CHAPTER-I

INTRODUCTION
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1. INTRODUCTION

Rural Women form the most important productive work force in the economy of majority of the developing nations including India. Agriculture, the single largest production endeavor in India, contributing 25 per cent of GDP, is increasingly becoming a female activity. Agriculture sector employs 4/5th of all economically active women in the country. In India, 48 per cent of self-employed farmers are women. There are 75 million women engaged in dairying as against 15 million men, and 20 million in Animal Husbandry as compared to 1.5 million men.

Beyond the conventional market-oriented narrower definition of ‘productive workers’, almost all women in rural India today can be considered as ‘farmers’ in some sense, working as agricultural labours, unpaid workers in the family farm enterprise, or a combination of the two. Over the decades, more and more rural men have migrated from their home places to urban areas in search of better employment opportunity and thus rural India is witnessing a process which could be described as Feminization of Agriculture.

India, with a population of 989 million has 120 million women living in poverty. India has 16 per cent of the world’s population, but only 2.4 per cent land is available to shelter them, resulting in great pressures on its natural resources. Over 84 per cent of the economically active women in India derive their livelihood from land resources. As per the Indian Planning Commission Mid Term Report 2000, the per capita income in India is only Rs 4285.00 per annum and people living below the
poverty line comprise 44.2% of the total population. The labour force participation rate of women is 22.7%, which is less than half of the men’s (51.6%). In rural India, agriculture and allied industrial sectors employ as much as 89.5% out of the total female labour force.

Although women work longer hours and are more arduous workers than men, their work is largely unrecognized. Technological progress in agriculture has a negative impact on the women work force. Even the extension services too overlook women. While women are guaranteed equality under the constitution, legal protection has little effect in the face of prevailing patriarchal tradition. India has a long history of activism for women’s welfare and rights and has increasingly focused on women’s economic rights. A range of government programmes have been launched to increase economic opportunity for women, although there appears to be no existing programmes to address the cultural and traditional discrimination against women that lead to dismal conditions.

Self-sufficiency in food production is still an overriding social issue and is, to a large degree, due to marginalization and disempowerment of women. Ironically, much of the essential work of household rests in women’s hand. Traditionally, women bear primary responsibility for the well being of their families. Yet, they are systematically denied access to the resources they need to fulfill their responsibility, which includes education, health care services, job training, and access and freedom to use family planning services.
Working women are invisible to most of the population. If the activities like maintenance of kitchen gardens and livestock, grinding food grains, collecting water and firewood, household chores etc. are taken into account, then 88 per cent of rural housewives and 66 per cent of urban housewives can be considered as economically productive. Women’s employment in family farms or business is rarely recognized as economically productive and incomes generated from these works are generally controlled by men. Such work is unlikely to ensure women’s participation in all around financial activities of the family.

Technological progress often displaces women labourers by men. Extension services also tend to reach only men, with women continuing to perform unskilled tasks. A World Bank study in 1991 reveals that the assumptions made by extension workers are that information within a family transmits to women through men. The male dominated extension system tends to overlook women’s role in agriculture and proves ineffective in providing technical information to women farmers.

A number of factors perpetuate women’s limited job skills: to train women for economic activities requires them to leave their village; this is usually a problem for them. Unequal access to education restricts women’s ability to learn skills that require even functional levels of literacy. In terms of skill development, women are impeded by their lack of mobility, low literacy level and prejudiced attitudes towards women.

Violence against women and girls are the most pervasive human rights violation in the present world. The fear of violence is a great concern in the lives of
most women. Fear of violence is a cause of women’s lack of participation in activities beyond their home. Within their home, women and girls may be subjected to abuse, punishment and culturally justified assaults. These acts shape their attitude to life, and their expectations to themselves. The insecurity outside the household is the greatest obstacle in the path development to women. Compared to the atrocities outside the house, atrocities within the house are endurable and women continued to accept their inferiority in the house and society. Exposure to and interactions with the outside world is instrumental in determining the possibilities available to women. The situation of women is affected by the degree of their autonomy or capacity to make decisions both inside and outside their own house.

Women continue to have little access to land and property, which is a major source of income and long-term economic security. Transforming the prevailing social discrimination against women will help in improvement of the social and economic status of women. If women receive better education and training, they will be able to contribute substantially to the family income. Generally, women spend their earnings in the welfare of the family including education and health for their children.

The tribal population of India (67.6 million) is greater than that of any other country in the world. In fact, it is almost equal to the tribal population of nineteen countries that have substantial tribal population. Myanmar has a tribal population of 14 million and is the second largest tribal populated nation in the world. India has four times more than Myanmar and six times more than Mexico (10.9 million). The tribal population in India constitutes 8.08 per cent of the total population. They are
the most adversely affected ethnic group due to developmental projects like dams, factories and mines. In fact, they constitute 40 per cent of the displaced persons due to developmental projects. On the other hand, tribal population of Assam is not affected in a similar manner as very little industrial development has taken place in this region.

