocation. They pointed out that even if some will be spared they cannot have sound sleep and their houses will have cracks soon because of the trembles of speeding trains. Since many have constructed their houses under the Indira Awas Yojana, they apprehend serious resettlement problems.

16. It was the very common concern in the public hearing meeting about the loss of common resources and collective institutions. The villagers requested to rebuild the affected community institutions like, school building, school boundary wall, community water bodies, temple, common meeting pendals etc.

17. The villagers unanimously requested the project authorities to pay special attention to solve the basic developmental issues like education, drinking water, health facilities, road and communication facilities, construct traffic turnings etc.

After listening to all the concerns, requests and demands of the affected village residents, the Special Land Acquisition Officer and Executive Engineer of East Coast Railways made the following points before the affected residents.

- a. The Special Land Acquisition Officer consoled the affected family members present in the meetings by informing them that (a) the Board of Revenue, Odisha, Cuttack has sought a report from the District level revenue offices regarding the *de-facto* land ownership position vis-à-vis consolidation records which may be taken as a step towards a move back to giving effects to pre-consolidation status of land ownership and (b) the project affected families will be compensated as per the New Land Acquisition Act. The compensation will be calculated considering the average of the three years highest

benchmark value for their lands in their area and also 12 percent interest will be added to that. Apart from that, they will also be compensated for their trees and other infrastructures like, wells, bore wells, ponds etc. A 'solatium' of 100% will be added to total value of compensation so that the loss of land will be well rewarded. If benchmark value is not available for any village then, benchmark value in neighbouring villages will be considered while calculating the compensation value for such villages.

- b. To the people's concern for acquiring their small surplus land of their total plot from which land will be acquired, the Special Land Acquisition Officer suggested that the Railways are acquiring land on the basis of minimum requirement.
- c. He informed that if encroached land will be acquired then the affected families will be compensated as per the Land Acquisition Law, Government of Odisha.
- d. In response to the demand for employment, ROB/RUB, guard wall etc. the Executive Engineer, Railways informed people that giving employment to youth of all land losing households is not possible but their request for ROB/RUB, guard wall etc. will be sympathetically considered.
- e. To address the affected village members' concern for rainfed irrigation and drainage problem, the Executive Engineer, Railways said that culverts will be constructed as per rules to resolve this issue.
- f. In response to concern for payment of compensation for partially affected houses, it was pointed out that if any house or construction will be affected more than 50 percent by the project, then the loss will be 100 percent compensated.
- g. During the public hearing meeting people were told that the railways and district administration will take every possible measure for the infrastructural development in the project affected area as per the provisions of government rules. Damage to/ loss of school, road, religious centres etc. will be repaired/rebuilt in the project affected villages.

At the end of the meetings, affected village residents were informed by the panel members that preventive and corrective measures will be taken by the project authorities and district administration to address the issues raised by them in the meeting. The meetings ended with a formal vote of thanks to everybody present in the meeting for making the public hearing successful by contributing their valuable time and views.

## **Appendix**

### **Proceedings of Public Hearing Meeting held at 11:00 A.M. on 13.08.2019 in the Community Hall of Bhogabereni village, Bhogabereni Gram Panchayat of Angul District**

A public hearing meeting relating to Land Acquisition in Bhogabereni village for Construction of Salagaon – Burhapanka – Talcher - Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project in Angul District was held at 11 A.M. on 13.08.2019 in the Community Hall of Bhogabereni village, Bhogabereni Gram Panchayat, Banarpal Tahasil of Angul District under the Chairmanship of Dr. Rabinarayan Patra, Professor of COATS and Director of SIA Study for Land Acquisition in the village for the project. Sri Pitabas Sahoo, Special Land Acquisition Officer (SLAO, Railway), Dhenkanal and Sri Prakash Kumar Mishra of the said office; Sri Sarat Chandra Behuria, Executive Engineer and Sri Babuli Kumar Das, S.S.E., East Coast Railways at Angul; Seventy-two villagers from the above noted three affected villages; and Sri Ashok Kumar Nanda (Supervisor), Sri Gopinath Pradhan (Investigator) and Sri Santosh Kumar Panda (Programmer) of the SIA Study team of COATS were present in the meeting. The meeting lasted for about two and half hours. Among those villagers present in the meeting, 11 persons of Bhogabereni village took active part in the discussion.

At the outset, Shri Ashok Kumar Nanda, Supervisor of the COATS SIA study team accorded a warm welcome to all present in the meeting. Prof. Rabinarayan Patra in his brief address highlighted on the purpose of the meeting and invited opinion from the villagers present in the meeting.

Shri Umesh Chandra Bhutia initiated the discussion and requested construction of a Road Under Bridge (RUB) or Road Over Bridge (ROB) at the point of crossing of the Panchayat road from the village and the rail lines. This will save time for movement of people, cart and cattle who are now travelling extra distance with the level crossing at a distance of about a Kilometer from the village end. He also stressed that the Talcher Road Station is in the revenue area of Bhogabereni village and therefore be renamed as Bhogabereni station.

Shri Susanta Kumar Sahoo wanted a video clipping of the proceedings of the Public Hearing meeting for documentation and record of the village committee. He placed the following demands namely, (a) Compensation to possessor of Land, (b) payment of

compensation @Rs.3 crore per decimal, (c) The village be taken as a periphery of Railways, (d) Construction of RUB / ROB as suggested by Sri U.C. Bhutia, (e) permanent government service in the railways to youth of the land-losing households and (f) Acquisition of remainder of lands from the plot from which land will be acquired on payment of compensation, as the little surplus will not be of any use after acquisition. He also pressed for demarcation of land to be acquired before land acquisition with intimation to each land loser.

Shri Bauribandhu Sahoo requested construction of the station building on the village side i.e. opposite to the existing building beyond the outer track. He also emphasized on construction of foot over bridge from the village side to the opposite outer side of the station, so that the villagers can cross the distance lawfully without platform ticket.

Sri Aditya Kumar Sahoo wanted that there should be a Panchayat Road on both outer sides of the tracks as the railways do not repair the extended portion of the RUB / ROB near the village. If water bodies are to be acquired for the project, they need to be created to compensate the loss and there should be provision for proper drainage of rain water to prevent crop loss of the village.

Shri Shrikanta Sahoo placed requests for permanent government service to eligible youth of the households who will lose land due to acquisition.

Sri Prabhakar Das pointed out that the village Mandap will be lost due to land acquisition and hence, a new Mandap should be made by the Railway Authorities.

Shri Dukhabandhu Sahoo was of the view that the payment of compensation must be made to the possessor of the land to be acquired.

Sri Purna Chandra Sahoo requested a) renaming the Talcher Road Station as Bhogabereni station, b) construction of ROB/RUB just outside the platform area, c) making guard wall in the station area, and d) making provision of a booking counter near the village in the station area. He expressed his concern about the loss of irrigation facilities to about 50 acres of farm land of the village from the nine - acre big tank on the opposite side of the rail lines because the construction of so many rail lines will be an obstruction to the free flow of water from the tank to the agricultural land of the village on the other side of the lines in exigencies.

Sri Tirthabasi Sahoo, the village headman, Bhogaberini wanted a ROB/RUB and provision of irrigation to compensate the loss of irrigation from the village tank due to construction of extra lines.

Sri Akshya Kumar Sahoo and Sri Srikanta Kumar Sahoo pointed out that they have already lost their homestead land due to land acquisition for railways and lost their livelihood also which should be compensated by giving permanent government service in the railways to their children.

Sri Umesh Bai expressed his concern for the loss to crops due to flow of enormous water from the bridge at its two ends which washes out top soil of the farm land and the paddy plants also.

Sri Suresh Chandra Dhal alleged that the consolidation of holdings has been complete only in pen and paper while people continue to possess and cultivate land as per pre-consolidation records. Hence, payment should be made on the basis of actual possession (Sabak). He said that about 1/3<sup>rd</sup> of the agricultural land of the village lies beyond the north outer side of the rail lines, and hence, there should be a ROB / RUB to facilitate movement of people and cattle. He stressed that the villagers are losing land and livelihood for the railways and there should be special recruitment for the youth of the land losing households of Bhogaberini without any interview. Additionally, special development works should also be done in the village.

Sri Sarat Chandra Behuria, Executive Engineer, East Coast Railway at Angul responded to the requests of the villagers and made the following points:

1. Renaming the station as per the request of the Bhogaberini villagers will be taken up at the appropriate level.
2. Construction of foot over bridge, ROB, RUB will be considered with a positive attitude.
3. Fencing / Guard wall in the station area up to the end of the village will be considered.
4. Drainage facilities to prevent loss of crop due to washing away of top soil on account of heavy flow of water on the bridge ends during rain will be provided.
5. Making a booking counter on the village side will be considered.

Sri Pitabas Sahoo, Special Land Acquisition Officer appraised the villagers about a letter from the Board of Revenue, Odisha, Cuttack seeking a report from the revenue administration at the district level regarding the land holding status – Chaka / Sabaka – at the grass roots level and he hoped the problem of compensation on the basis of Chaka Vs. Sabak in the village would be solved. He pointed out that a) appropriate compensation will be paid as per benchmark valuation with solatium, interest etc. added to it according to provisions of rules, (b) homes will be provided to those who will be rendered homeless due to land acquisition, (c) the issue of providing jobs is difficult and will be decided at the appropriate level, and (d) Gocher, School, Mandap, and Temple as may be lost due to land acquisition will be compensated appropriately.

It may be concluded on the basis of the discussion in the public hearing meeting that the villagers are not opposed to land acquisition but they insisted on acquisition and compensation on Sabak basis, special provision of permanent service to the youth of land losing households and development works in the villages.

The meeting was peaceful, the proceedings have been audio and video recorded. The meeting ended with a formal vote of thanks to all by Shri Ashok Kumar Nanda, Lecturer, COATS, and Supervisor, SIA Study on land acquisition for the Project.

Pitabas Sahu  
SLAO (Railway)

Sarat Chandra Behuria  
E.E., E.CoR.

