

# Study on Development Projects, Displaced Tribals & Their Living Conditions

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## Foreword

Economic development has been and will continue to remain the national priority. To accelerate the pace of growth, infrastructure development projects have been taken up and expected to come up in a large scale in different sectors in coming years. But, instituting many of these mega projects require land and to meet the land requirement of these projects, displacement of people seems an unavoidable prerequisite. Displacement remains a reality in the current development scenario and more such events can be expected in coming days with the rising aspiration for higher economic growth.

Since Independence, many of such infrastructure development initiatives have been taken up at the national level, like development of industrial corridors, hydro-power projects, irrigation projects etc. The socio-economic development of tribals and the rate of displacement in different projects shows that the tribals have been facing a disproportionate share of displacement in the overall process. In most of these mega project, tribals remain the major sufferer of development induced displacement whereas their share in the benefit of the project remain neglected. Different studies highlight how tribal families suffer due to such development projects because of poor implementation of safeguard policies to rehabilitate and resettle them. Their socio-cultural life and economic environment are very often neglected in the process. Displacement of tribals is not only their physically displacement from their homeland, but displacement from their environment, social belongingness, economic practices & cultural life which are immeasurable and difficult to compensate. Physical relocation of the displaced tribals normally considered primary, rather than restoration of their livelihoods and living conditions.

But appropriate and feasible R & R policy could have minimized the plight of the people and could have been helpful to improve their condition in the post-displacement situation. Non-adoption of required measures for rehabilitation and resettlement made the life of the oustees measurable. The critical requisites that are important for the survival of the displaced tribals, i.e., employment, Land for production and access to other resources were not focused appropriately in the post-displacement periods. Thus, even decades after their displacement, they are not able to come out of the distress situation.

The current study is innovative and exclusive in many respects to previous studies. The study examines the condition of the tribals, after decades of displacement, in two different project typologies, i.e., displacement caused due to hydro-power projects and displacement for the establishment of large scale industrial units. The study compares the socio-economic status of displaced tribal families with the non-displaced tribals, belonging to same village / location,

before evacuation. The overall objective of the study is to understand the current living condition of the displaced (after years of resettlement) and affected tribals, contributions made by the project for which they were displaced were also taken in to account. So, the study is an attempt to understand the overall socio-economic growth of the tribals, in two different set-ups (displaced and non-displaced) and to examine how far the project, for which these tribals were displaced or affected, has contributed in their development.

The study finds that it is not only displaced but condition of non-displaced families is also more or less same. Acquisition of productive land can be attributed as one of the reasons but it is not the prime reason. Had displacement been the sole factor of impoverishment, similar situation would not have prevailed in the non-displaced tribal villages. In industrial projects, resettled oustees observed comparatively in a better living condition in comparison to hydro-power or irrigation projects. One of the reasons has been development of market mechanisms around the industrial units and availability of different employment opportunities which are relatively remunerative than the agricultural labour. So, regional development scenario play an important role in the overall development of the displaced tribals rather than only displacement and related rehabilitation. It is inferred that had there been better economic growth in the region, the condition of the project oustees would have different from the present condition.

I expect that this report will be of use for policy makers and implementing entities at the national and state level. The findings of this study may act points of reference for taking appropriate policy decisions and strengthening implementation mechanisms that can restore the livelihoods of the people, in cases of emergence of requirement for displacement. I take this opportunity to recommend to conduct similar studies in different parts of the country to understand the benefits that have accessed by the displaced tribals for which they were displaced and expected conditions if they would not have displaced from their homeland. This will help in devising appropriate policy for socio-cultural and economic rehabilitation of tribal.



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## Abbreviations

AIDS	Acquired Immuno-Deficiency Syndrome
ANM	Auxiliary Nurse Mid-wife
ASHA	Accredited Social Health Activists
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BPL	Below Poverty Line
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CHC	Community Health Centre
CSR	Corporate Social Responsibility
HAL	Hindustan Aeronautics Limited
IAY	Indira Awas Yojana
IRR	Impoverishment Risks and Reconstruction
LAA	Land Acquisition Act
LARR	Land Acquisition and Resettlement and Rehabilitation
MFP	Minor Forest Produce
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MSME	Micro Small and Medium Enterprise
NAD	Naval Armament Depot
NALCO	National Aluminum Company
NPRR	National Policy on Resettlement and Rehabilitation
NPR	National Rehabilitation Policy
NTFP	Non-Timber Forest Products
OC	Other Caste
ORRP	Odisha Resettlement and Rehabilitation Policy
OUAT	Odisha University of Agricultural Technology
PDS	Public Distribution System
PHC	Primary Health Centre
PSU	Public Sector Undertaking
R & R	Rehabilitation and Resettlement
RSP	Rourkela Steel Plant
SC	Scheduled Caste
SCSTRTI	Scheduled Caste, Scheduled Tribe Research and Training Institute
ST	Scheduled Tribe
UIP	Upper Indravati Project
UN	United Nations

## Executive Summary

### Study Context:

To understand the socio-economic status of the displaced and non-displaced families in a comparative mode, SCSTRTI, Government of Odisha initiated the present study to understand different socio-economic factors of change in line with the IRR model. This study gives an overview on whether impoverishment and marginalisation is only because of displacement or it is a common phenomenon of the region which also affects the non-displaced communities.

### Study Objective

The overall objective of the study was to understand current living condition of displaced tribals and contribution made by the project for which they were displaced. The study also looks at comparative development of displaced tribals and non-displaced tribals in their respective place of living. The study attempts to explore two important research questions, i.e., has development projects contributed to the development of the displaced people in the way it has contributed to the development of the non-displaced people; and secondly Has there been developmental change of the displaced families in adherence to the “Risk and Reconstruction” Framework Model.

### Study Design and Methodology

The study design is primarily base on the risks and reconstruction mode of M. M. Cernea, 1997. The study adopted observational / non-experimental study design to understand different facets of welfare and development of displaced vis-a-vis non-displaced families. The study adopted a participatory and consultative process, covering different stakeholders, including the displaced, non-displaced and project officials. Available secondary literature were reviewed and based on the findings, different study instruments were designed. The study is both qualitative and quantitative in nature deploying qualitative and quantitative research techniques.

The study covered two hydro-power and two industrial projects in three districts of the state. The projects covered under the study are Harabhangi (Gajapati district) irrigation project, the Hindustan Aeronautics (HAL in Koraput), Upper Kolab hydro-power project (Koraput district) and Rourkela Steel Plan (Sundargarh district).

From each project, two different locations were studied, i.e., resettled colonies of the displaced families and the project affected villages. A total of 400 households were covered from

displaced and resettled communities, 100 households from each project, and a total of 100 households from non-displaced villages at 25 households from each project. So, the study covered, a total of 250 households (50.0 percent) from hydro-power and 250 sample households from industrial units. The study used both structured and semi-structured tools for different category of stakeholders / respondents. Structured tool developed for displaced and non-displaced families whereas semi-structured tool developed for secondary stakeholders like project authorities, Government officials.

### **Displacement**

In Koraput, families were displaced for the first time in 1963 for the establishment of HAL and again they were displaced between in year 1984-87 for Upper Kolab. Families were displaced in the year 1997 for Harabhangi hydro-power project in Gajapati and in case of RSP, 50.0 percent of sample families were displaced in the year 1954 and remaining 50.0 percent in the year 1957.

### **Homelessness**

After the displacement due to HAL, neither home nor homestead land was provided by the project. Instead of land for land, financial compensation was provided for homestead land. The displaced families were settled on their own by constructing houses in the available government land. In Upper Kolab, none of the families were provided home under the project. All the displaced families were provided homestead land of 0.50 acre. Similar mode of compensation is observed in Harabhangi irrigation project. None of the families were provided home under the project but all the displaced families were provided homestead land of 0.08 acre. For the construction of house at the identified colony, Rs.20, 000/- was provided to each displaced family. In case of RSP, none of the families were provided home under the project but 2400 2400 sq. ft. land was provided to each displaced family. The displaced families constructed their own house in the specified homestead land provided by the project.

There is no significant difference in terms of having house in displaced and non-displaced families. Before displacement, about 99.8 percent displaced families were having Kutchha house and the situation was more or less same (100.0 percent) to those families who were not evacuated from their village. At present, among the displaced families, 23.8 percent still have Kutchha house, whereas 45.5 percent are having mixed house and 30.8 percent are having Pucca house. In case of non-displaced tribals, prevalence of mixed houses observed more (63.0 percent) followed by Kutchha (20.0 percent) and Pucca houses (17.0 percent). Overall there is a change in house type in both displaced and non-displaced tribal families.

Number of living rooms in the houses has also increased in both displaced and non-displaced families. Availability of Kitchen and cattle shed inside the house has reduced in both the cases and more number of families are now having electricity connection in both the settlements. In comparison to earlier situation, when most of the families were not having homestead land of their own, substantial growth observed in terms of holding homestead land in both displaced and non-displaced families. Looking at the trend of housing and related facilities, it is evident that general tribal welfare and common welfare schemes has contributed comparatively in a higher degree than the project for which they were displaced.

### **Landlessness**

Among the displaced families, about 89.3 percent were having agricultural land and 94.0 percent having homestead land. Whereas, in case of non-displaced families, 97.0 percent were having agricultural land and 98.0 percent having homestead land. Average agricultural land holding of the displaced families were 5.26 acres and 5.71 acres in case of non-displaced families. Average size of homestead land holding was 0.16 acres in case of displaced and 0.13 acres in case of non-displaced families.

Type of land possessed by the displaced and non-displaced families' reveals that percentage of families possessing low land was relatively high in all the projects which are normally high yield land types. Average holding of high land is also significant among the displaced and non-displaced families. Before displacement, average land holding of the family, irrespective of displaced or non-displaced and irrespective of project type, was 4.95 acres. With land acquisition for the project and no procurement of land by the families in the later stage, average land holding decreased to 0.77 acres. Before displacement, about 91.75 percent displaced households were having land, irrespective of its size, which reduced to 35.35 percent after displacement. Similarly, in non-displaced tribal community, 97.0 percent families were having land. But with the project, it reduced to 51.0 percent. It indicates that many families became landless, after the implementation of the project.

In industrial HAL project, about 90.0 percent displaced families, prior to displacement, were having land and average size of holding observed to be 6.07 acres. But after displacement, only 2.0 percent families are now holding land and average holding size remains 0.05 acres. In the non-displaced category, 96.0 percent families were having land and average holding size was 5.68 acres. But after acquisition of land, the holding size reduced to 0.78 acres and only 36.0 percent families now hold land among non-displaced families.

In Harabhangi irrigation project, average holding size of the displaced families was 3.87 acres and about 90.0 percent families were holding land. With displacement, percentage of families holding land reduced to 50.0 percent and holding size also reduced to 0.44 acres. In the non-displaced families, average holding size reduced from 1.71 acres to 0.94 acres and percentage of families holding land reduced from 100.0 percent to 88.0 percent.

In RSP where 98.0 percent families were having land before displacement and average size of holding was 4.06 acres. In due course, with displacement, the holding size reduced to 0.16 acres and percentage of family holding land remaining at 8.0 percent. On the other hand, families living in affected villages were having on an average 5.26 acres of land and 100.0 percent families were having land prior to the project. But, later, because of the project, many families became landless and now only 16.0 percent families hold land and average holding size remain at 0.34 acres.

In Upper Kolab hydropower project, percentage of families holding land reduced from 89.0 percent to 81.0 percent after displacement and average holding size reduced from 5.22 acres to 2.06 acres. In case of non-displaced families, the average holding size reduced from 6.89 acres to 1.86 acres. Percentage of families holding land also reduced from 92.0 percent to 64.0 percent.

### **Land Acquisition**

The studied four projects have displaced a total of 6909 families from their village, of which highest of 54.93 percent are tribals followed by other backward classes (29.48 percent). Further, tribals are highest among all the displaced families in all the projects. All these project have acquired a total of 53,484.57 acres of private land of which highest quantum of land is acquired for Upper Kolab hydro-power project (46.22 percent of total land acquired for four projects) followed by RSP (36.88 percent of total land acquired for all the four projects) and lowest in Harabhangi project (3.26 percent). Apart from private land, these projects also acquired available government land.

The study finds that in HAL, all the agricultural and homestead land under the possession of the displaced families were acquired by the project. In Harabhangi project, about 97.91 percent agricultural land and 100.0 percent homestead land under the possession of displaced families were acquired. In case of RSP, 99.73 percent agricultural land and all the homestead land were

acquired while in Upper Kolab, 87.75 percent agricultural land and 96.24 percent homestead land of the total holding of the displaced families were acquired.

In case of non-displaced categories, about 88.73 percent of the total agricultural land acquired in HAL, 63.59 percent land by Harabhangi irrigation project, 96.96 percent land by RSP and 96.24 percent of the total agricultural land possessed by non-displaced families were acquired by the Upper Kolab hydro-power project. The families not only lose the land but they also lose fertile and irrigated land along with other land. A total of 239 acres of irrigated land (irrigated from all sources) reduced to 4.0 acres after displacement. In case of non-displaced, it reduced from 59.0 acres to 7.0 acres in HAL. Similar trend is observed in other projects where the tribal families lose their cultivated irrigated land.

### **Compensation for Acquisition**

In HAL, neither agricultural land nor homestead land was provided to any family after displacement. Families are still living in the Government land without ROR. The project provided compensation for agricultural land at the rate of Rs.250.00 per acre for Low land, Rs.150.00 per acre for medium land and Rs.100/- per acre for High Land. As some families suffered from double displacement, all these displaced families were provided with Rs.14, 040.00 as compensation for homestead land by Upper Kolab when they were displaced for the second time. In Upper Kolab, each displaced family was provided with 3 acres of irrigated land or 6 acres of un-irrigated land. The families, who were not provided with stipulated amount of land, were compensated with Rs.4, 320.00 for 1 acre of irrigated land and Rs.2, 160 for 1 acre of un-irrigated land. In the non-displaced villages, only land compensation was provided to the families those lost agricultural land under the project. The affected families were compensated with Rs.14, 040/- against their land and houses.

In Upper Kolab, Land for land was provided to the displaced families, wherever it was feasible. ROR was also provided to each displaced families for both agriculture and homestead land. However, the land provided under the project was less fertile than their own land which were acquired by the project.

In Harabhangi irrigation project, land for land was provided to the displaced families. The displaced families were provided with 0.60 acre of agriculture land and 0.08 decimal of homestead land. For the given land, ROR was also provided to each family for both agriculture and homestead land. In non-displaced villages, only land compensation was provided. Because of low availability of land, many farming tribal families acquired available government land for

cultivation, apart from using their own compensated land. In case of RSP, land compensation was provided to the families those who lost agricultural land under the project. Land compensation amount varies depending upon the pre-acquisition holding size.

### **Joblessness and Marginalization**

About 62.0 percent families belong to BPL category and highest percentage of BPL families, irrespective of displaced and non-displaced category, found in Harabhangi irrigation project (89.6 percent) followed by Upper Kolab (76.0 percent). Lowest percentage of BPL families among the sample households (39.2 percent) observed in HAL followed by RSP (43.2 percent). About 58.5 percent families are below the poverty line among the displaced whereas 76.0 percent families are below the poverty line among the non-displaced tribals.

Study reveals that no permanent job was provided by the project HAL to the displaced and/or affected families. But people were employed in HAL in their own capacity and capability. In Upper Kolab hydro-power project, more or less similar trend is observed. Normally, scope of direct engagement remains low in hydro-power and irrigation projects, in comparison to industrial projects. In Harabhangi irrigation project, job opportunity was not observed where the displaced families can engage them permanently. However, at the time of displacement, some people were provided temporary job (operator, store keeper) under the project for two to three years and some are provided with daily wage labour. After displacement, families were offered temporary and permanent jobs by RSP, based on their ability to work. Because of the scope of employment, after displacement, living standard of the displaced has improved. Even opportunities of employment were offered to the affected villagers.

### **Food Security**

In the production side, about 61.5 percent displaced tribal families produce their own food through agricultural activities, whereas 38.5 percent do not cultivate and hence depend upon other sources. In the non-displaced families, 59.0 percent do farming and produce their own food and 41.0 percent depend upon other instruments of food supply. Looking by Specific projects, it is evident that among the displaced, lowest percentage of producer are in RSP (8.0 percent) followed by HAL (54.0 percent) whereas highest percentage of producers in the displaced category are in Upper Kolab (94.0 percent) and Harabhangi Project (90.0 percent).

Similar trend is also observed in case of non-displaced families. Lowest percentage of non-displaced families observed in production system in RSP (28.0 percent) and HAL (44.0 percent) and highest in Harabhangi (92.0 percent) and Upper Kolab (72.0 percent). So, in industrial area,

percentage of producer to the total tribal families, irrespective of displaced or non-displaced, are comparatively less than hydro-power projects.

About 12.6 percent families did not have any food insecurity period before displacement, irrespective of their status of displaced and non-displaced. After the project, it increased to 25.0 percent. About 5.6 percent families were having lean period of one month which increased to 13.8 percent. Lean period for two months increased from 25.4 percent to 38.2 percent, 3 months lean period was for 32.8 percent earlier which has reduced to 19.6 percent. Four to five months lean period has also reduced among the families. In the distribution side, about 10.5 percent displaced families and 11.0 percent non-displaced families were accessing food stuff from PDS whereas now almost all the families having accessibility.

Forest was major source of food supplement for the tribals. About 26.45 percent displaced families and 27.22 percent non-displaced families were accessing edible roots from the nearby forest area. But due to displacement, only 5.85 percent resettled families are now able to access it.

#### **Agricultural Production and Productivity**

With the reduction of land holding, area (own) put to agriculture also reduced. Before the project, a total of 1617 acres of land was put to paddy cultivation by all these families, irrespective of their displacement status. With average yield of about 5.75 quintals per acre, total paddy production of these families was about 9,330 quintals. Apart from cultivating own land, they were also cultivating available forest and other land (70 acres) from which they were producing 402 quintals (yield rate of 5.75 quintal per acre) of paddy per year. Now, with same yield rate, total production from own land reduced by 80.77 percent (1,794 quintals). But in the post-project situation, due to less availability of own land, cultivation of other land, including encroached land increased from 70 acres to 356 acres and total production from other lands also increased from 402 quintals to 2,020 quintals.

#### **Common Property Resource and Accessibility**

There is a change in the availability, accessibility and utilization of various common property resources. Among the displaced families, availability of local forest reduced and for all the displaced families. Availability of forest resource also observed reduced for the non-displaced families, in comparison to pre-project situation. With reduced availability, accessibility and utilization of forest resources by the displaced and non-displaced families has also reduced. In resettled villages, the displaced face problems with regard to utilization of common property



resources. After displacement villagers have less or no access to forest, grazing land, village orchard, community well, and community pond. However, CSR activities by industrial units have been supporting in creating different facilities and infrastructures.

### **Health Care and Morbidity**

It is observed that morbidity has not increased for the majority of the displaced families (76.8 percent). Similar trend is also observed in case of non-displaced (76.0 percent). Major factors that have contributed for containing the morbidity are better health care services and improved infrastructural facilities. Among the evacuated families, about 99.0 percent feel that current health care facilities available to them are better than their old village. The health care facilities are created in both resettled and non-displaced villages in order to provide services to the people.

### **Social Disarticulation**

About 98.5 percent families are still in contact with other villagers and their relatives in the original or other resettled places. They also attend in social functions / cultural events of others and support each other at the time of requirement. This reveals that socio-cultural interaction is not that frequent which was before displacement due to common place of habitation. However, the socio-cultural fabric is still intact among them.

### **Organization of the Report**

The report is having nine chapters to cover different study aspects. **Chapter I** gives an overview of the study and discuss about the study approach and methodology. **Chapter II** gives the policy perspective and discuss about evolution of relevant acts and policies related to land acquisition, rehabilitation and resettlement at the national and state level. The studied projects and study area characteristics are discussed in **Chapter III** to give basic understanding about the project and people displaced and their resettlement. Housing and Homelessness aspect is discussed in **Chapter IV** in a comparative mode, i.e., displaced Vs non-displaced tribal families. This chapter also gives a view of compensation given by the projects under study for housing of displaced oustees. Land possession, land acquisition, compensation and landlessness is discussed in **Chapter V**. **Chapter VI** discuss about tribal livelihoods, employment, joblessness and marginalization in the context of four studied projects, comparing the status of displaced and non-displaced families. Food security / insecurity and health status, including morbidity is discussed in **Chapter VII**. **Chapter VIII** discuss on the social disarticulation and also socio-cultural assimilation of tribal oustees with other villagers. Overall study findings and key recommendations are presented in the last chapter, i.e., **Chapter IX**.

## Chapter I: Introduction and Study Overview

### 1.1 Introduction

Displacement refers to the process of expropriation of land and other assets like employment, home, production system (Behura, 1990). “It is conceived as systematic alienation of individuals and communities’ customary and legal rights and privileges of using, managing and controlling their habitat/sources of livelihoods through officially ordained force of coercion which becomes disruptive and painful” (Cernea, 1990). With increasing requirement of infrastructure, development-induced displacement is gradually becoming a phenomenon which is more common. While the beneficiaries of development are numerous, the costs are being borne disproportionately. The eviction of the tribal communities from their traditional habitation has been an essential ingredient for industrial development. Of the 2 percent of total displaced population in the first forty years of the country’s independence (1951 to 1990), 40 percent were tribal people though they comprised only 8 percent of the population (Rew, Fisher & Pandey, 2000). While tribals constitute a little over 8 percent of the population of the country, it is estimated that they are more than a third of those displaced on account of projects, particularly those related to irrigation (Govt. of India, 1985).

Development induces displacement and large scale infrastructural for greater development induces large scale displacement. Unfortunately, tribals have been the major victims of such infrastructure oriented development process. Displacement leads to impoverishment, marginalization, dehumanization and frustration among the people affected or displaced in the process. Because of such development initiatives, a larger section of tribals are forcibly evicted from their well knitted social fabric and years of establishment. Such projects, while bring fortune to a few, it pushes majority to distress and a state of marginalisation from which they hardly comes back to a normal conducive situation during their life time. It is not only the physical displacement, but post-displacement governance and socio-cultural factors associated with it is primarily responsible.

The most widespread effect of involuntary displacement is the impoverishment of considerable numbers of people. In India, the country’s development programs have caused an aggregate displacement of more than 20 million people during the last four decades, of which 75 percent

of the people are yet to be “rehabilitated” (Fernandes 1991; Fernandes, Das, and Rao 1989)”. As a result their livelihood is severely compromised with resulting in their perpetual impoverishment (Mahapatra 1999 b).

Forced displacement results in social exclusion from a known geographic territory to an unknown territory with a variety of potential challenges of living. As per the estimation of Indian Social Institute, New Delhi, 21.3 million persons were displaced because of development projects; of this, 16.4 million were displaced on account of dams only. According to the Central Water Commission, 3,300 dams had been built since 1947 and another 1,000 are under construction. According to the intimate of the Indian Institute of Public Administration, New Delhi, a large dam on average displaces 44,182 persons (Lama, 2000). The worst affected population belongs to the scheduled castes and tribal groups, whose livelihood, land, assets and social networks are largely compromised with resulting in their worse impoverishment.

After independence, economic development was the priority of the national government and in order to accelerate the process, different development projects were launched in India. Various development projects that have been taken up in the country are hydro-power and irrigation Projects, industrial projects, mining projects, thermal power plants, roads and urban infrastructure etc. All these development projects caused displacement of people from their own land in order to fulfil the land requirement of the project.

A number of such initiatives have been taken at the national level and also in the state of Odisha to augment development in different sectors. According to Michael M. Cernea, the main causes of development-induced displacement include: water supply (construction of dams, artificial reservoirs, irrigation projects), urban infrastructure, transportation (roads, highways, canals); energy (mining, power plants, oil exploration and extraction, pipelines), expansion of agriculture, parks and forest reserves and population redistribution schemes<sup>1</sup>. According to Bogumil Terminski the principal causes of Development Induced Displacement and Resettlement (DIDR) include (1) construction of dams, hydro-plants, and large irrigation projects, (2) the building of highways, roads and railroad networks, (3) urbanization and social services (expansion of cities, urban transport, water supply), (4) expansion of agriculture (especially monoculture plantations), (5) mining (oil exploitation, gold, copper, coal mining), (6) conservation of nature, (7) population redistribution schemes, and (8) other causes<sup>2</sup>. The types

<sup>1</sup> Michael Cernea, “Why Economic Analysis is Essential to Resettlement: A Sociologist’s View.” In Michael Cernea (ed) *The Economics of Involuntary Resettlement: Questions and Challenges*, Washington, DC: World Bank. 1999.

<sup>2</sup> Bogumil Terminski, *Oil-induced displacement and resettlement. Social problem and human rights issue*, Simon Fraser University, March 2012; B. Terminski, *Environmentally-Induced Displacement. Theoretical Frameworks and Current Challenges*, Liege, 2012.

of development projects causing displacement range across a wide spectrum. These types of projects can be divided into three categories: dams, urban renewal and development, and natural resource extraction<sup>3</sup>.

While development-induced displacement occurs throughout the world, two countries in particular – China and India – are responsible for a large portion of such displacements. According to Fuggle *et al.* (2000), the National Research Center for Resettlement in China has calculated that over 45 million people were displaced by development projects in that country between 1950 and 2000.

While an estimated 25 million people are displaced worldwide by conflict, the number of people uprooted by development projects is thought to be much higher. In 1994, a study of all World Bank-assisted development projects from 1986-1993 that entailed population displacement found that just over half were in the transportation, water supply and urban infrastructure sectors. Extrapolating from World Bank data to derive estimates of global figures, the study concluded that, in the early 1990s, the construction of 300 high dams (above 15 metres) each year had displaced four million people. Urban and transportation infrastructure projects accounted for six million more displaced each year. Ongoing industrialization, electrification and urbanization processes are likely to increase, rather than reduce, the number of programmes causing involuntary population displacement. Causes or categories of development-induced displacement includes water supply (dams, reservoirs, irrigation); urban infrastructure; transportation (roads, highway, canals); energy (mining, power plants, oil exploration and extraction, pipelines); agriculture expansion; parks and forest reserves; and population redistribution schemes<sup>4</sup>.

Taneja and Thakkar (2000) point out that estimates on displacement in India from dam projects alone range from 21 million to 40 million. The WBED report notes that, in 1993, World Bank projects in China accounted for 24.6 per cent of people displaced in Bank-assisted projects, while Bank-assisted projects in India accounted for 49.6 per cent of the Bank total.

Statistical figures indicate that till 2000, about 20 lakh people have been directly affected by Development Projects in varying degrees out of which about 5 lakh have been physically displaced losing their home & hearth from their original habitat. Statistical figures further indicate that while Dam/Irrigation Projects alone have displaced nearly 3.5 lakh people which is

<sup>3</sup> Terminski B., Mining Induced Development and Resettlement: Social Problem and Human Rights Issue (A Global Perspective), National Research Center for Resettlement in China, Hohai University, Nanjing, China - <http://www.chinaresettlement.com/>

<sup>4</sup> International Development Monitoring Centre (IDMC)

roughly 70% of the total displaced persons, Industrial Projects have displaced about 60,000 people which is 12% of the total displaced whereas the Mining Projects, Urban Development Projects, thermal Projects & Wild Life Sanctuaries have displaced 3.37%, 12.86%, 2.60% & 0.5% of the total displaced people in the State of Orissa. Although the above referred figures account for the already completed projects, there are a host of other projects which are either ongoing or are in the pipeline in which about 2 lakh more people are expected to be displaced<sup>5</sup>.