The tribals in Assam seem to be living outside the mainstream of the general population, but their villages are not exclusive. Traditionally they live in clusters in hamlets, generally in remote areas. They have their own socio-cultural life, which is male-dominated and patriarchal, which are at varying stages of development. Since independence, with more than half a century of efforts by the government to bring them at par with the rest of the society, not much has been achieved. The health status of tribes are poor, educational opportunities have not been taken advantage of, economic activity centres around agriculture for both men and women, and savings are unheard of. Their social life is unique. The constraints of more developed societies do not apply here. Because of contacts with outside society, they have adopted Hindu religious practices, but their original religious practices are a mixture of animism and superstitious beliefs which are retained by many.

Agriculture is the dominant sector of the economy of Assam contributing about 56 per cent of the states income (Das, 1984)¹ and crop production occupies the most important part of agriculture. Agriculture in turn is dependant upon type of soil, rainfall and host of other natural factors. Moreover, the cultivable land is highly

limited due to the peculiar physiographic conditions of the state. Intensity of
cropping and yield per hectare are also very low in the state.

Assam is a state with wide variation in its inhabitants and also in its physical,
economical, cultural and historical conditions. For these reasons, there are no
uniform patterns of agricultural practices among different tribes. Female work
participation in this sector is also of varied nature. In tribal society females perform a
major role in all work processes in agriculture.

Dhemaji, the eastern most district of Assam, is constituted bifurcating
Lakhimpur district and is the homeland of a large number of scheduled tribes namely
the Mishings, the Deoris, the Sonowal Kacharis, the Bodos, and the Tiwas besides
other ethnic groups like the Chutiyas, the Ahoms, the Koch and others. The bulk of
the tribal population of the district is constituted by the Mishing tribe. Agriculture is
the main occupation of all the tribes and non tribes residing within the district. The
Mishings are mainly riverine dwellers and are found all over the district while the
Sonowal Kacharis and the Deoris are mainly confined to the Dhemaji subdivision of
the district.
1.1 REVIEW OF LITERATURE

1.1.1. THE TRIBES AT A GLANCE

The tribal communities of Assam constitute 12.82 per cent of the total population. The tribal societies of this region are more or less isolated from outside world and from other similar societies until recent past. However, since independence, the gradual exposure to people of outside societies caused a gradual transition of their work, culture and way of living.

The Mishings are the second largest group of scheduled tribe (plains) of Assam after the Bodos. They are concentrated in the riverine areas of Lakhimpur, Dhemaji, Dibrugarh, Sivasagar, Jorhat, Golaghat, Tinsukia and Sonitpur districts of Assam. Their main occupation is agriculture, which is still at the subsistence level. The agricultural lands are mainly suitable for Ahu paddy. Besides paddy, they cultivate mustard seeds, sweet potatoes, pulses, cotton, maize, banana etc as subsidiary crops. Transplantation and weeding are traditionally the work of the women folk, while ploughing, threshing and carrying the harvested crops home are done by men. The role of the Mishing women in improving the economic conditions of the respective families cannot be underestimated. Most of their necessities like yarn, clothes, cosmetics, ornaments etc are procured from their exclusive earnings derived from rearing of pigs, poultry etc. The population of the Mishing language-speaking people in Assam is 381562 (1.7%).

The Sonowal Kacharis are the third largest scheduled tribe (plains) of Assam. They are mainly concentrated in Dibrugarh district of Assam. Besides Dibrugarh,
Sonowal Kacharis are also found in Lakhimpur, Dhemaji, Sivsagar and Jorhat districts. The number populations of the Sonowal Kacharis are not known as this tribe is included along with the Assamese speaking population in the 2001 census. However, the projected population of Sonowal Kacharis in 1987 as per 1971 census was 318717. Agriculture is the sole means of their livelihood. They are wet rice cultivators of Sali and Ahu paddy. Besides paddy, they also grow mustard, potatoes, sweet potatoes, pulses and winter vegetables. They are very much cognizant of their economic and educational improvement. They like to explore new avenues of employment for which occupational mobility are being taken place (Bordoloi et al. 1987). 

The Deoris are maintaining their old traditions, religious beliefs and practices. They are riverine tribe and are pile dwellers. The population of the Deori language-speaking people in Assam is 15955 (0.07%). Agriculture is the principal means of family income. They relish Ahu paddy. Besides paddy they produce mustard seeds, sweet potatoes, pulses, cotton and few varieties of winter vegetables. The majority of the tribe practices traditional method of cultivation. The Deori women enjoy a fair position in the society as they are treated as equal partners in the daily life. Except ploughing and cutting trees or jungles, the women perform all activities as their men.

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1 Bordoloi, B. N.; Sarma Thakur, G. C. and Saikia, M. C. (1987): Tribes of Assam (Part-I & Part-II), Tribal Research Institute, Assam, Guwahati
1.1.2. A BRIEF RESUME OF GENDER STUDIES

Gender studies in geography are still in its infancy. This type of study actually got attention after the pioneering work of the British group called “Women and Geography study group”. Their first book was “Geography and Gender: An Introduction to Feministic Geography” wrote in 1984. The Human Development Report published by UNDP in 1997 has brought the attention of researchers to the field of feministic study. Although the status issue of women is a dynamic and multidimensional subject, but in most societies it is portrayed as that of motherhood, childrearing and of no economic importance in spite of their direct and indirect contribution to household economy (Rashid, 1994)\(^1\). Monk and Hanson (1982)\(^2\) also gave emphasis on importance of the study of gender issues in geography while Andrews (1982)\(^3\) and Lee and Schultz (1982)\(^4\) made conceptual and methodological contributions towards understanding the status of women both in absolute and relative terms.