Tirthabasi Sahu  
President, Village Committee  
Bhogabereni

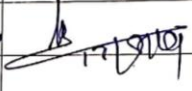



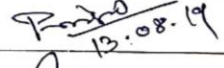
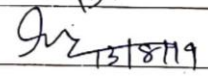
Babuli Kumar Das  
Sr. S.E., E.CoR.

Rabi Narayan Patra  
Project Director

**Gopinath Pradhan**

**Ashok Kumar Nanda**

LIST OF PARTICIPANT IN THE MEETING ON PUBLIC HEARING HELD ON 13.08.2019  
 AT 11.50 AM/PM IN VILLAGE Bhogobereni GP OFFICE  
Bhogobereni FOR LAND ACQUISITION FOR CONSTRUCTION OF  
 SALEGAON - BUDHAPANK - TALCHER-JHARPADA 3<sup>RD</sup> & 4<sup>TH</sup> LINE RAIL PROJECT, ANGUL DISTRICT.

Sl No	Name of the Official	Signature
01	Sri. Pitabash Sahu SP.L.A.O. (EOR)	
02	Sri Babul Kumar Das. SSE/WIC/Argul	
03	Sarat Chandra Behura Executive Engineer/EOR	 8455885261.
04	Pitabash Sahu. (H.O. C.E.) - 9778518413	Pitabash Sahu
05	Rabinarayan Patra	Rabinarayan Patra.
06	Sri. Ashok Ku. Wanda	
07	Prakash Kumar Mishra (P.S.) 7940498175	 13.08.19
08	Sri. G. N. Pradhan	 13/8/19

LIST OF PARTICIPANT IN THE MEETING ON PUBLIC HEARING HELD ON 13.08.2019  
 AT 11.00 AM/PM IN VILLAGE Bhogaberini GP OFFICE  
Bhogaberini FOR LAND ACQUISITION FOR CONSTRUCTION OF  
 SALEGAON - BUDHAPANK - TALCHER-JHARPADA 3<sup>RD</sup> & 4<sup>TH</sup> LINE RAIL PROJECT, ANGUL DISTRICT.

Sl No	Name of the Participant	Village / GP	Signature
1	pramulgehoni	Bhogaberini 9861708745	pramulgehoni
2	Prasanta Behera	Bhogaberini	Prasanta Behera
3	Purna Ch Sahu	Bhogaberini	
4	Umesh ch. Bhat	"	Umesh
5	Karunakar Sahu	Bhogaberini	Karunakar
6	Boribandh Bhatt	Bhogaberini	Boribandh
7	Subhbandh Bhatt	- do	
8	Aditya Ku Sahu	Bhogaberini	Aditya
9	Susant Ku Sahu	"	Susant
10	giri ch Sahu	"	
11	Sant Ch Bhatt	do	Sant Ch Bhatt
12		- do -	
13	Purna chandha Jhu	do.	Purna chandha Jhu
14	Abhaya Dhar	do	Abhaya Dhar
15		do.	
16	Ananta Ch Sahu	Bhogaberini	Ananta Ch Sahu
17	Bhimasen Dhar	Bhogaberini	Bhimasen Dhar
18			
19	Bhajanmohan Sahu	Bhogaberini	Bhajanmohan Sahu



LIST OF PARTICIPANT IN THE MEETING ON PUBLIC HEARING HELD ON 13.08.2019

AT U.00 AM/PM IN VILLAGE Bhogabeseni GP OFFICE  
Bhogabeseni FOR LAND ACQUISITION FOR CONSTRUCTION OF

SALEGAON - BUDHAPANK - TALCHER-JHARPADA 3<sup>RD</sup> & 4<sup>TH</sup> LINE RAIL PROJECT, ANGUL DISTRICT.

Sl No	Name of the Participant	Village / GP	Signature
20	ପ୍ରମୋଦ ଚନ୍ଦ୍ର ସାହୁ	ଭୋଗବେଶେନି	ପ୍ରମୋଦ ଚନ୍ଦ୍ର ସାହୁ
21	ଧର୍ମେଶ୍ୱର ସାହୁ	- do -	ଧର୍ମେଶ୍ୱର ସାହୁ
22	ପ୍ରମୋଦ ସାହୁ	ଭୋଗବେଶେନି	ପ୍ରମୋଦ ସାହୁ
23	ପ୍ରମୋଦ ସାହୁ	- do -	ପ୍ରମୋଦ ସାହୁ
24	ପ୍ରମୋଦ ସାହୁ	do.	ପ୍ରମୋଦ ସାହୁ
25	ପ୍ରମୋଦ ସାହୁ	ଧର୍ମେଶ୍ୱର ସାହୁ	ପ୍ରମୋଦ ସାହୁ
26	Chandhury Naik	ଧର୍ମେଶ୍ୱର ସାହୁ	Chandhury Naik
27	Amulya Naik	ଧର୍ମେଶ୍ୱର ସାହୁ	Amulya Naik
28	Mura Sahoo	Bhogabeseni	Mura Sahoo
29	Gokula Nayak		
30	Alok Sahu	Bhogabeseni	Alok Sahu
31	Koutuka Nayak	Kusapanshi	Koutuka Naik
32	Bansibandhu Sahu	Bhogabeseni	Bansuri Bandhu
33	Belarsen Nayak	Abhimanpur	Belarsen Naik
34	Hemant Ku Naik	Abhimanpur	Hemant Ku Naik
35	Gouranga Nayak	- do -	Naik
36	Gobekhu Nayak	do.	Gobekhu Naik
37	Pradyumna Nayak	do.	Pradyumna Naik
38	Pradyumna Nayak	do.	Pradyumna Naik

LIST OF PARTICIPANT IN THE MEETING ON PUBLIC HEARING HELD ON 13.09.2019  
 AT 11.00 AM/PM IN VILLAGE Bhogaberani GP OFFICE  
Bhogaberani FOR LAND ACQUISITION FOR CONSTRUCTION OF  
 SALEGAON - BUDHAPANK - TALCHER-JHARPADA 3<sup>RD</sup> & 4<sup>TH</sup> LINE RAIL PROJECT, ANGUL DISTRICT.

Sl No	Name of the Participant	Village / GP	Signature
39	Suresh Chandra Jha	Bhogaberani	[Signature]
40	Ramesh Chandra Jha	- - -	[Signature]
41	[Handwritten Name]	[Handwritten Village]	[Handwritten Signature]
42	Bijini Bihari Maik	Kesupangi	[Signature]
43	Bipin Chandra	Bhogaberani	[Signature]
44	Anadi Bhutia	- de -	[Signature]
45	Asutosh Saha	- de -	[Signature]
46			
47			
48			

**ANNEXURE - I**

**VILLAGE WISE DETAILS OF LAND ACQUISITION OF BANARPAL TAHASIL**

**NAME OF THE VILLAGE: BHOGABERINI, NAME OF THE G.P: BHOGABERENI, TAHASIL: BANARPAL (RS.)**

Book Sl No	Khata No	Plot No	Total Affected Area	Area to be Acquired	Type of Land	Name of the Owner & Address	Name of the Claimant	Total No of Claimant
			(In Acre)	(In Acre)				
1	2	3	4	5	6	7	8	9
1	3	761	1.36	0.52		Akshya Kumar Sahu, Father-Madhu Sahu, Caste-Chasa, own village	Akshya Kumar Sahu** (**Khata No.03, Plot No.761)	1
2	17	758	2.08	0.89		Amruti Sahu, Father-Palao Sahu, Sartuka Sahu, Siba Sahu, Father-Mangulu Sahu, Kirtana Sahu, Father-Bhikari Sahu, Caste-Chasa, own village	Abhaya Sahu Ajaya Sahu Dukhabandhu Sahu Basanti Sahu Aswini Kumar Sahu Jasbanta Sahu Purna Ch. Sahu Umesh Ch. Sahu Narattam Sahu Dhaleswar Sahu Trailokya Sahu	11
3	43	707	0.48	0.04		Kalpataru Sahu, Father-Sartuka Sahu, Caste-Chasa, own village	Tirthabasi Sahu** Padmini Sahu** **(Khata No.17, Plot No.758)	2
4	43	709	1.13	0.13				

Book SI No	Khata No	Plot No	Total Affected Area	Area to be Acquired	Type of Land	Name of the Owner & Address	Name of the Claimant	Total No of Claimant
			(In Acre)	(In Acre)				
1	2	3	4	5	6	7	8	9
5	51	485	0.38	0.02		Kunja Thamba, Father-Baji Thamba, Caste-Khatriya, own village	Janaki Thamba Kusuma Thamba Prafullo Thamba Kasturi Thamba	4
6	51	486	0.52	0.45				
7	55	738	1.21	0.25		Gangadhar Dhar, Father-Baidyanath Dhar, Hadibandhu Dhar, Father- Jujesthi Dhar, Caste-Brahmin, own village	Dinabandhu Dhar Binodini Dhar Hemanta Ch.Dhar Sisira Dhar Abhaya Dhar Chaturbhuj Dhar Pratap Dhar Santap Dhar	8
8	55	739	0.62	0.07				
9	55	740	1.38	0.77				
10	58	762	1.11	0.31		Gangadhar Sahu, Father-Prasadi Sahu, Caste-Chasa, own village	Sanjaya Dehuri** **(Khata No.58, Plot No.762) **(Khata No.59, Plot No.737)	1
11	59	737	1	0.01		Gangadhar Sahu, Bimbadhar Sahu, Father-Prasadi Sahu, Ananta Charan Sahu, Sarat Charan Sahu, Father-Hrusikesh Sahu, Caste- Chasa, own village	Ananta Sahu** Sarat Sahu** Biran Sahu** Naren Sahu** (**Khata No.204, Plot No.763)	4

