

## II REVIEW OF LITERATURE

The main objective of review of literature is to illustrate the idea of synthesizing the literature available and weaving together the threads contained in previous writings on the selected topics. It means that the literature review helps the researcher to fill the gaps in his/ her study (Punch, 2006).

The literature pertaining to the study on “**Gender Mainstreaming in Agriculture in the Selected Tribal Settings: A Comparative Analysis of Tamil Nadu and Manipur States**” is reviewed under the following broad heads:

- A. Profile of Tribals in India and Status of Tribal Farm Women
- B. Gender Mainstreaming in Agriculture
- C. Role of Tribal Women in Agriculture
- D. Programmes and Policies for the Welfare of Tribal Women
- E. Review of Related Studies

### **A. Profile of Tribals in India and Status of Tribal Farm Women**

India is the home for a number of tribes i.e. groups of indigenous people. The word ‘tribe’ means a group of families bound together by kinship, usually descending from common mythical or legendary ancestor, living in a contiguous region, speaking common language and having common historical past (Pani and Sahoo, 2008).

Prior to the birth of Republican Constitution of India in 1950, term such as ‘Aboriginals’, ‘Adivasis’, ‘Forest Tribes’, ‘Hill Tribes’ and ‘Primitive Tribes’ were in use. Tribe was a value added term since it designated a particular stage of socio-political evolution of a community, with a given territory and language area. The British colonials used the term tribe for the people who were primitive in comparison their only culture. Upto 1919 the tribes were included along with other communities categories as ‘Backward Class’ and ‘Depressed Class’. In 1931 census, the term ‘Primitive tribes’ was used to specify those communities who were till then termed ‘Forest Tribes’ or ‘Hill Tribes’. In 1941 census, just mentioned ‘Tribes’ and all adjectives were

dropped. Today, under the constitution of India, the tribals are 'Schedule Tribes' (Pramukh and Palkuman, 2006).

The lifestyle of the tribal people conditioned by and in alignment with natural eco-systems and their resources. Mostly inhabiting in remote hilly and forest areas, tribals are predominantly said to live in 'traditional' societies with 'indigenous' cultures, secluded and cut off from the 'mainstream'. Tribals maintained an autonomous existence until the British for economic reasons opened up their territories: exploitation of forests and mineral resources, regular supply of cheap labourer. Even after independence, the tribal communities continue to face the major brunt of uneven nature of India's development across regions as well as states (Chauhan, 20011).

Indian tribes have always been at the centre of discussion among administrators, missionaries, social workers and anthropologists. One of the main reasons of their occupying the centre stage is their diversified economic and social formation coupled with varied ethos and life style. In India, the tribal form a significant section of the population mainly because of two factors: they constitute 8.2 per cent of the population, numbering 84.4 million (Census, 2001) and they have distinct cultures, dialects and economic pursuits in different ecological settings (Chaudhury and Patnaik, 2008). India has the largest population of the tribal people in the world. These tribal people also known as the Adivasis, are the poorest in the country, which are still dependent on hunting, agriculture and fishing (Eco-India, 2008).

According to Article 342 of the Constitution of India, at present, there are 697 tribes as counted by the Central Government. More than half of the Indian tribal population are concentrated mostly in the States of Madhya Pradesh, Chhattisgarh, Maharashtra, Orissa, Jharkhand and Gujarat, whereas in Haryana, Punjab, Delhi, Pondicherry and Chandigarh no community has been notified as a specific tribal group. Other Indian tribal societies are found in Rajasthan, Bihar, Andhra Pradesh, Kerala, Tamil Nadu, Andaman and Nicobar Islands, West Bengal, Mizoram and other states of North Eastern India (Encyclopedia of India, 2012).

In the North Eastern part of India, there is a concentration of a number of tribes. The tribal people of Meghalaya are categorised into two major groups namely the Garo tribe and Hynniewtrep. Chakma tribe is one of the important tribes of Mizoram. The Pawi Tribe of Mizoram named not after the name of the clan but after the name of the place where they are residing. Another important tribe of Mizoram is Ralte tribe. The tribes of Manipur are as follows Aimol, Anal, Angami, Chiru, Chothe, Gangte, Hmar, Kabui, Kacha Naga, Koirao, Koirang, Kom, Lamkang, Mao, Maram, Maring, Lushai, Monsang, Moyon, Paite, Purum, Ralte, Sema, Simte, Sukte, Tangkhul, Thadou, Vaiphei and Zou. Bodo tribe and Mishing tribe constitute the largest population in Assam (Encyclopedia of India, 2012).