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Works on gender geography in India is still very limited. Geographers like Mehta (1967)\(^1\) and Gosal (1973)\(^2\) studied the spatial pattern of occupational structure of female workers in India. The efforts made by Mahadevan (1989)\(^3\) in bringing out the contemporary problems of women in different countries of Asia is also worth mentioning. Raju and Kumar (1989)\(^4\) also focused the gender issues in geography. Nayak (1991)\(^5\) analyzed the participation of rural women in economic activities in selected areas in India where he attempted to explain the nature and extent of female work participation both in spatial and cross cultural terms.

Socio-economic and socio-political studies have also been made by several researchers like Das (1979)\(^6\), Saikia (1987)\(^7\) in North East India. Sharma (1985)\(^8\) tried to examine the spatial pattern of literacy and education and its associated

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correlations in North East India. Kar and Sharma (1998)\(^1\) analyzed the sex disparity in non agricultural activities in North East India. Kar (2002)\(^2\) analyzed the spatial pattern of demographic, social and economic characteristics of women of North East Region of India and their nature and degree of work participation in the agricultural as well as non agricultural activities

1.1.3. GENDER DIVISION OF LABOUR

Information about gender division of labour is useful for identifying the target group for project activities. Division of labour in agriculture is not only quite complicated, but also dynamic and subject to change. A division of labour by gender both paid and unpaid works exists in almost all societies, although the nature of the specialized works done by women and men differs substantially due to place and time. Hence, economic and cultural interpretations require detail analysis in a specific social context incorporating class, race and other structural variables in addition to gender (Tinker, 1990)\(^3\).

There are some existing patterns of gender divisions of labours. For example, cooking, grinding grain, transplantation, harvesting and carrying water are more commonly female activities and ploughing, preparation of field, carrying harvested


crops to home etc. are more commonly male activities (Rogers, 1980). However, flexibility in the gender division of labour is also common.

Division of labour between men and women varies from region to region according to society and social customs. Community wise women’s participation in agriculture was highest among the tribal followed by scheduled castes and the degree of participation declines with their positions in the social hierarchy (Majumder, 1975; Kak, 1994).

Unpaid work may be defined as the works done for someone else without remuneration (Delphy and Leonard, 1992). The housework, child and dependent care were unrecognized and undervalued, unpaid work done predominantly by women. Unpaid works also includes community and voluntary works. Within household and paid work, gender divisions of labours are observed. Women do far more household works, but men specialize in maintenance and outside household tasks.

The nature of the gender division of labour has undergone lot of changes along with the changes in the methods of agriculture and the separation of household works from the field site of works. In agriculture, the impact of modern technology and shift from subsistence to cash cropping largely benefited men, while increasing

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women's work in the family (Boserup, 1970). The homework constitutes a gendered phenomenon. Women's participation in the paid labour force has shown fluctuations matching the social and economic changes, with their use as a reserve army of labour. Supply and demand factors have led to an increase in women's work participation in agricultural and allied activities and its extent varies according to economic, social and policy factors.

Female dominated occupations are lower waged and are more frequently defined as unskilled irrespective of its content, through the social construction of skill (Phillips and Taylor, 1980). However, as financial pressures necessitated dual earner households and thus the double burden on women emerged, with women working longer hours than men (Szalai, 1975). A comparative advantage for women in household work and men in paid work arises either from a belief in biological differences or from the observation that men earn more on an average than women. Specialization of roles, with men doing all or more of the market work and women more of the household and caring work, emerges simply from rational household decision-making. (Folbre, 1982).

The gender division of labour takes the form of horizontal and vertical occupational segregation, with women specializing in occupations in which skills

depreciate rapidly. Women are over represented in the secondary sector, with little access to better occupational conditions. This could be due to women having less access to education, training, apprenticeships and professional associations. However, despite many studies, gender specific occupational pattern, their differences between different societies and in the same society over time is yet to be fully understood (Brown and Pechman, 1987).\footnote{Brown, C. and Pechman, J. (1987): Gender in the Workplace. Cambridge, Polity Press. pp 67-75}

Due to progressive disintegration in joint type of family structures, changes are also taking place on the level of gender division of labour. The women, besides their traditional household tasks, such as fetching of water and firewood, are more involved in the sort of work for which men were formerly responsible. Work division and organization by gender within the family is closely related to the size of the family and to the amount of work to be done in women's own separate fields. The disintegration of the extended family and the transition to the nuclear family often results in a shortage of work capacity within the family. Woman's help in all aspects of fieldwork is needed and in agriculture generally it takes priority. The changes in family structure are also accompanied by willingness on the part of the men to act supportively.

Distribution of task responsibility and help received for housework and economically extended work was gender biased and divided along traditional lines, irrespective of women's work status. It may be because of the cultural view that
women do the housework and men do the outdoor work (Sandhu and Dhesi, 1977). It is a fact that unpaid domestic work is seen as women's work and women's responsibility. It was further observed that women were more involved in livestock care (Rani and Singh, 1982). Men's involvements in livestock activities were rather limited to cleaning and milking the animals. It is noteworthy to mention that most of the pre-harvesting operations are undertaken by men, especially ploughing, sowing, watering and fertilizing the fields. Operations of machinery and draught animals are performed by men, while women are often seen in works where the farm tasks demand direct manual labour, such as weeding, removing stones or debris from the field with hand.