Book SI No	Khata No	Plot No	Total Affected Area	Area to be Acquired	Type of Land	Name of the Owner & Address	Name of the Claimant	Total No of Claimant
			(In Acre)	(In Acre)				
1	2	3	4	5	6	7	8	9
12	98	706	0.13	0.05		Tripura Sahu, Dibakar Sahu, Father-Suniyan Sahu, Caste-Chasa, own village	Kalandi Sahu, Dhaneswar Sahu** (** Khata No.59, Plot No.737) (**Khata No.109, Plot No.731)	2
14	109	731	0.37	0.37		Dibakar Sahu, Father-Suniyan Sahu, Caste-Chasa, own village		
13	107	742	0.34	0.01		Dasarathi Rath, Father-Achyutananda Rath, Purna chandra Rath, Father-Khetrabasi Rath, Caste-Brahmin, village-Bantola, PS-Talcher	Dasarathi Rath Basanti Devi	2
15	115	700	1.32	0.14		Durlabha Rath, Father-Parikhita Rath, Caste-Brahmin, Village-Gurujanguli, PS-Talcher	Bijuli Rath Padma Charan Rath	2
16	115	702	1.07	0.61				
17	136	751	0.08	0.08		Pranabandhu Bai, Father-Natbar Bai, Caste-Tanti, own village	Umesh Bai	1
18	156	729	0.75	0.6		Banambar Rath, Mangaraj Rath, Father-Pabitra Rath, Caste-Brahmin, own village	Dhukabandhu Rath Arakhita Rath Bauribandhu Rath	3

Book SI No	Khata No	Plot No	Total Affected Area	Area to be Acquired	Type of Land	Name of the Owner & Address	Name of the Claimant	Total No of Claimant
			(In Acre)	(In Acre)				
1	2	3	4	5	6	7	8	9
19	164	750	8.18	6.24		Basudeb Dhar, Durlabha Dhar, Father-Somanath Dhar, Caste-Brahmin, own village	Golapa Dhar Ambica Dhar	2
20	164	699/788	0.45	0.35				
21	167	767	3.01	0.01		Bidyadhar Sethi, Sam Sethi, Dama Sethi, Father-Ghumuri Sethi, Caste-Dhoba, Village-Anugul, Pada-Hemsurpada	Meena Sethi Hemanta Ku. Sethi Sarat Ch. Sethi Sankar Ku. Sethi Bharat Ku. Sethi Sisira Ku. Sethi Mira Kumari Sethi Kartik Ku. Sethi Brajabandhu Sethi Akhaya Ku. Sethi Panchunath Sethi Gagan Bihari Sethi	12
	175	708	0.02	0.02		Budhadeba Dhar, Father-Biswanath Dhar, Caste-Brahmin, own village	Sucharu Malini Dhar Kamalini Dhar Basanta Ku. Dhar	3
30	175	705		1.28				

Book SI No	Khata No	Plot No	Total Affected Area	Area to be Acquired	Type of Land	Name of the Owner & Address	Name of the Claimant	Total No of Claimant
			(In Acre)	(In Acre)				
1	2	3	4	5	6	7	8	9
23	195	698	0.54	0.3		Madhusudan Rath, Chakradhar Rath, Father-Naba Kishore Rath, Caste- Brahmin, Village-Nirakarpur	Shanti Rah	1
24	199	752	0.31	0.11		Malati Sahu, Father-Chakra Sahu, Caste-Teli, own village	Rebati Sahu	1
25	204	763	1.84	0.25		Rabi Sahu, Satyabadi Sahu, Khetrabasi Sahu, Father-Harihar Sahu, Laxmidhar Sahu, Srikandar Sahu, Akshya Sahu, Dalimba Sahu, Father-Madhu Sahu, Damodar Sahu, Bhaskar Sahu, Father- Somanath Sahu, Hrudananda Sahu, Hadibandhu Sahu, Father-Bikram Sahu, Bhajamohan Sahu, Umesh Sahu, Baori Sahu, Purna Sahu, Father-Baisnaba Sahu, Ichha Sahu, Husband-Baisnaba Sahu, Arakhita Sahu, Father-Lokanath Sahu, Ananta Sahu, Sarat Sahu, Tanu Padhan, Aparna Sahu, Father- Hrusikesh Sahu, Amruti Sahu, Husband-Hrusikesh Sahu, Gangadhar Sahu, Bimbadhar Sahu, Father-Prasadi Sahu, Dibakar Sahu, Tripur Sahu, Father-Sunia Sahu, Caste-Chasa, own village	Antaryami Sahu Pabitra Sahu Mishra Sahu Sisira Sahu Prabhakar Sahu Khetrabasi Sahu Pramod Sahu Tulasi Sahu Kumuda Sahu Kedara Sahu Parbati Sahu Kishori Sahu Bijaya Sahu Nimai Charan Sahu Srikanta Sahu Girish Ch. Sahu Pranabandhu Sahu Pathani Sahu Uttana Sahu	23

Book Sl No	Khata No	Plot No	Total Affected Area	Area to be Acquired	Type of Land	Name of the Owner & Address	Name of the Claimant	Total No of Claimant
			(In Acre)	(In Acre)				
1	2	3	4	5	6	7	8	9
							Brajamohan Sahu Latika Sahu Bauri Bandhu Sahu Purna Ch. Sahu	
26	221	701	0.28	0.23		Lokanath Barik, Father- Dukhia Barik, Caste-Bhandari, own village	Ananta Barik Sarat Barik	2
27	236	753	0.71	0.04		Santara Behera, Routara Behera, Sumitra Behera, Badani Behera, Sukanti Behera, Father-Prahalada Behera, Caste-Gopala, own village	Bhagat Behera Tulasi Behera Nanda Behera, Babuli Behera	4
28	256	757	5	0.29		Suresh Chandra Dhar, Father- Satyabadi Dhar, Damayanti Dhar, Husband-Satyabadi Dhar, Dhrubananda Dhar, Father-Raghunath Dhar, Kailash Chandra Dhar, Uma Dhar, Nisa Dhar, Father-Udyanath Dhar, Indumati Dhar, Husband- Madhusudan Dhar, Caste-Brahmin, own village	Suresh Ch. Dhar Sukumari Dhar Kumati Dhar	3
29		744		0.2				
		<b>TOTAL</b>		<b>14.64</b>				<b>92</b>



# Village Resource Map

# Annexure: II



**FORM – D**  
**(See sub-rule 2 of Rule-8)**

**1. Executive Summary**

**(a) Name of the Project:** SIA Study on land acquisition for Construction of the Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project under East Coast Railways in Bhogabereni village, Banarpal Tahasil/Block of Angul district.

**(b) Public purpose:** Construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Rail Line will help the railways to handle the forthcoming additional passenger and goods traffic and ease the movement of the existing traffic due to rapid industrialization and spurt in economic as well as other developmental activities in the region. In addition, it will enable running of speedy trains and will help reaching both freight and people to important distant locations in shorter time. The project, therefore, will serve a public purpose.

**(c) Location:** Bhogabereni village, Banarpal Tahasil/Block of Angul district.

**(d) Area of the Project:** 15.99 acres of land will be acquired for the project which comprise 14.64 acres of private land and 1.35 acres of government land from the affected Bhogabereni village

**(e) Alternatives considered:** The project has been meticulously designed to ensure that the land requirement is the barest minimum. The new lines will run parallel to the existing ones on either side with minimum required gap. There would not be any displacement due to land acquisition. There is no alternative to the proposed land acquisition for the project. Going for alternative locations will involve greater amount of land acquisition and would entail much greater cost and far larger adverse socio-economic impact.

**(f) Social Impacts:** Private land will be acquired from 30 RoR holder households in which 07 repetitions were noted leaving 23 as the net RoR households which have extended to 92 households as per genealogy. It may be noted that among the land-losing households, 90% are marginal farmers and 6.67% are small farmers. The land to be acquired are mostly farm lands and the estimated loss of income from agriculture due to land acquisition will be Rs. 8,06,922 per annum. Hence, the proposed land acquisition will further reduce the amount of land owned by the affected households and cause loss of livelihood for some as also deterioration in the socio-

economic status for many. Additionally, both land-losing and non-land-losing households will be indirectly affected following the construction of additional lines due to movement of increased in number and rising speed of trains, damage to environment, loss of CPRs, injury and death to humans and cattle, decline in community life etc.

**(g) Mitigation measures:** On the basis of the findings of SIA Study, some measures have been suggested for mitigating the adverse socio-economic impact of land acquisition for the project. These include: **(i)** Updating land records and payment of compensation to the real owner of land, **(ii)** Disbursal of compensation in a stipulated time frame, **(iii)** Compensation for loss of trees and other assets, **(iv)** Counseling the PAPs for productive use of compensation, **(v)** Capacity building and skill development through trainings for the PAPs, **(vi)** Absorption of local wage workers in the construction of the 3<sup>rd</sup> and 4<sup>th</sup> line, **(vii)** Preference to youth of land-losing households in employment in the railways as per qualification and expertise, **(viii)** Recouping the common property resources, socio-cultural capital and public utilities that will be lost / damaged due to the project, **(ix)** Acquisition of full plot if the remainder land is unviable for any productive use, **(x)** Removal of spilled over materials from the construction sites and agricultural lands, **(xi)** Persuading people to plant trees on remainder land and Afforestation by the Railways on government land and on the sides of lines, **(xii)** Effective traffic management and Adherence to safety standards in construction phase and after, and **(xiii)** Construction of guard walls, ROB/RUB, foot over bridge as per need.

**(h) Assessment of social costs and benefits:** Assessment of Social costs and benefits of the Salagaon – Burhapanka – Talcher – Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project refer to the valuation of its direct and indirect impacts, financial and non-financial effects on economic agents, comparing them with the project cost and taking a final decision as to whether the project is worth having. The social costs and benefits of a rail infrastructure project have significant negative and positive social externalities for which exact pecuniary evaluation may be difficult and there is market failure. This is true of the construction of Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail project in Bhogabereni village of Banarpal Tahasil in Angul district.