Table 1: Dams and Displacement of Tribal People

Name of the Project	State	Population Facing Displacement	Tribal Percentage to Total Displaced
Karjan	Gujarat	11,600	100.0
Sardar Sarovar	Gujarat	200,000	57.6
Maheshwar	M.P.	20,000	60.0
Bodhghat	M.P.	12,700	73.91
Icha	Bihar	30,800	80.0
Chandil	Bihar	37,600	87.92
Koel Karo	Bihar	66,000	88.0
Mahi Bajaj Sagar	Rajasthan	38,400	76.28
Polavaram	Andhra Pradesh	150,000	52.90
Maithon & Panchet	Bihar	93,874	56.46
Upper Indravati	Odisha	18,500	89.20
Pong	Himachal Pradesh	80,000	56.25
Inchampalli	A.P. – Maharashtra	38,100	76.28
Tultuli	Maharashtra	13,600	51.61
Daman Ganga	Gujarat	8,700	48.70
Bhakra	Himachal Pradesh	36,000	34.76
Masan Reservoir	Bihar	3,700	31.00
Ukai Reservoir	Gujarat	52,000	18.92

Source: Planning Commission with reference to Satyajit Singh, *Taming the Waters*, OUP, 1997, and Government figures

Today, India is having over 3600 dams; more than 3300 of them built after independence. At least 700 more dams are under construction. According to an Indian government working group, 40 to 50 percent of those displaced by development projects are tribals<sup>6</sup>. The socio-economic development of tribals and looking at the rate of displacement shows that the tribals have faced a disproportionate share of displacement in the overall process. There is no specific measurement of the benefits of these project that have reached to the tribals, who have displaced for a greater cause. However, Anecdotal information indicates that very minimal, if at all any, benefits of such dams and the related green revolution and electricity have reached to the tribals. Displacement is not only a physically displacement of people from their homeland, it

<sup>5</sup> Ota A. B, *Reconstructing Livelihood of the Displaced Families in Development Projects Causes of Failure and Room for Reconstruction*, 2001

<sup>6</sup> Adivasis, Dams, and Displacement in India; <https://www.culturalsurvival.org/ourpublications/csq/article/adivasis-dams-and-displacement-india>; Accessed on Date 24.1.2016, 7.15 PM IST

also causes environmental, social, economic & cultural losses to the people which are immeasurable and which is very hard to compensate & restore in the post-displacement stage<sup>7</sup>.

Table 2: Irrigation Projects and Displacement by Social Category in Odisha

Sl. No.	Projects	Displaced Families			
		General	SC	ST	Total
<b>A</b>	<b>Multipurpose</b>				
1	Hirakud	-	-	1,636	22,144
2	Balimela	-	-	-	1,200
3	Salandi	32	5	352	569
4	Rengali	8,015	1,710	1,172	10,897
5	Upper Indravati	1,557	338	1,630	3,725
6	Upper Kolab	1,308	442	1,421	3,171
	<b>Total</b>	10,912	2,495	6,211	41,706
<b>B</b>	<b>Major Irrigation Project</b>				
1	Subarnarekha	2,246	416	6,382	9,044
2	Rengali Irrigation	918	81	10	1,009
	<b>Total</b>	3,164	497	6,392	10,053
<b>C</b>	<b>Medium Irrigation</b>				
1	Dadraghati	228	66	133	427
2	Derjang	327	29	-	356
3	Baghua	406	8	96	510
4	Ghodahad	3	-	65	68
5	Baghlati	17	15	91	123
6	Dumberbahal	74	23	156	253
7	Pilasalki	57	24	104	185
8	Kuanria	49	54	48	151
9	Daha	3	10	7	20
10	Remal	1	2	1	4
11	Sarafgarh	26	3	0	29
12	Jharbandh	120	2	4	126
13	Talsara	1	3	19	23
14	Gohira	51	18	74	143
15	Ramiala	166	159	89	414
16	Sunet	84	2	267	353
17	Kanjhari	113	4	80	197
18	Bankbahal	98	35	149	282
19	Kansbahal	10	29	172	211
20	Hariharjore	140	41	213	394
21	Harbhangi	17	8	128	153
22	Badnala	4	2	163	169
23	Upper Jonk	46	30	225	301
	<b>Total</b>	2,041	567	2,284	4,892
	<b>G. Total</b>	16,117	3,829	14,887	57,386

<sup>7</sup> Ota A. B, Reconstructing Livelihood of the Displaced Families in Development Projects Causes of Failure and Room for Reconstruction, 2001

According to WGHR Report, Between 60 and 65 million people are estimated to have been displaced in India since Independence, the highest number of people uprooted for development projects in the world. This amounts to around one million displaced every year since Independence, says a report released by the Working Group on Human Rights in India and the UN (WGHR). "Of these displaced, over 40% are tribals and another 40% consist of Dalits and other rural poor," says the WGHR report. Not taking into account displacement due to armed and ethnic conflict, India is estimated to have the highest number of people displaced annually as a result of ostensible development projects<sup>8</sup>.

There is painful irony, and possible design, in the fact that there are no reliable official statistics of the numbers of people displaced by large projects since Independence. Many researchers place their estimates between 10 and 25 million. In an influential 1989 study, Fernandes, Das and Rao provide an estimate of some 21 million displaced persons (Fernandes 1991). According to N. C. Saxena, persons displaced by big projects since 1947 are about 50 million. According to a detailed study of 54 Large Dams done by the Indian Institute of Public Administration, the average number of people displaced by a Large Dam is 44,182 (Roy, 1999).

### **Theoretical Models**

In the early 1980s, building upon earlier approaches that dealt primarily with the processes of voluntary resettlement, Scudder and Colson proposed a four-stage model of how people and socio-cultural systems respond to resettlement. The stages were labelled **recruitment, transition, potential development, and handing over or incorporation**. In the recruitment phase, policy-makers and/or developers formulate development and resettlement plans, often without informing those to be displaced. During transition, people learn about their future displacement, which heightens the level of stress experienced. Potential development occurs after physical relocation has occurred. Displacees begin the process of rebuilding their economy and social networks. Handing over or incorporation refers to the handing over of local production systems and community leadership to a second generation of residents that identifies with and feels at home in the community. Once this stage has been achieved, resettlement is deemed a success.

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<sup>8</sup> (Source: Mukherjee Anahita, India uproots most people for progress, Jun 4. 2012; <http://timesofindia.indiatimes.com/india/India-uproots-most-people-for-progress/articleshow/13792551.cms>)

The Scudder–Colson model focused on the different behavioral tendencies common to each of a series of stages through which resettlers passed. At first, the model was formulated to explain the stages of voluntary settlement, and was only later applied to some cases of involuntary resettlement. In the 1980s and 1990s, the mounting evidence of involuntary resettlement schemes that failed to pass through all four stages suggested that a new model was necessary to explain the consequences of involuntary relocation. In particular, it was recognized that a new theory was necessary to model what was increasingly seen as predictable impoverishment in forced resettlement schemes.

Cernea’s Impoverishment Risks and Reconstruction (IRR) model arose in the 1990s in response to this recognition. In contrast to the Scudder–Colson model, the IRR model does not attempt to identify different stages of relocation, but rather aims to identify the impoverishment risks intrinsic to forced resettlement and the processes necessary for reconstructing the livelihoods of displacees. In particular, it stresses that, unless specifically addressed by targeted policies, forced displacement can cause impoverishment among displacees by bringing about landlessness, joblessness, homelessness, marginalization, food insecurity, loss of access to common property resources, increased morbidity and mortality, and community disarticulation.

**Landlessness:** Expropriation of land removes the main foundation upon which people’s productive systems, commercial activities, and livelihoods are constructed.

**Joblessness:** The risk of losing wage employment is very high both in urban and rural displacements for those employed in enterprises, services or agriculture. Yet creating new jobs is difficult and requires substantial investment.

**Homelessness:** Loss of shelter tends to be only temporary for many people being resettled; but, for some, homelessness or a worsening in their housing standards remains a lingering condition. In a broader cultural sense, loss of a family’s individual home and the loss of a group’s cultural space tend to result in alienation and status deprivation.

**Marginalization:** Marginalization occurs when families lose economic power and spiral on a “downward mobility” path. Many individuals cannot use their earlier-acquired skills at the new location; human capital is lost or rendered inactive or obsolete. Economic marginalization is often accompanied by social and psychological marginalization.



**Food Insecurity:** Forced uprooting increases the risk that people will fall into temporary or chronic undernourishment, defined as calorie-protein intake levels below the minimum necessary for normal growth and work.

**Increased Morbidity and Mortality:** Displacement-induced social stress and psychological trauma, the use of unsafe water supply and improvised sewage systems, increase vulnerability to epidemics and chronic diarrhoea, dysentery, or particularly parasitic and vector-borne diseases such as malaria and schistosomiasis.

**Loss of Access to Common Property:** For poor people, loss of access to the common property assets that belonged to relocated communities (pastures, forest lands, water bodies, burial grounds, quarries and so on) result in significant deterioration in income and livelihood levels.

**Community Disarticulation / Social Disintegration:** Displacement causes a profound unraveling of existing patterns of social organization. This unraveling occurs at many levels. When people are forcibly moved, production systems, life-sustaining informal networks, trade linkages, etc are dismantled.

To these risks, Downing and others have added: loss of access to public services, disruption of formal education activities, and loss of civil and human rights. The model also recognizes risks to the host population, which, while not identical to those of displacees, can also result in impoverishment. Not all of these processes necessarily occur in each case of forced resettlement and not all displaced households are necessarily affected in the same way by each process. Rather, the model notes that, when taken together, these processes capture the reasons behind many failed resettlement operations. Aside from distinguishing risks, the IRR model serves several other functions: as a predictor of impoverishment; as a guide for formulating research hypotheses and conducting theory-led field investigations research; and as a compass for risk reversal, advocating targeted resettlement policies, such as land-based (as opposed to mere cash-based) resettlement, job creation, health and nutritional safeguards, and social network rebuilding.

### **Displacement and Human Rights:**

In 1986, the UN General Assembly adopted a Declaration on the Right to Development, which states that "every human person and all peoples are entitled to participate in, contribute to and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized." The heart of the problem is that people displaced by development projects are generally seen as a necessary sacrifice on the road to

development. The dominant perspective is thus that the positive aspects of development projects, the public interest, outweigh the negative ones, the displacement or sacrifice of a few<sup>9</sup>.

However, a change in paradigm has emerged in recent years with more emphasis on human rights and social justice. These rights include:

**Right to Participation.** The affected communities must be able to participate in different levels of decision-making, from the local (project), state (programme), national and international levels. The right to participation is well grounded in the International Bill of Human Rights (for instance, ICCPR, art. 25). More specifically, the 1991 International Labour Organization Convention Concerning Indigenous and Tribal Peoples in Independent Countries (ILO Convention 169) stipulates (Article 7) that indigenous and tribal peoples shall participate in the formulation, implementation and evaluation of national and regional development plans that affect them.

**Right to Life and Livelihood.** When security forces take action to move people forcibly or to quell civil dissent against development projects, this may constitute a direct threat to the right to life, which is protected in the UDHR (Article 3) and the ICCPR (Article 6). The right to livelihood is threatened by the loss of home and the means to make a living – whether farming, fishing, hunting, trading or the like – when people are displaced from habitual residences and traditional homelands. The right to own property and not to be arbitrarily deprived of this property as well as the right to work are spelled out in the UDHR (Articles 17 and 23, respectively) as well as in Article 6 of the ICESCR. Article 11 of the ICESCR, moreover, provides for "the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions".

Included in the right to life is the right to environment. This concept has also been phrased as "intergenerational equity" or the right of future generations to inherit a planet, or a particular piece of it, that is capable of sustaining life. The many linkages between protection of human rights and protection of the environment have long been recognized. The 1972 United Nations Conference on the Human Environment declared that "man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights--even the right to life itself".

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<sup>9</sup> Robinson W. Courtland, *Risks and Rights; the Causes, Consequences and Challenges of Development-Induced Displacement*, Brookings Institutions-SAIS Project on Internal Displacement, May 2003

**Rights of Vulnerable Groups:** While development projects may create vulnerability through impoverishment, they disproportionately affect groups that are vulnerable to begin with, particularly indigenous peoples and women. Human rights of vulnerable groups are protected generically in the International Bill of Human Rights. The ILO Convention 169 spells out protections for indigenous groups. The principle of non-discrimination is not only codified in the UDHR (Article 2), the ICCPR (Article 2) and the ICESCR (Article 2) but also in the 1979 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

**Right to Remedy.** The right to remedy is asserted in the UDHR (Article 8) and in the ICCPR (Article 2). As noted in a report to the World Commission on Dams, “often, due to the nature of the development process, the project-affected peoples come to know about actions that have been taken without their knowledge or consent. Therefore, they need a quick and efficacious remedy that can halt on-going violations and prevent future ones. The right to remedy is therefore crucial...to all development projects.”

## 1.2 Contextual Relevance of the Study

Many literatures observe displacement in a conventional way that are linked to people’s suffering and measurable condition of the displaced. Different studies that are conducted are either during displacement or immediately after it. Some of these studies also attempted to look at the situation from the perspective of the displaced rather than looking at the overall development that has caused due to such mega projects. There is a dearth of studies that are systematically looks at both the sides of the displacement on the issue whether or not the Displaced Persons have regained their former standards of living. But the limited number of studies conducted by Ota on Rengali Multipurpose Dam Project, Pandey on Mahanadi Coal Field, Dalua on Upper Kolab Dam Project & Baboo on Hirakud Dam Project invariably indicate that the Displaced people by & large have failed to restore their former standards of living and majority of them have slipped below the threshold of poverty & have often become impoverished. Comparative analysis of data between the Pre-Displacement & Post-Displacement stage indicate that majority of the affected persons have become relatively landless, homeless and in most of the cases affected persons have lost access to common property resources, Social disarticulation has taken place, job opportunities have reduced making them jobless and most of them have become marginalised. Majority of the Displaced Persons have become further impoverished in the post-displacement stage and many of them

have slipped below the threshold of poverty. In fact, there are a good proportion of such people who have fallen into the debt trap of the unscrupulous moneylenders and in the process have become impoverished.

However, it is also important to understand the socio-economic status of the displaced and non-displaced families in a comparative mode. This can help to reveal whether impoverishment and marginalisation is only because of displacement or it is a common phenomenon of the region (regional development characteristics) which also affects the non-displaced communities. Secondly, it is equally important to look in to whether displacement been the sole factor of impoverishment and marginalisation of tribals or any other confounding factors are there which are also responsible in this regard. Thirdly, the question remains, had there been no displacement, whether situation of these evicted families would have been better? If displacement is primarily responsible for impoverishment, there must be difference in the socio-economic status of the tribals between the displaced and non-displaced. There must be unequal growth in the standard of living between people of these two categories, keeping other socio-economic environmental factor constant. In order to understand these issues, SCSTRTI, Government of Odisha initiated the present study to understand some of these questions in a comparative mode.

### 1.3 Study Objective

The study, titled “Development Project, Displaced Tribals and their Living Conditions” cover displacement caused due to hydro-power as well as establishment of large scale industrial unit. The overall objective of the study was to understand current living condition of displaced tribals (after years of resettlement) and contribution made by the project for which they were displaced. The study also looks at comparative development of displaced tribals and non-displaced tribals, in the given context of their place of residence. So, the study is an attempt to understand the overall socio-economic growth of these tribals, in two different set-ups (displaced and non-displaced) and to examine how far the project, for which these tribals were displaced or affected, has contributed in their development.

### 1.4 Research Questions

This study attempted to explore following research questions which are related to development and welfare of the displaced tribal families.

**Research Question 1:** Has development projects contributed to the development of the displaced people in the way it has contributed to the development of the non-displaced people.

**Research Question 2:** Has there been developmental change of the displaced families in adherence to the “Risk and Reconstruction” Framework Model.

## 1.5 Study Design and Methodology

The study design is primarily based on the “**risks and reconstruction model**” (Cernea, 1997). The choice of the model is because of its comprehensiveness, theoretical outline and a framework that is usable operationally. This model explains the response of displaced populations to economic and social deprivation; suggests novel avenues for conducting field inquiry; and, most crucial—it outlines the constitutive elements of a strategy for problem-solving and planning. The model captures the socioeconomic content of forced displacement and the reestablishment. The framework helps to identify key impoverishment processes in displacement, i.e., **(1) landlessness; (2) joblessness; (3) homelessness; (4) marginalization; (5) food insecurity; (6) loss of access to common property resources; (7) increased morbidity; and (8) community disarticulation**. Conversely, the model suggests that reconstructing and improving the livelihood of those displaced requires risk-reversals through explicit strategies backed up by adequate financing. So, the current study would look in to these aspects in general and with a reversal perspective, i.e., how far these factors have been addressed after years of displacement and resettlement through development measures.

The study adopted observational / non-experimental study design to understand different facets of welfare and development of displaced people /families vis-a-vis non-displaced families. The study encompasses different stakeholders (please refer sample frame) who are directly associated with different development initiatives (hydro power / industry) as well as development of the displaced and rehabilitated population.

The study adopted a participatory and consultative process involving different stakeholders. Available secondary literature were reviewed and based on the findings, different study instruments were designed. The study adopted interview method, focus group discussion and

consultation with project authorities and Government officials. The study is both qualitative and quantitative in nature deploying qualitative and quantitative research techniques.

### 1.5.1 Sample Coverage

The study covered four projects, i.e., two hydro-power and two industrial projects in three districts of the state. All the study districts fall in to scheduled area category having more than 50.0 percent tribal population. In Gajapati, the study covered Harabhangi irrigation project, the industrial unit of Hindustan Aeronautics (HAL) and Upper Kolab hydropower project was studied in Koraput and in Sundargarh the industrial unit of Rourkela Steel Plan was covered under this study.

Table 3: Sample by Intervention and Control

Sample Coverage by Intervention & Control						
	Displaced Households		Control Households		Total	
	No. of HH	Percent	No. of HH	Percent	No. of HH	Percent
Gajapati	100	80.0	25	20.0	125	100.0
Koraput	200	80.0	50	20.0	250	100.0
Sundargarh	100	80.0	25	20.0	125	100.0
<b>Total</b>	<b>400</b>	<b>80.0</b>	<b>100</b>	<b>20.0</b>	<b>500</b>	<b>100.0</b>

From each project, two different locations were studied, i.e., resettled colonies of the displaced families (also referred as displaced families in this report) and the villages where land is acquired for the project but many families were not displaced which are partially affected villages (referred in this report as non-displaced families). As the basic objective of the study is to compare the IRR model components in these two categories of families (displaced families and non-displaced families), households were covered from these two set-ups, i.e., resettled colonies and non-displaced villages. A total of 400 households were covered from displaced communities (100 households from each project) and 100 households from non-displaced villages (25 households from each project). Number of sample households covered in each project are presented below.

The non-displaced (control) villages were studied in a comparative manner with the displaced communities to understand the status of socio-economic growth. The study attempted to understand what would have been the socio-economic status of the displaced tribals, had they not been displaced and allowed to live in their aboriginal village with the community they know for generations. So, the study remains exploratory in nature based on empirical evidences. In

each district and in each project, 100 displaced and 25 control households were studied to understand different socio-economic and cultural aspects.

Table 4: Sample Category by Project Category

Sample Coverage by Project Category						
District	Hydro-Power		Industry		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Gajapati	125	50.0	-	-	125	25.0
Koraput	125	50.0	125	50.0	250	50.0
Sundargarh	-	-	125	50.0	125	25.0
<b>Total</b>	<b>250</b>	<b>50</b>	<b>250</b>	<b>50</b>	<b>500</b>	<b>100.0</b>

Looking by project categories, the study covered a total of 250 households (50.0 percent) from hydro-power and 250 sample households from industrial units for which displacement took place and tribal families living in the area were displaced for the establishment of the project. Villages covered and sample covered by project types (hydro-power and industrial) are presented below.

Table 5: Sample Coverage by Studied Villages in Hydro-power and Industrial Projects

Hydro-Power			Industrial		
Village	No. of Households	Percent	Village	No. of Households	Percent
Adapanka	25	10.0	Badabodenga	25	10.0
Budhaneldhi	25	10.0	Chikapar	50	20.0
Colony 4-A	59	23.6	Dalposh	25	10.0
Colony 4-B	41	16.4	Jalada	50	20.0
Dumuriguda	25	10.0	Jhirpani	50	20.0
Gopalput	25	10.0	Pangiguda	50	20.0
Gudripadar	50	20.0	<b>Total</b>	<b>250</b>	<b>100.0</b>
<b>Total</b>	<b>250</b>	<b>100.0</b>			

## 1.5.2 Study Instruments / Tools

The study used both structured and semi-structured tools for different category of stakeholders / respondents. Structured tool developed for displaced and non-displaced families whereas semi-structured tool developed for secondary stakeholders like project authorities, Government officials. The tools that are used and its salient features are discussed below.

**Household Schedule:** This schedule is structured in nature which captures the responses of both displaced and non-displaced families. The tool captures all the study aspects, as per the “Risk and Reconstruction Model”, i.e., (1) landlessness; (2) joblessness; (3) homelessness;

(4) marginalization; (5) food insecurity; (6) loss of access to common property resources; (7) increased morbidity; and (8) community disarticulation.

**FGD Schedule:** To understand the community response, the Focus Group Discussion (FGD) tool was used which was semi-structured and open ended. The tool was having all the components of the IRR model.

**Consultation Checklist:** Consultation checklist was an open ended checklist used for consultation with project authorities and Government officials about the project.

## 1.6 Study Limitations

Non-availability of required secondary data for detail analysis by project as the projects are quite old.



## Chapter II: Overview of Land Acquisition and R&R Policy

Resettlement and rehabilitation is integral to the right to life guaranteed under Article 21<sup>10</sup> of the Constitution of India. Formulation of policies for rehabilitation of people displaced due to various development measures is hence a constitutional duty of the State. Furthermore, annually, the lives and livelihoods of nearly ten million people across the globe are affected by forced displacement due to infrastructure projects such as irrigation schemes, mines, industries, power plants and roads. Millions of others voluntarily leave their place of residence in search of new livelihoods, or to protect themselves from civil or military conflict. Enough indications are available to show that both forms of displacement are likely to increase in subsequent years. In India and other developing countries, aspiration for a greater economic growth likely to contribute in creating large infrastructures and hence can create more development oustees. In this background, strategies for rehabilitation of such displaced people acquire utmost importance in the current scenario.

### 2.1 Policy Perspective

The new economic policy opened up Indian economy to the private sector and decrease in government expenditure in the social sector. This market-led economy demands better infrastructure and facilities by which faster economic growth can be achieved. Such projects have been the major source of development oustees in the country. Planned development immediately after independence, especially the growth of core sectors like power, mining, heavy industry and irrigation, displaced a large number of persons. All this took place in the name of public interest and in order to attain better economic growth. In the era of new economic policy of liberalization and globalization, improved participation of private sector is desired and thereby increased demand for land. This simply means more displacement for land and thereby putting life and livelihood of more people at risk.

Consequently, the Committee of Secretaries, Ministry of Rural area and employment formulated the National Policy for Resettlement and Rehabilitation of Displaced Persons and drafted the Land Acquisition Bill in 1998. The policy recognized the need to rehabilitate people

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<sup>10</sup> Article 21 of the Constitution reads: Protection of life and personal liberty. No person shall be deprived of his life or personal liberty except according to procedure established by law.

but the bill locates rehabilitation in the statute book by mentioning that where a law exists, those eligible for rehabilitation should apply to claim it. However, no full-fledged law came into existence.

Several State Governments and various policies in the water and energy sector have addressed issues relating to Resettlement and Rehabilitation in the past decade. The National Policy on Resettlement and Rehabilitation formulated by the Ministry of Rural Development (2003) drew from many of these experiences, including the recommendations of the Hanumantha Rao Committee (1998) that was constituted by the Ministry of Power to look into rehabilitation in the Tehri Project<sup>11</sup>. India had no national resettlement and rehabilitation policy for a long time. Only three States, Maharashtra, Madhya Pradesh and Punjab, had state wide resettlement and rehabilitation (R&R) policies. The Maharashtra Project Affected People's Rehabilitation Act of 1976, amended in 1986, is the most comprehensive. Other States have issued Government Orders or Resolutions, sometimes sector-wide but more often for specific projects. Two national parastatal companies, the National Thermal Power Corporation (NTPC) and Coal India Limited (CIL) have completed and issued R&R policies consistent with the World Bank policies<sup>12</sup>. These affected projects across the nation. Many organizations in India had lobbied for a national rehabilitation policy<sup>13</sup>.

While there is no national resettlement policy, land acquisition in India is covered by a national law, the 1894 Land Acquisition Act (LAA) and its subsequent amendments. The LAA allows for land acquisition in the national interest for water reservoirs, canals, plants, fly-ash ponds, transmission lines and highways to be carried out by the respective States, in accordance with its provisions. Under the LAA, compensation is in cash for the loss of land, other productive assets (such as standing crops and fruit and fodder trees), house plots and residences.

The National Policy on Resettlement and Rehabilitation for Projected Affected Families, 2003, was gazetted on February 17, 2004, by the Ministry of Rural Development. The first draft of this policy was brought out in 1993; it was subsequently revised a number of times. The Union Cabinet gave its approval for the National Policy on Rehabilitation and Resettlement, 2007, to replace the National Policy on Resettlement and Rehabilitation for Project Affected Families, 2003.

<sup>11</sup> [nac.nic.in/communication/perspectives\\_on\\_the\\_r&r.pdf](http://nac.nic.in/communication/perspectives_on_the_r&r.pdf)

<sup>12</sup> The World Bank's OD 4.30 requires a review of the legal framework for resettlement in preparing a resettlement plan

<sup>13</sup> <http://his.com/~mesas/resindia.htm>

### 2.1.1 National Policy on Land Acquisition

The history of the land acquisition laws started with the year 1870, i.e. 140 years ago during the colonial period when the Land Acquisition Act 1870 was formulated with the intention of making land available for execution of public works. The number of litigations and acquisition expenses were high under this Act which forced the authorities to formulate a new Act in 1894 which vested more powers on the Collector. The intention was to reduce the time and money spent for litigation purposes. The new Land Acquisition Bill formulated in 1894 was passed on 2nd February 1899 and came to be known as the Land Acquisition Act 1894 (LAA 1894). It came to force on 1st March 1894. This act was used for acquiring lands for public works during the colonial period. India gained independence from the British rule in 1947, but the Indian state continued to use the Act for acquiring land for development purpose without making any significant changes in the basic philosophy of the Act. Minor amendments were made in 1919, 1921, 1923, 1933, 1962, 1967, 1984, and 2007. A comprehensive amendment came in 1984, based on the recommendations of the Law Commission with the intention of strengthening rights of the individual and guaranteeing a modicum of public accountability (Sinha 1996. 1453), but the governing principles continued to remain the same. The amendment of the 1894 Act in 1984 permitted the state to acquire additional land for those who get displaced in the project and also increased the percentage of solatium. The additional acquisition of land was not binding and depended on the interest of the state.