1.1.4. EDUCATION AND WOMEN

Literacy is one of the major attributes, which determines the character of social well being of women and their position in the society. Moreover, the issue of educational development is so basic and fundamental to human life that its differential levels results in disparities among people and places (Desai, 1994). Although, India's constitution guarantees free primary school education for both boys and girls even than India has the largest population of non-school-going working girls. Overall, the literacy rate for women is 54.28 per cent against 75.96 per 1

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cent for men. Although substantial progress has been achieved since independence, where less than 8 per cent females are literate, but it is not enough to keep pace with population growth.

The reluctance to educate girls has its roots in the situation of women (Paralikar and Yates, 1987). It is generally viewed that girls require no formal education for their future roles. A large proportion of the girls are kept at home because of responsibilities in housework. Moreover, parents are often reluctant to send their daughters to schools when they are located at a distance or when girls are expected to study along with boys.

In spite of the efforts of social reforms that included education for women, improvement of general literacy for women has been slow. The disparity between male literacy and female literacy has constantly been at about 25 per cent level. In spite of the sustained growth in female enrolment at tertiary level in recent years, women represented only an estimated 33.8 per cent of students in 1995, as compared to 31.7 per cent in 1989. Their representation in Science and Technology fields remains very low and women represents only 7.7 per cent of scientists and engineers, technicians at 9.5 per cent and auxiliary personnel at 17 per cent (UNESCO, 1997).

In Assam, the situations in regard to education of girls are not so different especially in the rural areas. The overall literacy rate for women in Assam is 34.29 per cent as compared to 49.99 per cent for males. The literacy percentage of women

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2 UNESCO (1997): Human Development resource centre, UNDP, Bombay
in Dhemaji district is 31.55 per cent as compared to 51.08 per cent for man (Statistical Hand Book, Assam, 2004). The female literacy among the tribal women in Assam is far better than that of their counterparts in India, but still not significant.

There is a distinctive connection between literacy and population growth and female literacy and education. The most effective effect of education is the late marriage, less fertility rate, less mortality rate etc. As a matter of fact, literacy attainment is a part of larger social change and it needs to be placed in proper perspective, without which the regional distortions as well as gender discriminations will not disappear even as general literacy rates rises (Raju, 1993).

1.1.5. THE STATUS DISPARITY OF WOMEN

Although the constitution provides legal equality for men and women social and economic equality is yet to be achieved. This is the fact why Indian women continue to be recipients of welfare and remain at a lower status with low literacy and poor access to resource and facilities. In most parts of India today, women constitute a disproportionate share of the chronically poor population. As in other parts of the world, Indian women face gender discrimination throughout their life within the family, society and at work place that runs common across the country along all class, caste and religion with varying degrees (Sandhu, and Dhesi, 1977).

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Gender division of labour prevails in all sectors of employment. Gender discrimination in India is observed in the fields of education, employment, control over property and resources, participation and influencing decision-making in public and political spheres etc. (Sen, 1985). Although about 25 per cent of rural households are female headed, which may be due to widowhood, desertion or male out-migration, especially in the hilly and backward areas (Dutt, 1985); yet, the national focus of policies and programmes, have been more on employment generation for women rather than ownership and control over resources and give least importance in addressing their priorities or involving them in decision-making roles (Purushothaman, 1998).

Women bear the primary responsibility for child education, nutrition, and health, and contribute substantially to the family income through their work participation in various productive activities. The persistence of hunger and poverty in India and other parts of the world can indirectly be linked to the subjugation, marginalization and disempowerment of women. India has exceptionally high rates of women and child malnutrition, because tradition in India requires that women eat last after feeding all the family members (Nath, 1992). Moreover, females receive

less health care facilities than males. Working conditions and environmental
pollution further impairs women's health. In respect of education, it is far less likely
to educate girls than boys, and far more likely to pull them out of school to help at
home.

1.1.6. WOMEN AND WORK PARTICIPATION

The study of women's work participation is vital to understand the role of
women in socio-economic functioning of a region. The participation in work force
has the potentiality to raise the quality of living and can exert an effective control on
family size. Women work longer hours than men do and they work roughly twice as
many hours as men. Women's contribution to subsistence farming or commercial
agriculture when measured in terms of the number of tasks performed and time spent
is greater than men (Jain and Chand, 1982\(^1\); Usha \textit{et al.}, 1983\(^2\)).

Women constitute a significant human resource on rural farm families. The
farm activities include hoeing, weeding, harvesting, transplantation, processing,
preservation, artisanship etc. Moreover, child bearing and socialization, and
household chores as food preparation, house and material cleaning, firewood and
water fetching are also carried out by women. (Waghmare and Choudhury, 1989\(^3\)).

methodological implications. Paper presented at Technical Seminar on


Metropolitan, New Delhi.
Bhople and Patki (1992)\(^1\) observed that farmwomen are involved maximally in pre-sowing, manuring, harvesting and grain storage operations and minimally in land preparation and plant protection.