External, environmental and social costs of the project consist of (a) costs of air, water and noise pollution, (b) costs attributed to contribution to global warming; loss of trees, open cargo movements, increasing frequency and high speed trains which will raise noise and dust pollution. and (c) barrier effects i.e. delays, discomfort and lack of access that rail traffic imposes on non-rail modes. There will be a four-fold increase in horns following operationalization of the 2<sup>nd</sup>,

3<sup>rd</sup> and 4<sup>th</sup> lines and this will cause early waking, sleep disorders and such other diseases. Injuries and casualties caused by accidents are serious costs. Air pollutants in terms of NO<sub>x</sub> and CO<sub>2</sub> emissions may play havoc with the natural resource system and the human society. These impacts are obstacles to fulfilling environmental goals.

External or social benefits encompass (a) the ease of movement of people and goods, (b) saving in access time, waiting time and in-train time, (c) reduction in pollution due to reduced road transport and use of sustainable and environment friendly technology in railways leading to lower NO<sub>x</sub> and CO<sub>2</sub> emissions, (d) reliability improvement in transport by avoiding congestion and delays and (e) safety improvement which helps reduction in traffic accidents and lifesaving. Saving in terms of lower expenses on road infrastructure may also be an example of external benefit of the project. It is estimated that improved access, smaller waiting time and lower in-train time and higher speed will save about 15minutes per hour for passengers and about 30 minutes per hour for movement of freight.

With construction and operationalization of the 3<sup>rd</sup> and 4<sup>th</sup> lines a kind of business and commercial culture will be promoted which, along with creation of new business opportunities, livelihood options, strong market forces, generation of gainful employment avenues, and rise in income, will enhance the consumption of comfort and luxury goods and augment standard of living of the people in the locality.

These costs and benefits do not relate to the present alone but stretch over a period to future. This necessitates discounting the future costs and benefits to estimate their present values and comparing them with the investment cost. Valuation of environmental costs and benefits is all the more difficult. Hence, they involve conjectures and may not be exact.

Therefore, assessment of social costs and benefits of the proposed rail project is a highly complex and very challenging exercise and the valuation is more likely to be inaccurate.

In such view of the matter, no attempt has been made to estimate costs and benefits of the construction of Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail project. But by intuitive logic it is expected that the benefits from the project will outweigh its costs and hence the project is worth the time, money, and effort to be directed at it and would make a worthwhile contribution to the development of railways and the economy at large.

## **2. Detailed Project Description**

**(a) Background of the project, including developer's background and governance:** In this age of globalization and in the backdrop of service sector led economic growth experienced in India and the states including the mineral rich state Odisha, the transport system is the kingpin of development. Transport, rail transport in particular, is an important player in the development process.

Indian railways are the busiest and third largest in the world. It enables the movement of about 20 million people daily and is the preferred mode of carrying the country's largest amount of bulky goods like fertilizer, food grains, coal, cement, petroleum etc. The railways are indeed the lifeline of India's transport system. The spread, speed and service quality of rail travel have been fast improving; and the pace and ease of freight movement have been rapidly increasing.

Capacity expansion has been one of the important requirements for development of railways. Construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project of Angul district is a part of this programme.

This portion of the railways forms part of the Bhubaneswar – Talcher – Sambalpur and Cuttuck – Talcher – Sambalpur section which serves as an important link between Howrah – Mumbai trunk route and Howrah – Chennai main line on the east coast. It also connects the Sambalpur and Khurda Road Divisions of East Coast Railways. Besides facilitating transport of goods – raw materials and finished products – and increasing mobility of people between the western and coastal regions of the state of Odisha, it also significantly contributes to movement of minerals to different countries through ports and works as the gateway of the state to the western and central parts of India. This points to the importance of construction of the Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line rail project. It has, indeed been a long felt necessity.

**(b) Management structure:** On completion of the construction of the Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line rail project, it will be managed according to the managerial system that is in vogue under the authority of East Coast Railways of Indian Railways.

**(c) Rationale for project including how the project fits the public purpose criteria:** Construction and operation of the Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line rail project will enable the Railways to handle increasing traffic with ease, help running of more

number of trains and reach additional major locations in the country with more trains. Hence, it will serve public purpose.

**(d) Details of project size, location, capacity, outputs, Production targets, cost, and risks:**

Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project is on the Bhubaneswar – Talcher – Sambalpur and Cuttack – Talcher – Sambalpur section of East Coast Railway. It requires acquisition of 15.99 acres land (14.64 acres of private land and 1.35 acres of government land) from Bhogabereni village for the construction of the 3<sup>rd</sup> and 4<sup>th</sup> lines.

It will cater to the movement of additional goods traffic in the Angul – Cuttack, Angul – Barang and Angul – Sambalpur – Jharsuguda sections of East Coast Railway that is increasing at the rate of more than 10% every year due to the need of moving coal and other industrial raw materials and produce originating from the MCL, movement of coal to different power plants, and of coal and other produce to other allied industries coming up in and around that area.

Environmental degradation due to increase in noise-dust-air pollution and increase in accidents, respiratory problems and health difficulties, loss of sleep, and such other problems may rise in the area from speeding and greater frequency of trains. These are the major risks associated with the project.

**(e) Examination of alternatives:** The project has been very carefully designed to ensure the barest minimum amount of land requirement. The new lines will run parallel to the existing ones on their sides with minimum required gap. There would not be any displacement due to land acquisition. Going for alternative locations for construction of the Salagaon-Burhapank-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line will involve greater amount of land acquisition and would entail much greater cost and far larger adverse socio-economic impact.

**(f) Phases of project construction:** On submission of the final SIA Study report and its acceptance and approval by the authorities, land will be acquired for the project on payment of compensation. Thereafter the East Coast Railway authorities will start construction work and complete the project. It is learnt that the East Coast Railway authorities have planned to complete it this way.

**(g) Core design features and size and type of facilities:** The 3<sup>rd</sup> line will run parallel on UP line side (towards Burhapank) with a flyover arrangement which crosses the existing Talcher Road – Talcher Thermal PH line and doubling line between Burhapanka and Talcher Thermal PH and

also crosses the NH 149 before joining the Burhapanka station. The 4th line will be parallel to DN line towards Sambalpur. The total route length of the 3rd line with flyover is 47 Kms. and that of the 4th line is 44 Kms. High level platforms are proposed to be provided at Jarapada and Kerejang stations.

**(h) Need for ancillary infrastructural facilities:** Provision of passenger amenities has been proposed as per the guidelines of Railway Board in all stations. High level platforms are proposed to be provided at Jarapada and Kerejang stations. Major and minor Bridges, level crossings, guard walls and other such facilities may also be provided.

**(i) Work force requirements -temporary-permanent:** The East Coast Railways of Indian Railways will engage and appoint temporary and permanent personnel according to need as per rules, admissibility and need.

**(j) Details of SIA/EIA if already conducted and any technical feasibility reports:** SIA Study Reports prepared earlier by RICOR, Bhubaneswar; STARR, Bhubaneswar; COATS, Koraput and other organisations on land acquisition for construction of additional rail lines on the Barang-Sambalpur route and the Technical Feasibility Report of Rail Vikas Nigam Limited (RVNL), Kolkata have been studied in preparing this Report.

**(k) Applicable legislations and policies:** Broadly speaking, two important legislations relating to land acquisition have been consulted in preparing the present SIA Study Report. They are: **(i)** Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013; and **(ii)** The Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016.

In addition to these, Report of the Scheduled Areas and Scheduled Tribes Commission, Ministry of Tribal Affairs, Government of India, 2004; **The Samatha Judgment**, the Supreme Court of India, 1997; PESA Act, 1996; Forest Rights Act, 2006 etc. have also been consulted for this study.

### **3. Team composition, approach, methodology and schedule of the SIA**

**(a) List of all team members with qualifications:** A five-member Social Impact Assessment Study Team was constituted for conducting the study and preparing the report. The constitution of the team is given in the following table:

Sl. No	Name	Position in SIA Team	Designation	Qualification	Responsibility
1.	Prof. R.N. Patra	Team Leader/ Project Director	Visiting Professor	M.A., Ph.D.	Overall Supervision, Collection of Secondary Data, Stakeholder Consultation, Data Interpretation & Report Preparation
2.	Sri A.K. Nanda	Research Supervisor	Lecturer	M.A.,M.Phil	Coordination of field work, FGD, Data validation, Assisting in Report preparation
3.	Dr. N.K. Rath	Field Investigators	Reader	M.A., Ph.D.	Data Collection from fields, PRA, FGD, Stakeholder Consultation
4.	Sri G.N. Pradhan		Lecturer	M.A, M.Phil.	
5.	Sri L.N. Padhi	Computer Operator	Librarian & Accountant	M.A., MLIS, MBA, PGDCA	Data Entry, Tabulation, Data Analysis and Report typing

**(b) Description and rationale for the methodology and tools used to collect information for the SIA Study:** This SIA study is based on both primary and secondary data. Primary data for the study were collected through a census survey of all affected land-losing households in Bhogabereni village by administering a pre-tested schedule. Additionally ten households from among the non-land-losing households selected by using the principle of simple random sampling technique have also been surveyed to get a broad picture of the likely socio-economic impact of land acquisition. A community level public survey was conducted, two focused group discussions were held and participatory rural appraisal was done by applying appropriate methods. Secondary data obtained from various published sources were also used and they were found useful in validating the results obtained from information collected and by analyzing primary data.

**(c) Sampling methodology used:** The principle of simple random sampling technique has been applied to select ten non-land-losing households from among the villagers and they have also been surveyed.