Tribes of Jammu and Kashmir have strictly descended from the Indo-Aryan group of people. With normal Indian food being their staple diet, these North Indian tribes believe in both Hinduism and Islam. Tribes of Uttar Pradesh and Uttarakhand comprise a colossal portion under the North Indian tribal section, with variety speaking out from every section and every sphere of daily life. Tribes in Haryana are consisted of nomadic and semi-nomadic individuals, with a decaying condition of their social and economic condition. There are approximately 25 nomadic tribes, with their total count exceeding 15 lakh. Tribes of Himachal Pradesh can be singled out for their looks, good conduct and religious behaviour towards every kind of situations and places (Encyclopedia of India, 2012).

East Indian tribes come to a significant numbering count under the vast section of Indian tribes. Tribes of West Bengal, with their incredible talents and improvisations, have elevated Bengali tribes into a prestigious hold. Tribes of Orissa have their own set of faiths when it comes to marriage and holy union. Tribes of Jharkhand diversified through their handy-work and religious customs (Encyclopedia of India, 2012).

West Indian tribes have pocketed in several far-away areas, living a life of their own. Agriculture and harvesting seem to be the basic occupations of the tribes of Gujarat since olden times. Tribes of Rajasthan have been involved with rest of the Rajasthani population since ancient times, with their unique customs and culture spreading each other day. Tribes of Maharashtra

primarily classified in the groups of nomadic tribes and scheduled tribes (Encyclopedia of India, 2012).

Tribal life in Central India is an excellent instance of the blending of rural and urbanity. Tribes of Madhya Pradesh classified under the group of scheduled tribes, with other sub-groups of tribes are also making their presence felt. Madhya Pradesh likes to concentrate wholly upon their festivities and celebrations. Tribes of Chhattisgarh primarily consist of a significant number that even surpasses the urban population (Encyclopedia of India, 2012).

The numbers of South Indian tribes are perhaps unlimited with their miscellaneous existence, which has now gained popularity throughout the country. The tribes of Tamil Nadu comprise significant number of population ranging from dwindling to massive. Tribes in Karnataka are astoundingly enormous in number, with the count exceeding a bare minimum. Tribes of Kerala are perhaps the most unique among all the South Indian tribes. Residing in the mountainous terrains of the state, they have been striving to uphold their indigenous traditions and customs from any foreign influence (Encyclopedia of India, 2012).

### **Nilgiris and Coimbatore Districts, Tamil Nadu State**

Toda tribe, also known as Dodha tribe, is the most ancient and unusual communities of the Nilgiri Hills of Tamil Nadu. The Toda lives in settlements consisting of a mund (a duster or beehive huts), a dairy temple, which is larger than the normal Toda hut and a cattle pen which consists of a circular enclosure surrounded by a loose stone wall with a single entrance guarded by powerful stakes. Their homes are on the tops of minor rounded eminences, studded with cairns raised for burying the dead. There is only one small entrance to a Toda hut and one has to get down on all fours to crawl in. These half-barrel-shaped constructions built of bamboos closely laid together, fastened with rattan and covered with thatch (Parthasarathy, 2007).

Toda has own secretive customs and regulations. Their belief was that they were the descendants of the Pandavas. True to that belief, they followed polyandry. They are nature-worshipping tribe. Most worshipped deities are

Hill-Gods. Among them, Lord Amodr (the realm of the dead) and Goddess Teikirzi are important. Toda tribe has their language. However, of Dravidian origin, the language has no script. Todas' linguistic affiliations are with South India and even their much-remarked physical characteristics - tall, with fairish skins, aquiline noses. The Toda embroidery garments known for its community. This artwork was practice exclusively by women and done using red and black threads on a white background, producing rich effect. Most of them have large herd of buffaloes. They manage their livelihood from milk products. Toda are also expert in silver-smithy. Toda tribes are vegetarians. People do not eat meat, eggs that can hatch (fertilised eggs) and fish but some villagers eat fish. They make Buffalo milk into butter, buttermilk, yogurt and cheese and drink it plain. Rice is the main food, which eaten with dairy products and curries. Toda tribes speak Toda language. The community even gained fluency in other languages like Kannada, Telugu, and Malayalam (Parthasarathy, 2008).