World economic profile of women shows that they represent 50% of population and 40% of the world’s farms are managed by women. In India, women accounts for 48% of rural population and perform up to 2/3rd of manual work. Thus Indian agricultural scenario cannot be improved without making women equal partners in developmental efforts (Kharwara et al., 1991)\(^2\).

The extent of women’s contribution is aptly highlighted in study conducted in the Indian Himalayas, which found that on a one-hectare farm, a pair of bullock works 1,064 hours, a man 1,212 hours and a woman 3,485 hours in a year (Shiva and Dankelman, 1992)\(^3\). In Andhra Pradesh, Mies et al. 1986\(^4\) found that the workday of a woman agricultural labourer during the agricultural season lasts for 15 hours, from 4 am to 8 pm, with an hour’s rest in between, while her male counterpart works for seven to eight hours, from 5 am to 10 am or 11 am and from 3 pm to 5 pm. Rice transplantation, the most arduous and labour intensive task in rice cultivation, is


carried out entirely by women without the help of any tools. Both transplantation and weeding require women to spend the whole day at work. As women's work is based largely on human energy, hence it is considered unskilled and less productive. On this basis, women are invariably paid lower wages, ignoring the fact that they work harder and for longer hours.

The rural women of Assam have a long tradition of doing various economic and productive activities both within and outside the sphere of the household. The economic activities of the rural women can be grouped under three heads viz. household works without direct economic benefits, agricultural and allied activities within the family farm and the wage earning employment. The role of tribal women in agriculture in the northeastern region of India is yet to get full attention in respect of their potentialities and development.

Studies about agricultural development in Assam are intended to provide information about various aspects for its uplift was made by various workers (Saha, 1975; Goswami and Bora, 1977; Das, 1984). The role of rural women in animal husbandry was highlighted by many researchers (Venkatachalan, 1983; Sardana 1987).

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The tribal women of Assam are known to contribute substantially to the family earnings by rearing pigs, poultries, goats, ducks etc. (Bordoloi et al. 1987). The tribal women of Assam works longer in weaving, husking, threshing, kitchen gardening, rearing of silk worms, animal care etc. besides spending 10 hours per day in various activities in agricultural season which rises up to 13.91 hours per day during the peak season (Mahajan, 1984).

Another study on time and energy spent by men and women on agricultural work (Batliwala 1984) found that 53 per cent of the total human hours per household are contributed by women as compared to 31 per cent by men. The remaining contribution comes from children.

1.1.7. WOMEN AND ECONOMIC DEVELOPMENT

Women’s role in the process of development has varied from society to society. An important component of work effort belongs to the area of activities resulting in non-marketed output where women play a dominant role (Das, 1984). According to the National Sample Survey Organization, ‘work’ may be defined as

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labour participation in gainful activities. The gainful activities include activities pursued for pay, profit or family gain or the activities, which adds value to the national product. Gainful activities normally result in production of goods or services for exchange and that the activities in agriculture in which a part or whole of the production is used for own consumption.

Poverty and unemployment are the two major economic problems in the rural areas of Assam. As most of the population in Assam (about 90%) lives in the rural areas, thus pressure on land is acute and the problem of finding jobs for the surplus population has become difficult. The role of women in economic development in Assam is both direct and indirect. The direct role can be observed based on proportion of women involved in the working force. However, it is also important that a significant proportion of women populate is also engaged in various activities under informal sector and remained mostly invisible. Such invisible task may include the wide-ranging domestic chores, weaving and knitting, livestock care, helping the male members in agricultural and allied activities etc. (Kar, 2002)¹. Unlike past, presently the role of women in economic development is an accepted fact and they are given more opportunities to take part in a diverse range of economic activities.

1.1.8. WOMEN AND TECHNOLOGY

The Green Revolution, which focused on increasing yields of rice and wheat, entailed a shift in inputs from human to technical. In the farm sector, the process of mechanization of agricultural activity has brought in tendencies for gender discrimination where women are replaced by men for a number of activities previously performed by women.

Extension services tend to reach only men, which perpetuate the existing division of labour in the agricultural sector, with women continuing to perform unskilled tasks. The male dominated extension system tends to overlook women's role in agriculture and proves ineffective in providing technical information to women farmers (Desai and Mohiuddin 1992). Traditionally women have played a key role in food security and also energy management and water. They have not only been collecting fuel/water for cooking but also been finding nutrition for both crops and farm animals. Organic recycling and collection of fodder and feed have been their traditional occupation. As major providers of food/water and income, rural women spend up to 16 hours a day producing, processing, marketing and preparing food, gathering fuel and water, and performing other household tasks in addition to caring for their children and extended families (Jain and Singh, 1983). Women have also traditionally been seed selectors and preservers. Whether literate or illiterate, they have the ability to spot the healthy plants whose seeds they carefully preserve.