In addition to the LAA 1894 there were other acts through which land could be acquired depending on the nature of the project. The differences in legislative provisions followed by various state government causing selective justice resulted in a recommendation in 1989 by the Conference of the Revenue Secretaries of the State that all lands should be acquired under LAA 1894 alone (ibid). But this remained as a recommendation and still projects continues to be acquired under different legislative provisions, though LAA 1894 remains the principal act for land acquisition in the country. A Land Acquisition Amendment Bill which raised significant questions on the condition of resettlement and rehabilitation was introduced in the Parliament but it got lapsed without discussion in 2009. This was despite the Supreme Court special order for undertaking prompt measures for rehabilitation in the event of acquisition of agricultural lands in large scale from farmers (Patnaik 2009). Further, the definition of public purpose was vague even under the new amendment Bill. The Bill also was not modified to include compensation for those dependent on the land acquired for livelihood (Saxena 2009). Draft Resettlement and Rehabilitation Policies were formulated in 1985, 1993, 1994, 1998, 2004 and

2007 in the backdrop of increasing protests against the land acquisition policy of the state which resulted in extensive displacement, loss of livelihood and destruction of common property resources across the country. But the policy was never provided with a legal status. Recently in 2011 a shift occurred in the land acquisition policy when the Land Acquisition Act was combined with the Resettlement and Rehabilitation policy of the country to formulate the Land acquisition and Resettlement & Rehabilitation Bill. It claimed to be progressive with regard to consultation with the people, transparency of acquisition process, acquisition of agricultural lands as well as issues related to rehabilitation and compensation. But the new Bill raised controversies over the explicit stand taken by the state in facilitating excessive land acquisition in the name of industrialization and infrastructure development without considering the socio-environmental implications.

### 2.1.2 The Central Act: The Land Acquisition Act 1894

The Central Act for land acquisition formulated in 1894 remains to this day as the major Act for supporting the state acquisition of land. It was formed with the intention of acquisition of land needed for public purposes and for Companies. It extends to the whole of India except Jammu and Kashmir. It has remained as the Central Act though state amendments have come in across the years from the period of its formulation. But the basic philosophy of the Act remained the same irrespective of the changes made by the state.

From the above, it is clear that the LA Act was formulated with the objective of acquiring land predominantly for public sector undertakings and other development programmes. The principle of public purpose rests upon the famous maxim *salus populi est suprema lex* which means that the welfare of the people or of the public is the paramount law, and also on the maxim *necessitas publica major est quam private* which means public necessity is greater than private (LAA 1894). But as per the principle of acquisition even if the state is vested with the right to appropriate land for public utility, it is not deemed politic to confiscate private property for public purposes without paying the owner its fair value. Hence the law of compensation is inseparably connected with the law of acquisition (ibid). But the concept of compensation confined itself to a narrow definition of monetary compensation and did not develop into the concept of rehabilitation till the beginning of the 1980s. Also the concept of public purpose in the recent decades, especially after India adopted neoliberal reforms largely included acquisition of land for private companies as well.

### 2.1.3 Resettlement & Rehabilitation (R&R) Policy

In 1967 the Ministry of Food, Agriculture, Community Development and Cooperation brought out a Report<sup>14</sup> which was published by the Department of Agriculture. The following observations (cited in Guha 2005) were made such as i) administrative inaction leads to delay in projects ii) acquisition of good agricultural lands should be avoided as far as possible iii) action to restrict the requisition agency from taking up extra land than required iv) the state has the moral responsibility to rehabilitate the displaced people.

In 1985 the first draft of the National R&R policy was prepared. It was prepared by a committee appointed by the Ministry of Tribal Welfare when it was found that above 40 percent of the displaced people from the 1950s belonged to tribes. In 1986 a decision was made by the Bureau of Public Enterprises to attach a rehabilitation cell to each land acquisition unit to address the issues of the displaced people, but the rehabilitation assistance provided was rather limited (Sinha 1996). Second and third drafts came in 1993 and 1994, both brought out by Ministry of Rural Development<sup>15</sup>. The policy of 1994 had in it many significant suggestions like organization of displaced persons, land for land basis rehabilitation, facilitating purchase of private lands, provision of resettlement grant, job planning, employment in collateral sectors, technical education and training, formation of cooperatives, provision of civic amenities etc.

Seeing that the landless population was kept out of the purview of the rehabilitation policy, the draft policy of 1994 envisaged that a national policy on resettlement of project-affected persons should cover not only those who hold land titles but also tenants, sharecroppers, landless labourers, and those who carry on any trade, occupation or gainful activity in the affected areas and who are deprived of their livelihoods. The draft policy was referred to 15 ministries and departments and the state governments. It also claimed to incorporate the policy recommendations formulated by the National Working Group which consisted of activists like Medha Patkar and academicians like Smithu Kothari. An alliance of researchers, activists and displaced and affected persons were formed to study the policy and they submitted an alternative policy to the Department of Rural Development.

<sup>14</sup> Report of the Group of experts on land acquisition

<sup>15</sup> The Draft National Policy for Rehabilitation of Persons-Displaced as a consequence of acquisition of land, 1994; The Draft National Rehabilitation Policy (2006) and The Communal Violence Bill (2005) A Critique of the Rehabilitation Policy of the Government of India

Another draft came in 1998, but did not get the approval of the Alliance since amendments of the Land Acquisition Act of 1894, brought in 1998, acted in principle against the policy directives. So by 2000, different policies were formed by different ministries (Ministries of Tribal Welfare, Rural Development, Water Resources development) but without any conclusive effect. A National Policy of R&R for Project Affected Families was formulated in 2004 by the department of land resources of the Ministry of Development. On a critical review of the policy and considering the practical issues faced during land acquisition, the policy was reframed and the National R&R Policy was formulated in 2006.

The R&R policy was the first of its kind, formulated after the Land Acquisition Act in 1894 with the objective of critically reviewing the project to understand its social impacts and take precautionary action. It was introduced in Lok Sabha on 6<sup>th</sup> December 2007 to provide for the rehabilitation and resettlement of persons affected by the acquisition of land for projects of public purpose or involuntary displacement due to any other reason (The R&R Bill, 2007). The Bill mandated that a Social Impact Assessment (SIA) be held in cases where there is involuntary displacement of 400 or more families in plain areas and 200 or more families in tribal areas. It stipulated that SIA should be done along with Environment Impact Assessment (EIA) in case EIA becomes a mandate for the project as per existing regulations. Those projects which are urgent in nature are avoided from the mandate of SIA. Institutional structures - Administrator and Commissioner for Rehabilitation and Resettlement, Ombudsman, Rehabilitation and Resettlement Committees at Project level, District level and state level, National Rehabilitation Commission - were envisaged as per the Bill. Survey of affected families, draft plans for rehabilitation and resettlement has to be made in prior to displacement. The affected families should be provided with land, transportation costs, financial assistance for employment generation, employment and skill development opportunities, subsistence allowance for a prescribed period, monthly pension for vulnerable persons etc.

The Supreme Court through its various directives from 1980s had called for the effective rehabilitation of the displaced people before they were evicted out of their land and property. The debate gained significance in the wake of increased sensitivity towards human rights. International funding agencies like the World Bank had also started demanding proper SIA before providing funds or according sanction to infrastructure development projects from the beginning of the 1990s.

#### 2.1.4 National Policy on Resettlement and Rehabilitation, 2003

The NPRR had always been looked down upon as a super-diluted, pro-industry policy. Walter Fernandes, director of the North Eastern Social Research Centre, Guwahati, had then noted that the 2003 policy will push thousands of families below the poverty line. Others had regarded it as eyewash and pro-industry policy. It was said that this policy ignored lakhs of oustees, whose basic human and constitutional rights have been violated, by refusing to address ways of granting them much-delayed justice. The drawbacks associated with this policy were multi-fold. The policy was relevant only for projects displacing more than 500 families in plain-land, and 250 families in hilly areas. Although the policy was having special attention to the cause of scheduled tribes, some issues remain inadequately addressed. One is compensation in monetary terms for the loss of customary rights and use of forest produce, and for those settled outside the district/taluka. It was then argued that financial incentive cannot compensate for loss of livelihood or access to forest produce. Furthermore, the policy provided no scope for participation of people in the process as per the requirement. Hence, this policy which formed the precursor of the recent policy, was considered highly inadequate considering the fact that it came after a long period.

#### 2.1.5 National Rehabilitation Policy (NRP-2006)

The latest policy is widely different from NPRR-2003, though it is also criticized and questioned. According to the press release by the Government, the new Policy and the associated legislative measures aim at striking a balance between the need for land for developmental activities and, at the same time, protecting the interests of the land owners, and others, such as the tenants, the landless, the agricultural and non-agricultural labourers, artisans, and others whose livelihood depends on the land. The benefits under the new Policy shall be available to all affected persons and families whose land, property or livelihood is adversely affected by land acquisition or by involuntary displacement of a permanent nature due to any other reason, such as natural calamities, etc. The Policy will be applicable to all these cases irrespective of the number of people involved.

Among other provisions, the policy provides for life-time monthly pension to the vulnerable persons, special provision for the STs and SCs including preference in land-for-land for STs and

SCs (land-for-land to the extent Government land would be available in the resettlement areas); preference for employment in the project to at least one person from each nuclear family within the definition of the affected family, subject to the availability of vacancies and suitability of the affected person; training and capacity building for taking up suitable jobs and for self-employment; scholarships for education of the eligible persons from the affected families; preference to groups of cooperatives of the affected persons in the allotment of contracts and other economic opportunities in or around the project site; wage employment to the willing affected persons in the construction work in the project; housing benefits including houses to the landless affected families in both rural and urban areas; and other benefits. A strong grievance redressal mechanism has also been provided for by the policy including standing R&R Committees at the district level, R&R Committees at the project level, and an Ombudsman duly empowered in this regard.

Promises apart, the provisions of the latest policy are being criticized on a number of grounds. Like the previous policy, exclusion of victims is a major drawback of the present policy. The call for "the active participation of affected persons" (clause 1.2) in the process of resettlement and rehabilitation is not reflected in the processes of development of the project. The affected persons do not have the right to be consulted prior to finalization of their lands as the project site. Under Clause 6.1, in cases where displacement is 400 or more families in plain areas, or 200 or more families in tribal or hilly areas, areas mentioned in Schedule V and Schedule VI of the Constitution of India, the appropriate Government shall declare, by notification in the Official Gazette, area of villages or localities as "an affected zone of the project". There is no provision for consultation with the affected families during the final preparation of the Social Impact Assessment (SIA) and Environmental Impact Assessment (EIA) reports prior to their submission to the expert group for examination. One of the provisions of the Policy that is also debated, discussed and criticised is that it allows further displacement of non-project affected persons from their land in the process of resettling the project affected families in a particular resettlement zone. Even the provisions meant for the safeguard of the SCs and STs are not being considered adequate.

### 2.1.6 Criticisms to Land Acquisition Act and Rehabilitation Policy

The attempt in this session is to highlight the various major debates and suggestions that had come up with regard to the Land Acquisition Act and the various R&R policy drafts at various stages. Goyal (1996) puts forward the following criticisms against the LA Act 1894. They



included the oft-quoted criticism vagueness of the term public, restriction of entitlement for the displaced to monetary compensation, indirect impact caused to people outside the project area and the right to compensation only to those who legally own the titles. The definition of public purpose is affected by class bias (Pati 2012: 11) which approved only those with land rights and title and refused to acknowledge those which are directly or indirectly linked to land in terms of livelihood or culture. The cash for land approach identifies one particular dimension of deprivation (land dispossession) and proceeds to put a price on it, which is market-based. In a sense, it is the narrowest interpretation of loss, and completely eschews structure and process (Goyal, 1996). The process of commodification of land gets complete here. Low investment for R&R and treating rehabilitation as an externality were other major features of the land acquisition policy according to Goyal. Ramanathan (1996: 1488) criticized that the meaning given to compensation has been dominated by its equation with the market value, or the notional value in the market. This treats the displaced person as a willing seller. It does not account for the part that coercion plays in the law. What she highlighted here was “eminent domain” features of the state which enabled it to acquire land from its subjects as and when required even without consensus.

Another factor was the focus of the LA Act on individual, forgetting the mass nature of displacement. The land acquisition act, 1894 is essentially concerned with the acquisition of rights over land from individuals who have legally recognized, and compensable, rights. These conservative notions of individual ownership and state acquisition have been stretched unrealistically to envelop the displacement of whole communities (Ramanathan, 1996). Even the 1984 amendment ignored the existence of displaced communities when it focused on persons displaced or affected by projects. Also displacement as such was not questioned, though the state had tried to incorporate the concept of rehabilitation in its policy modifications. Laws only intend to provide.

The amendment Bill in 2009 suggested that companies should be permitted to buy land directly from the land owners through negotiation. The Government need to step in for the remaining 30 per cent land acquisition only after 70 per cent acquisition of the land is done by the Companies. In the Bill, there was no indication as to the R&R benefits to the people, from whom the 70% land gets acquired.

The draft R&R policy of 1994 was concerned only with improving the circumstances of involuntary resettlement (Sinha 1996). The policy did not have an exact focus on complete rehabilitation. Parasuraman (1996) demanded the modification of the R&R policy of 1994 to

incorporate provisions which will encourage the affected people to invest the compensation money in productive assets. Along with this was the suggestion to provide loans and subsidies to augment the compensation money for suitable investment. Provision of employment to the evictee family was another suggestion. The gender aspect of rehabilitation also became a focal point of discussion in which women oriented rehabilitation through skill development was suggested. Both land-based and non-land based rehabilitation was suggested in addition to the redefinition of the term public purpose in the name of which land gets acquired. Also the acquisition of extra lands even if not necessary was questioned.

Critics said the rehabilitation policy formulated in 2004 seemed to be more concerned with protecting the interests of the big business than the livelihood interest of the displaced (Fernandes, 2004). The major reason for this criticism was criticism was that this policy was applicable only in those projects where at least 500 families are displaced in the plains and 250 families in hill areas (ibid.). Another criticism (Guha 2005) was that the policy mandated a survey to identify the beneficiaries for resettlement and rehabilitation only after draft declaration of acquisition gets published, which was contradictory to the objective of the policy that efforts will be taken to reduce displacements and alternatives will be sought. Lack of compensation for acquisition of common property resources was also criticized. One positive aspect in the policy was the incorporation of agricultural labourers as holding entitlement for compensation.

The institutional structures in the R&R policy of 2007 were mainly designed for projects displacing more than 400 families in the plain or 200 families in the hill regions respectively. The increase in the number of stipulated families is to be noted since the 1994 draft had suggested that the rehabilitation policy can be applicable if 50 families or 200 persons or more get displaced. The draft of 1994 had also mentioned that it can be applicable in the case of less than 50 families too, if the state Government decides so. In the 2004 policy the family threshold became 500 in the plains and 250 in the hill areas which evoked wide criticism. This provision was deleted and the threshold of families was fixed to 400 families and 200 families for plains and hills respectively when the policy was formulated in 2007. But the Bill failed in explaining the consequence in those cases where families less than 400 are displaced i.e. the benefits for small scale displacement was not clear.

Another major flaw with the Bill was that no clear time frame for rehabilitation was stipulated in it. Throughout, the Bill used a non-binding language which makes it unclear whether the benefits were mandatory. Also the evictees were eligible for compensation only if they have

lived in the place for at least 5 years. Further the Bill did not refer to cases of double displacement within a period of 5 years in case of a resettlement area. The Bill spoke largely of rural displacement and indications of urban displacement were completely missing from the Bill. Further the National Advisory Council which had put forward a draft rehabilitation policy in 2006 to the Central Government had recommended consultation with Gramasabhas for acquiring consent for the project from the people affected but when the Bill came the consultation was reduced to only the Scheduled areas under the 5th Schedule. For the rest of the people the provision was to file a complaint with the Collector within 30 days of the notification (PRS Legislative Research 2007).

Sinha (1996) vouched for creating a perfect information flow during land acquisition and thus avoid speculative price rise, empowerment of project affected persons, encouraging the involvement of NGOs as watchdogs, encouraging group decision on the use of compensation payments, enhancement of human capital, provision of project employment, land for land rehabilitation in case of tribals and social rehabilitation. Fernandes (2004) criticized the nature of language used in the policies. The policy document used non-binding language such as “may give” or “as far as possible”. When it comes to providing benefits, which the officials bend to their interests to avoid giving the provisions. The criticism was also against the extent of land being acquired by the state for private ventures. The free market theory was continuously proposed from various sources who proclaimed that the communities under displacement have the right to bargain for monopoly prices but the present legislation prevents them from doing so. Sinha criticized the free market theory and vouches for need based land acquisition (Sinha, 1996) where only sufficient land will be acquired for the project. Ramanathan suggested legal reforms to curb state powers in the matter of land acquisition and give tangible rights to the potential victims. Formulation of the policy without a proper database on the evictees was another matter of criticism.

The Narmada struggle for rehabilitation had generated wide discussion on the rights of the evictees, especially the indigenous populations. This resulted in the formulation of at least draft rehabilitation policies by the end of 1980s and the beginning of the 1990s in India but it remained to be just a framework of action or a broad guideline lacking specific and genuine interest without a legal backup. The major criticism that arose against the rehabilitation policies was also that without legal binding various state governments may refrain from its actual implementation. Ramanathan (1996) criticized that the distinction between policy and law makes it non-binding to the state to perform as per policy guidelines in the context of displacement. In the absence of law it is not a statutory right.

Absence of legal backup, lack of critical evaluation of the concerned project, lack of a socio-ecological perspective and lack of transparency are the major features that run the stage during land acquisition for the implementation of a project. Most often forgotten in the debate regarding land acquisition is the subject of land which suffers alteration and mutation in the process of development. Parsuraman (1996) says, most of the development projects drastically redefine the land use pattern. Mostly the loss of land or the livelihood attached to it due to acquisition and its inherent ecology is the cause of post-displacement impoverishment for many. But even after 27 years of the first draft policy, rehabilitation and environmental consideration still remain outside the purview of law. The LA Act, its amendments and even the new LA &RR Bill that came up recently not only ignore the existence of displaced communities but also forget the environmental significance of the land being acquired and treat land as a uniform entity without regional peculiarities.

### 2.1.7 Land Acquisition and Resettlement and Rehabilitation Bill 2011 (LARR 2011)

The LARR Bill<sup>7</sup> which was introduced in the Parliament in September 2011 as an alternative to the infamous and colonial Land Acquisition Act of 1894 has its good elements like merging the concept of land acquisition with R&R and offering much more in compensation to the people. But it makes no attempt to hide the obvious priority of the state to use land for industrialization and urbanization than for agriculture purposes and the free ride it offers to the private players for further exploitation. The State advocated that the Bill seeks 80 percent consent of the project affected before acquisition, entails the provision of R&R with several benefits, offers better market price and special allowances for the Scheduled Tribes (ST) and the Scheduled Castes (SC) and refrains from acquiring any irrigated multi-crop land etc. They are true to an extent, but do not embody the whole truth.

Instruments of Land Acquisition: Development projects demand for acquisition of land. Land is acquired by the government under the colonial Land Acquisition Act (LAA) 1894 on eminent domain and public purpose. The British were all set to modernize the then capital city, Calcutta but they were ill equipped, without acquiring the state rights over individual land. The first All India Act VI of 1857 was passed where land owners may be required by the legislature to surrender some of their rights they possess over their land for a purpose of public utility. Subsequently, a well-defined, all Comprehensive Land Acquisition Act (LAA) covering the whole of British India came into force on the first day of March, 1894 as the Act 1 of 1894. Under the

clause of 'Eminent Domain' and 'Public Purpose' the state is empowered to acquire privately owned land. Till now with minor amendments in 1984 this Act is being followed by the State as well as Government of India in the matter of land acquisition and distribution of compensation to the land owner. The mode of compensation is based on the market value of land only. The legal holders are only entitled to get the compensation on the basis of a land valuation fixed by the government taking note in to the sale deeds of that area. The valuation as fixed by the LAA fails to take in to consideration the future returns of land and which is usually less than the replacement cost of land. Another important dimension of land acquisition is that those people having land record of rights are accounted and people having no title to land rights and dependents on Common Property Resources (CPRs) are discounted from the purview of the act.

In addition to the LAA 1894 there are 16 more Central Acts which causes land acquisition and displacement. These are namely; The Land Acquisition (Mines) Act, 1885, The Indian Tramways Act, 1886, The Works of Defense Act, 1903, The Forest Act 1927, The Maneuvers, Field Firing and Artillery Practice Act 1938, The Resettlement of Displaced Persons (Land Acquisition) Act, 1948, The Damodar Valley Corporation Act, 1948, The Requisitioning and Acquisition of Immovable Property Act, 1952, National Highway Act 1956 The National Highways Act, 1956, The Coal Bearing Areas Acquisition and Development Act 1957, The Ancient Monuments and Archaeological Sites and Remains Act, 1958, The Atomic Energy Act, 1962, The Petroleum and Minerals Pipelines (Acquisition of Right of User in Land) Act, 1962, The Metro Railways (Construction of Works) Act, 1978, The Railway Act 1989, The Electricity Act, 2003. The Special Economic Zones Act 2005, the Cantonments Act, 2006, the Special Economic Zones Act, 2005. It is generally regarded land as state subject, the state face the wrath of people in the form of protest movement. But land can be acquired by the Union as well as State government for different purposes.

### 2.1.8 Rehabilitation and Resettlement Policies in Odisha

The Government of Odisha did not have any rehabilitation policy for a long time. In 1948 government of Orissa passed a Special Act (Act 18 of 1948) in accordance with the Land Acquisition Act 1 of 1894 in order to expedite the process of acquisition of land for Hirakud Dam Project. Due to the lack of a basic framework for rehabilitation, the oustee especially during the period from 1950 to 1970 have suffered a lot and a number of them have perished in the changed condition of post displacement. It was found in 1988 that even after 32 years of Hirakud reservoir, compensation amounting to Rs.15 crore rupees were to be paid to 9,913

claimants who lost their lands. A number of cases are yet to be disposed even after sixty year of its existence. In the case of Machhakund Hydro-electric project, no rehabilitation provisions were made for 300 displaced scheduled caste families. Only 450 families, which are 30 per cent of the total tribal families displaced belonging to scheduled tribes, were rehabilitated. Similarly, the Rourkela Project (Steel Plant) rehabilitated 53.6 per cent of its total number of displaced families. There was no clear-cut principle under which the land was allotted to each family for the purpose of rehabilitation.” (Patnaik, S.M.1996).

It is fact that there was no resettlement and rehabilitation (R&R) policy for the displaced people of Odisha they were dealt with the limited provision of compensation under LAA 1894, which was quite insufficient, inappropriate and unjust towards the displaces. The dam projects had no R&R policy till 1973. It is only, the agitation of Rengali oustees forced the Govt. for a policy in 1973 and subsequently in 1990 and 1994. In case of industrial and mining units like RSP, HAL, NALCO, Ordnance factory they have their own policy to deal the displacement. The NALCO adopted two types of policy one is the land for land and other is the land based rehabilitation. The displaced people of industrial projects have however been treated better in comparison to dams.

On 14th May 2006, (Notification No.18040-R&REH-1/2006) the Government of Odisha declared the Orissa Resettlement & Rehabilitation Policy (ORRP) following the Kalinganagar massacre (2nd Jan. 2006) in which 14 tribals were shot dead in police firing. The policy is somehow an improved version and shall apply to all projects for which private land has been acquired under LAA, 1894 as well as for which land is acquired through negotiation under the policy. The ORRP 2006 has identified five different types of projects where displacement occurs viz. Industrial Projects; Mining Projects; Irrigation Projects, National parks and Sanctuaries; Urban Projects and Linear Projects like roads and railways, power lines; and other projects.

The Project authority will make special efforts to facilitate skill up-gradation of the displaced people. The policy has the provision to provide employment to one member of each displaced family in case of industrial and mining projects and onetime cash assistance up to Rs. 5 lakh to those displaced families who have lost all land including homestead land in the following categories. (i) Displaced Families coming under Category (i) 5.00 lakh (ii) Displaced Families coming under Category (ii) 3.00 lakh (iii) Displaced Families coming under Category (iii) 2.00 lakh (iv) Displaced Families coming under Category (iv) & (v) 1.00 lakh.

However certain areas of concern still prevails e.g. the involvement of intermediaries like IDCO & IPCOL has raised various questions. It is said that the tribal were paid Rs.22000/-to 37000/- per acre by the Industrial Development Corporation of Orissa, which in turn sold the land to TATA at Rs.3 to 3.5 lakhs per acre. The displaced tribal feel that the said compensation paid to them was below the current market price. (Sahoo: 2006) The ORRP 2006 has failed to address the cause of dispossession and deprivation of sustainable livelihood of the displaced people in general and the STs in particular. In exercising the state sovereign power it has been acting as a broker for the private corporate sector. The burning examples of such cases are Tata steel at Kalinganagar and POSCO steel near Paradip port in Jagatsinghpur district. The policy does not provide any means of free, prior and inform consent of the affected families before the process of land acquisition starts. There is no mandatory provision on the part of the state to provide land to the displaced people. The ORRP 2006 is meant for the likely to be displaced families but remain silent about the 1.5 million already displaced during the past few decades. The improper implementation of ORRP, 2006 has also come under judicial scanning of the Orissa High Court in the case of Kalinganagar industrial estate (The Telegraph, Oct. 25 2011).

Different questions are raised at different point of time like, why the displaced people will be dealt through a policy which not enforceable. Some also argue that the policy may be given a legal status by the Government, so that these provisions will have a legal set-up and can be implemented with all legality.

## Chapter III: Development Projects & Study Area Characteristics

### 3.1 Hindustan Aeronautics Limited (HAL)

For the establishment of HAL, the State Government handed over a total of 12,000 acres of land belonging to 11 villages, including Kakigaon, Chikapur, Khalaput, Chakirliput and Kodinga to HAL. While the HAL has been established on 3121.15 acres of land, it has handed over nearly 6,000 acres to various Central institutes, including the Central University of Odiha and the Cobra Batallion. Now HAL has unused 2918.53 acres of land in its hand. This available and unutilised land has been the bone of contention between the displaced tribals and HAL.

In 1963 Govt. acquired 12000 acres of land in Sunabeda area of the Koraput district for establishment of HAL. At that time the HAL authorities asked for 8000 acres of land but the State govt. acquired 12000 acres. The State Government handed over a total of 12,000 acres of land belonging to 11 villages, including Kakigaon, Chikapur, Khalaput, Chakirliput and Kodinga to HAL. Of the total available land, HAL has been established on 3121.15 acres of land. For the project, about 10 villages were totally displaced and another 12 were partially affected. At that time 3639 people from 861 households were displaced. Out of total displaced ST were 480 households (2016 person), SC 232 households (998 people) general 149 households (625 person).

