CHAPTER - I
INTRODUCTION
INTRODUCTION

Agricultural labourers:

One of the most disquieting features of the rural economy of India has been the growth in the number of agriculture workers.

Cultivators and agricultural labourers engaged in crop production. The phenomena of under employment, under development and surplus population are all simultaneously manifested in the daily lives and livings agricultural labourers. They get unusually low wages conditions of work put an excessive burden on them and employment which they get is extremely irregular. According to Dr. Pattabhi said in 1940 still holds true. That, the cultivators who spends the day between slush and mud, who works now with a starving stomach and now with a half appeased appetite. Who knows no rest in storm or sunshine, who can be called his own, he, grows our paddy but starves? He feeds our milk cows but never knows anything beyond kanjee and water. He digs our well but must keep off from them when they are full. He is a perpetual hewer of wood and drawer of water for those who fatten on his labour and rise to wealth on his labour and rise to wealth and plenty. This condition is appalling and heart rending. It was the condition that led the agrarian reforms committee, 1950, to observe that "to leave out problem of agricultural labourers in any scheme of agrarian reforms as has been dine so far is to leave unattended a weeping wound in the agrarian system of the country." In view of the over riding concern to the problems of agricultural labour that the prime minister had stated in 1966 that. We must give special condition to landless agricultural labour. Although there has been tremendous progress in India since independence, this is one section which has really a very hard time and which is descrying of a very special consideration.

Present position of agricultural labourers in India:
Agriculture labour is provided mostly by economically and socially backward section; poor sections from the tribes also swell their ranks. It may be divided into four types:

a) Landless labourers who are attached to the landlords;
b) Landless labourers who are personally independent but who work exclusively for others;
c) Petty farmers with tiny bits of land who devote most of their time working for others; and
d) Farmers who have economic holdings but who have one or more of their children and dependent working for other prosperous farmers.

The first group of agricultural workers has been more or less in the position of serfs of slaves; they are also known as bonded labourers. They do not normally receive wages in cash but are generally paid in kind. They have to work for their masters and cannot shift from one to another. They have to provide beggar or forced labour. In some cases, they have to offer masters. Among the other group mentioned above the second and the third are quite important. The problem of landless labourers is the most serious problem in the rural sector.
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Sources, census 2001
**Category of agricultural labourers:**

The first agricultural labour committee had classified agricultural workers into two categories:

I. Attached labourers and 
II. Casual labourers.

In the Indian context, this is the basic classification. Attached labourers are attached to some cultivator's household on the basis of written context. Their employment is permanent and regular. Accordingly whenever the master wishes they are ready to work on this land. Normally they are not free to work at any other place. In any instance attached labourers also do the task of domestic servants in addition to working on land. The hours of work are very lengthy and in some cases, attached agricultural labourers have to work for dawn to dusk in the houses and farms of their employers.

All workers not falling in the category of attached labourers constitute casual workers. They are free to work on the farm of any farmer and payment is generally made to them on a daily basis. There are broadly three types of casual agricultural workers in India:

(i) Such small farmers who have very small holdings and are thus forced to work on the farms of other to make both ends met;  
(ii) Tenant who work on leased land but this is not their main source of income (the main sources of their income being work performed on the land of others); and  
(iii) Sharecroppers who besides sharing the produce of the land cultivated by them, also work as laborers.

However, such sweeping divisions of agricultural labour into merely two categories 'attached' and 'casual' is unscientific and hides the numerous variations in employer-employee relationship existing in the countryside. According to Pranab Bardhan and Ashok Rudra the employer-employee relationship differ because of different combinations of certain number of attributes such as the following.

- a) Duration of contact: day, month, season, year, etc.  
- b) Bases of payment; daily, piece rate, product share, etc.  
- c) Frequency of payment: day, month, quarterly, yearly, etc.
d) Medium of payment: cash, kind, meals, or a combination of them;
e) Degree to which work obligation and hours of work are specified or are left unspecified;
f) Interlink age with other contracts with the employer in credit or land relations, etc;

Freedom to work for different employers: full freedom, total absence of such freedom, conditional or restricted freedom etc. this long list of attributes shows how difficult it is to categories labour into different it is to categories labour into different classes in the rural sector. With the help of the numerous permutations and combination that can be form these attributes; we can define a number of categories of agricultural laborers.

**Growth in the number of agricultural labourers:**
The class of agriculture workers did not exit in India before the advent of Britishers. Sir Thomas Munroe had stated in 1842 that there was not a single landless labourer in India. Undoubtedly, this was an overstatement. However, it can be safety said that the class of agricultural workers was too small to attract any attention. According to the census of 1881, landless labourers in that year were 7.5 million. In 1921, agricultural workers were 21 million which was 17.4 percent of the total rural workers has continuously increased since then. They were 27.5 million in 1951 and 31.5 million in 1961. According to the census of 1971 the number of agricultural workers was 47.5 million which 26.3 per cent of the total workers were. Thus every forth person of the labours force was working as an agricultural labourer in 1971. According to the census of 1981 the number of agricultural workers is 55.4 million which 22.4 percent of the total labour force is. The figures for different census are not comparable because the definition of agricultural workers has been modified from time to time. However, an unmistaken tendency of a continuously increasing number of agricultural workers is clearly discernible.

