

# **Chapter 1**

## **INTRODUCTION**

### **1.1 Background**

Ship breaking is the process of dismantling of old ships to recover steel scrap and other materials. Ship breaking industry is a recycling industry which recovers steel from the ship which is expected to constitute 90 percent in terms of value. The other materials constitute the remaining 10 percent and consist of machines and equipment, furniture and fittings, asbestos, wood panels, oil, chemicals, electrical fittings etc. These items can at best be considered as by-products of this industrial activity. Ship breaking is a challenging process involving a complexity of issues like ecology environment, labour health and safety. Thus it has been recognized as one of the hazardous industries and this activity is mainly concentrated in developing countries of Asia.

The ship breaking activity shifted gradually from high-income countries to middle income countries and then to low income countries due to growing environmental concern and stringent regulations in developed countries. During this process the ship breaking industry has transformed from being a capital-intensive industry to labour intensive industry. Although ship breaking industries produce the potentiality for economic growth, it also brings with it dangers of environmental imbalances. Until the 1970's ship breaking activities were concentrated in developed countries. But after 1980, due to availability of cheap labour, a shift of these activities from the developed countries to developing countries is witnessed. Countries like India, Bangladesh, China and Pakistan have less stringent norms or legislation pertaining to environment and also the availability of huge labour force.

It is estimated that on an average 700 ships are taken for decommissioning every year world over. Out of these 350-450 ships are scrapped in India. The ship breaking activities are carried out at various places in India along the sea coast of the country viz, Alang in Gujarat, Sachana in Gujarat, Dharukhana near Bombay, Tadri in Karnataka,

Maipе in Karnataka, Baypore in Kerala, Vishakhapatnam in Andhra Pradesh, Valinokan in Tamil Nadu and at Tuticorin in Tamil Nadu. However, the main ship breaking centre is located on the west coast at Alang, Gujarat. The ship breaking activity at Alang began in 1982 and currently, 141 plots are in operation and Alang is considered to be the largest ship breaking yard in world. India has the world's largest ship breaking facility in terms of volume. According to Basel convention report of 2003, 38 percent of ship breaking activities are concentrated in India, followed by China 25 percent, Bangladesh 19 percent and Pakistan 7 percent.

Alang has grown from small coastal village with a small population of fishermen and farmers to become world's largest ship breaking yard. Upto 1980's ship breaking activities were limited to the breaking of small-sized ship at Darukhana yard near Bombay. At the end of 1970's, the Metal Scrap Trade Corporation (MSTC) of the Government of India decided to import non-useable ships from foreign countries and the Government decided to set up ship breaking yards. During 80's there was a tremendous demand for scrap from large number of foundries and re-rolling mills in Gujarat. Therefore, Government of Gujarat adapted policies in favour of ship breaking industry on Gujarat coast. The Gujarat Maritime Board made intensive survey and identified Alang as the most suitable site for developing ship breaking activity. In 1983, the first ship was beached and this laid the foundation of ship breaking at Alang, which has now grown as world's largest ship breaking yard.

The present study intends to track the development of the ship breaking industry in India. The study intends to analyse the linkages of ship breaking industry and more specifically linkages exhibited by the Alang ship breaking yard. The activities at Alang are not possible without the migrant labours participation. An analysis of the working and living conditions of these workers is taken up in detail in the succeeding chapters.

## **1.2 The Present Study**

India is a labour surplus country wherein labour is available at competitive wage rates. The ship breaking industry in India is labour intensive unlike its capital intensive

character in developed countries. Alang ship breaking yard provides employment opportunities to skilled and unskilled labours to the tune of 30,000. The labour employed at Alang consist largely migrants from the states of Uttar Pradesh, Bihar, Jharkhand and Orissa. But few Gujarati labours are also employed who hail from Bhavnagar and surrounding districts. The reasons stated for the less number of local labour employed are low wages, manual work, poor working and living conditions. There are many activities and industries which directly and indirectly depend on Alang ship breaking yard. The total number of people directly and indirectly employed by Alang ship breaking industry is estimated between 1.5 to 1.6 lakhs (FIDH 2002, p. 56). It includes the downstream industries generated by the ship breaking industry such as re-rolling mills, foundries, oxygen plants, local scrap store, transportation companies and other small local business and a number of upstream. Ship breaking industry is the starting point of the chain of industrial link in the region. This industry has wide range of linkages to the other industries. The products of ship breaking industry are used by various small, medium and large scale industries which convert them into various final products. Thus the ship breaking industry in its very nature is linked to various industries in the region.