**(d) Overview of information/data sources used (Detailed reference must be included separately in the forms):**

- Basu, D. D. (2015) Introduction to the Constitution of India Lexis Nexis Publications, Gurgaon, Haryana



- |    |   |        |   |
|----|---|--------|---|
| 3. | Odisha Law Reviews  | (2014) | The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, Odisha Law Reviews, Cuttack-2 |
| 4. | Revenue & Disaster Management Department Government of Odisha | (2017) | The Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016.                      |
| 5. | Srivastava, K.B.  | (1995) | Panchayats in Scheduled Areas, NIRD, Hyderabad  |
| 6. | Supp.2 SCR 205  | (1997) | The Samantha Judgement, Hon'ble Supreme Court of India  |
| 7. | Universal Law Publishing Co. Pvt. Ltd., New Delhi             | (2013) | The Constitution of India as amended by the Constitution (Ninety eight Amendment Act, 2012)   |
| 8. | Ministry of Tribal Affairs Government of India                | (2004) | Report of the Scheduled Areas and Scheduled Tribes Commission   |

**(e) Schedule of consultations with key stakeholders:** The key stakeholders in the project include the land-losing households, the villagers who will be indirectly affected, the Revenue Department officials, East Coast Railways, and people's representatives. These groups have been consulted and their views have been taken into account in preparing the Report.

**(f) Brief description of public hearing conducted:** A public hearing meeting was conducted at 11 a.m. on 13 August 2019 in Bhogabereni village and the proceedings have been appended to this report. It was clear in the meeting that the land-losing households were not opposed to land acquisition but subject to payment of due compensation on the basis of **sabak**, provision for recouping damages to public and common property resources and development works.

**(g) Specific feedback incorporated in the report:** Provision for repair of damage to and fresh construction of community capital, market rate based payment of compensation to land-losing households, engaging willing village wage workers in 3<sup>rd</sup> and 4<sup>th</sup> line construction work in the Railways, permanent employment to youth of land-losing households, special development works in the village are some of the specific views expressed by the participating villagers in the public hearing meeting.

#### 4. Land Assessment

- (a) **Maps showing area of impact under the project (not limited to land area for acquisition):** A village resource map showing the area of impact under the project (not limited to land area for acquisition) has been given at Annexure-II in the Report.
- (b) **Total land requirement for the project:** Construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project requires acquisition of 15.99 acres land (14.64 acres of private land and 1.35 acres of government land) from Bhogabereni village.
- (c) **Unutilised land in the vicinity of the project area:** There is no unutilised government and private land in the vicinity of the project area which could be used for construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Line Rail Project. That is why both private land and government land will be acquired for the project.
- (d) **Land (if any) already purchased, taken on lease and the intended use:** No land has been already purchased and/or taken on lease for the project earlier.
- (e) **Extent and location of land proposed to be acquired for the project:** 14.64 acres of private land and 1.35 acres of government land totaling 15.99 acres will be required to be acquired from Bhogabereni village.
- (f) **Nature, present use and classification of land and if agricultural land, irrigation coverage and cropping patterns:** At the aggregate level 98.86% is agricultural land, 1.02% is used for residential purposes and other uses have a share of 0.12%. All land (14.64 acre) to be acquired from private ROR holder households in the village are agricultural land and the government land (1.35 acres) to be acquired for the project are idle land. Agricultural lands are canal irrigated and used for cultivation of paddy, pulses and vegetables.
- (g) **Size of holdings, ownership patterns, land distribution, and number of residential houses:** From the primary survey of affected households it came out that the original 30 ROR Holder households who will be losing land have extended to 92 households and they possess 1.66 acres of residential/homestead land, 161.48 acres of agricultural land and 0.20acre of other land. The average amount of agricultural land owned by a household is estimated at 1.76 acres in the village. It has been observed that 27 or 90% of the 30 original RoR holder households are marginal farmers, two or 6.67% are small farmers and only one or 3.33% is a semi-medium farmer. All the affected households have their own dwelling houses.
- (h) **Land prices:** The plots in the village have been classified as Class-I, Class-II, Class-III, Class-IV, and Class-V in the records maintained in the Office of the Sub-Registrar, Angul

and their per acre prices as Rs. 30,00,000/, Rs. 30,00,000/, Rs. 25,00,000/, Rs. 50,00,000/, and Rs. 45,00,000/ respectively. The land to be acquired from Bhogabereni village come under Class-I and Class-II and hence the land price will be Rs. 30,00,000/ per acre.

- (i) **Recent changes in ownership, transfer and use of lands over the last 3 years:** During the last three years there has been no change in ownership, transfer and use of lands in the village as revealed by the respondents at the time of survey of households.

**5. Estimation and enumeration (where required) of affected families and assets (Enumeration of the followings types of families):**

(a) **Families whose land or other immovable properties acquired:** In Bhogabereni village 14.64 acres of private land will be acquired from 30 original ROR holder households which have been extended to 92 households through inheritance over the years. Among them 14 are SC households, 40 are OBCs and the balance 38 households belong to general castes. The details are given at Annexure-I.

(b) **Land under occupation of tenants:** All private land to be acquired for the project is under the control of owners and agricultural land are mostly cultivated by owner cultivators. Only few land owners who have shifted to the Municipality area have given their land for cultivation under the shared tenancy/ advance money payment system. But such land will not figure under land to be acquired for the project.

(c) **The Scheduled Tribes and other traditional forest dwellers who have lost any of their forest rights:** No land will be acquired from ST families and traditional forest dwellers.

(d) **Families of agricultural labourers, tenants or holding of usufructory right, share-croppers or artisans or who may be working in the affected area for three years prior to the acquisition of the land:** There are only 11 agricultural labour households in the village and each of them also own some agricultural land. There are few tenant cultivators who, along with their land, cultivate other's land on advance payment/ crop sharing arrangement system. There are no usufructory right holders in the village, There are some artisans in the village whose land will be acquired for the project.

(e) **Families who have been assigned land by the State Government or the Central Government under any of its schemes:** No family in the village has been assigned land by the State Government or the Central Government under any of its schemes.

**(f) Families who have been residing on any land in the urban areas for preceding three years or more prior to the acquisition of the land:** No family in the village, whose land will be acquired for the project, has completely left the village. Even though some have settled in the town, they continue to own their homestead and farm land in the village.

**(g) Indirectly impacted by the project (Gatherers of forest produce, hunters, fisher folk, boatmen, etc.):** No such household is there in Bhogabereni village. However, the non-land-losing households will be indirectly affected by the project environmentally, hygienically, physically and socio-culturally.

**(h) Inventory of productive assets and significant lands:** The households whose land will be acquired for the project own farm land that is mostly canal irrigated, have trees on land which have commercial value, and some of them possess livestock as also commercial transport vehicles which add to their family income in a significant way.

## **6. Socio-economic and cultural profile (affected area and resettlement site)**

No household in Bhogabereni village will be losing house due to land acquisition and hence there may not be any need of resettlement. In this section, the Socio-economic and cultural profile of affected area has been presented.

**(a) Demographic details of the population in the project area:** The total population of the village is 1770 and that of land-losing households is 448. The sex ratio is 941 in the village but lower at 874 for the affected households which compare unfavourably with that for the district (943). The average family size is four and five respectively and the child sex ratio is 1500 and 1333 in that order. SCs constitute 15.22% of the land-losing households while OBCs account for 45.65% and General castes have a share of 39.13%. The patriarchal family system is prevalent. More than 65% of the households have a nuclear family. The literacy rate is greater than 92%.

**(b) Income and poverty levels:** Average annual household income is Rs.232471/-. A large part of the income is sourced from salaried job work (41.66%) followed by business (10.72%), agriculture (7.68%), non-agricultural wage work (4.93%), self-employment (5.29%) and others (23.56%). The share of BPL families in the land-losing households is only 9.78%, OBCs have a higher incidence at 15%, and general castes have among them 7.89% BPL families but Ironically, there is none among the SCs.

**(c) Vulnerable groups:** The average amount of land owned by an affected household before acquisition is estimated at 2.27 acres, for OBCs it is 1.72 acres and for SCs it is 0.59 acre. After

acquisition the respective averages will be 1.97 acres, 1.66 acres and 0.56 acre. Hence the extent of vulnerability is the most severe for the SCs. There is need of special provisioning for them.

**(d) Land use and livelihood:** Agricultural land is used for growing paddy, pulses and vegetables. Among the project affected male working age population in Bhogabereni village, cultivators and agricultural labourers constitute 17.21% (cultivators 14.88% and agricultural labourers 2.33%), 28.37% are salaried workers, 13.49% are engaged in business, 5.58% are daily wagers and 35.35% are absorbed in other activities. Among the subsidiary occupations for male workers, cultivation (62.12%) and agricultural labour (21.12%) are prominent. The female workers are engaged in salaried jobs, and agriculture. This holds across social classes as well. Work participation of women is observed to be very low.

**(e) Local economic activities:** Agriculture, small business, carpentry, tailoring, driving, cement works and construction, driving, vegetable selling, rolling cart restaurants are some of the activities in which bulk of the working age population in the village are engaged. Many are engaged in the industries in Talcher-Angul-NALCO-Meramandali cluster.

**(f) Factors that contribute to local livelihoods:** Salaried employment, pension including scheme-based old-age social security pension, farming, wage work, business etc. are the major income sources through which people in the village earn their livelihood.

**(g) Kinship patterns and social and cultural organization:** The village has a rural socio-cultural character. The kinship, cultural, religious and social bond among them is very strong. Socio-cultural activities are performed round the year.

**(h) Administrative organisations:** The village has a Panchayat office, Rajiv Gandhi Seva Kendra, and SBI Kiosk.

**(i) Political organisations:** The village does not have office of any political party even though people are politically very conscious.

**(j) Community-based and civil society organisations:** The village has a community meeting hall, a mandap, SHGs, Kirtan-Bhan group, yatra ground and temple.

**(k) Regional dynamics and historical change processes:** The village is close to Angul, Talcher and NALCO industrial, mining and township areas. Its people have already adopted the urban life style and are health and education conscious. The housing and livelihood pattern have undergone remarkable improvements. People are highly mobile both geographically and occupationally.

**(l) Quality of the living environment:** Significant improvements in quality of living are noted because of development of connectivity, expansion of education, health facilities and growth of non-farm activities in and around the village. This is manifested in pucca dwelling houses with amenities, separate sheds for cattle, piped water supply etc.