**Causes of growth in the number of agricultural labourers:**
The causes operating to bring about the growth of this class may be broadly summed up as follows:

I. High net growth rate of population in the economy.
II. Growth of indebtedness due to low income leading to transfer of land from the small owners to the creditors, resulting in the former in to becoming agricultural labourers.

III. Growth of absentee landlordism.

IV. The extension of money economy to rural areas in replacement of payment in kind.

V. Disintegration of village communication of the pre nineteenth century.

VI. Decline of domestic industries and handicrafts.

VII. Disintegration of the peasantry.

VIII. A severe agricultural depression in the late twenties; and

IX. Other social factors such as economic transition through which some of the criminal tribes and castes have been passing.

- **Increase in population:**
The population of India has increased at a very rapid pace after 1921. However, development has proceeded at a very slow rate and it has not been possible to provide employment to the increasing population in areas other than agriculture. The technology mix in manufacturing industries, transport and tertiary industries is such that the capital-labour ratio is practically fixed and unchanging. Consequently, it is generally not possible to provide increasing employment opportunities in this sector. However, situation in the agricultural sector is entirely different. Not only the capital labour – is ratio variable. Therefore, when population increases, people fall back upon agriculture for their livelihood (in the face of expanding employment opportunities in other sectors). Thus, increase in population is one of the major reasons of increase in the number of agricultural labourers.

- **Decline of cottage industries and village handicrafts:**
There was a rapid decline of cottage industries and village handicrafts during the British period, but modern industries were not set up to take there place. The British had adopted various measures to destroy the traditional industries of India and they were least interested in providing alternative employment opportunities to the skilled and unskilled workers engaged in these industries. Not only were the craftsmen working in such industrial cities as dacca and murshidabad rendered jobless, even craftsmen engaged in seek employment as agricultural in the country side.
• **Eviction of small farmers and tenants from land:**
In ryotwari areas in south India, initially land belonged to the farmers. However, with increase in the number of intermediaries, the land started slipping out of the hands of small farmers and they were forced either to adopt the status of tenants or work as agricultural labourers.

• **Uneconomic holdings:**
The process of subdivision and fragmentation of holdings (which is mainly a consequence of the law of inheritance and decline of joint family system) has continued unabated for a long period of time. This has rendered a large number of holdings uneconomic. As a consequence, farmers working on these holdings find it difficult to make both ends meet.

• **Increase in indebtedness:**
The increasing indebtedness of small farmers in rural areas is also responsible for increasing the number of agricultural workers. The money lenders and mahajans after advance loans of small farmers, the adopt various malpractices like charging exorbitant rates of interest, manipulating accounts etc. and once the small and marginal farmers fall into their taps. It becomes very difficult for them to get out. In an attempt to repay debts, these poor farmers and forced to work as agricultural workers.

• **Spread of the use of money and exchange system:**
The rapid spread of the use of money and development of the exchange system has changed the entire complexion of agriculture. Whereas previously land was after given to the tenants to cultivate (from whom landlords obtained rent in the form of a portion of the produce), the present practice is to employ agricultural workers to do the works.

• **Capitalist agriculture:**
Because of a multiplicity of factors operating in this country during the decades, capitalist agriculture has received a big boost. Abolition on intermediaries, technological development in agriculture, cheap cooperative credit, expansion of marketing facilities and the pricing policy of the government have all created favorable conditions for the department of capitalist agriculture. Department of capitalist farming may force more and more tenants to leave land and start working as agricultural labourers.
Conditions and problems of agricultural labourers:
The class of agricultural labourers is the most exploited and oppressed class in rural hierarchy. Before independence, their position was nothing better than that of serfs. They were required to perform all sorts of beggar on the master's land and house, work as domestic servants from down to dusk and do anything that his zamindars demanded of them. They were victims of social discrimination and economic exploitation. If they failed to tow the lines of the master, they were beaten up and tortured. By advancing small loans to them, the zamindars and landlords often succeeded in trapping these poor people in their net and converted them into virtual slaves. In the absence of alternative sources of employment, they are forced to depend on landlords who consequently dictate terms. The simple law of demand and supply operates. Since their supply is excessive in relation to the demand for them, they have to settle for extremely low wages. The alternative is worse unemployment.