In the absence of R and R policy in 1963 displaced people were not rehabilitated and had to be kept silent only with compensation. Most of the people went to the nearby area and settled on the Govt. land as they didn't have any other choice. Out of 12,000 acres finally HAL acquired 3000 acres of land and all the units of the HAL were not established in Sunabeda. Govt. distributed the rest of the 8000 acres to Central breeding farm OUAT research institution. Some of the land (around 50 acres) was also later given to a private English medium school. During 1985 the oustees displaced for the second time by the Kolab dam later for the third time for the establishment of National Armament Depot (NAD). Though the HAL and the OUAT research station acquired the vast land but hardly 50 % of the land was actually utilized.

Many people returned to their original place and cultivated the unutilized vacant land which is highly productive land of their own. In this process two villages were again re-established on



their pre-displaced area with their original name Pangiguda, Talaput, from the year 1990, as they observed that the acquired land was fallow. They are living like aliens on their own land (as it is acquired by the govt. and not in use). Many times the HAL authority has tried to vacate the land and to drive out the people by burning their houses. But people started resisting it and cultivating the land. Not only are the villagers of Talpaut and Pangiguda, but also tribals from the nearby villages of Rajput Gram Panchayat cultivating the unutilized land of the OUAT research station. Many people of the Rajput GP are affected oustees by both the OUAT and the Kolab Dam. In this process a people's organization under the name "HAL DISPLACED SANGHA" came into existence and these people are struggling to get the legal entitlement on land and other basic facilities from HAL<sup>16</sup>.

Recently, tension gripped Hindustan Aeronautics Limited's (HAL) unit at Sunabeda in Koraput district as land losers forcibly ploughed on its premises<sup>17</sup>. The agitators were demanding jobs in the company and compensation to the persons displaced by the PSU. About 200 villagers of Totaput, Bilaiguda, Sindhiput, Solaput, Katigaon and Pangiput under the banner of HAL Displaced Persons Association carried out the unique protest. They alleged that though they have lost their land to HAL during its inception in the mid-60s, no compensation was paid to them and not a single family member was provided permanent job in the PSU. They have been demanding compensation based on the government's rehabilitation policy since long but it is yet to be taken up. Demanding rehabilitation, HAL land losers, started ploughing nearly 200 acres of land forcibly to take up agricultural activities. Sources said displaced people of the Hindustan Aeronautics Limited (HAL) had been asking for return of their land since long as the latter allegedly failed to properly rehabilitate them as per conditions made before the land acquisition way back in 1963. After 36 years of displacement still tribal people are struggling for their rights in Koraput district.

#### **Study Village Chikapar (Resettled):**

In the year 1963 the village was displaced under HAL project. They settled by their own arrangement near Kolab river. They stayed there for about 23 years. In the year 1986 they again displaced under Upper Kolab Irrigation project and stayed near Sunabeda, presently known as Naval Armament Depot (NAD). Gradually, that area came under Sunabeda NAC and recently became Municipality (It comes under ward No-9). They have been staying for 29 years in the present residence. According to the residents, the then Collector (name not known) verbally

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<sup>16</sup> Mohanty B, The plight of Koraput Ousteas

<sup>17</sup> <http://timesofindia.indiatimes.com/city/bhubaneswar/Displaced-villagers-plough-HAL-and/articleshow/42084151.cms>

demarked the present place (at the time of his visit) for their residence after second displacement.

**Study Village Pangiguda (Resettled):**

In the year 1963, the village was displaced under HAL project. After displacement the DPs stayed at their own arrangements at different villages (Condaguda, Dalieiguda, Rajanguda) at different location. At their resettled place, they did not get required Government facilities and faced critical problem for their livelihood. They did not get agricultural land at their settled village. After Upper Kolab displacement, other villages settled nearby the HAL area. In the meantime Pangiguda/Thalaput villagers started to get settled in the unused area acquired under the HAL in the year 1985. In between 1985 to 1990, several times their houses were destroyed and the villagers were forcefully displaced by HAL with the support of district administration. After 1990 to till date they have been staying there. Now they are demanding to get back the unused area, acquired by HAL. For these issues, they are not getting any schematic benefits from Government.

**Study Village Bada Badigaon (Non-Displaced):**

This is a non-displaced but project affected village where land of the people was acquired and compensation was provided to the families those who lost agricultural land for the project.

### 3.2 Upper Kolab Hydro-Power Project

This multipurpose project in Koraput district was constructed to harness the water potentials of River Kolab. The Project was supposed to irrigate 47,985 hectares of agricultural land for kharif and little less for the rabi crop, in addition to 22,267 hectare by life irrigation and generate electricity to a maximum capacity of 240 megawatt. The project began in 1976-77 and was completed in 1984-85 at a cost of Rs.160 crore (The original estimate was Rs.16.4 crore). The catchment area at dam site is 1630 square km. It is a straight masonry gravity type with length of 630.5 meter and maximum height of 54.50 meter from the deepest bed level.

In this project total land submerged is 32,163 acres (Government of Orissa, 1981), out of which 21,870 acres are private land, 6,557.90 acres are revenue land and 189.95 acres are forest. The balance is rivers, nallahs, tanks, roads and etc. The total number of families affected due to the construction of this dam, either fully or partially were 13,095 families (50,771 persons) of which 2,127 families (8,830 persons) were dalits, 7,092 families (26,620 persons) were tribal and 3,882 families (15,327 persons) were from other caste (Government of Orissa, 1981).

*Table 6: Displacement Status of Upper Kolab Project*

Caste	No. of Families Displaced	No. of Families Rehabilitated	No. of Families Preferred to Receive Cash Grant
ST	1,431	195	1,236
SC	435	30	405
Other Caste	1,201	194	1,007
Total	3,067	419	2,648

For rehabilitating the 3,067 displaced families 9,432 acres of land was acquired separately. A sum of Rs. 6,30,23,989 was paid as compensation to the displaced persons and the project affected persons. These exclude the cost of reclamation. Out of, Rs. 5,71,81,192 was paid for land and trees and Rs. 58,43,196 for homestead. The project authorities claim that 2,643 (86.17%) of the 3,067 families did not accept land-based rehabilitation and were cash grants amounting to Rs. 3,86,77,820 as compensation. To accommodate the remaining 1,330 families 7,774.68 acres were reclaimed and developed in to 7 camps. Only 424 families were settled in the campus 4 to 7 and were allotted 675.43 acres of irrigated land, 290.11 acres of non-irrigated land and 212 acres of homestead land.

According to Resolution No. 13169 dated. 20th April 1977, Govt. of Orissa, Irrigation and Power Department, Land for Land has been the objective of this resettlement over and above the payment of compensation money for land and houses, trees and etc acquired for the project. The amount of land is 0.5 acre of homestead land for habitation and either 6 acres of un-irrigated or 3 acres of irrigated land. In 1989, it was amended to provide 5 acres of reclaimed unirrigated land or, 2.5 acres of reclaimed irrigated land. It was further amended to 2.5 acres of unirrigated land or 1.25 acre of irrigated land and homestead plot of 20 decimals. In case of non-availability of required extent of land allotment will reduce. Displaced families are allowed free transport by project authorities for shifting as well as for carrying their house building materials, which they salvage from old sites to the new settlement colony. They are also provided with house building forest material at concessional rate 60% of normal royalty.

Wherever land is not available for resettlement of the displaced families or, when the displaced families wish to make their own rehabilitation arrangements, rehabilitation grant of Rs. 14,040 at the flat rate of Rs. 2160 per acre was given (6 acres of unirrigated land + 0.5 acre of homestead land) to be allotted to them. This grant is in addition to the compensation money given to the persons towards acquisition of land and houses etc (This ceiling of Rs. 14,040 was

enhanced to Rs. 20,075) in 1989 and further enhanced in 1990. Common civic amenities like schools, drinking water, wells and tanks, clubhouses, etc, are provided in the settlement colonies.

**Study Village Batasana Colony-4 (A) and Colony-4 (B) (Resettled):**

Batasana Colony-4 (A) and Colony-4 (B) are two colonies out of four resettled colonies under the project. They were displaced in the year 1985 and were settled at a transit camp near the Batasana village. After one and half year, the displaced families shifted to the colony with self-constructed houses in their demarcated piece of homestead land. Batasana colony comes under Kotpad block, which is about 70 km away from district head quarter. Agriculture is the primary and daily labour is the secondary source of income of the villagers.

**Study Village Gopalput (Non-displaced):**

This village is nearer to the town. This village is relatively developed in comparison to the resettled colonies.

### 3.3 Harabhangi Irrigation Project

In Harabhangi Irrigation Project of Gajapati district was established in 1990s. The project displaced mostly tribals who were living there. Some tribal families also experienced double displacement, especially who were displaced by HAL and resettled near the river.

**Study Village Gunduripadar (Resettled):**

The displaced families were initially settled in a transit camp near to *Gunduripadar* in the year 1997. Some families settled by their own arrangements. After two years, in 1999 the families came to the *Pathachheneda* Colony with self-constructed home which is presently known as Gunduripadar village.

**Study Village Adapanka & Padagam (Resettled)<sup>18</sup>:**

Families of Adapanka were settled at Adapanka village in the year 1998 after self-constructed houses at Padagam colony in the year 2001. Daily wage labour work is the primary source of income. Cultivation including vegetable (beans, brinjal, tomato, potato) contributes to their secondary source of income.

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<sup>18</sup> At Adapanka village only 44 DPs were settled who have received compensation. To meet the total sample Padagam village has been taken. 25 sample from each village has been taken.

**Budhaneldhi (Non-Displaced):**

This village is developed one in comparison to the resettled villages. Educational status of these villagers has developed even students of the village are getting education at KISS, Bhubaneswar. Students are also getting education at Government run Ashram schools. Agriculture is the primary source of income of the villagers. Petty business (cottage industries), stone carving, goat rearing, vegetable cultivation contributes to the secondary source of income.

**3.4 Rourkela Steel Plant (RSP)**

Rourkela Steel Plant, the first Public Sector Integrated Steel Plant of the country came up as a Greenfield project in the backward and remote district of Sundargarh. For establishment of the Steel Plant & its Captive Township land was acquired under the provisions of Orissa Development of Industries, Irrigation, Agriculture, Capital Construction & Re-settlement of Displaced Persons (Land Acquisition) Act, 1948 (Orissa Act, XVIII of 1948) by the Govt. of Orissa after complying with all the formalities and there after handed over possession of Ac 19722.69 of land comprising 33 villages in & around Rourkela to Rourkela Steel Plant. Elaborate arrangements were made for rehabilitation of the displaced persons. Besides the payment of compensation for the land acquired, all the displaced persons were provided with house site / plots in the adjacent resettlement colonies at Jalda and Jhirpani etc. Besides this, development works such as roads, parks, schools, etc. were also carried out in these colonies.

A Lease Agreement in respect of the land under possession of RSP was executed between RSP & the Govt. of Orissa on 01.07.1993. Over a period of time on the request of the Govt. of Orissa, RSP has surrendered a vast expanse of land measuring Ac 4515.00 to cater to the requirements of Govt. such as construction of Regional Engg. College, expansion of South Eastern Railway Stock Yard, development of Civil Town ship as area no 7 & 8 of Rourkela, Industrial Estate, Private Housing Colonies of Orissa Housing Board at Basanti Colony & Chhend Colony, Koelnagar Housing complex, STPI etc. The remaining land now in possession of RSP has been / is being utilized for integrated steel plant, industrial Township Colony, roads, drainage & Sewer systems, schools, parks, playgrounds, green belts, underground cable lines, water lines, overhead electric lines etc.<sup>19</sup>

Rourkela Steel Plant (RSP) in Orissa caused direct displacement of 4,094 families in 64 tribal villages including 31 villages of Mandira dam oustees, which was built to supply water for the

<sup>19</sup> SAIL Manual No. 17. Particulars of other information of Rourkela Steel Plant

steel plant and its township. Among the oustees, more than 60 per cent were tribals. The plant acquired 12,675 Ha lands that included prime agricultural land of the acquired tribal villages<sup>20</sup>.

The resettled village Jhirpani was set-up by the displaced in the year 1954. This village is located adjacent to the Rourkela Municipal Corporation. All types of facilities are readily available to the villagers due to its proximity to the municipality. Living condition of people is better and most of the houses are pucca houses. Due to the urbanization and modern facilities, people in this village are very happy. If industrialization was not there, they and their generations would have spent their life in the forest and remained debarred from such facilities.

The resettled village of Jalda-C is under Jalda gram panchayat. For administrative point of view it has been divided into three parts, Jalda-A, B and C. In each part more than 20 wards are there. Most of the families in this village depend upon daily wage labour.

The non-residential village Dalposh is located near the NIT educational institution. This is nearer to the urban area and hence having better facilities to access at the time of requirement. Government has provided basic amenities to the villages. House type is mixed one and cultivation is the primary occupation of most of the village. Some people of the village are also employed in RSP.

*Table 7: Project wise Displaced Families and Area Acquired*

<b>Project wise Displaced Families, affected villages and land Acquired status</b>							
Sl. No.	Name of the Project	Displaced Families				No. of affected villages	Land Acquired (in Acre)
		SC	ST	OBC	Total		
1	HAL	47	298	90	435	10 <sup>21</sup>	7297.48
2	UPPER KOLAB	496	1523	1299	3318	53 <sup>22</sup>	24718.5
3	HARBHANGI	-	-	-	255	06 <sup>23</sup>	1745.90
4	RSP	279	1974	648	2901	33	19722.69

*Source of Information: Land Acquisition Office of Koraput for HAL, Special Land Acquisition Officer, Koraput for Upper Kolab, Land Acquisition Office of Gajapati for Harbhangi Irrigation Project, Additional District Magistrate Office, Rourkela*

<sup>20</sup> <http://jhss.org/archivearticleview.php?artid=122>

<sup>21</sup> 5 villages fully Affected and 5 villages partially Affected

<sup>22</sup> 27 villages fully submerged and 26 villages partially submerged

<sup>23</sup> 5 villages fully submerged and 1 village partially submerged

### 3.5 Economic Category

In the overall sample, 62.0 percent families belong to below poverty line category and remaining 38.0 percent are non-BPL. Highest percentage of BPL families, irrespective of displaced and non-displaced category, found in Harabhangi irrigation project (89.6 percent) followed by Upper Kolab (76.0 percent). Lowest percentage of BPL families among the sample households (39.2 percent) observed in HAL followed by RSP (43.2 percent).

Table 8: Economic Category of Sample Households by Studied Project

Economic Category			
Project	BPL / N-BPL	Frequency	Percent
HAL	BPL	49	39.2
	NON-BPL	76	60.8
	<b>Total</b>	<b>125</b>	<b>100.0</b>
UPPER KOLAB	BPL	95	76.0
	NON-BPL	30	24.0
	<b>Total</b>	<b>125</b>	<b>100.0</b>
HARABHANGI	BPL	112	89.6
	NON-BPL	13	10.4
	<b>Total</b>	<b>125</b>	<b>100.0</b>
RSP	BPL	54	43.2
	NON-BPL	71	56.8
	<b>Total</b>	<b>125</b>	<b>100.0</b>

Families below the poverty line by displaced and non-displaced category reveals that about 58.5 percent families are below the poverty line among the displaced whereas 76.0 percent families are below the poverty line among the non-displaced tribal families. If it is assumed that pre-displacement conditions are constant for both the categories, i.e., displaced non-displaced families, the current economic condition, as per the government enumeration, reveals that with the lapse of time the economic status of displaced tribals has improved in comparison to non-displaced tribal families. Projects, for which these families were displaced may have certain degree of impact on the economic wellbeing of the displaced families along with different other welfare initiatives of the government.

Table 9: Economic Category of the Sample Households in Displaced & Non-Displaced Villages

Districts	Economic Category											
	Displaced						Non-Displaced (Control)					
	BPL		Non-BPL		Total		BPL		Non-BPL		Total	
	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%
Gajapati	93	93.0	7	7.0	100	100.0	19	76.0	6	24.0	25	100.0
Koraput	101	50.5	99	49.5	200	100.0	43	86.0	7	14.0	50	100.0
Sundargarh	40	40.0	60	60.0	100	100.0	14	56.0	11	44.0	25	100.0
<b>Total</b>	<b>234</b>	<b>58.5</b>	<b>166</b>	<b>41.5</b>	<b>400</b>	<b>100.0</b>	<b>76</b>	<b>76.0</b>	<b>24</b>	<b>24.0</b>	<b>100</b>	<b>100.0</b>

Among the displaced families, about 93.0 percent are below the poverty line in Gajapati (Harabhangi hydro-power project), 50.5 percent in Koraput (HAL and Upper Kolab Project) and 40.0 percent in Sundargarh (RSP industrial project). Among the non-displaced, 76.0 percent families found below the poverty line in Gajapati, 86.0 percent in Koraput and 56.0 percent in Sundargarh. The district of Gajapati is having highest BPL in both displaced and non-displaced category whereas it is lowest in Sundargarh. In Koraput, BPL percentage in sample non-displaced households is higher (86.0 percent) than displaced tribal families (50.5 percent).

### 3.6 Development and Displacement

Forced population displacement is always crisis-prone, even when necessary as part of broad and beneficial development programs. It is a profound socioeconomic and cultural disruption for those affected. Dislocation breaks up living patterns and social continuity. It dismantles existing modes of production, disrupts social networks, causes the impoverishment of many of those uprooted, threatens their cultural identity, and increases the risks of epidemics and health problems. In the 1950s and 1960s, it may be said that the dominant view in development was informed by modernization theory, which, put crudely, saw development as transforming traditional, simple, third world societies into modern, complex, westernized ones.

Seen in this light, large-scale, capital-intensive development projects accelerated the pace toward a brighter and better future. If people were uprooted along the way, that was deemed a necessary evil or even an actual good, since it made them more susceptible to change. In recent decades, however, a “new development paradigm” has been articulated, one that promotes poverty reduction, environmental protection, social justice, and human rights. In this paradigm, development is seen as both bringing benefits and imposing costs. Among its greatest costs has been the involuntary displacement of millions of vulnerable people<sup>24</sup>.

Table 10: Year of Displacement by Project Locations

Projects	Year of Displacement	No. of HH Displaced	Percentage of Displaced
HAL	1963	100	100.0
UPPER KOLAB	1984-1987	100	100.0
HARABHANGI	1997	100	100.0
RSP	1954-1957	100	100.0
<b>Total</b>		<b>400</b>	<b>100.0</b>

<sup>24</sup> Robinson W.C., Risks and Rights: The causes, consequences, and challenges of development induced displacement



Development projects induce displacement and tribals are worse sufferers of such displacements. While benefits of such projects are limited for the tribals, but displacement related suffering remains high. In Koraput, families were displaced for the first time in 1963 for the establishment of HAL and again they were displaced between in year 1984-87 for Upper Kolab. Families were displaced in the year 1997 for Harabhangi hydro-power project in Gajapati and in case of RSP, 50.0 percent of sample families were displaced in the year 1954 and remaining 50.0 percent in the year 1957.

Among the all the displaced families, displacement remains once in their lifetime for the project whereas, in HAL double displacement is observed. The tribal families were displaced for second time due to industrial establishment (HAL) and prior to it, they were displaced for the Upper Kolab hydro-power project. In the sample, about 50 families were found affected due to double displacement.

*Table 11: Times of Displacement of Sample Families*

Projects	Times of Displacement							
	No Displacement (Control)		Single Displacement		Double Displacement		Total	
	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%
HAL	25	20.0	50	40.0	50	40.0	125	100.0
UPPER KOLAB	25	20.0	100	80.0			125	100.0
HARABHANGI	25	20.0	100	80.0			125	100.0
RSP	25	20.0	100	80.0			125	100.0
<b>TOTAL</b>	<b>100</b>	<b>80.0</b>	<b>350</b>	<b>280.0</b>	<b>50</b>	<b>40.0</b>	<b>500</b>	<b>100.0</b>

## Chapter IV: Development Displacement and Homelessness

Homelessness is a condition, arise contextually due to eviction of people from their own house in the name of the project and suitable measures are taken to provide them with a livable house. Homelessness of the tribals, after their displacement from their old village by project is discussed below.

After the displacement due to HAL, neither home nor homestead land was provided by the project (financial compensation provided for homestead land). The displaced families were settled on their own by constructing houses in the available government land. These resettled families have been staying about 29 years in government land, after taking the pain of double displacement. Settled families are in the fear of third displacement as they are not having ROR of the land where they are now staying. For this reason, some families have not constructed pucca houses. At Chikapar village, pucca and mixed housed are found whereas at Pangiguda, only mixed houses are found. One colony has been constructed for 81 families at Pangiguda/Thalaput at hill top by the project. But the villagers are reluctant to move as means of survival / livelihoods (presently agriculture is the primary occupation, whereas daily wage is the secondary source of income) specifically scope of agriculture is remote in that area. Families of Chikapar have been availing IAY benefit under the scheme, whereas the villagers have not received a single IAY since inception of the scheme. Families have constructed their own houses within their own land. Pucca and mixed house types (pucca/mud wall with tile/asbestos roof) are found in the non-displaced villages. Some families have also availed IAY houses there.

In Upper Kolab, none of the families were provided home under the project. All the displaced families were provided homestead land of 0.50 acre. No such provision is made for non-displace families as they did not lose their home. Most of the houses are mixed in nature and some of the families were also included as IAY beneficiary for construction of house. In non-displaced villages, families have constructed their own houses in their own land and most of the houses are pucca. Mixed houses (pucca/mud wall with tile/asbestos roof) was also found in the non-displaced villages. Fisheries department has provided cash for house construction to the affected families.

Similar mode of compensation is observed in Harabhangi irrigation project. None of the families were provided home under the project but all the displaced families were provided homestead

land of 0.08 acre. For the construction of house at the identified colony, Rs.20, 000/- was provided to each displaced family. Most of the houses are pucca at Gunduripadar village and mixed houses found at Adapanka and Padagam. Some families have also availed houses under rural housing scheme (IAY). In the non-displaced villages, Families have constructed their own houses in their own land. Most of the houses are pucca but mixed houses (pucca/mud wall with tile/asbestos roof) can also be observed in the non-displaced villages.

In case of RSP, none of the families were provided home under the project but 0.05 decimal of homestead land (40 feet x 60 feet= 2400 sq. ft.) was provided to each displaced family. No such compensation paid to the affected / non-displaced families as their homestead land is not acquired. The displaced families constructed their own house in the specified homestead land provided by the project. Most of the houses at Jharpani are pucca, whereas mixed and pucca houses are found at Jalda-C village. Some of these families also availed IAY scheme for construction of house. In non-displaced villages, Families have constructed their own house in their own land.

#### 4.1 Housing, Household Facilities and Services

A house to live is the common minimum basic requirement and in all the project sites, the tribal families were having their own house before the displacement and also at present in the resettled colonies / villages. There is no difference in terms of having house in displaced and non-displaced families. Before displacement, about 99.8 percent displaced families were having Kutchha house and the situation was more or less same (100.0 percent) to those families who were not evacuated from their village and still continuing to live in their original village. Over these years, the situation has changed and with the implementation of rural housing scheme like IAY, many rural tribal families, irrespective of their displacement status are having mixed / Pucca house.

At present, among the displaced families, 23.8 percent still have Kutchha house, whereas 45.5 percent are having mixed house and 30.8 percent are having Pucca house. In case of non-displaced tribals, prevalence of mixed houses observed more (63.0 percent) followed by Kutchha (20.0 percent) and Pucca houses (17.0 percent). Overall there is a change in house type in both displaced and non-displaced tribal families. With the increasing focus on rural housing, the house type observed change in both the cases. Apart from this, in resettlement colonies, the displaced families were also provided with Pucca houses with common living amenities like water and electricity.

Table 12: Housing, Household Facilities &amp; Services

Particulars	Before		After	
	DP	N-DP	DP	N-DP
<b>House Ownership</b>				
Own House	100.0	100.0	100.0	100.0
<b>House Type</b>				
<i>Kutchha</i>	99.8	100.0	23.8	20.0
<i>Mixed</i>	0.3	-	45.5	63.0
<i>Pucca</i>	-	-	30.8	17.0
<b>No. of living rooms</b>				
<i>One Room</i>	6.3	5.0	9.5	11.0
<i>Two Rooms</i>	69.2	69.0	52.3	40.0
<i>Three Rooms</i>	18.7	22.0	21.3	30.0
<i>More than Three Rooms</i>	5.8	4.0	17.0	19.0
<b>Facilities Available at Households</b>				
Kitchen inside house	90.0	86.0	80.3	76.0
Cattle shed inside house	74.3	22.0	6.9	17.0
Having electricity	0.5	9.0	77.3	85.0
Having toilet inside house	0.0	0.0	10.5	0.0
Own drinking water source	0.0	1.0	9.0	9.0
Pipe water supply	0.0	0.0	1.8	0.0
Having solar panel	0.0	0.0	0.0	0.0
IAY support for house	0.0	0.0	16.4	29.0
Homestead land of self	0.0	0.0	75.0	100.0

Note: DP-Displaced People, N-DP-Non-Displaced People

Number of living rooms in the houses has also increased in both displaced and non-displaced families. There is an increment in families possessing three rooms in both the cases but houses having two living rooms has reduced and one room houses shows increased in both the cases. Availability of Kitchen and cattle shed inside the house has reduced in both the cases and more number of families are now having electricity connection in both the settlements. In comparison to earlier situation, when most of the families were not having homestead land of their own, substantial growth was observed in terms of holding homestead land in both displaced and non-displaced categories.

Looking at the trend of housing and development / provision of related facilities, it appears that general tribal welfare and common welfare schemes has contributed comparatively in a higher degree than the project for which they were displaced. If the project would have been benefitted, a significant difference could have been observed between displaced and non-displaced communities. But no such remarkable change is observed in both the cases. The benefits given to the displaced and resettled families by the development project was also provided to the non-displaced families in the later stage under tribal development and welfare schemes / programmes.

## Chapter V: Land Acquisition and Landlessness

This situation originates when required measures are not taken to provide land to the families from whom land is acquired for the project. Secondly, such a situation is also an outcome of improper utilization of compensation or otherwise investment of compensation by the displaced and affected families instead of purchasing land. It is also observed in many project locations that when a project is announced, the land price in the nearby area goes up significantly and project displaced and affected families find it difficult to purchase land with the amount of compensation they receive in lieu of their acquired land. The gap in estimated government price and prevailing market price per unit of land (acre) further minimizes the land holding status of the families. Because, the amount of compensation paid, as per Government rates, normally remain lower than the market price for which compensation paid per acre of land becomes insufficient to again purchase an acre of land. So, normally a variation is observed in the post-acquisition period, in comparison to the land holding status of the families, prior to the acquisition.

### 5.1 Land Holding

Land remains a prime source of livelihood for the tribals and eviction from land destroys their productive system. This is the principal form of decapitalisation & pauperization of displaced people through loss of both physical & man made capital (Cernea M.). A study on UIP hydro-power project reveals that average land holding of the displaced families which was 2.64 acres before displacement has substantially come down to 0.62 acres in the post-displacement stage. Similarly, the data further indicates that the encroached land which the displaced families were enjoying before displacement was about 1.5 acres per family and this has also reduced considerably to 0.20 acres in the post-displacement stage. The study also points that while 48.98 percent displaced families were landless before displacement, it has increased to 85.25 percent. The study finds that reduced land holding size in the post displacement stage in case of the displaced people is as an important parameter that has been responsible for non-restoration of the livelihood of the displaced families. This also has contributed to the further impoverishment of the Displaced Families.