The demand for workers at Alang ship breaking yard is met with inter-state and intra-state migration of labour. Labour migration in India is highly unregulated and replete with the abuses and violation of rights. Migrant workers find jobs in agriculture, construction sector, plantations, rice mills, fisheries and ship breaking industry. The proportion of rural people involved in the migration flow is rapidly increasing. It is said to represent more than half of the migrant population worldwide. Normally, lack of employment opportunities and conditions of poverty are attributed to be the cause of migration. Thousands of rural labours migrate from their hinterlands in rural areas to other places mainly in search of employment. They are new to the place of destination and find it difficult to make adjustment with the changed situation and environment. They have to face a number of problems at the place of destination. Moreover, they are exploited both physically as well as mentally by the employers or contractors at the place of migration.

The ship breaking industry of Alang has some unique characteristics, which differentiate it from other industries. The industry after functioning for more than 20 years and despite its great economic importance, the industry retains some informal characteristics. The migrant labours are unorganised and none of the trade unions operating at national level have any presence at Alang. Another unique feature of the industry is that most of the labours are male living alone and have migrated from different backward and underdeveloped regions of the country. Ship breaking activity is one of the hazardous industries falling under the category of Hazardous Waste Management and is not always covered by normal labour and social protection laws. The ship breaking industry presents a dangerous work environment with high risk of injury and accidents. Labours are also exposed to a large number of chemicals and asbestos. The implementation of labour rights at Alang yards is inadequate. The atmosphere of fear and intimidation prevails thereby ensuring that workers remain obedient and submissive.

The contribution of the capital and labour in any industry is equally important. Therefore, the prosperity of an industry depends on the cooperation of the capital and labour. As disputes between capital and labour are invisible, the object of industrial legislation is to ensure the smooth relationship between the two. But Employers' main attention is to the maintenance of machines and improvement of the technical know-how to the utter neglect of workers employed to run the machines because they are available in large numbers and could be replaced in no time. Workers were generally illiterate, poor and unconscious of their rights. As such, the workers are at disadvantage in negotiating with the employers for employment. The employers dictate their own terms and conditions with regard to wages, hours of work, leave etc. The workers being in weaker position are left with no choice but to accept such terms, for employment as it is their only means to earn their livelihood.

Providing satisfactory working and living conditions to workers has been an unfulfilled task in a developing country like India. Industry is one of the major sources of employment in developing country like India. The advancement of industry shows the growth of industrial establishments, improvement in technology and as a consequence improvement in productivity, but it also witnesses the growth of hazards to workers. The

primary reason cited for increasing work related hazards is the negligency of the safety provided by the employers and the ignorance of the workers themselves.

Government has formulated various rules and regulations to protect the rights of the labours. If these are implemented properly it can lead to non-exploitative situations. However, when the very implementation of these is faulty, it usually leads to undesirable results. An organization will have to work within the boundaries of laws for its own benefit.

Much attention is paid to production and improvement of technology, while the workers needs are relegated. The availability of a large number of workers place the employers in a convenient position, they can dictate the terms and conditions of work. Besides, illiteracy and ignorance has handicapped the workers and made them unaware of their rights. Even the occasional industrial unrest and economic discontent could not bring improvement of the conditions of workers.

Since the early 1970's and particularly in the 1980's there has been a widespread debate among economists in India on the question of working conditions of workers in an established industry. Economists in India have tried to evolve the concept of working conditions so that the poor workers could be identified objectively and a quantitative estimation of their number and the factors associated with the poor working conditions be established. Though, the rate of accidents and health hazards associated with a particular industry would be one of the indicators of working conditions, reliable data for the same are difficult to obtain and at times not available on a regular basis at the national level and more specifically for unorganised sectors.

In India there exist a considerable number of studies on migration. But these studies have touched upon the migrant labours from Agriculture, construction, Brick industry and Textile industry. But no systematic work has been taken up on ship breaking industry. The present study attempts to fill this gap.

Various scholars defined working conditions of labour in terms of nature of work and facilities provided by employer and authorities. National Commission on Labour defined the working conditions of labour in manufacturing industries in terms of hazardous nature of work. On the other hand living conditions are defined in terms of housing, civic amenities and other facilities at the place of work.

Vidyut Joshi's study on Uttarkashi found that the poor conditions of migrant labours in terms of working and living conditions employed in Government projects. Labours have migrated from Orissa and Bihar. Even women and children were employed in such project works and thus violated all labour laws. Most of the labours, especially those from Orissa were bonded labours who had received monetary advances from the labour contractors (Vidyut Joshi, 1987: 10).