- Marginalization of agricultural workers:
The workforce in agriculture (cultivators plus agricultural labourers) was 97.2 million in 1951 and this rose to 185.2 million in 1991. As against this, the number of agricultural labourers rose from 27.3 million in 1951 to 7.6 million in 1991. This implies that (i) The number of agricultural labourers increased by almost three times over the period 1951 to 1991; and (ii) as proportion of work force in agricultural labourers increased from 28 percent in 1951 to 40 percent in 1991. These facts indicate the first pace of capsulation of workers in agriculture in India. More over the sere of agriculture in GDP (gross domestic product) has consistently decline over the years (from 59.2 percent in 1950 – 51 to 35 percent in 1990 – 91 and further to 26.6 percent in 2000 – 01 at 1993 – 94 prices). The implication is that the gaper worker GDP in agriculture and that in non agriculture widened markedly over the post. Independent decades, “The widening gap, considered in the context of capsulation of workers in agriculture mentioned above, appears to provide a clear indication of the marginalization process operation in agriculture.”

- Wage and income:
Agricultural wages and family income of agricultural workers are very low in India. The first agricultural labourer’s enquiry reported that the per-capita annual income of agricultural labour families was a meager rupees 104 in 1950 – 51. The average annual income of the household being Rs. 447, the second agricultural labour enquiry reported a farther deterioration in the condition of agricultural workers. Thus per capita annual income
declined to Rs 99.4 in 1956 – 57 and average annual income of the agricultural labor household to Rs. 437.

- **Employment and working condition:**
  The agricultural labourers have to face the problems of unemployment and underemployment. For a substantial part of the year they have to remain unemployed. For a substantial part of the year they have to remain unemployed because there is no work on the year they have to remain unemployed because there is no work on the farms and alternative sources of employment do no exist. There is no provision for fixation of hours of work. At the time of sowing and harvesting, the agricultural workers have to work on the farms from down to dusk. Since they are employed on a daily basis, there is no question of any leave or other benefits for them.

- **Indebtedness:**
  Low level of their incomes, agricultural workers have to seek debits off and on. In 1950-51 to 1974-75, debt per agricultural labour household was Rs. 47; it had risen to Rs. 148 in 1964-65 and further to Rs. 387 in 1974-75.

- **Feminization of agricultural labour with low wages:**
  Female agriculture workers are generally forced to work harder and are paid less than their male counterparts. Such bias against female workers exists is most of the dry-land areas. A many places, wages paid to female workers are even less than the minimum wages.

- **High incidence of child labour:**
  Incidence of child labour is high in India and the estimated number varies from 17.5 million to 44 million. It is estimated that one third of the child workers in Asia are in India. The largest numbers of child labours are in agriculture. Child employment benefits the employer but adversely affects the poor as a class although it may supplement the income of the household supplying child labour. The poor are made worse off as employment of children brings down the wages levels.

- **Increase in migrant labour:**
  Green revaluation significantly increased remunerative wage employment opportunities in pockets of assured irrigation areas while employment opportunities, nearly stagnated in the
vast rain-fed semi-arid areas. Therefore these have been a large flow of migrant labour from the latter to the former areas. The number of inter state distress rural migrant workers is estimated to be around 10 million. Even in areas of abundant labour supply, employers prefer rural migrant workers because of grater control that can be exercised on such labour without regard to any social responsibilities. Sankaran draws a graphic sketch of the miserable plight of inter state migrant labour in these words: ”the time they spend in their own village is aimed at keeping them alive until the next recruiting season. After with the help of advances of money by the reciting agents and while on migratory work the time is spent on keeping them alive until they return to their village”.

- **The landlord labourer relationship:**
The relationship between the landlord and the labourer is not uniform throughout the country. There are substantial differences not only among different state but even among different villages of the same state as regards the period of employment, mode and time period of payment, freedom of movement, bargaining power vis-à-vis landlords, beggar etc. broadly speaking, the relationship between landlords and agricultural labourers is of two types: In the first category are those labourers who are free. Therefore, they can, if they so wish refuse to work for a particular landlord or zamindar at the prevailing wage rate their village and go to some other place for work. In the second category are included those agricultural labour. They have to work on the fields of their masters and have to accept whatever wages are offered to them. They have been deprived of their freedom in a number of ways. Social customs, oppression and forcible subjugation, burden of indebtedness, etc. have all contributed to strengthen the chains of their serfdom.

**Measures adopted by the government:**
The government has shown awareness of the problems of agricultural workers and all plan documents have suggested ways and means to ameliorate the lot of these people. Measures adopted by the government for this purpose can be considered under the following headings.

- **Minimum wages:**
The minimum wage act was passed as long back as in 1948 and since then the necessity of applying it to agriculture has been constantly felt. However, because of a number of difficulties it was for agricultural labour in most of the states up to 1974 the main difficulties were low productivity of agricultural labour, small size of holdings of many farmers and
their consequent incapability of paying more wages, determination of wages by traditional methods and opposition of any changes from the landlords, lack of organization among rural workers. Excessive labour supply in many areas, prevalence of widely different conditions of employment, etc. some changes have occurred during the planning period. The resulting prosperity of farmers has included agricultural workers in some places to demand more wages. In this changing environment, the government has initiated a number of stapes to fixed minimum wage for agricultural labourers. At present excepting Jammu and Kashmir, Nagaland and Sikkim, legislation has been passed in all the states fixing the minimum wages. However, on account of practical difficulties and excessive supply of labour benefits for this legislations have been very limited, because of the lack of bargaining power, agricultural workers do not press for minimum wages.