In a rural tribal economy, having land play an important role apart from forest for their livelihoods. Among the displaced families, about 89.3 percent were having agricultural land and 94.0 percent having homestead land. Whereas, in case of non-displaced families, 97.0 percent were having agricultural land and 98.0 percent having homestead land. Average agricultural

land holding of the displaced families were 5.26 acres (median 4.0 acres) and 5.71 acres (median 40 acres) in case of non-displaced families. Average size of homestead land holding was 0.16 acres in case of displaced and 0.13 acres in case of non-displaced families.

Table 13: Pre-Displacement Land Holding of Displaced & Non-Displaced Families

Category	No. of Households		Average Land Holding
	No. of HH	% of HH	
<b>Displaced</b>			
Agricultural	357	89.3	5.26
Homestead	376	94.0	0.16
<b>Non-Displaced</b>			
Agricultural	97	97.0	5.71
Homestead	98	98.0	0.13

Type of land possessed by the displaced and non-displaced families' reveals that percentage of families possessing low land was relatively high in all the projects which are normally high yield land types. Average holding of high land is also significant among the displaced and non-displaced families. Land holding by holding type is presented in the table.

Table 14: Type of Land Holding

Category	Particular	Total Ag. Land		High land		Medium Land		Low Land	
		Before	After	Before	After	Before	After	Before	After
<b>HAL</b>									
Displaced	No. of HH	90	2	63		47		78	2
	Av. Land	6.74	2.50	3.45		2.54		3.46	2.50
	Total Land	607	5	217		120		270	5
Non-Displaced	No. of HH	24	9	16	6	13	3	22	7
	Av. Land	5.92	2.17	2.88	.92	2.38	1.33	2.95	1.43
	Total Land	142	20	46	6	31	4	65	10
<b>Harabhangi</b>									
Displaced	No. of HH	90	50	46	21	48	19	78	17
	Av. Land	4.30	.87	2.23	.79	1.68	.58	2.61	.94
	Total Land	387	44	103	17	81	11	203	16
Non-Displaced	No. of HH	25	22	17	11	15	12	21	10
	Av. Land	4.34	1.89	2.03	1.36	1.60	1.17	2.38	1.25
	Total Land	109	42	35	15	24	14	50	13
<b>RSP</b>									
Displaced	No. of HH	98	8	44	3	41	4	59	5
	Av. Land	4.14	1.98	3.46	1.67	2.60	1.20	2.49	1.20
	Total Land	406	16	152	5	106	5	147	6
Non-Displaced	No. of HH	25	4	11		7		20	4
	Av. Land	5.26	2.13	3.77		2.58		3.60	2.13
	Total Land	132	9	42		18		72	9
<b>Upper Kolab</b>									
Displaced	No. of HH	89	81	53	11	44	11	87	73
	Av. Land	5.87	2.54	2.78	2.68	2.03	3.34	3.28	1.91
	Total Land	522	206	148	30	90	37	285	139

Category	Particular	Total Ag. Land		High land		Medium Land		Low Land	
		Before	After	Before	After	Before	After	Before	After
Non-Displaced	No. of HH	23	16	15	6	10	3	23	12
	Av. Land	7.49	2.90	2.91	1.86	2.95	1.67	4.30	2.52
	Total Land	172	46	44	11	30	5	99	30

Before displacement, average land holding of the family, irrespective of displaced or non-displaced and irrespective of project type, was 4.95 acres. With land acquisition for the project and no procurement of land by the families in the later stage, using compensation amount, average land holding decreased to 0.77 acres. Before displacement, about 91.75 percent displaced households were having land, irrespective of its size, which reduced to 35.35 percent after displacement. Similarly, in non-displaced tribal community, 97.0 percent families were having land. But with the project, it reduced to 51.0 percent.

Table 15: Land Holding by Families in Pre-Project and After Project

PROJECT	BEFORE PROJECT		AFTER PROJECT	
	DISPLACED	NON-DISPLACED	DISPLACED	NON-DISPLACED
HAL	90	24	2	9
HARABHANGI	90	25	50	22
RSP	98	25	8	4
UPPER KOLAB	89	23	81	16
<b>TOTAL</b>	<b>367</b>	<b>97</b>	<b>141</b>	<b>51</b>
<b>PERCENT</b>	<b>91.75</b>	<b>97.00</b>	<b>35.25</b>	<b>51.00</b>

It indicates that many families became landless, after the implementation of the project. The land that were acquired for the project, these families could not able to compensate it again though compensation paid for purchasing land in lieu of the acquired land. The status of a land holder vanished with the upcoming project. The situation remain more or less same for the non-displaced but project affected tribal families who continued to live in their original village with the changed holding status, i.e. from landed to landless or from one land holding category to other.

Table 16: Land Holding Pattern

Project	Particulars	Land Holding Pattern			
		Intervention		Control	
		Before	After	Before	After
HAL	% of HH	90.00	2.00	96.00	36.00
	Av. Holding	6.07	0.05	5.68	0.78
	Std. Deviation	7.43	0.41	4.16	1.24
	Total Land	606.56	5.00	142.00	19.50
Harabhangi	% of HH	90.0	50.00	100.00	88.00
	Av. Holding	3.87	0.44	4.34	1.66
	Std. Deviation	3.99	0.63	1.71	0.94
	Total Land	386.64	43.50	108.50	41.50
RSP	% of HH	98.00	8.00	100.00	16.00

Land Holding Pattern					
Project	Particulars	Intervention		Control	
		Before	After	Before	After
	Av. Holding	4.06	0.16	5.26	0.34
	Std. Deviation	3.62	0.77	6.71	0.80
	Total Land	405.94	15.80	131.50	8.50
Upper Kolab	% of HH	89.00	81.00	92.00	64.00
	Av. Holding	5.22	2.06	6.89	1.86
	Std. Deviation	5.23	2.82	4.92	1.99
	Total Land	522.25	205.50	172.17	46.42

Looking by projects, in HAL about 90.0 percent displaced families, prior to displacement, were having land and average size of holding observed to be 6.07 acres. But after displacement, only 2.0 percent families are now holding land and average holding size remains 0.05 acres. In the non-displaced category, 96.0 percent families were having land and average holding size was 5.68 acres, which was relatively less than the displaced families. But after acquisition of land, the holding size reduced to 0.78 acres and only 36.0 percent families now hold land among non-displaced families. In Harabhangi hydropower project, average holding size of the displaced families was 3.87 acres and about 90.0 percent families were holding land. With displacement, percentage of families holding land reduced to 50.0 percent and holding size also reduced to 0.44 acres.

In the non-displaced families, average holding size reduced from 1.71 acres to 0.94 acres and percentage of families holding land reduced from 100.0 percent to 88.0 percent. The trend remains more or less same in RSP where 98.0 percent families were having land before displacement and average size of holding was 4.06 acres. In due course, with displacement, the holding size reduced to 0.16 acres and percentage of family holding land remaining at 8.0 percent. On the other hand, families living in affected villages were having on an average 5.26 acres of land and 100.0 percent families were having land prior to the project. But, later, because of the project, many families became landless and now only 16.0 percent families hold land and average holding size remain at 0.34 acres. In Upper Kolab hydropower project percentage of families holding land reduced from 89.0 percent to 81.0 percent after displacement and average holding size reduced from 5.22 acres to 2.06 acres. In case of non-displaced families, the average holding size reduced from 6.89 acres to 1.86 acres. Percentage of families holding land also reduced from 92.0 percent to 64.0 percent.

So, while these mega projects, irrespective of its category, remain an instrument of greater development of the locality and contribute to the economy of the state / country, people, those gets affected due to such projects and lose their socio-cultural and economic opportunities, fail to regain their asset base. The asset base which was built by them and their



forefathers in the aboriginal community set-up, taking years of hard work, vanishes with the project. Financial compensation and related other compensating mechanisms found inadequate to reestablish their socio-economic status and linking them with the social fabric as it was before.

## 5.2 Land Acquisition

The studied four projects have displaced a total of 6909 families from their aboriginal village of which highest of 54.93 percent are tribals followed by other backward classes (29.48 percent). Further, tribals are highest among all the displaced families in all the projects. All these project have acquired a total of 53484.57 acres of private land of which highest quantum of land is acquired for Upper Kolab hydro-power project (46.22 percent of total land acquired for four projects) followed by RSP (36.88 percent of total land acquired for all the four projects) and lowest in Harabhangi project (3.26 percent). Apart from private land, these projects also acquired available government land.

Table 17: Project wise Displaced Families and Land Acquisition Status

Sl. No.	Name of the Project	No. of Displaced Villages	Displaced Families				Pvt. Land Acquired under the Project (in Acre)
			SC	ST	OBC	Total	
1	HAL	10	47	298	90	435	7297.48
2	Upper Kolab	53	496	1523	1299	3318	24718.5
3	Harbhangi Project		-	-	-	255	1745.90
4	RSP		279	1974	648	2901	19722.69
	Total		822	3795	2037	6909	53484.57

Source: Land Acquisition Office of Koraput for HAL, Special Land Acquisition Officer, Koraput for Upper Kolab, Land Acquisition Office of Gajapati for Harbhangi Irrigation Project, Additional District Magistrate Office, Rourkela

Both homestead and agricultural land got acquired in case of displaced families whereas agricultural land found acquired in case of non-displaced tribal families. So, non-displaced tribal families are the project affected families as they lost their agricultural land for the project. Agricultural land was acquired by the project, irrespective of its category (industrial or hydro-power) in 88.3 percent displaced families (total displaced families having agricultural land was 89.3 percent) those were having agricultural land in the pre-displacement phase. But all displaced families lost their homestead land. The total agricultural land under holding of 357 families (89.3 percent of displaced families) was 1879.39 acres of which 1806.39 acres were acquired under the project. About 376 displaced families (94.0 percent) who were having homestead land of 61.80 acres, all were acquiring by the project. In case of non-displaced

families, 97.0 percent project affected families who were having 554.17 acres of agricultural land, lost 454.92 acres of land for the project.

Table 18: Land Acquisition in the Sample Households

Category	No. of Households Having Land			Land Acquisition		
	No. of HH	% of HH	Total Land	No. of HH	% of HH	Land Acquired
<b>Displaced</b>						
Agricultural	357	89.3	1879.39	353	88.3	1806.39
Homestead	376	94.0	61.80	376	94.0	61.08
<b>Non-Displaced</b>						
Agricultural	97	97.0	554.17	97	97.0	454.92
Homestead	98	98.0	13.14	-	-	-

Looking by project types, it is evident that in HAL, all the agricultural and homestead land under the possession of the displaced families were acquired by the project. In Harabhangi project, about 97.91 percent agricultural land and 100.0 percent homestead land under the possession of displaced families were acquired by the project. In case of RSP, 99.73 percent agricultural land and all the homestead land under possession of displaced families were acquired while in Upper Kolab, 87.75 percent agricultural land and 96.24 percent homestead land of the total holding of the displaced families were acquired.

Table 19: Land Acquisition by Projects in the Sample Households

Projects	No. of Households Having Land			Land Acquisition		
	No. of HH	% of HH	Total Land	No. of HH	% of HH	Land Acquired
<b>HAL</b>						
<b>Displaced</b>						
Agricultural	93	93.0	606.56	89	89.0	606.56
Homestead	97	97.0	18.31	97	97.0	18.31
<b>Non-Displaced</b>						
Agricultural	24	96.0	142.0	24	96.0	126.0
Homestead	25	100.0	3.83	-	-	-
<b>HARABHANGI</b>						
<b>Displaced</b>						
Agricultural	89	89.0	383.64	89	89.0	375.64
Homestead	99	99.0	9.94	99	99.0	9.94
<b>Non-Displaced</b>						
Agricultural	25	100.0	108.50	25	100.0	69.0
Homestead	25	100.0	2.02	-	-	-
<b>RSP</b>						
<b>Displaced</b>						
Agricultural	86	86.0	366.94	86	86.0	365.94
Homestead	86	86.0	14.40	86	86.0	14.40
<b>Non-Displaced</b>						

Projects	No. of Households Having Land			Land Acquisition		
	No. of HH	% of HH	Total Land	No. of HH	% of HH	Land Acquired
Agricultural	25	100.0	131.50	25	100.0	127.50
Homestead	23	92.0	3.25	-	-	-
<b>UPPER KOLAB</b>						
<b>Displaced</b>						
Agricultural	89	89.0	522.25	89	89.0	458.25
Homestead	94	94.0	19.15	94	94.0	18.43
<b>Non-Displaced</b>						
Agricultural	23	92.0	172.17	23	92.0	132.42
Homestead	25	100.0	4.04	-	-	-

In case of non-displaced categories, about 88.73 percent of the total agricultural land acquired in HAL, 63.59 percent land by Harabhangi irrigation project, 96.96 percent land by RSP and 96.24 percent of the total agricultural land possessed by non-displaced families were acquired by the Upper Kolab hydro-power project.

In HAL, about 99.18 percent land under the possession of displaced families were acquired by the project whereas 88.73 percent agricultural land of affected / non-displaced families were acquired. In Harabhangi hydropower project, 97.93 percent agricultural land were acquired from the displaced and 63.59 percent from non-displaced families. In case of RSP, land acquired from both displaced and non-displaced families remain high, i.e., 99.75 percent and 96.96 percent of the total land possessed. In Upper Kolab hydropower, 87.75 percent and 76.91 percent land were acquired from displaced and non-displaced families respectively. Number of households possessing land and amount of land acquired is presented in the Table.

Table 20: Acquisition of Land

Project	Category		Possession of Land		Acquisition of Land	
			Ag. Land	HS Land	Ag. Land	HS Land
HAL	Displaced	No. of HH	90	97	89	97
		Av. Land	6.74	0.19	6.76	0.19
		Total Land	607	18	602	18
	Non-Displaced	No. of HH	24	25	24	
		Av. Land	5.92	.15	5.25	
		Total Land	142	4	126	
Harabhangi	Displaced	No. of HH	90	100	90	100
		Av. Land	4.30	0.10	4.21	0.10
		Total Land	387	10	379	10
	Non-Displaced	No. of HH	25	25	25	
		Av. Land	4.34	0.08	2.76	
		Total Land	109	2	69	
RSP	Displaced	No. of HH	98	98	98	98
		Av. Land	4.14	0.23	4.13	0.23

	Non-Displaced	Total Land	406	22	405	22
		No. of HH	25	23	25	
		Av. Land	5.26	0.14	5.10	
		Total Land	132	3	128	
Upper Kolab	Displaced	No. of HH	89	94	89	94
		Av. Land	5.87	0.20	5.15	0.20
		Total Land	522	19	458	18
	Non-Displaced	No. of HH	23	25	23	
		Av. Land	7.49	0.16	5.76	
		Total Land	172	4	132	

The families not only lose the land but they also lose fertile and irrigated land along with other land. A total of 239 acres of irrigated land (irrigated from all sources) reduced to 4.0 acres after displacement. In case of non-displaced, it reduced from 59.0 acres to 7.0 acres in HAL. Similar trend is observed in other projects where the tribal families lose their cultivated irrigated land. Land acquired by its irrigation status is presented in the table.

Table 21: Irrigated and Unirrigated Land

Particulars	Irrigated Agriculture Land (Own Land)				Non-Irrigated Agriculture Land (Own Land)			
	Before		After		Before		After	
	Displaced	Non-Displaced	Displaced	Non-Displaced	Displaced	Non-Displaced	Displaced	Non-Displaced
<b>HAL</b>								
No. of HH	60	16	1	4	74	19	1	7
Av. Land	3.99	3.69	4.00	1.63	4.96	4.37	1.00	1.86
Total Land	239	59	4	7	367	83	1	13
<b>Harabhangi</b>								
No. of HH	60	20	2	10	67	22	49	17
Av. Land	3.13	2.95	1.25	1.40	2.97	2.25	.84	1.62
Total Land	188	59	3	14	199	50	41	28
<b>RSP</b>								
No. of HH	33	8			89	19	8	4
Av. Land	2.87	3.38			3.50	5.50	1.98	2.13
Total Land	95	27			311	105	16	9
<b>U. Kolab</b>								
No. of HH	66	18	57	5	69	19	32	12
Av. Land	4.08	4.26	2.21	3.20	3.66	5.03	2.48	2.54
Total Land	270	77	126	16	253	96	80	30

### 5.3 Compensation for Acquisition

Failure in acquiring alternate cultivable lands remains a reality with most of the oustees. In the absence of a comprehensive rehabilitation plan, undervaluation of compensation and the inability to negotiate a money economy, combine as serious barriers for displaced land owners to secure alternate cultivable lands. Chakraborty (1986) cites the instance of Srisailam, where the average land-holding size of the oustees declined between 53 percent and 63 percent for all categories. This is indicative of the economic marginalization of the oustees. This is one of the impoverishment risks discussed by Cernea (1999). The only recourse for the dispossessed

cultivator caught in what Cernea describes as the “spiral of impoverishment” is typically one of two alternatives. The erstwhile land-owner either migrates to the slums of the cities in search of work, or fans out to neighboring wastelands or forest tracts or clears them for cultivation. Whether it is hydro power and irrigation project like Upper Kolab or Harabhangi or Industrial project like RSP and HAL or any other project like Bargi or Srisailam, Hasdeo Bango or Ukai, the result remains more or less same.

Under-valuation of compensation coupled with improper procedure of payment make the situation of the displaced and affected families more vulnerable. The only significant reparation for displaced persons guaranteed by law is the payment of monetary compensation for compulsorily acquired individual assets, mainly land or houses. However, the manner in which the law is framed and interpreted ensures that the displaced land-owner or house-owner is always the loser. Lokayan in 1982 documented the trauma undergone by the 21,094 families in the 100 villages submerged by the Srisailam project in Andhra Pradesh. According to the report (quoted in Paranjpye, 1990): The government has conceived and executed the Srisailam project without taking into consideration the human problem seriously.

The disbursement of compensation (in cash) did not encourage plans for resettlement. In the disbursement of compensation there appears to have been widespread corruption. Large and rich farmers managed to receive compensation, for both house sites and land lost, at reasonably competitive terms; people with low economic and social status did not get fair compensation for the property lost. The people were neither educated nor taken into confidence regarding the various issues involved in computing compensation, evacuation and rehabilitation. Except for a few educated people, the overwhelming majority were not conversant with the relevant provisions of the Land Acquisition Act. The Government made no effort to educate the people in this regard. This led to “legal cheating” of the people. State power, including police power was used in a most brutal manner to evict the villagers.

On the other hand, inability to handle cash compensation appropriately pushed them further to impoverishment. Whatever compensation is fixed was paid as a rule in cash rather than kind to the oustees. The tribal people, with little experience of handling cash mismanaged it and utilized it inappropriately (observed in projects like Upper Indravati). Many studies have recorded how cash compensation is mishandled by the oustees and in short period, all the paid amount vanished out of their vanity.

In HAL, neither agricultural land nor homestead land was provided to any family after displacement. Families are still living in the Government land without ROR. Villagers of

Pangiguda has been cultivating by enclosing Government land since 1990 (which they have lost at the time of displacement in the year 1963), whereas there is no scope for Chikapar to encroach government land for cultivation. In the project affected (non-displaced) village, no agricultural land was provided to the families from whom land is acquired. The land that were acquired from people was relatively fertile land. The left out or remaining land that were not acquired are less fertile as these land comes under high land.

Under the project, only compensation for agricultural land was provided by HAL at the rate of Rs.250.00 for Low / fertile land-, Medium land-Rs.150.00, High Land / *Bagada*- Rs.100.00 per acre (source: Community FGD). As these families suffered from double displacement, all these displaced families were provided with Rs.14, 040.00 as compensation for homestead land by Upper Kolab hydro-power project when they were displaced for the second time. Only Chikapar village comes under the second displacement and availed compensation benefit of homestead land.

Under the Upper Kolab Hydro-power project, each displaced family was provided with 3 acres of irrigated land or 6 acres of un-irrigated land. The families, who were not provided with stipulated amount of land, were compensated with Rs.4, 320.00 for 1 acre of irrigated land and Rs.2, 160 for 1 acre of un-irrigated land. All the displaced families could able to get 2 acres of irrigated land (land provided under irrigated category but practically canal water is not reaching to the tail end). In the non-displaced villages, only land compensation was provided to the families those lost agricultural land under the project. The affected families were compensated with Rs.14, 040/- against their land and houses.

In Upper Kolab, Land for land was provided to the displaced families, wherever it was feasible. ROR was also provided to each displaced families for both agriculture and homestead land. However, the land provided under the project was less fertile than their own land which were acquired by the project. As a result, many farming tribal families acquired nearby government land, based on its availability, for farming apart from cultivating their compensated land. All the cultivated land is not irrigated (only 10% of the land is irrigated) though it comes under designed *lyacut*. This situation was because of the defunct canal system which failed to feed water to the land. After displacement, some of the ST families preferred to get resettled near their own village area (Colony-B). In the affected (non-displaced) villages, no agricultural land was provided to the families. Their remaining cultivable land (land not acquired by the project) was less fertile (as these land comes under high land) and production from agricultural was also comparatively less. After losing fertile land to the project, source of income from agricultural

also reduced due to poor production and productivity. As a result, they started exploring other areas of engagement like wage, including migration.

In Harabhangi irrigation project, land for land was provided to the displaced families. The displaced families were provided with 0.60 acre of agriculture land and 0.08 acre of homestead land. For the given land, ROR was also provided to each family for both agriculture and homestead land. In non-displaced villages, only land compensation was provided to the families those who lost agricultural land under the project. Because of low availability of land, many farming tribal families acquired available government land for cultivation, apart from using their own compensated land. Demarcation of agriculture land has not been done for any of the families till now which gives rise to conflicting situation, even with the nearby villagers. The lands provided under the project are less fertile than the acquired land.

In case of RSP, land compensation was provided to the families those who lost agricultural land under the project. Land compensation amount varies depending upon the pre-acquisition holding size. As project is quite old, it was difficult to get actual amount paid to the displaced / affected families. Land for land was also provided to the displaced families. In the non-displaced villages, land compensation was provided to the families those who have lost agricultural land under the project.

Some of the families, who were provided land, were also provided ROR (in terms of lease for 99 years). Agricultural land provided to **Jhirpani** displaced families at Hatidarsha, and Gurundia which is about 85 km and 120 km away respectively from the resettled colony. But the families did not occupy the provided land due to the distance factor and poor land character (high lands). Agricultural land provided to **Jalda-C** displaced families at Birkera which is about 50 km away from the resettled colony. The area (Birkera) was difficult to approach due to river, for which families could not able to access their agricultural land. Further, they even did not occupy the provided land due to distance and poor quality of agricultural land. In the non-displaced villages, no agricultural land was provided.

## Chapter VI: Tribal Livelihoods, Joblessness & Marginalization

### 6.1 Joblessness and Marginalization

Instead of adopting and operationalizing rehabilitation using land-for-land policy, rehabilitation of oustees has been through non-land based financial compensation mode. Even the projects failed to foster self-employment strategies, either directly or through convergence. It has remained difficult for the executing entities to find a suitable avenue for economic diversification of the displaced families into non-land based activities, especially when land resource is not available with them adequately after displacement. Somehow, fisheries have been one of the scope that has been created through these mega dams / hydro-power projects.

Contextually looking at the studied projects, it is apparent that no permanent job provided by the project HAL to the displaced and/or affected families. But people were employed in HAL in their own capacity and capability. In some families, members are also engaged in different Government or private jobs in different places. Some of the family members of Chikapar are getting employment opportunity as casual or daily labour in HAL, whereas the villagers of Pangiguda are deprived off such facilities. The similar situation is observed in the non-displaced villages.

In Upper Kolab hydro-power project, more or less similar trend is observed. The project could not able to provide job / employment to the displaced families. The displaced families were settled at Kotpad which is about 75 km from their old village. Even after displacement, it was difficult for the people to get daily wage labour work in the displaced locations. A nearby cashew factory is creating casual labour work opportunity for the local people. Similar trend is also observed in the non-displaced (affected) villages. The project did not provide any opportunity of employment to the affected families. However, persons have joined in Government and private jobs by their own. The living condition of the non-displaced village is comparatively better than the resettled colonies at Batasana. Some families are also involved in fishing activity in the reservoir of Upper Kolab.

Normally, scope of direct engagement remains low in hydro-power and irrigation projects, in comparison to industrial projects. In Harabhangi irrigation project, job opportunity was not



observed where the displaced families can engage them permanently. However, at the time of displacement, some people were provided temporary job (operator, store keeper) under the project for two to three years and some are provided with daily wage labour. Very few persons got permanent post.

At present, wage labour is the primary source of income for the people in Harabhangi whereas agriculture, timber sale, NTFP selling remains secondary source of engagement and income. Family members are now engaged in private daily wage work at Adava, Jhiliki and also at Mohana block. Skilled persons are getting work, whereas the unskilled labour are facing employment problem. In the non-displaced villages, no job provided to any of the affected families by the project. From their own ability, family members have joined in Government and private jobs. The living condition of people in this village is comparatively better than the resettled colonies at Batasana. Some families in the non-displaced villages are also engaged in fishing (from the reservoir of Upper Kolab), petty business, cottage industries and daily wage labour as their primary source of income.

After displacement, families were offered temporary and permanent jobs by RSP, based on their ability to work. Because of the scope of employment, after displacement, living standard of the displaced has improved. Even opportunities of employment were offered to the non-displaced but affected villagers.

## 6.2 Employment and Income

Acquisition of land takes away the basic sources of livelihood from the people and forceful displacement from own land further minimize the scope. In the new set-up, it becomes difficult for the tribals to cope with the situation and find the means of their livelihoods. It is expected that the project for which these people were displaced, should be provided job in the project or by the project through required skill development. But any of these four projects did not offer any job to the displaced or non-displaced families, though these people demanded for employment. As educational background of tribals was low, equipping them with required employable skill could have been benefitted. But no such measure was taken by industrial projects nor by the hydro-power projects, excluding Harabhangi. About 11.0 percent displaced families were provided skill based training by the Harabhangi project so that these families can earn their livelihoods utilizing the acquired skill set/s. Apart from skill inputs, the Harabhangi project also assisted in livelihoods restoration of the displaced families (11.0 percent) in the

form of skill based training, linkage with existing schemes and financial support for restoration of livelihoods.

Table 22: Primary Source of Engagement and Income: Pre-Displacement

Engagement	Name of Projects															
	HAL				Harabhangi				RSP				Upper Kolab			
	D		ND		D		ND		D		ND		D		ND	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Agriculture	95	95.0	25	100.0	100	100.0	25	100.0	96	96.0	23	92.0	95	95.0	24	96.0
Daily Labour	3	3.0							3	3.0			5	5.0	1	4.0
Fishing	1	1.0														
Salary Job	1	1.0							1	1.0	2	8.0				
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>

Note: D-Displaced, ND-Non-Displaced

Before displacement, agriculture was the primary source of income and engagement of tribals in both displaced and non-displaced villages. About 95.0 percent families in HAL, 96.0 percent in RSP, 95.0 percent in Upper Kolab and 100.0 percent families in Harabhangi were engaged in agriculture sector before displacement. Similar trend is also observed in non-displaced families.