The Irulas found mainly in the southern and eastern slopes of the Nilgiri hills. They are generally considered to have drifted to the Nilgiris from the hilly terrains of Attapadi and Siruvani valleys in Kerala and the adjoining Anaikatti area in Coimbatore. Among the tribes of the Nilgiris, the Irulas are most numerous, next to the Badagas. They reported to be in possession of excellent medico-botanical knowledge of herbal wealth and related vegetation in their immediate vicinities.

The Irulas are sub-divided into the following groups; Poongkaru, Kudagar Kalkatti, Vellaka, Devala and Koppillingam. Marriage ties are rather loose. The Irula marriage and funeral ceremonies are simple. Marriages followed by feast and dance, and some Kurumbas are invited. Irulas worship Vishnu in their own temple. Irula temples are not imposing, consisting as they do of circles of rough stones, each enclosing an upright one with iron tridents fixed in the ground. They have many traditions concerning their power over wild beasts. They accredited with being able to tame tigers, and the fable goes that the women went in the woods leave their children in the care of a tiger. The Irulas in the eastern slopes are legendarily associated with the Ranagsamy (also spelt as Rangaswami) cult, a virile religious and cultural

event centered on the northern slopes of the hills, used to be expert honey-collectors and hunters. Irulas cultivate Ragi, Samai, (all millets), plantains, oranges, jacks, pumpkins, etc. They rarely trade on the plateau and go to towns with their produce like fruits, honey, bee-wax, gum, dyes, etc. They also hunt and snare wild animals (Indiainfoweb, 2007).

### **Ukhrul and Senapati Districts, Manipur State**

Tangkhul tribes are the inhabitants of Ukhrul district in Manipur. The name of this tribe derived from the Meities who said to be their neighbours. The people of this tribal communities residing in the northern part called Luhupas. It has said about their origination that they originated from Mongolian race. Locally known as Hao, these tribesmen are very industrious and have a penchant for enhancing their education and knowledge. Tangkhul tribe is the most educated tribe in the state. The Tangkhul tribesmen are mostly polyglots who converse in a variety of dialects. However, the most popular language happens to be the Tangkhul dialect. In fact, the linguistic diversity of the Tangkhuls reflected by the fact that the residents of every Tangkhul tribal village and bucolic hamlet speak a different dialect (Encyclopedia of India, 2012).

The people mainly depend on agriculture for their economic subsistence. Besides agriculture, they also run poultry farms and rear livestock to earn their livelihood. They produce in quantities products like rice, cotton, millet, maize, arum, chilli, sesame, ginger, tomato, pumpkin, cucumber and beans. The Tangkhul tribes, one of the principal ethnic groups of Manipur, provide a wonderful insight into the quintessential tribal legacy of Northeast India (Mapsofindia, 2009).

The "Kabui" word considered a corruption of Apui meaning mother, which they worship as goddess, Leimaren. Their language is Kabui. They speak Meitei language well and had close interactions with the Meiteis of the plains. The Kabui tribe divided into four exogamous clans: Kamei, Dangmei, Lengmei and Gangmei. The Agriculture is their main occupation and rice is the main crop. Some of other crops are maize, soyabean, pumpkin, gourd, ginger, tomato chilli and groundnut. They also work as daily wage labourers.

Carpentry, weaving and basketry are cottage industries. They considered one of the most skill artisans of Manipur. They also engaged in occasional hunting too. Fishing is another occupation of this tribe. Weaving is an occupation among the women (Encyclopedia of India, 2012).