• Abolition of bonded labour:
After independence, attempts have been made to abolish the evil of bonded labour because it is exploitative, in human and violation of all norms of social justice. Legislation was passed known as the bonded labour system (abolition) act 1976. Under this act which extends to the whole country, the bonded labour system was abolished and every bonded labour was freed and discharged from any obligation to render bonded labour. Accordingly all contracts for bonded labour, attachment for recovery of bonded debt, etc. where declared null and void as a consequence of this act, 1,62,637 bonded labourers were identified and freed in various part of the country up to February 1984.
The estimates of bonded labour very widely. Different state governments have reported a total of 1.20 lakh bonded labourers. The national sample survey (32nd round) puts the figure at 3.5 lakhs. The survey carried out by the Gandhi Peace Foundation and National Labour Institute in 1978 has estimated the number of bonded labour to be as high as 22.0 lakhs. It seems that a large number of bonded labourers are yet to be liberated.

• Provision of housing sites:
A law has been passed in several states for providing house sites in villages to agricultural workers. A number of steps were undertaken during the second plan to provide house sites free of on a subsidized under which financial assistance was given to the states for provision house sites with an area of 91 sq. meters to cover, where necessary, the cost of acquisition and development of house – sites. The minimum needs program (NNP) and the 20-point program give a higher priority to the rural house site – cum – house construction scheme. It is estimated that these were 12.2 million bondless families as of march 1985.
According to the seventh plan, 0.72 million of these families have yet to be provided with house – sites. The seventh plan proposes to provide assistance to the extent of Rs. 500 per family for provision of developed house sites of 90 sq. meters each and assistance of Rs. 2000 per family towards construction cost. A total provision of Rs. 577 crores has been made for the program of this, Rs. 36 crores would be utilized to provided house –sites in respect of those states where there are landless families still to provide house – sites and Rs. 541 Crores would be utilized for the provision of construction assistance to 2.71 million families.

- **Providing land to landless labourers:**
  The government has distributed land to landless labourers with a view to improving their economic position. The first plan made a provision of Rs. 1.5 crores for the resettlement of landless labourers on newly reclaimed land as well as cultivable waste land. In september 1957, the national development council proposed that lands obtained as a result of on forcing ceiling laws and those donated in bhoodan and gramdan should be primarily devoted to the settlement of landless labourers. Priority in the distribution of land is accorded to landless labourers belonging to scheduled castes and scheduled tribes. Approximately 70 lakh hectares of land has been distributed among landless labourers so far.

- **Special schemes for providing employment:**
  A number of schemes have been initiated in the planning period for providing employment to rural poor, the importance ones being the rural workers programme (RWP), rash scheme for rural employment (CSRE), employment guarantee scheme (EGS) initiated in maharashtra food for work programme (FWP), national rural employment programme (RLEG)P. NREP was lunched in the six five year plan. It was expected to generate additional gainful employment in the rural areas to the extent of 300.400 million man days per annum, create durable community assets, and improve nutritional status and living standers of the poor. An outlay of Rs. 1620 crores was provided under this programme, out of which the outlay for 1980 81 onwards was to be shared equally between the centre and the states. Outlay under NREP in the seventh plan has been kept at Rs. 1250.81 crores. It is expected to create a total employment of 1,445 million man days.

RLAGP was introduced in august 1983 specifically with the object of providing employment to the rural landless. An outlay of Rs. 500 crores was provided for the programme in the
sixth plan. The target for employment was actually generated. An outlay of Rs. 1743.73 crores has been provided for RLEG in the seventh plan (to be born entirely by the centre) and a total employment of 1,013 million man days is expected to be generated under this programme over the seventh plan period.

• **Special agencies for development:**
  Two special agencies, small farmers development agency, (SFDA) and marginal farmers and agricultural labourers, development agency (MFAL) was created in 1970-71 with an outlay of Rs. 115 crores (subsequently pruned down to Rs. 103 crores). Under the MFAL scheme, farmers with land holdings below 2.5 acres were defined as marginal farmers and rural households during more than 50 percent of their income from agriculture were designated as agricultural labourers.

• **Other measures:**
  Various others measures adopted by the government from time to time have either directly or indirectly sought to improve the condition of agricultural workers. For example, promotion of small and cottage industries and village handicrafts and development of industrial estates in rural areas have created job opportunities for agricultural workers. On the other hands, development of social services has indirectly helped to improve the conditions of living of agricultural workers.