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for sowing next year (Majumder, 1976). Similarly in the area of conservation of biological diversity, women have traditionally been active conservationists. Further their roles in the organization and conservation of heritage sites, biosphere reserves, national parks and community gene banks enhances the effectiveness of the conservation movement. Though, traditionally women have played key roles in energy, water, agriculture, including crop husbandry, animal husbandry; fisheries, forestry and post harvest technology, services and public policies for rural areas have often tended to neglect the productive roles of women. Consequently, the development of technologies specifically tailored to women-specific occupations and the involvement of women in technology development and transfer has received inadequate attention from both scientific and administrative angles. The advancement of technology as a dimension of economic development will be successful only when the needs of both women and men are addressed and acceptance of equal participation in the process will come. However, technology continues to be associated with masculinity, and as a result, technology is narrowly defined and understood, making the linkage between technology and women invisible.

Women constitute a significant human resource that implements functions cutting across the whole spectrum of agro-business (Whaghmare and Choudhary, 1989). The economic scenario in rural India can only be improved when women are made equal partners in the developmental efforts as they play key roles in many

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facets of composite farming systems and in fact, poorest families are the most dependants upon women's economic productivity (Kharwara et al. 1991).1

1.1.9. WOMEN IN ANIMAL HUSBANDRY

Although women's work is rarely recognized but with increased women participation in income-earning activities there will be more income for the family and side by side gender inequality will also be reduced. This issue is particularly salient in India because studies show a very low level of female participation in the labour force. This under-reporting is attributed to the view that women's work is not economically productive (Mies, et. al 1986; Sen, 1993). Participation in animal husbandry practices is one such sphere of activity performed by women.

Animal Husbandry and Agriculture are the twin occupations and have played a significant role in improving the rural economy. Livestock rearing provides meaningful occupation, provides assured income and ensures better utilization of human resources. It provides employment especially self-employment to a substantial number of rural and urban population. The employment in Animal husbandry sector is estimated to be 9.8 millions in principal status and 8.6 million in

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subsidiary status which accounted for 5% of the total working population. Women contribute 71% of the labour force in Livestock farming.

There are 75 million women engaged in animal husbandry as compared to 1.5 million men. (Women in agriculture, 2002)\(^1\). Despite such significant contributions of women in animal husbandry, technological formulations and public policies for rural areas have often tended to ignore the productive role of women.

Livestock form an important resource next to family labour for the landless agricultural labourers. Livestock rearing forms the backbone of the livelihood of the landless rural poor and is the only major asset for them. Livestock rearing offers substantial income to the rural poor particularly during non-agricultural seasons and can create a positive impact on the rural economy (Bhatt, 1975)\(^2\).

Increasing population, decreasing land holding, shrinking agricultural lands, failure of monsoon and the increasing demand for foods are some of the serious issues faced by our country. Animal Husbandry will be a lucrative occupation for alleviating poverty in such a condition (Kaur and Sharma, 1991)\(^3\).

Women in most societies are responsible for the daily care of animals, their reproduction and management. As a result, women in general have more in-depth


knowledge of animal husbandry practices than men (Patel and Kumbhare, 1980). Women had a wide range of knowledge on animal health problems and a set of traditional solutions.

The main drawback in the agricultural economy in Assam is the preponderance of uneconomic land holding. This preponderance of the small marginal farmers (one hectare of land or less) and land-less farmers in the state is indicated by the fact that 27.12% of the household in Assam was landless (World Agricultural Census, 1980-81). The population explosion in the recent decades is the major cause of rural unemployment and rural poverty in Assam. This grim scenario can greatly be improved by adapting improved animal husbandry practices in the rural sector.

The Assamese women in rural areas are traditionally rearing poultry including ducks in small numbers. Besides poultry and ducks, rural women in different tribal pockets are traditionally involved in pig rearing also (Deka and Hazarika, 2002). Effective economic development can be achieved by encouraging women for promotion of small livestock units through scientific way of rearing. The rural women seem to manage these small units of livestock easily.

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1.2. STATEMENT OF THE PROBLEM

Study of women issues assumed great importance in a global context. However, geographical research on participation of women in agriculture, especially in this region is still very limited. In rural economy, women are playing an important role in the economic sustenance of the families. It is also recognized that rural women particularly the tribal women have significant contribution to the economic development of the family and the society, though they are at low level of skill. Participation of women in agricultural activity constitutes one of the most important facets of rural economy.

Woman is the molder and builder of any nation’s destiny. They play a significant role in any economy. They are regarded as the backbone of the rural scene. Most of the women perform various types of work for their livelihood. Agriculture is considered as the biggest unorganized sector where large number of rural women takes part actively. About 75 per cent of the Indian female population is from rural families, who belong to the small and marginal farmers and landless agricultural labourers (Census of India, 2001). Though women’s primary responsibility is indulging in domestic work, greater emphasis is laid on women’s earning in the form of cash by working outside the four walls. In India, a significant proportion of the population is below the poverty line and it is a fact that labour force participation will increase with poverty, a large proportion of rural women are under pressure to participate in the labour force.

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1 Census of India (2001): Directorate of Census Operations, India

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In agriculture, the role of men have been stressed and studied extensively while those of women have been ignored. However, women cannot participate in all activities of agriculture like men but most women take part in agricultural activities. There are work variations and rate of variations depending upon the type of crops they grow. Agriculture being a family activity, participation of all family members including the womenfolk is considered to be must so as to provide free labour force for the family. In Assam, participation of female in agricultural activity is varied in different communities depending on their environment and ethnic variation. In tribal society, women constitute one of the main sources of agricultural labourers.