## 7. Social impacts

**(a) Framework and approach to identifying impacts:** The framework and approach to identifying impacts in this study are basically empirical survey based and their accuracy is subject to the response of the respondents to the issues discussed at the time of filling the schedules. The respondents include the land-losing and sample non-land-losing households, participants in FGDs, people's representatives and the local knowledgeable informants. Interactive approach has been followed to elicit reasonably correct information and reaction of locals to land acquisition for the project.

**(b) Description of impacts at various stages of the project cycle such as impacts on health and livelihoods and culture. For each type of impact, separate indication of whether it is a direct/indirect impact, differential impacts on different categories of affected families and where applicable cumulative impacts:** Acquisition of private land is likely to reduce the amount of agricultural land possessed by the affected households, induce changes in occupational pattern and livelihood resources and sources favouring non-farm activities. Productive utilisation of compensation is expected to bring about improvement in the standard of living of the affected households. But land acquisition may trigger intra-household conflicts on compensation sharing, loosening of kinship bond, increase in intoxication, environmental degradation (increase in air and noise pollution), health risks, sleeplessness, cause injury and death to humans and cattle from speeding trains etc. These are likely to affect both land-losing and non-losing households. Loss and damage to community property, water bodies, plants and trees will also have adverse effects on the whole population. Some of the above noted effects will be direct e.g. change in occupation, living standard, loosening of kinship bond etc. while many will be indirect e.g. increase in warming, pollution etc.

**(c) Indicative list of impacts areas include: impacts on land, livelihoods and income, physical resources, private assets, public services and utilities, health, culture and social cohesion and gender based impacts:** Land acquisition from private individual households will lower their land holding, diversify occupation and livelihood resources away from agriculture, raise income and asset holdings from productive use of compensation, improve public utilities and services through additional government provisioning, but increase health and life risks, induce adoption of urban lifestyle and culture. It all depends on how the compensation amount is utilized and how the Railways and the government address the problems of the affected households and the village community.

## **8. Analysis of costs and benefits and recommendation on acquisition**

**(a) Assessment of public purpose:** Construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Rail Line will help the railways to handle the forthcoming additional passenger and goods traffic due to rapid industrialization and spurt in economic as well as other developmental activities in the region and ease the movement of the existing traffic and will help reaching both freight and people to important distant locations in shorter time. Hence, it will serve public purpose.

**(b) Less-displacing alternatives and minimum requirements of land:** The project has been diligently designed to ensure that the land requirement is the barest minimum. There would not be any displacement in the village due to land acquisition. Alternative sites will involve greater amount of land acquisition and would entail much greater cost and far larger adverse socio-economic impact.

**(c) Nature and intensity of social impacts:** Some amount of adverse socio-economic impact from land acquisition for a development project is inevitable. This is also true of land acquisition for construction of Salagaon-Burhapanka-Talcher-Jarapada 3<sup>rd</sup> and 4<sup>th</sup> Rail Line project. But these impacts may be successfully addressed through productive utilization of compensation and effective implementation of the suggested SIMP.

**(d) Viability of the mitigation measures and extent to which mitigation measures described in the SIMP will address the full range of social impacts and adverse social costs:** It is fervently hoped that the mitigation measures suggested in the SIMP will address the adverse socio-economic impact including the social costs of land acquisition and construction and operation of the project.

**(e) Final conclusion:** The costs due to the project are likely to be neutralised by the benefits which will be flowing from it by way of compensation, improvement in transport networking, exploring more gainful employment opportunities, and successful implementation of the suggested SIMP. Hence the project is worth undertaking.

**Form – E**  
**(See sub-rule 2 of Rule-8)**  
**Social Impact Management Plan**

**Ameliorative measures required to be undertaken for addressing the impact on:**

**(a) Livelihood of affected families:** (i) Payment of Fair compensation for acquired land within a reasonable time frame, (ii) Counselling for productive utilization of compensation, (iii) Training farmers to grow high yielding and high value crops to increase yield rate and production, (iv) Engaging local labourers in construction work for the 3<sup>rd</sup> and 4<sup>th</sup> line, (v) Preference to the youth of affected households in employment in railways as per qualification, a certificate may be issued to the land-losing households as proof that may help in obtaining a job and (vi) Capacity building and skill development of youth through trainings to enable them take up gainful activities, should be taken up to restore and augment Income.

**(b) Public and community properties:** Construction of Temple and Mandap and Reconstructing the 9-acre big pond that will be damaged and destroyed due to land acquisition for construction of the 3<sup>rd</sup> and 4<sup>th</sup> line.

**(c) Assets and infrastructure particularly roads, public transport:** Construction and repair of Panchayat road that will be completely damaged for the construction of additional lines.

**(d) Drainage and sanitation:** provision of drainage of water flowing down from the bridge which washes out top soil and destroys/damages crops.

**(e) Sources of drinking water:** The overhead tank at the station will have to be demolished for the construction of 3<sup>rd</sup> and 4<sup>th</sup> lines for which a new one has to be constructed for providing drinking water to the village.

**(f) Sources of water for cattle:** A pond be created for making water available for the cattle.

**(g) Community ponds:** The big community pond will be difficult to access due to construction of additional lines. An alternative be provided.

**(h) Grazing land:** Acquisition of government land (that is usually availed as Gochar) for the project will cause loss of grazing land for the village. The loss may be compensated by providing alternative government land or acquiring private land and giving to the village for their use as grazing land.

**(i) Plantations:** Afforestation on government land and planting trees by the outer sides of the rail lines by the railways and Incentivizing local people for plantation on their remainder land.

**(j) Public utilities such as post offices, fair price shops, food storage godowns, electricity supply, health care facilities, schools and educational or training facilities, anganwadis, children parks, places of worship, land for traditional tribal institutions and burial and**



**cremation grounds:** No such facility is being affected by the project. However, some such facilities may be created as part of the special development programme in the affected village.

**(k) Measures that the Requiring Body has stated it will introduce in the Project Proposal:**

The Railways authorities have proposed passenger amenities as per the guide lines of the Railway Board. It will engage temporary and permanent personal according to need and as per admissibility. Level crossings with guard facilities will be provided as per the recent policy of the railway Board.

**(l) Additional measures that the Requiring Body has stated it will undertake in response to the findings of the SIA process and public hearings:** Renaming the Talcher Road Station as Bhogabereni station; Construction of foot over bridge, ROB, RUB, Fencing / Guard wall in the station area up to the end of the village, Drainage facilities to prevent loss of crop due to washing away of top soil on account of heavy flow of water on the bridge ends during rain as demanded by the villagers in the Public Hearing Meeting will be sympathetically considered by the Railways with a positive attitude. As these are the genuine demands these demands of the villagers need to be fulfilled by the Railway Authorities.

**ଓଡ଼ିଶା ସରକାର**  
**ରାଜସ୍ୱଓଦିପର୍ଯ୍ୟୟପରିଚାଳନାବିଭାଗ**

RDM-LAC-ANG-0002-2019- <sup>୫</sup>6795 /RDM dated **26 FEB 2019**

**ସାମାଜିକପ୍ରଭାବନିର୍ଦ୍ଧାରଣନିମନ୍ତେ ଅଧିକାରୀଙ୍କୁ ସୂଚନା**

ରାଜ୍ୟ ସରକାର ପ୍ରଭାବିତ ଗ୍ରାମ / ଖାର୍ଡ ସ୍ତରରେ ସମ୍ପୂର୍ଣ୍ଣ ଗ୍ରାମ-ପଞ୍ଚାୟତଙ୍କ ପରାମର୍ଶକ୍ରମେ ନିମ୍ନଲିଖିତ ଭୂମି ଅଧିଗ୍ରହଣ କରିବାକୁ ଚାହୁଁଛନ୍ତି ଏବଂ ସେଥି ନିମନ୍ତେ ସର୍ବସାଧାରଣ ଉଦ୍ଦେଶ୍ୟରେ ପ୍ରଭାବିତ ଅଞ୍ଚଳରେ ସାମାଜିକ ପ୍ରଭାବ ନିର୍ଦ୍ଧାରଣ (Social Impact Assessment) ସର୍ବେକ୍ଷଣ କରିବାକୁ ଚାହୁଁଛନ୍ତି। ଭୂମି ଅର୍ଜନ, ପୁନର୍ବାସ ଓ ଅଇଥାନରେ ଉଚିତ ମୂଲ୍ୟ ଏବଂ ସ୍ୱଚ୍ଛତା ଅଧିକାର ଆଇନ – ୨୦୧୩ ର ଧାରା ୪ ଅନୁଯାୟୀ ଉକ୍ତ ସର୍ବେକ୍ଷଣ କରାଯିବ।

୧. ପ୍ରକଳ୍ପ ବିକାଶକାରୀଙ୍କ ନାମ:- ଉପ ମୁଖ୍ୟ ଯନ୍ତ୍ରୀ, ପୂର୍ବ ତଟ ରେଳପଥ, ଭୁବନେଶ୍ୱର।

୨. ପ୍ରସ୍ତାବିତ ଭୂମି ଅଧିଗ୍ରହଣର ଉଦ୍ଦେଶ୍ୟ- ଶାଳଗାଁ-କୁଢାପଙ୍କ ଗାୟ ଓ ୪ର୍ଥ ରେଳପଥ ପ୍ରକଳ୍ପ ନିର୍ମାଣ ନିମନ୍ତେ।

୩. SIA study କରୁଥିବା ଅନୁଷ୍ଠାନର ଯୋଗା ଯୋଗ ସୂଚନା :- Council of Analytical Tribal Studies (COATS), Koraput.

SIA ସର୍ବେକ୍ଷଣ ଅନୁଷ୍ଠାନ : Nabakrushna Choudhury Centre for Development Studies , Bhubaneswar, Phone No. 0674,2300471, 2301094