• **Measures for improvement:**
  The problems of agricultural workers can be tackled only when a two pronged strategy of providing land to the agricultural labourers (by strictly enforcing land ceilings and distribution surplus land to agricultural labourers), and providing alternative avenues of employment (by promoting small and cottage industries and village handicrafts) is adopted. The former measure can be implemented even in the short-term provided the government is really serious about it. The latter measure, on the other hand, is a long term process involving considerable resources and carefully chalked out long range planning.

• **Better implementation of legislative measures:**
  Through the minimum wage act was passed as for back an in 1948, yet implementation leaves must be desired. Because of the excessive supply of agricultural workers and lack of organization they are offered very low wages. There is no administrative machinery worth
the name to implement effectively the provisions of the minimum wage act. Even otherwise, fixation of minimum wages in an era of continuous and exorbitant rise in prices carries no consolation for the starved masses of agricultural workers. Therefore it is necessary to proved for periodical revision of minimum wages keeping the changing price trends in view.

- **Improving the bargaining position:**
Special effort should be directed towards organizing agriculture workers. It is only such organization that can improve their bargaining power and ensure better wages and better condition of work for them. This is not easy because the large farmers and land lords are economically and socially very powerful. Because of their unlimited power they have in pinning down whatever little attempts were made by agricultural workers to organize themselves in some parts of the country. They have not retrained from the use of force and violent methods to accomplish this end. Therefore organization of agricultural workers is possible only under the protection of and support from the government.

- **Resettlement of agricultural workers:**
The surplus obtained as a consequence of the implementation of land ceiling lows should be distributed amongst agricultural workers, similarly newly reclaimed land should be allotted only to agricultural workers. However, there are physical limitations to this programme. The supply of land is very much limited in relation to the supply of agricultural workers. To cope with this problem, steps can be taken to set up cooperative farms or state farms where employment at fair wages can be provided to the agricultural labourers.

- **Creating alternative sources of employment:**
From a long term point of view perhaps the best policy to be create ample employment opportunities outside the field of agriculture. Because of the pressure on land and increasing population it is become more and more difficult to absorb additional labour on farms and unless other sector of the economy cerate employment opportunities it will not be problems of agricultural workers. Perhaps the best strategy is to promote labour intensive industries, in rural areas. For this purpose facilities of power, finance and training rural youth (especially those belonging to agricultural labour households) should be provided in the village. This will reduce the dependence of agricultural workers on land and increase their incomes.
• **Improving the working condition:**

It is necessary to improve the working conditions of agricultural workers. Their house of work should be statutorily fixed and strictly enforced. In case of work beyond the stipulated house, overtime payments should be made. Child labour should be totally banned.

• **Public work program:**

A major problem of many agricultural workers is that they are employed only for a part of the year, for example, during sowing and harvesting. For the remaining part of the year they remain unemployed. The period of inactivity may vary from three months to six months. During this period, it is necessary to organize rural works programme like construction of roads, school buildings, digging of canals, wells, etc. so that employment can be provided to agricultural workers all the year round. Of course, the ultimate solution is the creation of employment opportunities in sectors other than agriculture but till such opportunities are created in an ample measure, public works programme can be entrusted with the task of providing employment.

• **Raising the standard of living:**

The state can, if it wishes, organize special programme to improve the standard of living of agricultural workers. Since a large proportion of living of agricultural workers belongs to scheduled castes, they are not allowed to take water from village wells. State can arrange for drinking water for them. State can also provide housing sites to agricultural workers so that they do not remain houseless. State can organize fair price shops in rural areas to save agricultural workers from the exploitation of village trades who generally sell goods at high prices. To improve the socio-economic environment in which agricultural labourers works, state can provide amenities of rural life like health centres, maternity wards, youth clubs, and sport facilities etc. Special programme for vocational and technical training of agricultural workers can also be arranged.

• **Social security:**

Unlike industrial labour, agricultural labour has no social security, no earned leave, no sick leave and no pension or gratuity; substantial efforts should be directed in this field. Since these labourers are not permanently attached to any employer, the task of providing social security is indeed a complex one. Therefore this responsibility has to be borne by the state must provide compulsory insurance on marginal contribution or no contribution and
institute old age pension schemes so that the agricultural workers do not have to starve or depend on others in their old age.

These measures can go a long way in solving most of the problems of agricultural workers. As stated earlier, the basic task is to distribute surplus land amongst agricultural workers and provide additional employment of small and cottage industries, general improvement in the working conditions, enforcement of legislative measurers, provision of social security, etc.

**The objective of the study:**

The main objectives of the present study may be stand as follows:

- To find out the socio-economic characteristics of sample agricultural labourers.
- To find out the level of income of the sample of agricultural labourers before and after tsunami disaster.
- To find out the structural change in occupation among the sample labourers before and after the tsunami disaster.
- To find out the proportion of sample agricultural labourers living below poverty line.
- To evaluate the impact of assistance provided to sample agricultural labourers.
- To identify the different men made/natural resources damage and the government contribution for rehabilitation.
- To suggest some measurers regarding the improvement of levels of living of sample agricultural labourers.
Reference year:
The sampling of labourers was done during the July 2005 to November 2005, so the reference period of this research should be 2005.