The association of women in agriculture is an age-old practice. Most of the female workers in India are engaged in agricultural sector. In the agricultural sector more women are found as agricultural labourers as compared to cultivators. The 2001 census data indicate that 39.4 per cent of women are working as agricultural labourers while 32.5 per cent are cultivators. Though rural farm labourers work under severe limitations, their contribution towards agricultural production and development is noteworthy. Apart from the job they do outside the household, the unpaid activities in the domestic sphere go unnoticed and unrewarded. Women workforces outside the four walls are larger in rural areas than in urban India. Women in rural areas help to grow at least about 50 per cent of the world's total food. They take part in all aspects of cultivation including planting, weeding, harvesting, sowing, threshing, etc.

While economists and sociologists have developed much interest in studying female participation in agriculture and their economic contributions, geographers
have been late in addressing such issues. The former made attempts to examine women’s overall contribution to economy in the context of sexual division of labour and its impact on patriarchy. Geographical approach considered the issue in a holistic frame and relates it to the agro-ecological parameters. The present research aims at understanding the female participation in agriculture from the agro-ecological point of view and intends to examine the impact of ethnic factor in differentiating female involvement in work. It is assumed that agro-ecological factors influences the volume of work required in agriculture while the ethnic factor influences the sexual division of labour and socially directed, access to different types of work. This is why the case of tribal women is addressed directly in this research as the tribal societies are known to be more egalitarian and do not nurture discrimination in the name of gender.

In light of the above facts the present study was conceived to explore the pattern of participation in agriculture by the Mishings, the Deoris and the Sonowal Kachari women of Dhemaji district. An attempt was made to make a comparative study of work participation rate among the tribal and non-tribal villages of Dhemaji district. In this an attempt was to examine the extent of work participation, structure of work performed and the nature of sexual division of labour among the tribal women. The case of non-tribal component was also taken into consideration to find out the comparison between the two groups of population to test the significance level. The participation rate was examined in different areas of the district to find out a meaningful result on the nature and type of female participation in agricultural work among the tribal groups.
1.3. SALIENT FEATURES OF THE STUDY AREA

The present study was undertaken in the Dhemaji district of Assam where almost half of the population is tribal (43.92%). The major scheduled tribe population of the district include the Mishings, the Bodos, the Sonowal Kacharis and the Deoris. The district is ranked 12th in literacy rate among the districts of Assam. The district has a fair proportion of women engaged in cultivation and agricultural activities (32.9%). Dhemaji district occupies a unique position amidst complex geologic and physiographic makeup of the state of Assam. It is the easternmost district of Assam and was created in the year 1989 bifurcating the Dhemaji and Jonai Subdivisions of the greater Lakhimpur district. The tribal and the non-tribal segments have long been interacting with each other both socially and economically as they live side by side in the same ecological unit.

The district is a narrow and elongated valley bounded by eastern Himalayan range in the north and river Brahmaputra in the south. The district lies between Arunachal Pradesh in the north and the east, river Brahmaputra in the south and Lakhimpur district in the west. The district is situated between 94° and 95°3' E longitude and 27°25' and 27°55' N latitude. The district has two subdivisions and five revenue blocks with 1205 inhabited villages. The district has a total population of 569468 persons as per 2001 census. The area of the district is 3237 sq. km. with population density of 148 persons per sq. km.

The topography of the district varies from undulating uplands in the northern foothill belts to low lying plains in the south. The grasslands and grazing lands
normally occupy along the main rivers and in Char areas. The district has a total cropped area of 100237 hectares while 63665 hectares are covered by forests. All the rivers of the district are perennial in nature.

The river Brahmaputra flows in the southern side of the district. The major tributaries of river Brahmaputra are Subansiri, Kumatia, Jiadhal, Charikuria, Gai, Jalakia suti, Tangani, Gela, Dimu, Simen, Dipa, Dikrai and Buri suti. The district acts as a run-off zone for the access water from Arunachal Pradesh. An extensive area of the district is thus invariably subject to 3 or 4 waves of floods during the monsoon period. The district receives high annual rainfall accompanied by flash floods and high floods in the summer season. In fact, the flood problem is a perennial problem of the district affecting 28% (28084 hectares) of cropped area annually.

The district falls under the upper Brahmaputra valley agro-climatic zone. The climatic condition of the district is hot and moist during the summer and cool and dry during the winter. The district is influenced by the southwestern monsoon in the summer season.
Fig. 1.1: Location Map of Dhemaji District

ASSAM
Scale
0 34km

Fig. 1.1: Location Map of Dhemaji District

Scale
0 4 8 16 24
Kilometer

ASSAM
Scale
0 34km
1.4. SOCIO-ECONOMIC CHARACTERISTICS OF THE TRIBES

Women are an integral part of human society. The status of women in the society depends upon social and cultural traditions, status of economic development, education level and political attainments. The economic status is on the other hand is determined by the role-played by them in carrying out various economic and non-economic activities in the society. In rural society, these activities are measured in work participation chores like agriculture, animal husbandry, weaving, domestic works, public related activities etc. The work participation rates among the scheduled tribe women are always higher than the non-tribal population. The social well being of women and their position in the society depends on various social attributes like literacy, education level, mobility, work participation etc. Today women have witnessed a significant improvement in areas of literacy and work participation.