Table 23: Primary Source of Engagement and Income: After Displacement

Employment	Name of Projects															
	HAL				Harabhangi				RSP				Upper Kolab			
	D		ND		D		ND		D		ND		D		ND	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Agriculture	51	51.0	25	100.0	23	23.0	8	32.0			3	12.0	38	38.0	4	16.0
Artisan									1	1.0						
Daily Labour	27	27.0			53	53.0	11	44.0	36	36.0	10	40.0	30	30.0	16	64.0
Fishery					12	12.0										
Migration					1	1.0										
Own Enterprise									6	6.0						
Pension	3	3.0											4	4.0		
Petty business	2	2.0			3	3.0							2	2.0	1	4.0
Petty Business							1	4.0	6	6.0						
Salary Job	14	14.0			3	3.0	2	8.0	22	22.0	7	28.0	4	4.0	3	12.0
skilled Labour									1	1.0						
Skilled Labour	3	3.0			5	5.0	3	12.0	28	28.0	5	20.0	22	22.0	1	4.0
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>

Note: D-Displaced, ND-Non-Displaced

Diversification in sectors of engagement observed after displacement, in both displaced and non-displaced families. But engagement in diverse sectors observed more in displaced communities rather than non-displaced families. In HAL, 51.0 percent now have agriculture as their primary source of earning followed by daily wage (27.0 percent), salaried job (14.0 percent) and other. But in non-displaced communities, agriculture still remains primary for non-displaced communities. In Harabhangi hydro-power project, majority of the displaced families are engaged in daily wage labour (53.0 percent) followed by agriculture and fishery (12.0 percent).

In non-displaced families, employment of families in daily wage is higher (44.0 percent) than agriculture (32.0 percent). In RSP, more number of displaced families are engaged in daily wage (36.0 percent), skilled labour (28.0 percent) and salaried jobs (22.0 percent). People engaged in own enterprise (6.0 percent) and petty business (6.0 percent) is also observed in RSP as market mechanism is well flourished around RSP project site. In Upper Kolab, highest percentage of families, though less than earlier, are engagement is in agriculture (38.0 percent) followed by daily wage (30.0 percent) and skilled labour (22.0 percent). Among non-displaced families, engagement in daily wage labour remains high (64.0 percent) followed by agriculture (16.0 percent) and salaried job (12.0 percent).

Table 24: Secondary Source of Engagement and Income: Pre-Displacement

	HAL				Harabhangi				RSP				Upper Kolab			
	D		ND		D		ND		D		ND		D		ND	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
	2	2.0			6	6.0			6	6.0			53	53.0	12	48.0
Agriculture	1	1.0									2	8.0				
Animal Husbandry	1	1.0							2	2.0						
Daily Labour	17	17.0			9	9.0	1	4.0	19	19.0	14	56.0	26	26.0	2	8.0
Fishing	1	1.0														
NTPF	77	77.0	25	100.0	85	85.0	24	96.0	73	73.0	8	32.0	21	21.0	9	36.0
Petty Business	1	1.0									1	4.0			2	8.0
Total	100	100.0			100	100.0	25	100.0	100	100.0	25	100.0	100	100.0	25	100.0

Note: D-Displaced, ND-Non-Displaced

Table 25: Secondary Source of Engagement and Income: Post-Displacement

Sectors of Engagement	Name of Project															
	HAL				Harabhangi				RSP				Upper Kolab			
	D		ND		D		ND		D		ND		D		ND	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
	99	99.0	25	100.0	84	84.0	13	52.0	94	94.0	21	84.0	86	86.0	25	100.0
Agriculture													1	1.0		
Animal Husbandry									1	1.0						
Daily Labour	1	1.0			14	14.0	6	24.0	4	4.0	2	8.0	13	13.0		
Firewood collection, selling					2	2.0	6	24.0								
NTPF									1	1.0	2	8.0				
Total	100	100.0			100	100.0	25	100.0	100	100.0	25	100.0	100	100.0		

Note: D-Displaced, ND-Non-Displaced

About 32.8 percent families, irrespective of displacement, feel that they were having a better standard of life before, in comparison to present status. But majority (67.2 percent) feel that present standard of living is better than the earlier due to various facilities and services that are available now. Similar trend is observed in displaced and non-displaced families. In displaced families 67.0 percent and 68.0 percent among the non-displaced families feel that their current living condition is better than earlier.

Table 26: Reasons of Better and Poor Living Standard Before

Reasons of Better Living Standard Before	Reasons of Poor Living Standard Before
<ol style="list-style-type: none"> <li>1. More fertile agriculture land and more productivity</li> <li>2. Perennial source of irrigation through streams</li> <li>3. Getting natural food supplements from forest</li> <li>4. Population low and less competition</li> <li>5. Natural food production without pesticide and fertilizer</li> </ol>	<ol style="list-style-type: none"> <li>1. Low income</li> <li>2. Zamindari system (mortgage)</li> <li>3. Labour in terms of kind</li> <li>4. No education</li> <li>5. Lack of Communication/ inaccessible area</li> <li>6. Use of country liquor</li> <li>7. Food insecure</li> <li>8. No future perspective/ vision</li> </ol>

Reasons of decreased living standard now	Reasons of Improved living standard now
<ol style="list-style-type: none"> <li>1. Less income and high expenditure</li> <li>2. Less land</li> <li>3. Not getting schematic benefit</li> <li>4. No BPL, No IAY</li> <li>5. One rupees rice not available</li> <li>6. Zamindari system (mortgage)</li> <li>7. Labour in terms of kind</li> <li>8. High Consumption of liquor</li> </ol>	<ol style="list-style-type: none"> <li>1. Got more agriculture land</li> <li>2. Increased level of income</li> <li>3. Good communication facilities to different institutions</li> <li>4. More employment and high wage rate</li> <li>5. Availing schematic benefits from Govt.</li> <li>6. Better education</li> <li>7. Different opportunities of employment</li> <li>8. Use of electronics items</li> <li>9. Migration and getting higher income from it</li> </ol>

In a pre-project situation, when number of persons engaged in agriculture was more than the current engagement, average days of engagement found to be more or less same. But average income of the engaged families has increased. While, there is reduction in number of households engaged in agriculture by 38.13 percent in displaced and 37.11 percent in non-displaced families, average growth in income from agriculture observed in both the cases, i.e., there is a growth in income of about Rs. 12577.82 in displaced and Rs. 8288.99 among the non-displaced with a total average difference of Rs. 11684.86 between pre-project and current situation.

While there is a reduction in number of families engaged in agriculture and earning their livelihoods, a growth is marked in daily wage by 45.21 percent among the displaced and 54.76 percent among the non-displaced. Average total difference in engagement, irrespective of displaced and non-displaced, found to be 46.96 percent. Along with increased participation of tribals in daily wage, average annual income from wage has also gone up by Rs.36038.06 and Rs.39, 638.21 in displaced and non-displaced families. Average annual growth from wage income, irrespective of displacement, estimated to be Rs.36, 721.12 which is higher than agricultural income. Decreasing land availability for agriculture and increasing scope of wage engagement (MGNREGA, private works, contractor works etc.) has been one of the reasons for

such diversion, coupled with instant income benefit to the wage earners after the completion of work (daily / weekly basis).

Table 27: Number of Persons Engaged, Days of Engagement and Income

	Before						After					
	Displaced		Non-Displaced		Total		Displaced		Non-Displaced		Total	
	HH	Mean	HH	Mean	HH	Mean	HH	Mean	HH	Mean	HH	Mean
<b>Agriculture</b>												
No of Persons	375	2.20	97	2.04	472	2.17	232	2.01	61	1.66	293	1.94
No of Days	375	150.92	97	141.45	472	148.97	232	154.76	61	122.30	293	148.00
Income (in Rs.)	375	3661.83	97	3638.14	472	3656.96	232	16239.66	61	11927.13	293	15341.83
<b>Daily Wage</b>												
No of Persons	188	1.94	42	1.88	230	1.93	273	1.86	65	1.72	338	1.83
No of Days	188	106.70	42	106.31	230	106.63	273	212.86	65	220.77	338	214.38
Income (in Rs.)	188	2920.00	42	1963.33	230	2745.30	273	38958.06	65	41601.54	338	39466.42
<b>Animal Husbandry</b>												
No of Persons	46	1.37	4	1.25	50	1.36	57	1.42	11	1.64	68	1.46
No of Days	46	270.43	4	363.75	50	277.90	57	286.14	11	355.45	68	297.35
Income (in Rs.)	46	1714.57	4	387.50	50	1608.40	57	8989.47	11	12981.82	68	9635.29
<b>NTPF Selling</b>												
No of Persons	215	1.75	52	1.75	267	1.75	8	1.63	26	1.46	34	1.50
No of Days	215	97.56	52	106.25	267	99.25	8	57.50	26	95.19	34	86.32
Income (in Rs.)	215	2711.79	52	1795.19	267	2533.28	8	1500.00	26	5225.00	34	4348.53
<b>Salaried Job</b>												
No of Persons	10	1.20	1	1.00	11	1.18	60	1.28	18	1.39	78	1.31
No of Days	10	328.00	1	365.00	11	331.36	60	375.67	18	393.33	78	379.74
Income (in Rs.)	10	1750.00	1	3600.00	11	1918.18	60	200625.00	18	202166.67	78	200980.77
<b>Petty Business</b>												
No of Persons	11	1.55	1	1.00	12	1.50	41	1.17	6	1.33	47	1.19
No of Days	11	180.91	1	300.00	12	190.83	41	185.85	6	265.83	47	196.06
Income (in Rs.)	11	13181.82	1	5000.00	12	12500.00	41	41981.71	6	104140.00	47	49916.81
<b>Skilled labour:</b>												
No of Persons	1	1.00			1	1.00	112	1.08	16	1.19	128	1.09
No of Days	1	90.00			1	90.00	112	228.35	16	246.56	128	230.63
Income (in Rs.)	1	14000.00			1	14000.00	112	58509.38	16	81250.00	128	61351.95
<b>Own Enterprise:</b>												
No of Persons	2	1.50			2	1.50	21	1.24	4	1.00	25	1.20
No of Days	2	125.00			2	125.00	21	254.52	4	255.00	25	254.60
Income (in Rs.)	2	20000.00			2	20000.00	21	97619.05	4	105000.00	25	98800.00
<b>Artisan</b>												
No of Persons	3	2.00			3	2.00						
No of Days	3	200.00			3	200.00						
Income (in Rs.)	3	1333.33			3	1333.33						
<b>Other Sources:</b>												
No of Persons	17	1.71	6	1.67	23	1.70	158	1.51	28	1.39	186	1.49
No of Days	17	111.76	6	188.33	23	131.74	158	281.17	28	316.43	186	286.48
Income (in Rs.)	17	14052.94	6	2493.33	23	11037.39	158	20827.51	28	23832.14	186	21279.82

Engagement in animal husbandry has increased by 23.91 percent among displaced and more than 2 times among the non-displaced. Average annual income from animal husbandry has also increased by Rs.8026.89, irrespective of displacement status. Among the displaced families, it has increased by Rs.7, 274.91 and Rs.12, 594.32 among the non-displaced families while average days of engagement remains more or less same. So, gradually, economic dimension of animal husbandry is evolving in the tribal society, in both displaced and non-displaced categories. Increasing demand for animal husbandry products may be one of the reasons for such change. Further, number of persons engaged in skill labour also shows an increasing trend in the current situation with increased average annual income of Rs.47, 351.95, irrespective of

their status of displacement. Among the displaced families, it has increased on an average by Rs.44, 509.38 and among the non-displaced it has increased substantially by Rs.81, 250.0 while number of skilled labourer found more among the displaced rather than non-displaced families. Other sectors of engagement and related income are presented in the table (project wide details are annexed).

### 6.3 Agricultural Production and Productivity

With the reduction of land holding, area (own) put to agriculture also reduced drastically. Before the project, a total of 1617 acres of land was put to paddy cultivation by all these families, irrespective of their displacement status (including both displaced and non-displaced). With average yield of about 5.75 quintals per acre, total paddy production of these families was about 9330 quintals. Apart from cultivating own land, they were also cultivating available forest and other land (70 acres) from which they were producing 402 quintals (yield rate of 5.75 quintal per acre) of paddy per year. Now, with same yield rate, total production from own land reduced by 80.77 percent (1794 quintals). But in the post-project situation, due to less availability of own land, cultivation of other land, including encroached land increased from 70 acres to 356 acres and total production from other lands also increased from 402 quintals to 2020 quintals. Non-availability of own land increased cultivation of other land, based on its availability.

Table 28: Difference of Area put to Agriculture and Production

	Pre-Project and Post-Project Difference in Area and Production					
	Difference Among Displaced			Difference Among Non-Displaced		
	No. of HH	Average	Total	No. of HH	Average	Total
<b>Paddy</b>						
Own Area (Ac.)	-220	-1.89	-1036	-47.00	-2	-261.10
Other Area (Ac.)	123	0.41	273	10.00	0	13.20
Own Production (Qt.)	-220	-11.34	-6025	-47.00	-10	-1511.50
Other Production (Qt.)	123	2.37	1527	10.00	-1	90.40
<b>Maize</b>						
Own Area (Ac.)	-78	0.09	-72	-10.00	-1	-15.80
Other Area (Ac.)	39	-0.48	33	-3.00	0	-1.50
Own Production (Qt.)	-78	0.50	-214	-10.00	-2	-49.30
Other Production (Qt.)	39	-0.99	92	-3.00	0	-7.00
<b>Ragi</b>						
Own Area (Ac.)	-204	-0.23	-278	-47.00	-1	-89.00
Other Area (Ac.)	85	0.21	107	4.00	0	3.30

	Pre-Project and Post-Project Difference in Area and Production					
	Difference Among Displaced			Difference Among Non-Displaced		
	No. of HH	Average	Total	No. of HH	Average	Total
Own Production (Qt.)	-204	-1.50	-858	-48.00	-2	-282.75
Other Production (Qt.)	85	-0.27	238	4.00	-2	-6.00
<b>Kutting</b>						
Own Area (Ac.)	-18	-0.11	-15	-2.00	-1	-1.50
Other Area (Ac.)	8	0.04	6	-2.00	0	-1.00
Own Production (Qt.)	-18	-0.69	-57	-2.00	-2	-4.00
Other Production (Qt.)	8	-0.53	14	-2.00	0	-4.00
<b>Jana</b>						
Own Area (Ac.)	-72	-0.02	-52	-20.00	0	-16.60
Other Area (Ac.)	30	-0.02	20	-6.00	0	-0.50
Own Production (Qt.)	-72	-0.22	-132	-21.00	-1	-45.70
Other Production (Qt.)	30	-0.13	45	0.00	0	-0.50
<b>Bazra</b>						
Own Area (Ac.)	-7	-0.66	-5	-2.00	-1	-1.10
Other Area (Ac.)	0	-0.50	-1	-2.00	0	-0.50
Own Production (Qt.)	-6	-0.21	-6	-3.00	-1	-4.20
Other Production (Qt.)	-1	-0.50	-1	-1.00	-2	-2.00
<b>Green Gram</b>						
Own Area (Ac.)	-33	0.69	-20	-10.00	0	-7.05
Other Area (Ac.)	9	0.00	5	0.00	0	0.00
Own Production (Qt.)	-33	0.32	-52	-10.00	-2	-39.25
Other Production (Qt.)	9	-0.38	13	0.00	0	0.00
<b>Black Gram</b>						
Own Area (Ac.)	-101	-0.29	-94	-23.00	-1	-43.50
Other Area (Ac.)	23	-0.19	14	-2.00	-1	-1.50
Own Production (Qt.)	-103	-0.86	-237	-23.00	-2	-90.40
Other Production (Qt.)	25	-0.46	29	-2.00	-5	-9.00
<b>Horse Gram</b>						
Own Area (Ac.)	-53	-0.01	-32	-15.00	0	-16.90
Other Area (Ac.)	16	-0.51	7	0.00	1	1.60
Own Production (Qt.)	-53	-0.98	-99	-16.00	-2	-49.55
Other Production (Qt.)	16	-2.11	28	-1.00	1	-2.00
<b>Kandul</b>						
Own Area (Ac.)	-77	-0.45	-62	-24.00	-1	-20.95
Other Area (Ac.)	15	0.16	12	0.00	0	-0.60
Own Production (Qt.)	-77	-0.38	-146	-24.00	-2	-45.80
Other Production (Qt.)	15	-0.34	18	0.00	-1	-2.80

	Pre-Project and Post-Project Difference in Area and Production					
	Difference Among Displaced			Difference Among Non-Displaced		
	No. of HH	Average	Total	No. of HH	Average	Total
<b>Til</b>						
Own Area (Ac.)	-25	-0.36	-17	-7.00	-1	-5.00
Other Area (Ac.)	3	0.83	3	0.00	0	0.00
Own Production (Qt.)	-25	-1.10	-44	-7.00	-2	-12.45
Other Production (Qt.)	3	0.70	2	0.00	0	0.00
<b>Sunflower</b>						
Own Area (Ac.)	-1	-0.20	0	0.00	0	0.00
Other Area (Ac.)	1	0.05	0	0.00	0	0.00
Own Production (Qt.)	-400	0.00	0	-100.00	0	0.00
Other Production (Qt.)	1	2.00	2	0.00	0	0.00

Own area cultivated / put to agriculture (paddy) has reduced in both displaced and non-displaced families and as a result, production of paddy from own land has also reduced. But other areas, including forest and enclosed area put to paddy cultivation has increased and in comparison to pre-project, they are getting more production from such land. Similar trend is also observed in major crops cultivated by the tribals like Maize, Ragi, Kutting, Jana, Bazra etc. Difference of area and production between pre-project and current situation for specific crops is presented in the table.

## 6.4 Common Property Resource and Accessibility

It is a common phenomenon that land is acquired not only from the families (private land), but also available Government lands are acquired by different projects, including common property resources, used by people, on priority basis. Acquisition of these valuable resources automatically restricts accessibility of the users and to a large extent impact upon their socio-cultural and economic life. A study in the Upper Indravati Project (UIP) confirms that acquisition of forest land reduces people's accessibility and also impact upon their livelihoods. In case of UIP, the acquired area was having dense forest and the local tribals depending upon forest resources to derive part of their livelihoods. Besides, most of the displaced persons had encroached a sizable forest area or available Government land for cultivation. Because of the acquisition of these lands, the tribals lost these resources and their by their sources of livelihoods. Even they did not get any compensation for these land as there was no record of



right over such encroached land. This contributed to the impoverishment of the displaced people.

Besides, forest as a major common property resource, there are a number of other resources like grazing land, wood lot, burial ground, waste land and space for cultural shows which were very meaningfully used by the displaced People in their original villages before displacement. But after the displacement, most of these facilities were not available to the resettled displaced people in the relocated places. Besides, for sharing the common property resources, in most of the resettlement places, conflict of very serious nature were observed between the host villager & the Resettled families. Besides, the fruits, roots, tubers and other forest produces consumed, collected & sold by the people were also minimised in the new relocation sites which contributed profusely to the impoverishment of the displaced persons.

The study finds that while 75.85 percent of the displaced families had encroached land before displacement, it has substantially reduced to 23 percent in the post displacement stage as most of the forest & government land encroached by them got acquired. In the new place of relocation, there were no government / forest land available which can be used by them for cultivation. Further, it is also seen that due to the acquisition of encroached land, the average encroached land per family, which was 1.50 acres in the pre-displacement stage, got reduced to only 0.20 acres in the post-displacement stage. In addition to the above status, it is also revealed that while forest was very easily accessible for the displaced persons before displacement and as many as 34.65 percent families depended on minor forest produce (MFP) for their survival, accessibility to forest got reduced considerably and this resulted in reducing the percentage of displaced families depending on MFP for survival to only 14.20 percent. It was also observed that while all the displaced families before displacement had access to grazing land as well as to the burial ground, in the post displacement stage, only about 25 percent and 26.66 percent had access to grazing land & burial ground respectively. It has been seen that in the relocation sites, since the displaced families did not had any earmarked places for burial & grazing land, while trying to share these places of the host population, there have been often conflict. Access of the displaced and resettled families to common property resources have been reduced in the post-displacement stage & this has disrupted the livelihood restoration to a large extent.

This situation is observed not only in UIP, but also in most of the projects for which displacement has taken place and available common property resources were acquired by the project. The studied four projects also reveals similar trend. But attempt is made to understand

this aspect in two contexts, i.e., in resettled habitations and non-displaced village (affected village). The objective of this comparative assessment is to look at whether access to common property resource has minimized only in resettled villages or the situation also persists in non-displaced villages. Attempt is also made to look at the overall environmental situation in both the context and comparing the status of common property resources and accessibility status of the people.

It is common that when people gets evicted from their own land, certain privileges they left behind. Tribals normally live with nature and when they gets evicted from their own land and forced to settle in other place, they leave behind certain services they were availing from the environment. Ecosystem services remain very important for the life and livelihoods of the tribals. There is a change in the availability, accessibility and utilization of various common property resources. Among the displaced families, availability of local forest reduced and for all the displaced families, it has reduced (medium availability for 37.5 percent and low availability for 62.5 percent). Availability of forest resource also observed reduced for the non-displaced families, in comparison to pre-project situation. Less availability of forest resources depends upon a number of factors like place of resettlement, decreasing forest cover due to developmental activities (road, bridges, infrastructure etc.), increasing population pressure and anthropogenic activities in the forest areas. With reduced availability, accessibility and utilization of forest resources by the displaced and non-displaced families has also reduced. With the acquisition of land, the availability of grazing land has also reduced and by that accessibility and its utilization. It is observed in both displaced and non-displaced families / communities. Status of similar other common property resources are also mapped based on the responses of displaced and non-displaced families which is presented in the table.

*Table 29: Availability, Accessibility and Utilisation of Common Property Resources*

	Displaced						Non-Displaced					
	Pre-Project			Post-Project			Pre-Project			Post-Project		
	H	M	L	H	M	L	H	M	L	H	M	L
<b>Availability</b>												
Village / Local Forest	100.0				37.5	62.5	100.0				100.0	
Prayer / Worship Place	100.0			100.0			100.0			100.0		
Cremation Ground	100.0			75.0	25.0		100.0			100.0		
Grazing Land	100.0			37.5	12.5	50.0	100.0				75.0	25.0
Threshing Ground	100.0			50.0		50.0	100.0			50.0	50.0	
Village Orchard	50.0	25.0	25.0			100.0	99.0	1.0				100.0
Community Hall	50.0		50.0	50.0		50.0	25.0		75.0	50.0		50.0
Community Ponds	25.0		75.0	25.0	12.5	62.5	25.0		75.0	25.0	50.0	25.0
Community Wells	62.5		37.5	25.0	12.5	62.5	75.0	25.0		75.0		25.0
Streams	100.0			62.5	12.5	25.0	75.0		25.0	25.0		75.0
<b>Accessibility</b>												

	Displaced						Non-Displaced					
	Pre-Project			Post-Project			Pre-Project			Post-Project		
	H	M	L	H	M	L	H	M	L	H	M	L
Village / Local Forest	100.0				50.0	50.0	100.0				100.0	
Prayer / Worship Place	100.0			100.0			100.0			100.0		
Cremation Ground	100.0			75.0	25.0		100.0			100.0		
Grazing Land	100.0			62.5	12.5	25.0	100.0				75.0	25.0
Threshing Ground	100.0			50.0		50.0	100.0			50.0	50.0	
Village Orchard	50.0	25.0	25.0			100.0	75.0	25.0				100.0
Community Hall	50.0		50.0	50.0		50.0	25.0	75.0		50.0		50.0
Community Ponds	25.0		75.0	25.0	12.5	62.5	25.0	75.0		25.0	50.0	25.0
Community Wells	62.5		37.5		37.5	62.5	75.0		25.0		75.0	25.0
Streams	100.0			31.5	12.5	56.0	75.0	25.0		25.0		75.0
<b>Utilisation</b>												
Village / Local Forest	100.0				11.0	89.0	100.0			25.0	75.0	
Prayer / Worship Place	100.0			100.0			100.0			100.0		
Cremation Ground	100.0			75.0	12.5	12.5	100.0			100.0		
Grazing Land	100.0			30.0	22.0	48.0	100.0				75.0	25.0
Threshing Ground	100.0			50.0		50.0	100.0			50.0	50.0	
Village Orchard	50.0	25.0	25.0			100.0	75.0	25.0				100.0
Community Hall	50.0		50.0	19.5	5.5	75.0	25.0		75.0	50.0		50.0
Community Ponds	25.0		75.0	12.5	25.0	62.5	25.0	25.0	50.0	25.0		75.0
Community Wells	62.5		37.5		37.5	62.5	75.0		25.0	50.0	25.0	25.0
Streams	100.0			32.0	11.3	56.8	75.0		25.0	25.0		75.0

In resettled colonies / villages, the displaced face a number of problems with regard to utilization of common property resources. After displacement villagers have no access to forest, grazing land, village orchard, community well, and community pond. Prior to displacement, villagers had access to all these resources. However, different activities have been undertaken by HAL under CSR in 14 adopted villages. Health care, infrastructure development, vocational training, education, environment management, sports and other activities has been undertaken by HAL. In non-displaced villages, villagers are not able to access the forest, which is now under the project. Different activities under CPRs are also extended to these villagers such as development of grazing land, village orchard creation, digging pond, construction of community well etc.

In Upper Kolab, access to forest got restricted after displacement. Although a protected forest is there about 4 km away near the settled colony, villagers have poor access to forest. The government land has been encroached by these displaced families for farming as a result, land for grazing of animal has reduced. At the resettled colony, there is no stream, river or village orchard. Availability of NTFP collection has decreased substantially and hence the source of income and livelihoods. Till now the cremation ground has not been identified for which they have been using different places for cremation. Sometimes, conflicting situation arises with the

villagers of Batasana (original village) with the resettled families. Due to poor natural water resource base, drinking water is the major problem of the displaced families living in the colony, followed by water for irrigation. A playground (Volley ball) is created by the young mass by their own for their recreational activity. Whereas, in the non-displaced villages, people have better access to forest resources, which is about three km away. Because of degradation of forest resources, there has been significant reduction in the availability of NTFPs.

More or less, similar situation is observed in Harabhangi irrigation project area. The displaced families acquired / encroached government land for farming, as a result land available for grazing and other purposes has reduced. At the resettled colony, there is no perennial source of natural stream / river for which in summer, drinking water availability reduces. Collection of NTFP and getting income out of its selling has also reduced in the resettled place. Alternatively, they sell timber and earn about Rs.1, 500.00 to Rs.2, 000.00 per month. The reservoir has been used for bathing and washing cloths and for animal purposes. As some of these tribal families are engaged in fishing, Government has provided nets, boats and other facilities. In the non-displaced villages, villagers depend on NTFP collection and it's selling (leaved for leaf plat making, Sal seeds, Amla, Bahara, Bamboo shoot, Mahua flower, Tola, Char, Tamarind, Jack fruit and Mango etc.). Selling of timber is also another source of income for them.