The scope of the study:
As stated earlier, the study has been uncommon for a remote area like this group of islands. Selection of Andaman and Nicobar Islands for the purpose of present study for the following reasons:

- This Andaman and Nicobar Islands is one of the largest numbers of island, where settlement of the Indian people after and before independent. The employment opportunity for mainlanders quite increase day today, in agriculture sector for labour groups.
- It contributes substantially towards the total value of agricultural production, the contribution of the economic development, non dependency of food grace of mainland.
- Verification of social development, economic and agro-economic, cultural development towards the territory by increasing of population.

Research methodology:
The study has gone through the multistage of the research methodology. The methodology of the topic is classified into the following stage below.

- Selection of the area:
For the present study agricultural labourers before and after tsunami disaster of Andaman and Nicobar islands are considered. Andaman and Nicobar district has been chosen from Andaman and Nicobar islands as it has the highest proportion of earthquakes and tsunami effects in these regions of bay of bangle, and also highly affected agricultural land and labourers. As the objectives of present survey is an intensive study of agricultural labourers in unorganized sectors of rural areas, the agricultural labourers in rural area of north Andaman, middle Andaman, south Andaman and Nicobar groups of islands are considered. These four rural groups of islands represents different class of rural agricultural labourers, while north, middle and south Andaman are in class I, II and III, Nicobar groups of islands...
are class IV rural areas. These selection has therefore, helped, in analyzing different aspects of agricultural labourers in rural areas representing different class of rural area.

- **Selection of the respondents:**
In this study big, marginal and small agricultural labourers working under the income group of ten to twelve thousand, four to six thousand and below one to two thousand, labourers working in organized sector of rural areas have been considered. The organized sectors of rural areas, which usually employ agricultural labourers, are working under small and big fertile paddy and hilly land.

In each area out of four sectors 100 labourers have been selected from every sector. Thus, from one rural centre 100 respondent have been selected i.e., from four rural areas in all 400 agricultural labourers, respondents have been selected by stratified purposive random sampling method.

- **Method of data collection:**
The data to be collect through primary and secondary sources, for secondary source books, journals, periodicals, reports and articles to be consults for this purpose.

For primary data collection by the help of personal interview through out the respondents of the schedule agricultural labourers, those are affected by the disaster. For this purpose affected households schedule specially formulation is used for collecting from the respective respondents.

- **Statistical Tools:**

  **An average:**
An average is single value that represents a group of value; such a value is of great significances because it depicts the characteristic of the whole group. Since an average represent the entire data. Its value lies somewhere in between the two extremes i.e., the largest and the smallest items. For this reason an average is frequently referred to as a measure of central tendency.
The distinguish average finds out the real income and value of assets of the sample agricultural labourers. Using the analytical formula:

\[ \bar{x} = \frac{\sum M}{N} \]

Where,
- \( a = \) average
- \( \sum dx = \) total of value of deviation from assumed mean and
- \( n = \) numbers of sample.

**Standard deviation:**

The standard deviation measure the absolute dispersion (or variability of dispersion; the greater the amount of dispersion or variability), the greater the standard deviation for the greater will be the magnitude of the division of the value from the mean. A small standard deviation means of high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposite. Thus, if we have two or more comparable series with identical or nearly identical means, it is the distribution with the smallest standard deviation that has been most representative mean. Hence standard deviation is extremely useful in judging the representatives of the mean.

The following standard deviation model has been use to find out the impact of development expenditure on economic growth of the distinguish group of islands. To use the formula:

\[ \delta = \sqrt{\frac{\sum dx^2}{N} - \left(\frac{\sum dx}{N}\right)^2} \]

Where,
- \( \delta = \) standard deviation
- \( \sum dx^2 = \) total square deviation from assumed mean.
- \( \sum dx = \) total deviation from assumed mean.
- \( N = \) number of sample.
**Co-efficient of variation:**
It is necessary to describe the variability or dispersion of the observations. In two or more distribution the central value may be the same but still there can be wide disparities in the formation of distribution. It helps us in studying this important characteristic of a distribution. The degree to which numerical data tend to spread about an average value is called the variation of the data.

The uses of coefficient of variation were magnitude the variability of the expenditure pattern, debt and labourers’ different heads have been measured with the help of coefficient of variation.

\[
C.V = \frac{\sigma}{X} \times 100
\]

Where,
- \( \sigma \) = standard deviation.
- \( X \) = mean.

**Co-efficient of co-relation:**
The coefficient of correlation measures the degree of relationship between two sets of figures. As the reliability of estimations depends upon the closeness of the relationship it is imperative that utmost care be taken while interpreting the value of coefficient, otherwise fallacious conclusions can be drawn.