୪. ପ୍ରକଳ୍ପ ପାଇଁ ଅନୁଗୁଳ ଜିଲ୍ଲାରେ ପ୍ରସ୍ତାବିତ ଭୂଅଧିଗ୍ରହଣର ବିବରଣୀ/ ତଫସିଲ

କ୍ରମିକନଂ	ତହସିଲ	ଗ୍ରାମପଞ୍ଚାୟତ	ଗ୍ରାମ	ବେସରକାରୀଜମି	ମନ୍ତବ୍ୟ
୧	ତାଳଚେର	ଭୋଗବେରେଣୀ	ଭୋଗବେରେଣୀ	୧୪.୭୪୦	
			ମୋଟ୍-	୧୪.୭୪୦	

ଭୂମି ଅନୁସୂଚିର ନକଲ ଏଥି ସହିତ ସମସ୍ତ କରାଯାଇଛି।

୫. ପ୍ରସ୍ତାବିତ ପ୍ରକଳ୍ପର ସଂକ୍ଷିପ୍ତ ବିବରଣୀ :- ଅନୁଗୁଳ ଜିଲ୍ଲାର ଶାଳଗାଁ-ବୁଢ଼ାପଙ୍କ-ତାଳଚେର-ଜରପଡ଼ା ଶାଳ ଓ ୪ର୍ଥ ରେଳପଥ ପ୍ରକଳ୍ପ ନିର୍ମାଣ କରାଯିବ । ଉକ୍ତ ଓସାରିଆ ରେଳ ଲାଇନଟି ଅନୁଗୁଳ ଜିଲ୍ଲାର ଗାଟି ରାଜସ୍ୱ ଗ୍ରାମ ମଧ୍ୟ ଦେଇ ଯିବ ।

୬. SIA ସର୍ବେକ୍ଷଣରେ ଅନ୍ତର୍ଭୁକ୍ତ ପ୍ରକଳ୍ପ ଅଞ୍ଚଳ ଏବଂ ପ୍ରକଳ୍ପ ପ୍ରଭାବିତ ଅଞ୍ଚଳ :-

ଅନୁଗୁଳ ଜିଲ୍ଲାରେ ଉପରୋକ୍ତ ୧ଟି ଗ୍ରାମର ୧୪.୭୪୦ ଏକର ଘରୋଇ ଜମି ଶାଳଗାଁ-ବୁଢ଼ାପଙ୍କ-ତାଳଚେର-ଜରପଡ଼ା ଶାଳ ଓ ୪ର୍ଥ ରେଳପଥ ପ୍ରକଳ୍ପ ନିର୍ମାଣ ନିମନ୍ତେ ଅନ୍ତର୍ଭୁକ୍ତ । ପ୍ରକଳ୍ପ ପ୍ରଭାବିତ ଜମିର ବିସ୍ତୃତ ତାଲିକା/ତଫସିଲ SIA ସର୍ବେକ୍ଷଣ ଅନ୍ତେ ମିଳିପାରିବ ।

୭. SIA ସର୍ବେକ୍ଷଣର ପ୍ରାଥମିକ ଉଦ୍ଦେଶ୍ୟ ଏବଂ ମୁଖ୍ୟ କାର୍ଯ୍ୟାବଳୀ :-

ସର୍ବସାଧାରଣ ଉଦ୍ଦେଶ୍ୟ ନିର୍ଦ୍ଧାରଣ

ପ୍ରଭାବିତ ଅଞ୍ଚଳରେ ଥିବା ସମସ୍ତ ଗ୍ରାମ ପଞ୍ଚାୟତ / ଗ୍ରାମ / ଖାର୍ଡର ପରାମର୍ଶ କ୍ରମେ SIA ସର୍ବେକ୍ଷଣ କରାଯିବ । SIA ସର୍ବେକ୍ଷଣ କ୍ଷେତ୍ର ପରିଦର୍ଶନ, ପ୍ରଭାବିତ ବ୍ୟକ୍ତିଙ୍କ ସାମୁହିକ ଆଲୋଚନା ଏବଂ ପ୍ରଭାବିତ ବ୍ୟକ୍ତିଙ୍କ ମତାମତ ଚୁଡ଼ାକ୍ତ ରିପୋର୍ଟରେ ସ୍ଥାନିତ ହେବ ।

ଭୂମି ଅଧିଗୃହିତ ପ୍ରତ୍ୟକ୍ଷ ଅଥବା ପରୋକ୍ଷ ଶତକଡ଼ା ୨୫ଭାଗ ପ୍ରଭାବିତ ସମସ୍ତ ଗ୍ରାମ ସଭା ମାନଙ୍କରେ ଜନଶୁଣାଣି କରାଯିବ ।

୮. ଗ୍ରାମସଭା / ଭୂମିମାଲିକଙ୍କ ସହମତି ଆବଶ୍ୟକ କି?

ସହମତି ଆବଶ୍ୟକ ।

୯. SIA ସର୍ବେକ୍ଷଣ ଆରମ୍ଭ ଏବଂ ସମାପନ ରିପୋର୍ଟ ପ୍ରଦାନ ଏବଂ ତାହାର ପ୍ରକାଶନ

ସରକାରୀ ବିଜ୍ଞପ୍ତି ପ୍ରକାଶିତ ଦିବସଠାରୁ ୭ମାସ ମଧ୍ୟରେ SIA ସର୍ବେକ୍ଷଣ ସମାପନ କରାଯିବ ।

SIA ସର୍ବେକ୍ଷଣ ରିପୋର୍ଟ ସମ୍ପୂର୍ଣ୍ଣ ପ୍ରଭାବିତ ପଞ୍ଚାୟତ/ ଗ୍ରାମ/ ଖାର୍ଡ ସ୍ତରରେ ସ୍ଥାନୀୟ ଭାଷାରେ ପ୍ରକାଶନ କରାହେବ । ତତସହିତ ଜିଲ୍ଲାପାଳ, ଉପଜିଲ୍ଲାପାଳ ଏବଂ ବ୍ଲକ ମହକୁମାରେ ପ୍ରକାଶନ କରାଯିବ ଏବଂ ସର୍ବସାଧାରଣଙ୍କ ଗୋଚରୀୟ ସରକାରଙ୍କ ୱେବସାଇଟରେ ସୁଚିତ ହେବ ।

ରାଜ୍ୟପାଳଙ୍କ ଆଦେଶାନୁସାରେ

*(Handwritten Signature)*  
ଯୁକ୍ତ ଶାସନ ସଚିବ ୨୫/୭/୨୦୧୯

Memo. No. 6796 / R&DM dtd. 26 FEB 2019

Copy of the Notification along with the land schedule forwarded to the Director, Printing Stationery and Publication, Odisha, Cuttack with a request to publish the Notification in the next issue of E.O.G and supply 5 copies to this Department/ Commerce & Transport(Transport) Department / Collector, Angul and Secretary to R.D.C (N.D), Sambalpur.

Memo. No. 6797 / R&DM dtd. 26 FEB 2019

Copy of the Notification forwarded to IMU Cell of this Department with a request to upload the Notification in this Department website for information of general public.

Memo. No. 6798 / R&DM dtd. 26 FEB 2019

Copy forwarded to Collector, Angul/ Spl. Land Acquisition Officer, Salegaon-Budhapank 3<sup>rd</sup> & 4<sup>th</sup> line Project, Dhenkanal for information with the following instructions:-

1. He is requested to send a copy of the Notification to the Sarpanch of the concerned Panchayats and other concerned for information and necessary action.
2. The substance of the Notification may be published in the locality immediately. Copies of such publication and the date of such publication may be intimated to this Department forthwith for further course of action.
3. Publication in EOG may be watched and reported to this Department with details of such publication.

Memo. No. 6799 / R&DM dtd. 26 FEB 2019

Copy forwarded to Commerce & Transport(Transport) Department/ R.D.C (N.D), Sambalpur /Coordinator, State SIA unit(NCDS),Bhubaneswar for information and necessary action.

Memo. No. 6800 / R&DM dtd. 26 FEB 2019

Copy forwarded to the Deputy Chief Engineer( Construction) East Coast Railway, Bhubaneswar /Guard File(2 spare copies for information.

### ଭୂମି ଅନୁସୂଚୀ


ମୌଜା - ଭୋଗବେରେଣୀ (ଗ୍ରାମାଞ୍ଚଳ) ଥାନା- ଅନୁଗୋଳ, ଥାନା ନଂ-୯୩, ଚଢ଼଼ପିଲ- ତାଳଚେର,  
ଜିଲ୍ଲା-ଅନୁଗୋଳ ଶାଳଗାଁ ବୁଢ଼ାପଲ୍ଲୀ ତାଳଚେର ଠାରୁ ଜରପଡ଼ା ଚୂଡ଼ୀୟ ଓ ଚତୁର୍ଥ ରେଳ ପ୍ରକଳ୍ପ  
ନିର୍ମାଣ ନିମନ୍ତେ ।