According to National Commission on Labour report, most of the workers in construction industry are employed on casual basis. Unstable employment/earning and shifting of workplaces are the basic characteristic of work for construction workers. Women engaged in construction work are most exploited. Frequent changes in the work and instability deprive them and their children of primary facilities like health, water, sanitation facilities and education. In most cases safety norms are violated. In construction industries the rate of accidents is high and there is no protection for workers on the site. There is violation of laws on Minimum Wages, Equal Wages, Child Labour, Contract Labour and Inter-State Migrant Workmen Act (NCL, 2002: 106-107).

Barik (1994) has made attempt to investigate on the conditions of Oriya migrant labours in Surat, working in textile mills. The study is based on primary data collected using questionnaire and interview methods. The study evaluates working environment, working conditions and other features migrants in Surat. The study comes to conclusion that workers are prone to accidents and no protective gears are provided at workplace either by employer or by any other authority (Barik, 1994: 12-13).

In Punjab, migrant workers employed in Brick Kilns are subjected to harassment by their employers as well as contractors who recruit them. Most of the time, they do not

get wages for the extra work they do and often face non-payment of regular wages. The Government is apathetic and does not look into the problems involved in the implementation of laws such as the Inter-State Migrant Workmen's Act 1979, Equal Remuneration Act 1948, Child Labour (Prohibition and Regulation) Act 1976. Factories Act 1948 etc have the provisions which could be invoked to safeguard the rights of migrant workers (John and Ateaq, 2003: 82).

International Federation of Human Rights report mentioned that the working conditions of migrant workers in Alang ship breaking yards is worse than any of the established industries in India. Report also mentioned that the rate of accidents is very high, much higher than the average industrial accidents in India. Ship breaking activity requires trained workers to handle toxic substances and reduce the rate of accidents inside the yards. According to FIDH, there is not a single day that goes without accidents. Due to lack of transparency and Government oversight, it is impossible to obtain precise figure on accidents and even more on diseases. Report also mentioned that due to lack of proper implementation industrial and labour laws, the working conditions of labours deteriorated day by day (FIDH, 2000: 57-59).

UNESCO conducted a survey on Alang-Sosiya ship breaking yard and found that workers are working in the open space in severe conditions, even in rainy season. Ship breaking activity is physically demanding and many of the tasks are risky. The process of ship breaking is labour-intensive and requires a high level of teamwork and co-ordination, which is very difficult to achieve under prevailing weather and noise conditions. Safety equipment such as gloves, spectacles, boots and helmets are required for protection during work. But these are not always supplied regularly and may need to be purchased by the workers themselves. The most difficult obstacle is the implementation of labour laws for which the Gujarat Maritime Board and the ship breakers are responsible. For the above-mentioned factors the survey found that workers are working in poor conditions (UNESCO, 2004: 23-24).

A survey conducted by International Metalworker Federation on "Status of Ship Breaking Worker in India" found that in both the ship breaking yards of Alang-Sosiya and Mumbai, workers are getting wages less than minimum wage, working and living

conditions are poor and there is no proper enforcement of labour legislation (IMF, 2006: 11-13).

There are few studies done on Alang ship breaking yard till data and they mainly focus on the development of the industry and various environment problems. But there is no detailed and systematic study focuses on the condition of labours who are low paid, unskilled and are allowed to dismantle ships and undertake the reprocessing/recycling operations without protective and safety equipment.

### **1.2.1 Objectives of the Study**

The present study seeks to analyse various aspects of labours at Alang ship breaking yard. The specific objectives of the study are as follows:

- To track the development of ship breaking activity in developing countries.
- To analyse the linkages exhibited by ship breaking industry at Alang.
- To study the process of migration and identify socio-economic characteristics of migrant labours.
- To examine how the laws are implemented at Alang ship breaking yard.
- To assess the working conditions of the labours at Alang ship breaking yard.
- To evaluate the living conditions of the labours at Alang ship breaking yard.
- To assess the health status of the labours at Alang ship breaking yard.
- To evaluate the safety of labour working at Alang ship breaking yard.

### **1.2.2 Hypothesis of the Study**

In the light of the theoretical and empirical research on working and living conditions of migrant labour, certain hypotheses are formulated for the present study.