The following co-efficient of co-relation model has been used to find out impact of development of agricultural labourers for rehabilitation of economic growth of the study area. To use the formula:

\[
r = \frac{\Sigma dx dy.n - (\Sigma dx.n - \Sigma dy.n)}{\sqrt{\Sigma dx^2.n - (\Sigma dx)^2} \cdot (\Sigma dy^2.n - (\Sigma dy)^2)}
\]

Where,
\[ r = \text{coefficient of co-relation (Karl Pearson).} \]
\[ \Sigma dx dy = \text{total of multiplication between deviation from assumed mean of X and Y-series} \]
\[ n = \text{number of sample.} \]
\[ \Sigma dx = \text{total of deviation from assumed of X-series.} \]
\[ \Sigma dy = \text{total of deviation from assumed of Y-series.} \]

**Variability of income:**

The variability in the income in accordance to the family size among tsunami effected and non effected zone of the group of islands has been computed through analysis of Lorenz curve, Gini-coefficient ratio to know the contribution in income among the family size groups. Pursued Gini-coefficient analysis was concluded the specifications of the analytical tools are as follows.

To specified the income level and standard of living of agricultural labourers. To use the formula as given below:

\[
G = 1 + \frac{1}{n} - \frac{2}{n^2} \sum_{i=1}^{n} \frac{(n+1-i) Y}{Z}
\]

Where:
- \( G \) = Gini coefficient ratio to the distribution of the income of all households.
- \( N \) = population size
- \( Z \) = mean income
- \( Y_i \) = income of ith households.

**Relative change (RC):**

Absolute change fails to explain the comparative change among the variable and therefore, relative change method was used for estimating the percentage change.
The development of the rehabilitation of agricultural labourers, on behalf of social and economical aspects, to be measured the relative changes of the households. The formula has been given to measure the relative change as follows:

Relative change (RC) = \( \frac{Y_n Y_o}{Y_o} \times 100 \)

Where:
- \( Y_n \) = tsunami effected zone
- \( Y_o \) = non effected zone

**Gini- coefficient ratio:**
The income after heavy disaster and the government participation on income and distribution pattern of various activities was examined by fitting curves. Cumulative percentage of population of sample households stating from Nicobar (+) to north Andaman is projected on x axis, where as, the corresponding value of cumulative percentage of income derived by the sample households in the government rehabilitation tsunami project area is plotted on Y-axis. It is define as the area between Lorenz curve and diagonal. It is an increasing function of inequality and equals to zero when distribution is perfectly equal.

Gini coefficient ratio is more opaque since it measures the distance between the diagonal and Lorenz curve. Unlike Lorenz curve comprise, the Gini-coefficient ratio comparisons are always conclusive since one real number must be greater than, equal to or than other.

**Levels and coefficient of income:**
Pattern of distribution of income can be measured by Gini-coefficient ratio. In the present study, inequality of income is measured in terms of Gini-coefficient ratio and compared with Lorenz curve obtained for the distribution of income among the households of tsunami affected and non affected area. For the study of income distribution all the households were pooled.
Data sources:
The data for the present study has been collected from primary and secondary sources. A compressive pre tested questionnaire has been to collect the primary data from the respondent. The questionnaires content the details of socio-economic characteristics, income and expenditure pattern, public health facilities, transport facilities, savings and indebtedness and asset position, also determine the effects through the tsunami and earthquakes. Details questions were asked to the respondents to understand their social and economic living conditions with special reference to the status of their family and family members, monthly income and expenditure, occupation, educational standards, knowledge about government schemes for there development, sources of credit etc. family respondents own suggestions of their present living conditions and the attitude of the government towards them, are also recorded.

The primary data collected have been supplemented by secondary by data. The secondary data for the study have been mainly collected from the record of the Port Blair distinct office. Besides relevant books, journals, theses, report, internet collection, were consulting from many libraries like state library etc.

Sampling procedure:
The well-structured and pre-tested interview schedule includes questions on the consumption behavior and expenditure pattern of the entire structural, economical feature of sample households. The first questions were related to the introduction of the family with family composition regarding sex, age, education, marital status etc.
  o The second question included question on type of family.
  o The third question includes questions on information about property loses and government relief and aids
  o The fourth question related to the use of consumption monthly expenditure
  o The fifth question was based on information about death/missing person from the family
  o six question was on government compensation
  o The seven question was related to the other compensation charitable trust
  o The eight questions were related with the job satisfaction.
  o The ninth questions were consumption and expenditure pattern
  o The tenth on related to the facilities available of village level
  o The final and the last question were related to the facilities at household level
Sample design: The present study is mainly based on primary data collected from four zones of Andaman and Nicobar Islands, keeping in view the objectives of research, 451 households were selected on the basis of the classification of agricultural labourers. On the basis of classification the percentage of the household to be surveyed from, concrete, tiled, thatched, others, 20.39, 25.72, 29.04, 24.83, respectively that is 92, 119, 131 and 112 households from respective different tsunami effected and non effected zone. The households were surveyed randomly. Thus a detailed survey was carried on by multistage sample methods. It in case any of the respondents do not respond a substitute household from the locality was surveyed.