Availability of forest resources and accessibility of the displaced families has reduced significantly after displacement. Such families have less or no access to forest and grazing land. Collection and selling of NTFP has become negligible. For drinking purpose, tube well and pipe water supply is there in the colony and some families have their own water source (like bore well). Water supply is there only for one hour for Jhirpani village, whereas the pipe water supply is presently defunct at Jalda-C. Because of non-availability of land, families facing problem for cremation ground. Playground, place of worship, community hall and playground is available nearby the colony. In non-displaced villages, the project has provided a number of facilities under CSR like school, dug well, tube well, overhead tank for water supply etc. In non-displaced villages, people are still depending upon NTFP collection and selling. Selling of timber is also another source of income for some of the families in the non-displaced villages.

## 6.5 Household Asset Base

Household asset base is one of the key indicators to measure the wellbeing of a family. Primarily, it is related to the household income and possession of high cost assets also reflects

the economic status of a family, more specifically in a rural context. Irrespective of displaced and non-displaced families, basic agricultural asset base shows decreasing like plough, bullock cart and sprinkler whereas some other agricultural assets has increased like sprayer. Overall, the farm mechanization has been poor which has a greater bearing on the agricultural production, productivity and overall economic gain from farming. Perhaps, this is one of the reasons, apart from discussed aspects, which has taken away people from farming.

*Table 30: Asset Base at Household Level: Pre-Displacement and Current Situation*

<b>Asset Base (Agricultural)</b>	<b>Before</b>	<b>After</b>	<b>Asset Base (Household)</b>	<b>Before</b>	<b>After</b>
Wooden Ploughs	83.6	42.8	Bicycle	7.0	81.8
Iron Plough	25.6	20.0	Scooter/Motor-bike	0.4	31.2
Bullock Carts	9.0	0.2	Jeep/Car	0.0	4.4
Tractor	0.0	1.0	Television	0.0	49.0
Power Tiller	0.0	0.0	Sewing Machine	0.0	11.0
Thresher	0.0	0.0	Telephone Land Line	0.0	1.6
Transplanting Machine	0.0	0.0	Mobile Phone	0.0	54.4
Sprayer	2.6	5.4	Radio	1.2	5.0
Pump Set with/without pipe	0.0	0.4	Cooking Gas	0.0	14.4
Sprinkler	0.4	0.0	Refrigerator	0.0	7.6

In household asset base, there is substantial growth in possession of means of communication like scooter / motor-bike (31.2 percent) and bicycle (81.8 percent). Television has been one of the source of entertainment for 49.0 percent families. For improved interpersonal communication, 54.4 percent families are now having mobile phones. Cooking gas use has also increased among the tribals (14.4 percent), mostly in industrial project areas. Perhaps, this is one of the reasons, for which majority of the tribal families, in both displaced (resettled colonies) and non-displaced villages, feel that their standard of living at present is better than earlier.

*Table 31: Asset Base at Household Level: Displaced and Non-Displaced Families*

<b>Asset Base</b>	<b>Displaced</b>		<b>Non-Displaced</b>	
	<b>Before</b>	<b>After</b>	<b>Before</b>	<b>After</b>
<b>Asset Base (Agricultural)</b>				
Wooden Ploughs	84.5	45.5	80.0	32.0
Iron Plough	25.8	22.0	25.0	12.0
Bullock Carts	9.5	0.0	7.0	1.0
Tractor	0.0	1.3	0.0	0.0
Power Tiller	0.0	0.0	0.0	0.0
Thresher	0.0	0.0	0.0	0.0
Transplanting Machine	0.0	0.0	0.0	0.0
Sprayer	2.0	5.3	5.0	6.0

Asset Base	Displaced		Non-Displaced	
	Before	After	Before	After
Pump Set with/without pipe	0.0	0.0	0.0	2.0
Sprinkler	0.5	0.0	0.0	0.0
<b>Asset Base (Household)</b>				
Bicycle	7.0	81.5	7.0	83.0
Scooter/Motor-bike	0.3	30.0	1.0	36.0
Jeep/Car	0.0	4.0	0.0	6.0
Television	0.0	46.5	0.0	59.0
Sewing Machine	0.0	11.3	0.0	10.0
Telephone Land Line	0.0	1.5	0.0	2.0
Mobile Phone	0.0	55.5	0.0	50.0
Radio	1.5	6.0	0.0	1.0
Cooking Gas	0.0	14.0	0.0	16.0
Refrigerator	0.0	6.8	0.0	11.0

Looking by agricultural and household asset base holding by displaced and non-displaced families, significant difference is not observed, apart from some specific assets. Percentage of households with plough is comparatively more in displaced families whereas, sprayer and pump set is marginally higher in non-displaced families.

Table 32: Asset Base at Household Level: Displaced and Non-Displaced Families by Project Type

Asset Base	HAL				Harabhangi				RSP				Upper Kolab				
	D		ND		D		ND		D		ND		D		ND		
	B	C	B	C	B	C	B	C	B	C	B	C	B	C	B	C	
<b>Asset Base (Ag.)</b>																	
Wooden Plough	87.0	47.0	60.0	48.0	80.0	53.0	92.0	0.0	93.0	1.0	96.0	12.0	78.0	81.0	72.0	68.0	
Iron Plough	35.0	26.0	36.0	36.0	26.0	25.0	4.0	0.0	19.0	0.0	24.0	0.0	23.0	37.0	36.0	12.0	
Bullock Carts	20.0	0.0	8.0	4.0	12.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	5.0	0.0	20.0	0.0	
Tractor	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	
Power Tiller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Thresher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Transplanter	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sprayer	2.0	11.0	4.0	8.0	0.0	0.0	0.0	0.0	6.0	2.0	16.0	8.0	0.0	8.0	0.0	8.0	
Pump Set	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	
Sprinkler	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Asset Base (HH)</b>																	
Bicycle	15.0	75.0	4.0	68.0	0.0	82.0	0.0	92.0	9.0	95.0	12.0	100.0	4.0	74.0	12.0	72.0	
Scooter/bike	0.0	32.0	4.0	28.0	0.0	24.0	0.0	40.0	0.0	51.0	0.0	48.0	1.0	13.0	0.0	28.0	
Jeep/Car	0.0	3.0	0.0	8.0	0.0	6.0	0.0	4.0	0.0	7.0	0.0	4.0	0.0	0.0	0.0	8.0	
Television	0.0	29.0	0.0	40.0	0.0	50.0	0.0	72.0	0.0	80.0	0.0	84.0	0.0	27.0	0.0	40.0	
Sewing	0.0	9.0	0.0	4.0	0.0	14.0	0.0	28.0	0.0	21.0	0.0	8.0	0.0	1.0	0.0	0.0	
Tel. Land Line	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	4.0	0.0	0.0	0.0	4.0	
Mobile Phone	0.0	68.0	0.0	52.0	0.0	2.0	0.0	0.0	0.0	95.0	0.0	96.0	0.0	57.0	0.0	52.0	
Radio	4.0	11.0	0.0	4.0	0.0	0.0	0.0	0.0	2.0	10.0	0.0	0.0	0.0	3.0	0.0	0.0	
Cooking Gas	0.0	17.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	36.0	0.0	36.0	0.0	3.0	0.0	8.0	
Refrigerator	0.0	9.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	28.0	0.0	0.0	0.0	4.0	

Note: D-Displaced, ND-Non-Displaced, B-Before Displacement, C-Current Situation

In possession of household asset base, the trend remains similar in both displaced and non-displaced families. It indicates that, economic environment and other development measures, taken by Government are more responsible for the improved living standard, rather than the project specific intervention. Uniform development approach of Government with special focus on tribal development appears to contribute more rather than the project, apart from indirect benefit of the project (increasing employment opportunities, scope of marketing / business opportunity etc.). If project specific intervention would have been made, dissimilar trend would have appeared among the families of displaced and non-displaced categories. As, the trend remains similar, it is obvious that development inputs remains similar in both the cases. Project wise asset holding of both displaced and non-displaced families are presented in the table.

## Chapter VII: Food Security and Health Status

### 7.1 Food Security

The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”. Commonly, the concept of food security is defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences. Food security is built on three pillars, i.e., (1) Food availability: sufficient quantities of food available on a consistent basis, (2) Food access: having sufficient resources to obtain appropriate foods for a nutritious diet, (3) Food use: appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation.

Food security is a complex sustainable development issue, linked to health through malnutrition, but also to sustainable economic development, environment, and trade. Issues such as whether households get enough food, how it is distributed within the household and whether that food fulfills the nutrition needs of all members of the household show that food security is clearly linked to health. Agriculture remains the largest employment sector in Odisha and the tribals derive their livelihoods primarily from agriculture followed by forest.

In the production side, about 61.5 percent displaced tribal families produce their own food through agricultural activities, whereas 38.5 percent do not produce / cultivate and hence depend upon distribution channels and markets. In the non-displaced families, 59.0 percent do farming and produce their own food and 41.0 percent depend upon other instruments of food supply. Looking by Specific projects, it is evident that among the displaced, lowest percentage of producer are in RSP (8.0 percent) followed by HAL (54.0 percent) whereas highest percentage of producers in the displaced category are in Upper Kolab (94.0 percent) and Harabhangi Project (90.0 percent).

Similar trend is also observed in case of non-displaced families. Lowest percentage of non-displaced families observed in production system in RSP (28.0 percent) and HAL (44.0 percent) and highest in Harabhangi (92.0 percent) and Upper Kolab (72.0 percent). So, in industrial area, percentage of producer to the total tribal families, irrespective of displaced or non-displaced,



are comparatively less than hydro-power projects. Non-involvement in agricultural production system by highest percentage of tribals in industrial project areas are attributed to a number of factors like increasing cost for agricultural investment, low or no holding of agricultural land, scope of other engagements that are relatively remunerative and available for engagement and willful or unwillingly diversion of livelihoods to other sectors of engagement.

*Table 33: Producer and Non-Producer by Project in Displaced and Non-Displaced Families*

Name of Project	Particular	Displaced		Non-Displaced	
		No. of HH	Percent	No. of HH	Percent
HAL	Producer	54	54.0	11	44.0
	Non-Producer	46	46.0	14	56.0
	<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>
Harabhangi	Producer	90	90.0	23	92.0
	Non-Producer	10	10.0	2	8.0
	<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>
RSP	Producer	8	8.0	7	28.0
	Non-Producer	92	92.0	18	72.0
	<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>
Upper Kolab	Producer	94	94.0	18	72.0
	Non-Producer	6	6.0	7	28.0
	<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>

But, own production does not mean security of food as food security also depends upon producing required amount of food or having access to required quantity of food that are essential for a family. Only 1.21 percent displaced families those do farming (0.8 percent of total) produce adequate food that are required for their family for a year whereas food produced by remaining 98.78 percent are not adequate enough to sustain their family. Similarly, only 1.69 percent non-displaced families, of the total who do farming produce required quantity of food that can take care of the annual food requirement of the family whereas 98.31 percent of the total producer do not produce enough to sustain their family for a year. Only 5.56 percent of the total displaced families, who are engaged in agriculture sector produce required quantum of food grains and 5.56 percent of non-displaced families, engaged in agriculture sector fall in to the same production category. So, in remaining cases, production remain deficient for the cultivators and they also depend upon food supply from external sources (PDS) or on market mechanism (access to market).

### 7.1.1 Period of Food Insecurity

Contextually, food insecurity refers to non-availability of required quantum of food round the year for the consumption of family members. About 12.6 percent families did not have any food insecurity period before displacement, irrespective of their status of displaced and non-displaced. After the project, it increased to 25.0 percent, i.e., 25.0 percent families do not experience any food insecure period now. About 5.6 percent families were having lean period of one month, 25.4 percent for 2 months, 32.8 percent for 3 months, 12.2 percent for 4 months, 10.4 percent for 5 months, 0.6 percent for 6 months and 0.4 percent for 7 months. Current situation reveals that 13.8 percent families experience food insecurity for 1 month, 38.2 percent for 2 months, 19.6 percent for 3 months, 3.2 percent for 4 months and 0.2 percent for 5 months. So, there is reduction in the food insecure period now and growth in food secure periods at the family level.

Table 34: Period of Food Insecurity among the Tribals (Displaced and Non-Displaced)

Months of Food Insecurity	Pre-Project		Post-Project	
	No. of HH	Percent	No. of HH	Percent
No Food Insecurity	63	12.6	125	25.0
1 Month Food Insecurity	28	5.6	69	13.8
2 Month Food Insecurity	127	25.4	191	38.2
3 Month Food Insecurity	164	32.8	98	19.6
4 Month Food Insecurity	61	12.2	16	3.2
5 Month Food Insecurity	52	10.4	1	0.2
6 Month Food Insecurity	3	0.6		
7 Month Food Insecurity	2	0.4		
<b>Total</b>	<b>500</b>	<b>100.0</b>	<b>500</b>	<b>100.0</b>

Looking at the studied projects, the food insecurity period found differing at household level. Displaced households not having any food insecurity period in a year observed 2.0 percent in HAL, 34.0 percent in Harabhangi, 9.0 percent in RSP and 8.0 percent in Upper Kolab. At present, no food insecure period in case of displaced found to be 23.0 percent in HAL, 34.0 percent in Harabhangi, 21.0 percent in RSP and 33.0 percent in Upper Kolab.

Similarly, in case of non-displace, every family was food insecure in project HAL, 16.0 percent in Harabhangi, 16.0 percent in RFP and 8.0 percent in Upper Kolab. Currently, the situation seems differing by project types, i.e., status of people continue to be same as before in HAL (no food secured period), 8.0 percent in Harabhangi, 16.0 percent in RSP and 32.0 percent in Upper

Kolab are food secured. Number of households suffering from food insecurity also varies by project types and project villages.

Table 35: Food Insecurity Period of Displaced & Non-Displaced (HAL and Harabhangi Project)

Food Insecurity Period	HAL				HARABHANGI			
	Before		Current		Before		Current	
	D	ND	D	ND	D	ND	D	ND
No Food Insecurity	0.2		23.0	-	34.0	16.0	34.0	8.0
1 Month Food Insecurity	-				12.0	12.0	11.0	12.0
2 Month Food Insecurity	1.0	100.0	60.0	100.0	33.0	52.0	14.0	36.0
3 Month Food Insecurity	38.0		11.0	-	16.0	20.0	35.0	44.0
4 Month Food Insecurity	3.0		5.0	-	5.0	-	6.0	
5 Month Food Insecurity	51.0		1.0					
6 Month Food Insecurity	3.0							
7 Month Food Insecurity	2.0							
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: D-Displaced, ND-Non-Displaced

Table 36: Food Insecurity Period of Displaced & Non-Displaced (RSP and Upper Kolab)

Food Insecurity Period	RSP				UPPER KOLAB			
	Before		Current		Before		Current	
	D	ND	D	ND	D	ND	D	ND
No Food Insecurity	9.0	16.0	21.0	16.0	8.0	8.0	33.0	32.0
1 Month Food Insecurity	5.0	12.0	23.0	52.0	4.0	4.0	18.0	4.0
2 Month Food Insecurity	10.0	20.0	36.0	28.0	34.0	24.0	30.0	40.0
3 Month Food Insecurity	40.0	48.0	20.0	4.0	39.0	56.0	16.0	16.0
4 Month Food Insecurity	36.0	4.0			14.0	8.0	3.0	8.0
5 Month Food Insecurity					1.0	-		
6 Month Food Insecurity								
7 Month Food Insecurity								
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: D-Displaced, ND-Non-Displaced

### 7.1.2 Access to Public Distribution System

Supply of food through public distribution system (PDS) and improved accessibility has been one of the major causes of food security. About 10.5 percent displaced families and 11.0 percent non-displaced families were accessing food stuff from PDS whereas PDS has become more universal now and almost all the families are now having accessibility. Supply of rice through PDS was also less regular before for both displaced (30.3 percent) and non-displaced (50.0 percent) families. But now, almost of the families, access it more regularly in both displaced and non-displaced villages. Before displacement, AWC was not a source of food

supplement for the family but now 52.3 percent displaced and 54.0 percent non-displaced families get food supplements from AWC, based on their eligibility.

### 7.1.3 Access to Forest for Food

Forest has remained a major source of food supplement for the tribals. But because of forced displacement and resettlement out of the forest area, it affects their food accessibility and thereby food security. About 26.45 percent displaced families and 27.22 percent non-displaced families were accessing edible roots (Kandha) from the nearby forest area during monsoon. But due to displacement, only 5.85 percent resettled families are now able to access it. Collection of Mahua Flower, Mango, Kendu and other food items has also observed decreasing by both displaced and non-displaced families. Less availability of edible roots and decreasing accessibility is also observed in non-displaced villages. So, it is a common characteristic in both the places.

Resettlement away from forest, encroachment and cleaning of forest land for farming and acquisition of forest area for the development project remain major reasons of decreasing availability of forest food items. Apart from this degradation of available forest also remain a major cause of non-availability of edible roots in both displaced and non-displaced families. With increasing urban exposure, education and socio-cultural assimilation, young generations in tribal communities, in both displaced and non-displaced families, are preferring less to go to forest and collect different forest items. Rather they are more inclined for organize farming and other sectors of engagement, like non-tribals.

## 7.2 Health Care and Morbidity

Comparing the pre-displacement and current scenario, morbidity has not increased for the majority of the displaced families (76.8 percent). Similar trend is also observed in case of non-displaced (76.0 percent). Major factors that have contributed for containing the morbidity are better health care services and improved infrastructural facilities. In certain cases, where morbidity found increased are basically due to changed health care practices and allied factors. Among the evacuated families, about 99.0 percent feel that current health care facilities available to them are better than their old village.

Table 37: Availability of Health Care Facilities

Particulars	Pre-Project				Post-Project			
	Available		Not-Available		Available		Not-Available	
	D	ND	D	ND	D	ND	D	ND
Availability of ASHA			100.0	100.0	75.0	75.0	25.0	25.0
Availability of ANM			100.0	100.0	100.0	100.0		
Availability of AWC & AWW		16.0	100.0	84.0	100.0	100.0		
Availability of Doctor	0.2	16.0	99.8	84.0	100.0	100.0		
Accessibility to Health Care	12.5	18.0	87.5	82.0	100.0	100.0		
Quality of Services	38.0	19.0	62.0	81.0	99.8	85.0	0.2	15.0
Presence of other Medicos		1.0	100.0	99.0	100.0	100.0		

During the time of displacement, there was no provision of ASHA at the village level and ANM was also not available. AWC was either not available or it was not functioning properly. Only in 16.0 percent cases, AWC was there (non-displaced villages). Availability of doctors at the locality or nearby place for medical examination was also not there and whatever health care facility was there, accessibility to such facility was limited (87.5 percent in displaced and 82.0 percent in non-displaced villages). The quality of health care services was quite poor and presence of other medicos was also not there. But, gradually with increased focus of government on health care, the services has improved in both resettled and non-displaced villages. Now at the village level ASHA is available for immediate health response (75.0 percent in resettled villages and 75.0 percent in non-displaced villages) and ANM is available at the sub-centre level in all the settled and non-displaced villages. All most all the villages, both resettled and non-displaced villages, now AWC is functioning and AWW are there for mother and child health care. In the nearby place, they can approach to doctor for health care and accessibility to health facilities has increased. Now the quality of health care services at the institutional level has also improved.

### 7.2.1 Common Health Ailments

Among the common health alignment, malaria continue to be one of the major problem in both displaced and non-displaced community. High occurrence of diarrhea / dysentery has reduced but it is still prevalent with relatively less intensity then the pre-displacement scenario. Occurrence of Jaundice has been low in comparison to common cold/ cough in both children and adults. Common Diseases and its prevalence in three scales (High, Medium and Low) in the pre-project and post-project (current situation) is presented in the table for displaced and non-displaced tribal families.

Table 38: Occurrence of Common Health Ailments

Particulars	Displaced						Non-Displaced					
	Pre-Project			Post-Project			Pre-Project			Post-Project		
	H	M	L	H	M	L	H	M	L	H	M	L
<b>Children</b>												
Malaria	62.5	31.0	6.5	44.5	15.0	40.5	51.0	37.0	12.0	22.0	44.0	34.0
Diarrhea / Dysentery	42.5	50.3	7.3	4.5	48.0	47.5	47.0	31.0	22.0	2.0	24.0	74.0
Skin Diseases	19.5	61.0	19.5	5.0	26.5	68.5	26.0	48.0	26.0	2.0	47.0	51.0
Respiratory Problem	10.3	63.0	26.8	4.3	34.5	61.3	9.0	57.0	34.0	5.0	28.0	67.0
Cold / Cough	50.0	44.0	6.0	37.0	54.5	8.5	40.0	51.0	9.0	34.0	57.0	9.0
Fever	28.3	70.0	1.8	22.8	53.5	23.8	38.0	53.0	9.0	22.0	46.0	32.0
Measles	33.5	50.3	16.3	10.3	37.5	52.3	34.0	33.0	33.0	5.0	21.0	74.0
Jaundice	3.3	61.3	35.5	14.3	19.3	66.5	3.0	40.0	57.0	11.0	13.0	76.0
<b>Adult</b>												
Malaria	59.0	22.3	18.8	43.8	20.8	35.5	54.0	27.0	19.0	22.0	40.0	38.0
Diarrhea / Dysentery	42.8	50.3	7.0	3.8	25.8	70.5	46.0	28.0	26.0	1.0	11.0	88.0
Cold / Cough	37.3	61.8	1.0	17.3	60.5	22.3	32.0	66.0	2.0	22.0	60.0	18.0
Fever	30.3	47.0	22.8	22.3	51.8	26.0	31.0	45.0	24.0	20.0	45.0	35.0
Measles	23.3	32.0	44.8	7.5	37.8	54.8	21.0	28.0	51.0	2.0	26.0	72.0
Jaundice	10.0	32.8	57.3	8.0	31.0	61.0	8.0	27.0	65.0	11.0	21.0	68.0

Note: H-High, M-Medium, L-Low

## 7.2.2 Health Care Facilities

Health care facility play a critical role in providing health services to the people at the time of requirement and strengthening overall health system of the locality. Every resettled and non-displaced village has an AWC equipped with AWW to improve the maternal and child health care in the locality. ASHA is working at the village level in both the settlements and staying in the village or nearby area of the village. So, for any basic health care requirements, they can approach to AWC and/or ASHA for support. Apart from that ANM sub-centre is also in the nearby place and at an approachable distance, ranging between nearer to village (< 1 Km) to a maximum of 5 Km (Sargiguda: 4 Km and Adaba: 5 Km.). More or less similar trend is also observed in non-displaced villages where average distance of ANM centre is about 2.5 Km to 3 Km. Primary Health Centre (PHC) is within 5 Km. range of most of the studied resettled villages (excluding Kotpad) and also in non-displaced villages (excluding Bisra and Semiliguda). The community Health Centre (CHC) is relatively at a distance place, ranging within 5-20 Km in resettled villages and also in non-displaced villages. So, the health care facilities are created around both resettled and non-displaced villages in order to provide services to the people. Perhaps, such facilities and services have been of some impact with regard to creating health awareness among people and making health care more accessible.

## Chapter VIII: Social Disarticulation and Socio-Cultural Assimilation

Community disarticulation refers to dismantling of community structures and social organization, the desperation of informal and formal networks, local associations, etc. It is a massive loss of social capital. Such disarticulation undermines livelihoods in ways not recognized and not measured by planners, and results in disempowerment and further pauperization<sup>25</sup>.

In the studied resettled families, it is observed that about 98.5 percent families still in contact with other villagers / their relatives in the displaced village or resettled in other places. They normally meet them often, more than three times in a year during different occasions. It is not only attending in social functions / cultural events but also support each other at the time of requirement. This reveals that socio-cultural interaction is not that frequent which was before displacement due to common place of habitation. However, the socio-cultural fabric is still intact among them.

Table 39: Displacement and Resettlement of Families

Displaced and Resettled Families of Sample Villages					
Name of the Project	Present Village Name	No. of Families living in the old displaced village	No. of Families displaced from the old village	Families relocated in the present village / colony	Families resettled in other villages / colonies
HAL	Chikapar	160	160	150	10
	Pangiguda	59	59	50	9
Upper Kolab	Colony 4-A	300	250	120	130
	Colony 4-B	300	250	60	190
Harabhangi	Adapanka	49	49	49	0
	Dumiguda	46	46	46	0
	Gudripadar	70	70	70	0
RSP	Jalada	350	350	125	225
	Jhirpani	350	350	140	210
<b>Total</b>		<b>1684</b>	<b>1584</b>	<b>810</b>	<b>774</b>

Less attended serious issue in resettlement is the unwillingness of host population to accept forcefully migrated and involuntarily willing to resettle oustees. Where they are settled amidst existing settlements, there is inevitably competition for scarce resources and jobs. There may also be social and cultural incompatibility. In most cases, the displaced people are at a disadvantage in these conflicts because they are outsiders to the local people, economically at a

<sup>25</sup> Cernea Michael M.; Risk Analysis and Risk Reduction; IRR: A Theory and Operational Model for Population Resettlement

fragile state and not having or having poor social networks and cultural bounding among themselves.

There is a mixed response with regard to support and cooperation of the local villagers with the resettled families. Some people help these resettled families, support them financially, do labour exchange and make them feel that they are one of them. On the other hand, some other villagers feel that families with better economic status look them down upon. There is lack of mutual trust and respect and people from some other higher caste dominate in every sphere. Such characteristics are common in most of the localities and not a new phenomenon. It is neither induced by displacement nor because they were resettled there. Initially, there might be some resistance by the host villagers due to sharing of common resources but with time, gradually a social cohesion emerges among them to meet each other's requirement and differences starts receding. People's opinion on current settled village and displaced village are as follows.

Table 40: Comparative Social Status of Families in the Pre-Project and Post-Project Period

Social Status in Displaced Village	Social Status in Current Village
1. Having humanity, unity and believe	1. Educated
2. Less conflict	2. Living in hygienic places
3. Respect to each other	3. Good communication (road)
4. Simple living	4. Higher income
5. Food secured	5. Use of electronics goods/assets
6. Helping each other at the time of requirement	6. Use of Bike / Two Wheeler
7. No use of electronics goods	7. Use of mobiles
8. More agriculture land and forest food item	8. Health ailments decreased

As most of the villagers are living in the same place, nearer to their previous habitation, social disarticulation is not so prominent in HAL areas. They all meet at the time of cultural functions and occasion (Chikapar village). Although villagers from different villages have been living together, they originally belong to the same village and moved to the place after 20 years. The social disarticulation, which was caused due to displacement, has minimized due to their relocation nearer to their previous village. The entire village functions cohesively and community related decisions are taken unanimously (Pangiguda). In the non-displaced villages, there are good relationships among the villagers.

In Harabhangi, most of the families are living in the resettled village are from the same village. As a result, the connecting social fabric among them remain intact. They all meet at the time of cultural functions and occasion. Displacement induced social disarticulation is not observed,



apart from their social linkages with other villages, who were not displaced from their village. But some other issues are gradually erupting and creating community disturbances and sabotaging their cultural practices. Because of employment oriented migration to other places and increased exposure to the urban set-ups, the young boys are getting married to girls of other community and bring them home while returning. Discussion with different community members and other stakeholders' reveal that, because of such practices, now disease like HIV / AIDS are increasing in the locality. As reported, recently one girl has died in Padagam village due to AIDS. Caste based social feeling is also observed for which the tribal families do not accept any good / materials from the local AWW, who is from Scheduled Caste community. The resettled tribal families are also not sending their children to the AWC for the same purpose. In case of RSP, more or less similar situation is observed as most of the families living in the resettled village are originally from the same village.