The North East India is an agrarian region where 86.11 per cent of the total population lives in the villages. In Dhemaji district, about 98 per cent of the people live in the villages. There are no industries in the district and thus people depend upon agriculture and allied activities for their livelihood.

Literacy and educational attainment are considered basic and fundamental to human life and its differential levels result in disparities among people and places (Desai, 1993). Moreover, female mobility also depends upon level of education to a

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The mobility pattern is an important factor to understand the socio-economic conditions of women population of a region. Unfortunately, major part of Assam is lagging behind in respect of literacy and education than many other parts of the country. The female literacy rate in Assam is 56.03 per cent (Male: 71.93%) while Dhemaji district has 56.11 per cent (Male: 75.15%). This indicates that the district is at par with the state average in literacy.

The role of women in work participation and their occupational pattern is vital to understand the socio-economic functioning of a region. Women's work participation is not only associated with gender division of labour, but also with ecological conditions, intensity of poverty and landlessness and prevailing social norms. The proportion of female main workers to the total female population in Assam according to 2001 census is 10.59 per cent while Dhemaji district has 17.18 per cent. The proportion of female marginal workers (to total female population) in Assam is 7.6 per cent while in Dhemaji it is 17.62 per cent. Female work participation is always found to be higher in tribal dominated regions in all over the country. Almost half of the population of Dhemaji district is dominated by tribal groups hence the work participation of females are also high as compared to the state average.
1.5. OBJECTIVES

The present study is conceived with the following objectives:

1. To undertake a study of the agro-ecological condition of the area that influences the total volume of work in agriculture and animal husbandry in Dhemaji district.

2. To make a comparative study of the participation rate of women in agricultural activities of the Mishings, the Deoris and the Sonowal Kacharis with the non tribal women of the district.

3. To study the nature of sexual division of labour between the tribes and the non-tribes population living in the district.

4. To explain the variation in female work participation in agriculture, among the scheduled tribes and between the tribes and non-tribes.
1.6. HYPOTHESES

The present research proposes to test the following hypotheses:

1. Variation in agro-ecological condition influences the extent of variation in female participation in work among the tribes as well as the non-tribal segments of the population.

2. Inter tribal variation in female work participation in agriculture will be minimal in similar agro-ecological units.

3. Sexual division of labour shall be more pronounced between the tribes and the non-tribes. However, the sexual division between the two segments will become insignificant within similar agro-ecological units.
1.7. DATA BASE AND METHODOLOGY

The study was undertaken in Dhemaji district of Assam. A total of 20 (twenty) villages were selected from the district considering five villages from the three scheduled tribes dominating and five non-tribal villages. The villages were selected on the basis of the following considerations:

a) Areas where the scheduled tribes constitute more than 80% of the population and are distributed in a contiguous belt.

b) Areas where traditional cultivations are dominant.

c) Areas where cash crops are cultivated.

d) Areas where irrigation facility is available to most farms.

From each village a minimum of 25 (twenty five) households was selected for personal interview to collect primary data with the help of household scheduled questionnaires (Appendix-I) for 690 households. The primary data thus collected was tabulated and used statistical analysis to determine the female participation rate, sexual division of works and occupational structure etc.

Necessary secondary data for the present study was taken from different Government reports, documents and other published reports. These documents was consulted to collect data on cropping pattern, sexual division of works, female rate of participation in the agricultural sector, female tribal and non-tribal occupational structure and population figures etc.
In the second stage, the validity of the findings was testified with secondary data by comparing the primary data collected through field survey with the help of household scheduled questionnaires. These were also used to examine the location specific factors responsible for occurrence of specific patterns and attributes.

Agro ecological information such as topography, soil type, climate, irrigation facility etc. was collected from different Government sources like Department of Agriculture, Govt. of Assam, Regional Remote Sensing Application Centre, Guwahati and other published sources.

The data obtained was processed, tabulated and analyzed with suitable and meaningful quantitative techniques. Interpretation and statistical analysis was made using $\chi^2$ tests and also with simple ratio of percentages, post diction method according to method described by Pal (1998)\textsuperscript{1} and Hammond and McCullagh (1991)\textsuperscript{2}. These analyses was supplemented by a number of charts, maps and diagrams to give a clear vision on the patterns of work participation, gender division of labour and occupational structure etc. A conclusion of the study was drawn based on results derived from the study.

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1.8. SAMPLING

The sampling was prepared as per the criteria cited in the methodology. However, difficulty arose while selecting areas where cash crops are cultivated and areas where irrigation facility is available to most farms, because the district is scantily irrigated either through Govt. or private agencies. Cash crops are also grown sporadically in the central part of the district (part of Dhemaji and Sissiborgaon revenue circles). Details of the villages covered during this study are depicted in table-1.1.
Table-1.1: Sampling Frame showing details of the villages covered

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Block</th>
<th>Village</th>
<th>No. of households</th>
<th>Respondent Profile</th>
<th>Population Structure (%)</th>
<th>Irrigation Structure</th>
<th>Cash Crop grown</th>
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<tr>
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<td></td>
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<td>PC of ST</td>
<td>No. Interviewed</td>
<td>Households covered (%)</td>
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Fig-1.2: Map showing Sampling villages in Dhemaji District