Size of sample: the present study is based on a survey of 451 households of four different zones, and different multiple income group of agricultural labourers of the sample households were selected by random sampling methods of the union territory.

Conduct of field inquiry:
The present study showing the socio and economic living condition of the agricultural labourers are the product of 45 days long field inquiry conducted during June and August.

Limitations of the study:
The present study is confined mainly to the island of the Andaman and Nicobar district. This is because tsunami affected people living mainly in these two sections. This study does not contain their living conditions. Future, almost all the respondent is poor and ignorant. Who keep no account of their income and expenditure, in addition to this, due to there ignorance, most of the survivors are much co-operate with data collection. All this made this data collection easier to earn the information. In spite of these limitations, the study provides a clear and precious picture regarding the social and economic conditions of the survivors in Andaman and Nicobar Islands.

Chapter frame:
The present study has been divided into seven chapters. The opening chapter deals with the importance of the present stage of the labour groups of Andaman and Nicobar islands in economic development, main objectives of the study, research methodology and analysis of data. The chapter second deals with profile of the study area.
The review of literature of the present work is contending chapter three which present the brief survey of relevant literature. The fourth chapter evaluates the socio economic characteristic of agricultural labourers of Andaman and Nicobar islands.

Chapter five analyses the economic condition and development of the agricultural labourers. These chapters present a picture of the time series data and shows the trends and growth of the economic structure on these communities. In chapter five an attempt has been made to find out the growth and trends of development pattern on these communities. This chapter also analysis the impact of economic structure and stander of living conditions of the real agricultural labourers in Andaman and Nicobar islands.

Chapter six analyses the economic condition and development of the agricultural labourers after tsunami disaster. This chapter presents a picture of the recent disaster of the groups of islands and a brief scenario on Asian tsunami affected countries discusses public living conditions, economic impact, and structure of affected nations and there position today. The last chapter discusses the summary conclusion and suggestion of the present works.

Selection of households:
The selection strategy of agricultural labourers from the selected villages, in order to make a comparison for different agro-economic indicators in presented in table, a total non tsunami effected zone and tsunami effected zone, is considered out of selected total 214 non tsunami effected household, 123 labourers benefited by government from 303 labourers. 451 household were selected for detailed economic analysis according to size of household, constituted 132 bengali, 103 tamil, 79 telgu, 71 local tribes, and other participation only 65 households. The group of island consider as different language people are working together from different habited islands. Where as tsunami affected zone total number of labourer participation according to survey is 367, out of this people 228 household were benefited by the government aid. A same number sample household is considered here also from each of the category to be collected the same data required in-order to asses the agro-socio-economic impact, of the agro-labourers to be concern.
### Table No. 1.2
ANDAMAN AND NICOBAR ISLANDS: SELECTION OF HOUSEHOLD

<table>
<thead>
<tr>
<th>Survey area</th>
<th>Total labourers</th>
<th>Total household benefited by govt.</th>
<th>Selected household</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bengali</td>
<td>Tamil</td>
</tr>
<tr>
<td>A. Non Tsunami affected areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicobar zone</td>
<td>112</td>
<td>57</td>
<td>11</td>
</tr>
<tr>
<td>Port Blair</td>
<td>69</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Middle Andaman</td>
<td>59</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>North Andaman</td>
<td>63</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>303</strong></td>
<td><strong>123</strong></td>
<td><strong>63</strong></td>
</tr>
<tr>
<td>B. Tsunami affected areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicobar zone</td>
<td>120</td>
<td>93</td>
<td>17</td>
</tr>
<tr>
<td>Port Blair</td>
<td>105</td>
<td>72</td>
<td>23</td>
</tr>
<tr>
<td>Middle Andaman</td>
<td>53</td>
<td>21</td>
<td>09</td>
</tr>
<tr>
<td>North Andaman</td>
<td>89</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>367</strong></td>
<td><strong>228</strong></td>
<td><strong>69</strong></td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td><strong>670</strong></td>
<td><strong>351</strong></td>
<td><strong>132</strong></td>
</tr>
</tbody>
</table>


One important factor is that different zone of this group indicate of all four categories i.e. includes the villages are malakha, kakana, soldary, labutala, ramkrishna gram, natagi nagar, fararjung, campbelbay, pilomolow, kundul, katchal, guptapara, sipighat, arialbay, etc. According to the statistical concept regarding selection of data, is significant at 0.01 levels.
Figure No: 1
Selection of the Households

NICOBAR ZONE PORT BLAIR MIDDLE ANDAMAN NORTH ANDAMAN TOTAL

Non-affected Area

Affected Area

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