ଖଣ୍ଡ ନଂ	ସର	ପୁର ନଂ	କିମ୍ପା	ରଜବା	ଅଧିଗ୍ରହଣ ରଜବା	ଅଭିଲିଖିତ ରକ୍ଷତ ନାମ
୩	ରଘୁଚି	୭୭୧		୧.୩୭୦	୦.୫୨୦	ଅକ୍ଷୟ କୁମାର ସାହୁ ପି:ମଧୁ ସାହୁ ଜା: ଚଷା ବା: ନିଜ
୯୭	ରଘୁଚି	୭୫୮		୧.୦୮୦	୦.୮୯୦	ଅନୁଚି ସାହୁ ପି: ପଦ୍ମ ସାହୁ, ସାର୍ଜୁନ ସାହୁ, ଶିବ ସାହୁ ପି: ମଦନୁ ସାହୁ, ବିରଜ ସାହୁ ପି: ଭିକାରି ସାହୁ ଜା: ଚଷା ବା: ନିଜରାଁ
୯୩	ରଘୁଚି	୭୦୭		୦.୮୮୦	୦.୮୮୦	କଳ୍ପଚରୁ ସାହୁ ପି:ସାର୍ଜୁନ ସାହୁ ଜା: ଚଷା ବା: ନିଜରାଁ
୯୩	ରଘୁଚି	୭୦୯		୧.୧୩୦	୦.୧୩୦	
୫୧	ରଘୁଚି	୮୮୫		୦.୩୩୦	୦.୦୯୦	କୃଷ୍ଣ ଅମ୍ବ ପି:ବାଜି ଅମ୍ବ ଜା: କ୍ଷତ୍ରିୟ ବା: ନିଜରାଁ
୫୧	ରଘୁଚି	୮୮୭		୦.୫୨୦	୦.୫୫୦	
୫୫	ରଘୁଚି	୭୩୮		୧.୨୧୦	୦.୨୫୦	ଗଙ୍ଗାଧର ଧର ପି: ବୈଦ୍ୟନାଥ ଧର, ହାଡ଼ିବନ୍ଧୁ ଧର ପି:
୫୫	ରଘୁଚି	୭୩୯		୦.୭୨୦	୦.୦୭୦	ସୁରେଶ୍ଵର ଧର ଜା: ବ୍ରାହ୍ମଣ ବା: ନିଜରାଁ
୫୫	ରଘୁଚି	୭୪୦		୧.୩୮୦	୦.୭୫୦	
୫୮	ରଘୁଚି	୭୨୨		୧.୧୧୦	୦.୩୧୦	ଗଙ୍ଗାଧର ସାହୁ ପି:ପ୍ରସାଦି ସାହୁ ଜା: ଚଷା ବା: ନିଜରାଁ
୫୯	ରଘୁଚି	୭୩୭		୧.୦୦୦	୦.୦୧୦	ଗଙ୍ଗାଧର ସାହୁ, ବିଦ୍ୟାଧର ସାହୁ ପି: ପ୍ରସାଦି ସାହୁ, ଅନନ୍ତ ଚରଣ ସାହୁ, ଶରତ ଚନ୍ଦ୍ର ସାହୁ ପି: ହୃଷିକେଶ ସାହୁ ଜା: ଚଷା ବା: ନିଜରାଁ
୯୮	ରଘୁଚି	୭୦୭		୦.୧୩୦	୦.୦୫୦	ବ୍ରହ୍ମପୁର ସାହୁ, ବିବାକର ସାହୁ ପି: ସୁନିଆଁ ସାହୁ ଜା: ଚଷା ବା: ନିଜରାଁ
୧୦୭	ରଘୁଚି	୭୪୭		୦.୩୫୦	୦.୦୧୦	ଦାଶରଥ ରଥ ପି: ଅତ୍ୟୁକାନ୍ତ ରଥ, ପୂର୍ଣ୍ଣଚନ୍ଦ୍ର ରଥ ପି: କ୍ଷେତ୍ରବାସି ରଥ ଜା: ବ୍ରାହ୍ମଣ ବା: ବଢ଼ୋଳ ଥାନା- ତାଳଚେର
୧୦୯	ରଘୁଚି	୭୩୧		୦.୩୨୦	୦.୩୨୦	ବିବାକର ସାହୁ ପି:ସୁନିଆଁ ସାହୁ ଜା: ଚଷା ବା: ନିଜରାଁ
୧୧୫	ରଘୁଚି	୭୦୦		୧.୩୨୦	୦.୧୪୦	ବୁଢ଼ଲ ରଥ ପି:ପରକ୍ଷିତ ରଥ ଜା: ବ୍ରାହ୍ମଣ ବା: ଗୁରୁଜାଜୁରି

୧୦୫	ରୟତି	୨୦୨		୧.୦୭୦	୦.୭୧୦	ଆନା- ଚାଳଚେର
୧୦୬	ରୟତି	୨୫୧		୦.୦୮୦	୦.୦୮୦	ପ୍ରାଣବନ୍ଧୁ ବାଲ ପି:ନଟବର ବାଲ ଙା: ଚଢ଼ି ବା: ନିକରାଁ
୧୦୭	ରୟତି	୨୬୯		୦.୨୫୦	୦.୨୦୦	ବାଳାମ୍ବର ରଥ, ମଙ୍ଗରାଜ ରଥ ପି: ପଦ୍ମିନୀ ରଥ ଙା: ବ୍ରାହ୍ମଣ ବା: ନିକରାଁ
୧୦୮	ରୟତି	୨୫୦		୮.୧୮୦	୭.୭୫୦	ବାସୁଦେବ ଧର, ଦୁଇର ଧର ପି: ସୋମନାଥ ଧର ଙା: ବ୍ରାହ୍ମଣ ବା: ନିକରାଁ
୧୦୯	ରୟତି	୨୯୯/୮		୦.୫୫୦	୦.୩୫୦	
୧୧୦	ରୟତି	୨୨୭		୩.୦୧୦	୦.୦୧୦	ବିଦ୍ୟାଧର ସେଠା, ଶାମ ସେଠା, ବାମ ସେଠା ପି: ସୁମୁରା ସେଠା ଙା: ଧୋବା ବା: ଅନୁଗୋଳ ଚାଉଳ ପତା- ହେମସୁରପତା
୧୧୧	ରୟତି	୨୦୮		୦.୦୨୦	୦.୦୨୦	ବୁଦ୍ଧଦେବ ଧର ପି:ବିଶ୍ଵନାଥ ଧର ଙା: ବ୍ରାହ୍ମଣ ବା: ନିକରାଁ
୧୧୨	ରୟତି	୨୯୮		୦.୫୫୦	୦.୩୩୦	ମଧୁସୂଦନ ରଥ, ଚକ୍ରଧର ରଥ ପି: ନବ ଭିକ୍ଷୋର ରଥ ଙା: ବ୍ରାହ୍ମଣ ବା: ନିରାକାର ପୁର
୧୧୩	ରୟତି	୨୫୨		୦.୩୧୦	୦.୧୧୦	ମାଳତୀ ସାହୁ ପି:କବ୍ର ସାହୁ ଙା: ଚେଇଁ ବା: ନିକରାଁ
୨୦୦	ରୟତି	୨୨୩		୧୮.୫୦	୦.୨୫୦	ରବି ସାହୁ, ସତ୍ୟବାଦି ସାହୁ, କ୍ଷେତ୍ରବାସୀ ସାହୁ ପି: ହରିହର ସାହୁ, ଇନ୍ଦ୍ରାଧର ସାହୁ, ଶ୍ରୀକନ୍ଦର ସାହୁ, ଅକ୍ଷୟ ସାହୁ, ବାଜିମ୍ବ ସାହୁ ପି: ମଧୁ ସାହୁ, ବାମୋଦର ସାହୁ, ଭାବର ସାହୁ ପି: ସୋମନାଥ ସାହୁ, ଦୁବାନନ୍ଦ ସାହୁ, ହାଡ଼ିବନ୍ଧୁ ସାହୁ ପି: ବିକ୍ରମ ସାହୁ, ଭଜ ମୋହନ ସାହୁ, ଭମେଶ ସାହୁ, ବାଉରୀ ସାହୁ, ପୂର୍ଣ୍ଣ ସାହୁ ପି: ବୈଷ୍ଣବ ସାହୁ, ରଞ୍ଜା ସାହୁ ସା: ବୈଷ୍ଣବ ସାହୁ, ଅରକ୍ଷିତ ସାହୁ ପି: ଲୋକନାଥ ସାହୁ, ଅନନ୍ତ ସାହୁ, ଶରତ ସାହୁ, ଚନ୍ଦ୍ର ପଧାନ, ଅପର୍ଣ୍ଣା ସାହୁ ପି: ହୃଷିକେଶ ସାହୁ, ଅନୁତା ସାହୁ ସା: ହୃଷିକେଶ ସାହୁ, ରଞ୍ଜାଧର ସାହୁ, ବିନ୍ଦାଧର ସାହୁ ପି: ପ୍ରସାଦି ସାହୁ, ଦିବାକର ସାହୁ, ତ୍ରିପୁର ସାହୁ ପି: ସୁନିଆ ସାହୁ ଙା: ଚଷା ବା: ନିକରାଁ
୨୦୧	ରୟତି	୨୦୧		୦.୨୮୦	୦.୨୩୦	ଲୋକନାଥ ବାରିକ ପି:ଦୁଃଖିଆ ବାରିକ ଙା: ଭଣ୍ଡାରି ବା: ନିକରାଁ

୨୩୭	ରଘୁଚି	୨୫୩		୦.୭୧୦	୦.୦୦୦	ସାଜରା ବେହେରା, ରାଜବରା ବେହେରା, ସୁମିତ୍ରା ବେହେରା, ବଦନି ବେହେରା, ସୁକାନ୍ତି ବେହେରା ପି: ପ୍ରହରାଜ ବେହେରା ଜା: ଗୋପାଳ ବା: ନିଜଗାଁ
୨୫୭	ରଘୁଚି	୨୫୭		୫.୦୦୦	୦.୨୧୦	ସୁରେଶ ଚନ୍ଦ୍ର ଧର ପି: ସତ୍ୟବାଦି ଧର, ଦମୟନ୍ତୀ ଧର ସ୍ତ୍ରୀ: ସତ୍ୟବାଦି ଧର, ଧୂବନନ୍ଦ ଧର ପି: ଗଗୁନାଥ ଧର କୈଳାସ ଚନ୍ଦ୍ର ଧର, ଭନା ଧର, ନିଶା ଧର ପି: ଉଦୟନାଥ ଧର, ଇନ୍ଦୁମତୀ ଧର ସ୍ତ୍ରୀ: ମଧୁସୂଦନ ଧର ଜା: ବ୍ରାହ୍ମଣ ବା: ନିଜଗାଁ
	ରଘୁଚି	୨୫୫			୦.୨୦୦	
	ରଘୁଚି	୨୦୫			୦.୨୫୦	
			ମୋଟ	୩୫.୭୨୦	୧୫.୭୫୦	

ASIS KU Rathi.  
(Amit)

  
**Revenue Inspector**  
 Salegoan-Budhananka-Talcher-Jharpada  
 3rd & 4th Line Project, Dhenkanal

  
**Land Acquisition Collector,**  
 Salegoan-Budhananka-Talcher-Jharpada  
 3rd & 4th Line Project, Dhenkanal