1. Lack of employment opportunities and abject poverty are directly responsible for the process of out-migration.



2. Employment opportunity, higher income and bright light of city are the pull factors which are responsible for migration of labour.
3. It is the combination of push factors and pull factors that are responsible for migration of labour in Indian conditions.
4. Wage differences between present and prospective occupation is the most important determinant of migratory process.
5. Wages paid to workers are determined by the level skill and the experience of the workers.
6. Wages are higher in occupations that have greater risk of threat perception.
7. Working conditions are positively related to the implementation of factory regulations and labour rights.
8. A good living condition at site does have a positive impact on the productivity and performance of the workers.
9. Continuous exposure to harsh working conditions has adverse impact on health status of workers, thereby on their productivity.
10. Remittances and savings play important role in the process of migration.

To test these hypotheses various statistical tools have been used. The study makes use of simple ratio analysis, probability, regression- bivariate and multivariate for analyzing data.

### **1.3 Data Sources and Methodology**

The study is based on the data collected by the researcher personally from the workers using a structured questionnaire. Out of 30,000\* unskilled and skilled labours working inside yards, a random sample of 300 respondents which accounts for about 1 percent of the population is selected for the survey. These 300 respondents are from different states viz, U.P, Orissa, Bihar, Jharkhand and Gujarat. The survey was conducted in the month of June-July, 2004. The researcher directly contacted the respondents at site and at their living place in Alang to collect the information.

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\* Figures are collected from GMB reports on ASSBY.

Besides primary data the researcher has also made use of secondary data such as reports, studies and information available at Gujarat Maritime Board and Gujarat Ship Breakers Association. A number of reports and surveys containing information of ships dismantled and environment conditions are available. These studies have been conducted both at individual and Government levels but comparison of the results of these studies is difficult and results have to be treated with certain amount of caution due to variation in the data and definitional differences.

The purpose of data analysis is to prepare a model whereby relationship between the variables can be studied. Analysis of data is made with reference to the objectives and hypotheses of the study. Analysis of data involves re-categorization of variables, tabulation, for casual inferences. The study made use of Excel for data processing. For the purpose of analyzing the data and for performing various tests statistical and econometric packages (such as SPSS and Eviews) have been made use of.

Furthermore, to analyze data various statistical tools such as ratio analysis, percentages, correlation, regression analysis-bivariate and multivariate, logit model are used. For analysis of data on some aspects of the conditions of workers t-test is made use of. For analyzing qualitative data such as accident faced and health problems faced by workers logistic regression is used. Ratio analysis is used whenever necessary to draw inferences.

## **1.4 Chapter Scheme**

The study is organized into seven chapters. Summary outline of the chapters are as follows:

Chapter 2 presents the background of the ship breaking industry in India. The nature of this industry and the production processes in this industry are explained. This chapter outlines the development of Alang ship breaking yard as a major yard in the world. The linkages exhibited by Alang ship breaking industry with other industries and regions through production, sales and purchases are analysed in this chapter.

Chapter 3 presents various laws applicable to organised sector such as ship breaking industry. This chapter also examines the structure and composition of labour market in India. The rights of the workers and the responsibility of the employer are presented. The laws act as the reference point for evaluation of working and living conditions of workers.

Chapter 4 examines the migratory process of the workers and the reasons behind this process. The process of migration is examined using the push factors and the pull factors. The conditions of work and living at the place of residence mainly act as the push factors and the so called better working and living conditions at the place of migration work as the pull factors. To examine the migratory process variables such as present income, employment opportunities, ownership of land, skill level, level of development of the native village/district are used as the explanatory factors.

Chapter 5 presents the working conditions of labours employed at Alang ship breaking yard. A survey of working conditions in various industries is presented. This chapter examines the work status and experience of the workers including type of work (skilled or unskilled), number of working days per week, number of working hours per day and other related work aspects. An analysis of occupational safety, injuries and accidents related to work are also analysed. The chapter also focuses on the social security of labour at Alang. This chapter examines in detail the factors that are responsible for poor working conditions and discuss different criteria for the measurements of poor working conditions at Alang ship breaking yard.

Living conditions of workers at Alang ship breaking yard is the subject of Chapter 6. This chapter includes detailed reference to housing conditions, availability of public services such as piped water, electricity, sewage disposal etc. This chapter evaluates the living conditions workers with reference to various legislations. The chapter also examines the income, saving, remittances and consumption pattern that are important for the explanation of living conditions. Workers linkages to their native place are also analysed in this chapter.

Finally, summary and conclusions of the research are presented in Chapter 7. This chapter also put forwards the policy implications and suggestions.

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