## Chapter IX: Conclusion and Recommendations

Displacement remains a reality in the current development scenario and more such events can be expected in coming days with the rising aspiration for higher economic growth. Whether it is industrial units, hydro-power projects or medium / mega irrigation projects, displacement has affected the life and livelihoods of thousands of tribal people. But appropriate and feasible R & R policy could have minimized the plight of the people and could have been helpful to improve their condition in the post-displacement situation. Non-adoption of required measures for rehabilitation and resettlement made the life of the oustees measurable. Physical relocation of the displaced normally considered primary, rather than restoration of their livelihoods and living conditions.

But, execution of macro policy framework for development and welfare; development measures of different players, including the project for which these people get displaced (CSR activities) and focused intervention for the socio-economic growth can minimize the distress situation. Had all these been perceived before displacement, the situation of the oustees would have different. In all the studied projects, a common trend of negligence in rehabilitation and resettlement is observed, may be due to the non-availability of required act and policy. Meaningful Utilization of the compensation amount also could have helped the oustees but poor capability of cash management and unproductive investment can also be made responsible to certain extent for the current situation. Three critical factors that are important for the survival of the displaced, i.e., employment, Land for production and access to other resources were not focused appropriately during implementation. As a result, even after more than three decades of displacement, they are not able to come out of the distress situation.

However, it is also observed that it is not only displaced but condition of non-displaced families are also more or less same. Acquisition of productive land may be one of the reasons but it cannot be the sole reason. Had displacement been the sole factor of impoverishment, similar situation would not have prevailed in the non-displaced tribal villages. So, regional development scenario can be attributed largely rather than only displacement. It is realized that had there been better economic growth in the region, the condition of project oustees would have improved which is demonstrated in case of Rourkela Steel Plant. In industrial projects, resettled oustees observed comparatively in a better living condition in comparison to hydro-power or irrigation projects. One of the reasons has been development of market mechanisms

around the industrial units and availability of different employment opportunities which are relatively remunerative than the agricultural labour.

Based on the aspirations of the people, following aspects may be taken care at this stage which can further improve the condition of the displaced tribal families. It may not help people who were evacuated because of the project, rather, it will be helpful to their present and future generation to lead a better life.

1. The displaced families may be provided with ROR for the homestead land, either allotted by the project or under encroachment of government land where they have been staying.
2. In HAL and RSP, the oustees have been demanding the unused land available with the project. Normally, it happens that the industrial units keep additional land for future expansion and looking from that perspective, it may be relatively less feasible to give out the land. However, a mechanism may be devised by which concerned industry utilize those land for additional industrial activities (MSMEs / other production unit) and create more job opportunities for the oustees. The eligible family member of the oustees may be well equipped with skill based trainings for employment.
3. Schematic convergence can be helpful where household and community level requirements are mapped and appropriate benefits that are provisioned under different schemes are provided to the oustees.
4. Focused CSR intervention for the oustees, in terms of skill development, enterprise promotion support, production system improvement and related forward linkage can help them to move out of job demand and create scope for self-employment. Required financial support under CSR and other formal institutions can be helpful further.
5. Under Right to Forest Act, displaced families, who do not have land or right over the land being cultivated, should be given priority by which the family can have productive asset base to be utilized for livelihoods.

## Annexure

## Annexure I: Availability of CPR

	Availability					
	Pre-Project			Post-Project		
	High	Medium	Low	High	Medium	Low
Village / Local Forest	100.0				50.0	50.0
Prayer / Worship Place	100.0			100.0		
Cremation Ground	100.0			80.0	20.0	
Grazing Land	100.0			30.0	25.0	45.0
Threshing Ground	100.0			50.0	10.0	40.0
Village Orchard	59.8	20.2	20.0			100.0
Community Hall	45.0		55.0	50.0		50.0
Community Ponds	25.0		75.0	25.0	20.0	55.0
Community Wells	65.0		35.0	35.0	10.0	55.0
Streams	95.0		5.0	55.0	10.0	35.0
Rivers	70.0		30.0	50.0		50.0

## Annexure 2: Accessibility to CPR

	Accessibility					
	Pre-Project			Post-Project		
	High	Medium	Low	High	Medium	Low
Village / Local Forest	100.0				60.0	40.0
Prayer / Worship Place	100.0			100.0		
Cremation Ground	100.0			80.0	20.0	
Grazing Land	100.0			50.0	25.0	25.0
Threshing Ground	100.0			50.0	10.0	40.0
Village Orchard	55.0	25.0	20.0			100.0
Community Hall	45.0		55.0	50.0		50.0
Community Ponds	25.0		75.0	25.0	20.0	55.0
Community Wells	65.0		35.0	15.0	30.0	55.0
Streams	95.0		5.0	30.2	10.0	59.8
Rivers	70.0		30.0	50.0		50.0

## Annexure 3: Utilization of CPR

	Utilisation					
	Pre-Project			Post-Project		
	High	Medium	Low	High	Medium	Low
Village / Local Forest	100.0			5.0	23.8	71.2
Prayer / Worship Place	100.0			100.0		
Cremation Ground	100.0			80.0	10.0	10.0
Grazing Land	100.0			24.0	32.6	43.4
Threshing Ground	100.0			50.0	10.0	40.0
Village Orchard	55.0	25.0	20.0			100.0
Community Hall	45.0		55.0	25.6	4.4	70.0
Community Ponds	25.0	5.0	70.0	15.0	20.0	65.0
Community Wells	65.0		35.0	10.0	35.0	55.0
Streams	95.0		5.0	30.6	9.0	60.4
Rivers	70.0		30.0	37.8	9.4	52.8

## Annexure 4: Common Health Ailments

	Displaced						Non-Displaced					
	Pre-Project			Post-Project			Pre-Project			Post-Project		
	H	M	L	H	M	L	H	M	L	H	M	L
<b>Children</b>												
Malaria	62.5	31.0	6.5	44.5	15.0	40.5	51.0	37.0	12.0	22.0	44.0	34.0
Diarrhea / Dysentery	42.5	50.3	7.3	4.5	48.0	47.5	47.0	31.0	22.0	2.0	24.0	74.0
Skin Diseases	19.5	61.0	19.5	5.0	26.5	68.5	26.0	48.0	26.0	2.0	47.0	51.0
Respiratory Problem	10.3	63.0	26.8	4.3	34.5	61.3	9.0	57.0	34.0	5.0	28.0	67.0
Cold / Cough	50.0	44.0	6.0	37.0	54.5	8.5	40.0	51.0	9.0	34.0	57.0	9.0
Fever	28.3	70.0	1.8	22.8	53.5	23.8	38.0	53.0	9.0	22.0	46.0	32.0
Measles	33.5	50.3	16.3	10.3	37.5	52.3	34.0	33.0	33.0	5.0	21.0	74.0
Jaundice	3.3	61.3	35.5	14.3	19.3	66.5	3.0	40.0	57.0	11.0	13.0	76.0
<b>Adult</b>												
Malaria	59.0	22.3	18.8	43.8	20.8	35.5	54.0	27.0	19.0	22.0	40.0	38.0
Diarrhea / Dysentery	42.8	50.3	7.0	3.8	25.8	70.5	46.0	28.0	26.0	1.0	11.0	88.0
Skin Diseases												
Respiratory Problem	25.3	42.3	32.5	3.5	43.0	53.5	17.0	54.0	29.0	3.0	49.0	48.0
Cold / Cough	37.3	61.8	1.0	17.3	60.5	22.3	32.0	66.0	2.0	22.0	60.0	18.0
Fever	30.3	47.0	22.8	22.3	51.8	26.0	31.0	45.0	24.0	20.0	45.0	35.0
Measles	23.3	32.0	44.8	7.5	37.8	54.8	21.0	28.0	51.0	2.0	26.0	72.0
Jaundice	10.0	32.8	57.3	8.0	31.0	61.0	8.0	27.0	65.0	11.0	21.0	68.0

## Annexure 5: Food Secure Period-Before Displacement

Food Secure Period: Before									
Period		Name of Project							
		HAL		Harabhangi		RSP		Upper Kolab	
		Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced
5	No. of HH	2							
	Percent	2.0							
6	No. of HH	3							
	Percent	3.0							
7	No. of HH	51						1	
	Percent	51.0						1.0	
8	No. of HH	3		5		36	1	14	2
	Percent	3.0		5.0		36.0	4.0	14.0	8.0
9	No. of HH	38		16	5	40	12	39	14
	Percent	38.0		16.0	20.0	40.0	48.0	39.0	56.0
10	No. of HH	1	25	33	13	10	5	34	6
	Percent	1.0	100.0	33.0	52.0	10.0	20.0	34.0	24.0
11	No. of HH			12	3	5	3	4	1
	Percent			12.0	12.0	5.0	12.0	4.0	4.0
12	No. of HH	2		34	4	9	4	8	2
	Percent	2.0		34.0	16.0	9.0	16.0	8.0	8.0
Total	No. of HH	100		100	25	100	25	100	25
	Percent	100.0		100.0	100.0	100.0	100.0	100.0	100.0

## Annexure 6: Food Insecure Period-Before Displacement

Food Insecure Period: Before									
		Name of Project							
		HAL		Harabhangi		RSP		Upper Kolab	
		Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced
0	No. of HH	2		34	4	9	4	8	2
	Percent	2.0		34.0	16.0	9.0	16.0	8.0	8.0
1	No. of HH			12	3	5	3	4	1
	Percent			12.0	12.0	5.0	12.0	4.0	4.0
2	No. of HH	1	25	33	13	10	5	34	6
	Percent	1.0	100.0	33.0	52.0	10.0	20.0	34.0	24.0
3	No. of HH	38		16	5	40	12	39	14
	Percent	38.0		16.0	20.0	40.0	48.0	39.0	56.0
4	No. of HH	3		5		36	1	14	2
	Percent	3.0		5.0		36.0	4.0	14.0	8.0
5	No. of HH	51						1	
	Percent	51.0						1.0	
6	No. of HH	3							
	Percent	3.0							
7	No. of HH	2							
	Percent	2.0							
Total	No. of HH	100		100	25	100	25	100	25
	Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

## Annexure 7: Food Secure Period-Current Status

Food Secure Period: After									
Period	Particular	Name of Project							
		HAL		Harabhangi		RSP		Upper Kolab	
		Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced
7	No. of HH	1							
	Percent	1.0							
8	No. of HH	5		6				3	2
	Percent	5.0		6.0				3.0	8.0
9	No. of HH	11		35	11	20	1	16	4
	Percent	11.0		35.0	44.0	20.0	4.0	16.0	16.0
10	No. of HH	60	25	14	9	36	7	30	10
	Percent	60.0	100.0	14.0	36.0	36.0	28.0	30.0	40.0
11	No. of HH			11	3	23	13	18	1
	Percent			11.0	12.0	23.0	52.0	18.0	4.0
12	No. of HH	23		34	2	21	4	33	8
	Percent	23.0		34.0	8.0	21.0	16.0	33.0	32.0
<b>Total</b>	<b>No. of HH</b>	<b>100</b>		<b>100</b>	<b>25</b>	<b>100</b>	<b>25</b>	<b>100</b>	<b>25</b>
	<b>Percent</b>	<b>100.0</b>		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

## Annexure 8: Food Insecure Period-Current Status

Food Insecure Period: After									
Period	Particular	Name of Project							
		HAL		Harabhangi		RSP		Upper Kolab	
		Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced	Displaced	N-Displaced
0	No. of HH	23		34	2	21	4	33	8
	Percent	23.0		34.0	8.0	21.0	16.0	33.0	32.0
1	No. of HH			11	3	23	13	18	1
	Percent			11.0	12.0	23.0	52.0	18.0	4.0
2	No. of HH	60	25	14	9	36	7	30	10
	Percent	60.0	100.0	14.0	36.0	36.0	28.0	30.0	40.0
3	No. of HH	11		35	11	20	1	16	4
	Percent	11.0		35.0	44.0	20.0	4.0	16.0	16.0
4	No. of HH	5		6				3	2
	Percent	5.0		6.0				3.0	8.0
5	No. of HH	1							
	Percent	1.0							
<b>Total</b>	<b>No. of HH</b>	<b>100</b>		<b>100</b>	<b>25</b>	<b>100</b>	<b>25</b>	<b>100</b>	<b>25</b>
	<b>Percent</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>



## Annexure 9: Food Security &amp; Insecurity Calendar

	Name of Project							
	HAL		Harabhangi		RSP		Upper Kolab	
	D	ND	D	ND	D	ND	D	ND
<b>FOOD SECURE: BEFORE (No. of HH)</b>								
January	100	25	100	25	100	25	100	25
February	100	25	100	25	100	25	100	25
March	100	25	100	25	100	25	100	25
April	98	25	100	25	100	25	100	25
May	92	25	100	22	100	25	98	25
June	32	25	91	15	86	25	90	22
July	5	25	64	9	47	24	51	12
August	4		49	12	14	4	16	5
September	12		58	23	9	7	18	4
October	43	25	92	25	55	12	77	19
November	99	25	100	25	100	25	100	25
December	100	25	100	25	100	25	100	25
<b>FOOD INSECURE: BEFORE (No. of HH)</b>								
March	1							
April	3							
May	8			3			2	
June	68		9	10	14		10	3
July	94		36	16	53	1	49	13
August	95	25	51	13	86	21	84	20
September	87	25	42	2	91	18	82	21
October	58		8		45	13	23	6
November	1							
<b>FOOD SECURE: AFTER (No. of HH)</b>								
January	100	25	100	25	100	25	100	25
February	100	25	100	25	100	25	100	25
March	100	25	100	25	100	25	100	25
April	100	25	99	25	100	25	99	25
May	100	25	94	24	100	25	99	25
June	96	25	84	19	100	25	93	23
July	83	25	57	6	80	24	70	16
August	23		52	5	44	17	50	12
September	24		57	18	21	4	61	13
October	96	25	90	24	100	25	90	20
November	100	25	99	25	100	25	100	25
December	100	25	100	25	100	25	100	25
<b>FOOD INSECURE: AFTER (No. of HH)</b>								
April			1				1	
May			6	1			1	
June	6		16	6			7	2
July	21		43	19	20	1	30	9
August	76	25	48	20	56	8	50	13
September	72	25	43	7	79	21	39	12
October	3		10	1			10	5
November			1					

## Annexure 10: Livelihoods Engagement &amp; Income

	HAL						HAL					
	Displaced		Non-Displaced		Total		Displaced		Non-Displaced		Total	
	HH	Av.	HH	Av.	HH	Av.	N	Mean	N	Mean	N	Mean
<b>Agriculture</b>												
HH & Persons Engaged	91	2.43	24	2.00	115	2.34	54	2.20	10	1.80	64	2.14
Days of Engagement	91	176.40	24	154.58	115	171.84	54	199.63	10	129.00	64	188.59
Income (Rs.)	91	1806.21	24	1444.58	115	1730.74	54	23931.48	10	16035.00	64	22697.66
<b>Daily Wage</b>												
HH & Persons Engaged	45	2.18	8	2.25	53	2.19	75	2.23	20	1.85	95	2.15
Days of Engagement	45	120.00	8	130.00	53	121.51	75	284.08	20	297.25	95	286.85
Income (Rs.)	45	1383.33	8	1898.75	53	1461.13	75	50422.00	20	47930.00	95	49897.37
<b>Animal Husbandry</b>												
HH & Persons Engaged	23	1.43	1	2.00	24	1.46	26	1.50	7	1.43	33	1.48
Days of Engagement	23	238.26	1	360.00	24	243.33	26	280.77	7	344.29	33	294.24
Income (Rs.)	23	457.39	1	500.00	24	459.17	26	12611.54	7	5000.00	33	10996.97
<b>NTFP (Selling)</b>												
HH & Persons Engaged	27	1.48	5	1.40	32	1.47	5	1.60	4	1.25	9	1.44
Days of Engagement	27	62.96	5	50.00	32	60.94	5	38.00	4	40.00	9	38.89
Income (Rs.)	27	352.96	5	500.00	32	375.94	5	1220.00	4	975.00	9	1111.11
<b>Salaried Job</b>												
HH & Persons Engaged	1	1.00			1	1.00	21	1.29	3	1.00	24	1.25
Days of Engagement	1	60.00			1	60.00	21	429.52	3	365.00	24	421.46
Income (Rs.)	1	800.00			1	800.00	21	312333.33	3	118000.00	24	288041.67
<b>Petty Business</b>												
HH & Persons Engaged	3	1.00	1	1.00	4	1.00	8	1.00	1	2.00	9	1.11
Days of Engagement	3	310.00	1	300.00	4	307.50	8	274.38	1	300.00	9	277.22
Income (Rs.)	3	13333.33	1	5000.00	4	11250.00	8	58018.75	1	330000.00	9	88238.89
<b>Skilled Labour</b>												
HH & Persons Engaged							9	1.00	3	1.00	12	1.00
Days of Engagement							9	171.67	3	266.67	12	195.42
Income (Rs.)							9	41750.00	3	66666.67	12	47979.17
<b>Own Enterprise / Business</b>												
HH & Persons Engaged							2	1.00	1	1.00	3	1.00
Days of Engagement							2	285.00	1	200.00	3	256.67
Income (Rs.)							2	73500.00	1	72000.00	3	73000.00
<b>Other Engagements</b>												
HH & Persons Engaged							8	1.00	1	1.00	9	1.00
Days of Engagement							8	365.00	1	365.00	9	365.00
Income (Rs.)							8	15349.50	1	3600.00	9	14044.00
	Harabhangi						Harabhangi					
	Displaced		Non-Displaced		Total		Displaced		Non-Displaced		Total	
	HH	Av.	HH	Av.	HH	Av.	HH	Av.	HH	Av.	HH	Av.
<b>Agriculture</b>												

HH & Persons Engaged	93	1.96	25	2.20	118	2.01	84	1.85	23	1.87	107	1.85
Days of Engagement	93	128.82	25	125.40	118	128.09	84	123.69	23	113.48	107	121.50
Income (Rs.)	93	7693.01	25	5232.80	118	7171.78	84	9555.06	23	11068.48	107	9880.37
<b>Daily Wage</b>												
HH & Persons Engaged	52	1.71	8	1.88	60	1.73	84	1.63	14	1.86	98	1.66
Days of Engagement	52	87.60	8	102.50	60	89.58	84	143.21	14	166.43	98	146.53
Income (Rs.)	52	5231.73	8	2431.25	60	4858.33	84	22528.57	14	27821.43	98	23284.69
<b>Animal Husbandry</b>												
HH & Persons Engaged	16	1.13			16	1.13	17	1.47	2	1.00	19	1.42
Days of Engagement	16	324.06			16	324.06	17	339.12	2	330.00	19	338.16
Income (Rs.)	16	3606.25			16	3606.25	17	6647.06	2	3500.00	19	6315.79
<b>NTFP</b>												
HH & Persons Engaged	79	1.80	24	2.00	103	1.84			21	1.52	21	1.52
Days of Engagement	79	104.32	24	135.00	103	111.47			21	109.76	21	109.76
Income (Rs.)	79	4212.15	24	2142.08	103	3729.81			21	6140.48	21	6140.48
<b>Salaried Job</b>												
HH & Persons Engaged	1	1.00			1	1.00	4	1.00	1	1.00	5	1.00
Days of Engagement	1	300.00			1	300.00	4	346.25	1	300.00	5	337.00
Income (Rs.)	1	2000.00			1	2000.00	4	75125.00	1	72000.00	5	74500.00
<b>Petty Business / Shop</b>												
HH & Persons Engaged	8	1.75			8	1.75	23	1.26	2	1.00	25	1.24
Days of Engagement	8	132.50			8	132.50	23	109.13	2	330.00	25	126.80
Income (Rs.)	8	13125.00			8	13125.00	23	17482.61	2	39420.00	25	19237.60
<b>Skilled labour</b>												
HH & Persons Engaged	1	1.00			1	1.00	20	1.05	3	1.00	23	1.04
Days of Engagement	1	90.00			1	90.00	20	205.50	3	233.33	23	209.13
Income (Rs.)	1	14000.00			1	14000.00	20	43300.00	3	73333.33	23	47217.39
<b>Own Enterprise</b>												
HH & Persons Engaged	2	1.50			2	1.50	3	1.33			3	1.33
Days of Engagement	2	125.00			2	125.00	3	123.33			3	123.33
Income (Rs.)	2	20000.00			2	20000.00	3	35333.33			3	35333.33
<b>Other Sources</b>												
HH & Persons Engaged	15	1.80	6	1.67	21	1.76	93	1.73	11	1.82	104	1.74
Days of Engagement	15	117.33	6	188.33	21	137.62	93	227.10	11	292.27	104	233.99
Income (Rs.)	15	15660.00	6	2493.33	21	11898.10	93	18115.59	11	11936.36	104	17462.02
	<b>RSP</b>						<b>RSP</b>					
	<b>Displaced</b>		<b>Non-Displaced</b>		<b>Total</b>		<b>Displaced</b>		<b>Non-Displaced</b>		<b>Total</b>	
<b>Agriculture</b>	HH	Av.	HH	Av.	HH	Av.	N	Mean	N	Mean	N	Mean
HH & Persons Engaged	100	2.20	25	2.00	125	2.16	5	2.00	7	1.43	12	1.67
Days of Engagement	100	137.00	25	124.00	125	134.40	5	88.00	7	131.43	12	113.33
Income (Rs.)	100	2695.22	25	2762.40	125	2708.66	5	11280.00	7	8375.71	12	9585.83
<b>Daily Wage</b>												
HH & Persons Engaged	42	1.79	17	1.76	59	1.78	56	1.77	14	1.71	70	1.76
Days of Engagement	42	120.71	17	96.47	59	113.73	56	261.25	14	217.14	70	252.43
Income (Rs.)	42	2916.19	17	1902.35	59	2624.07	56	58064.29	14	66428.57	70	59737.14
<b>Animal Husbandry</b>												
HH & Persons Engaged	3	2.00			3	2.00			1	4.00	1	4.00

Days of Engagement	3	340.00			3	340.00			1	480.00	1	480.00
Income (Rs.)	3	1133.33			3	1133.33			1	72000.00	1	72000.00
<b>NTFP</b>												
HH & Persons Engaged	77	2.00	15	1.80	92	1.97						
Days of Engagement	77	112.86	15	114.00	92	113.04						
Income (Rs.)	77	2861.95	15	2269.33	92	2765.33						
<b>Salaried Job</b>												
HH & Persons Engaged	8	1.25	1	1.00	9	1.22	29	1.38	8	1.50	37	1.41
Days of Engagement	8	365.00	1	365.00	9	365.00	29	345.86	8	353.13	37	347.43
Income (Rs.)	8	1837.50	1	3600.00	9	2033.33	29	155793.10	8	167750.00	37	158378.38
<b>Petty Business / Shop</b>												
HH & Persons Engaged							8	1.13	1	1.00	9	1.11
Days of Engagement							8	311.25	1	365.00	9	317.22
Income (Rs.)							8	99000.00	1	150000.00	9	104666.67
<b>Skilled Labour</b>												
HH & Persons Engaged							45	1.04	8	1.38	53	1.09
Days of Engagement							45	268.56	8	255.63	53	266.60
Income (Rs.)							45	82222.22	8	95000.00	53	84150.94
<b>Own Enterprise</b>												
HH & Persons Engaged							16	1.25	3	1.00	19	1.21
Days of Engagement							16	275.31	3	273.33	19	275.00
Income (Rs.)							16	112312.50	3	116000.00	19	112894.74
<b>Artisan</b>												
HH & Persons Engaged	3	2.00			3	2.00						
Days of Engagement	3	200.00			3	200.00						
Income (Rs.)	3	1333.33			3	1333.33						
<b>Other Sources</b>												
HH & Persons Engaged	1	1.00			1	1.00	28	1.18	5	1.20	33	1.18
Days of Engagement	1	40.00			1	40.00	28	398.75	5	365.00	33	393.64
Income (Rs.)	1	2500.00			1	2500.00	28	40535.71	5	39600.00	33	40393.94
	Upper Kolab						Upper Kolab					
	Displaced		Non-Displaced		Total		Displaced		Non-Displaced		Total	
<b>Agriculture</b>	HH	Av.	HH	Av.	HH	Av.	HH	Av.	HH	Av.	HH	Av.
HH & Persons Engaged	91	2.22	23	1.96	114	2.17	89	2.04	21	1.43	110	1.93
Days of Engagement	91	163.32	23	164.17	114	163.49	89	160.62	21	125.71	110	153.95
Income (Rs.)	91	2459.89	23	5145.65	114	3001.75	89	18160.39	21	12095.24	110	17002.50
<b>Daily Wage</b>												
HH & Persons Engaged	49	2.08	9	1.78	58	2.03	58	1.81	17	1.47	75	1.73
Days of Engagement	49	102.76	9	107.22	58	103.45	58	174.91	17	178.53	75	175.73
Income (Rs.)	49	1881.22	9	1720.00	58	1856.21	58	29481.03	17	25058.82	75	28478.67
<b>Animal Husbandry</b>												
HH & Persons Engaged	4	1.50	3	1.00	7	1.29	14	1.21	1	2.00	15	1.27
Days of Engagement	4	188.75	3	365.00	7	264.29	14	231.79	1	360.00	15	240.33
Income (Rs.)	4	1812.50	3	350.00	7	1185.71	14	5107.14	1	28800.00	15	6686.67
<b>NTFP</b>												
HH & Persons Engaged	32	1.25	8	1.13	40	1.23	3	1.67	1	1.00	4	1.50
Days of Engagement	32	73.28	8	40.63	40	66.75	3	90.00	1	10.00	4	70.00

Income (Rs.)	32	636.72	8	675.00	40	644.38	3	1966.67	1	3000.00	4	2225.00
<b>Salaried Job</b>												
HH & Persons Engaged							6	1.00	6	1.50	12	1.25
Days of Engagement							6	350.83	6	476.67	12	413.75
Income (Rs.)							6	110000.00	6	311833.33	12	210916.67
<b>Petty Business / Shop</b>												
HH & Persons Engaged							2	1.00	2	1.50	4	1.25
Days of Engagement							2	212.50	2	135.00	4	173.75
Income (Rs.)							2	31500.00	2	33000.00	4	32250.00
<b>Skilled Labour</b>												
HH & Persons Engaged							38	1.16	2	1.00	40	1.15
Days of Engagement							38	206.18	2	200.00	40	205.88
Income (Rs.)							38	42402.63	2	60000.00	40	43282.50
<b>Own Enterprise</b>												
HH & Persons Engaged												
Days of Engagement												
Income (Rs.)												
<b>Other Sources</b>												
HH & Persons Engaged	1	1.00			1	1.00	29	1.28	11	1.09	40	1.23
Days of Engagement	1	100.00			1	100.00	29	317.93	11	314.09	40	316.88
Income (Rs.)	1	1500.00			1	1500.00	29	12006.90	11	30400.00	40	17065.00