The main occupation is cultivation and practice Jhum system in the hills and wet cultivation in the plains. After the formation of the Zeliangrong community of the North East India, they constitute a powerful lobbying community. They prefer Zeliangrong than Kabui or Kacha Naga. The plain Kabuis have considerable influence of the Vaishnavite tradition (major sub-traditions of Hinduism) and Meitei culture. The kabui believe in a multiple of Gods and Goddesses, local deities and spirits and in a Supreme God, Ra-Gang (King of Gods) whose abode is in Heaven and who is immortal and eternal. They have their priests (whom they call Molls), and other diviners of various attainments. Kabui tribes offer chickens to the evil spirits for the well-being of the coming New Year ([www.themanipurpage.tripod.com](http://www.themanipurpage.tripod.com), 2011).

In the hilly villages, Maring tribes are mainly situated. The Maring tribe has an etymological significance. The term Maring derived from `Mei` means fire and `ring` means start or produce. The three groups of this tribe are identifiable from diverse way of dressing. Rather, the colours of their dresses become identifiable marks of these Maring tribal community people. Usually the Maring tribes prefer dresses of black and red colors along with red and black borders.

The Maring tribes speak language similar to that of any other tribe of this beautiful state of Manipur. Maring tribes practice farming and irrigation. The economy of these Maring tribes is agrarian with low level of literacy as a whole. However, the scenario has undergone a change with improvement in their status and prestige. The Maring tribes make different articles with bamboo. Some of the items meant for household purpose. These Maring tribes rightly preserved their culture and tradition in their original form. Fun, merrymaking, feasting, singing and dancing play an integral part of various festivals of these Maring tribal communities (Encyclopedia of India, 2012).

## **Status of Tribal Farm Women**

Tribals have their own culture and social life. With culture, they also have their own folklore, folk songs, dances etc. Almost all tribal communities possess rich mythologies, folk tales, stories that illustrate their affinity and relationship with tradition and traditional characters. With traditions, they have their own general beliefs. There are around 636 schedule tribe categories in India. They situated all over India. Even though they have a rich culture they are socio-economically disadvantaged and marginalized (Panchbhai, 2010).

The status of tribal women can judge mainly by the roles they play in society. Their roles are determined largely through the system of descent. The families try to pass their property by the line of descent. The family surnames too are trace based on the system of descent. In a unilateral system the descent is traced either through the male or female line. When the descent is trace through the mother's line, it called a matrilineal system and when it is trace through the father's line, it called a patrilineal system. Most of the tribes in India follow a patrilineal system. There are exceptional cases like the Khasi, Jaintia, Garo and Lalung of Meghalaya in the Northeast who follow the matrilineal system. The Mappilas of Kerala too are a matrilineal community. There are very rare cases of bilinear descent (Burman, 2012).

Haimendorf (1943), Hutton (1921), Hunter (1973) and Firth (1946) among Tharus of U.P., Nagas and Garos of the North East reported a higher social status of women. However, there are many facts, which indicate a low status for the tribal women. For example, she does not have property rights except in a matrilineal society, which is a small proportion of the tribal population. She paid less as wages than her male counterpart for the same work. Several taboos discriminating against tribal women exist in certain tribal groups implying impurity and low status. The tribal women cannot hold the office of a priest. There are taboos related to menstruation as in non-tribal communities. The Kharia women cannot touch a plough nor can she participate in roofing of a house. The Oraon women also prevented from touching a plough. The Todas of Nilgiri Hills do not touch a menstruating woman for fear of destruction of harvest. In certain tribes, only the males can participate in ancestor worship (Satyanarayana and Behera, 1986). The Toda

and Kota women in southern India cannot cross the threshold of a temple. The Santal women cannot attend communal worship. Rivers (1973), Dalton (1872) and Grigson (1938) had reported low status of women among Todas, Kharies and Mariya Gonds with reference to certain taboos during certain periods and ceremonies.

Women in the tribal communities toil hard and they considered assets. The practice of bride price during marriages is quite common among them. This is in sharp contrast to the general caste-Hindu population. Sometimes when the prospective groom is not in a position to pay the bride price, he has to render physical labour and service at the wife's house. At times, he even stays back at the wife's house throughout his life to reside as a 'ghar jowai' (Burman, 2012).

Tribal women enjoy very little control over immovable property. They hardly ever inherit land, particularly in the matrilineal societies. Among the Khasis as well, it is mainly the youngest daughter or 'khadduh', as she locally known, who inherits the house and property. The tribal women generally inherit the ornaments from the mother. The customary laws do not permit them to own land. It is mainly due to the reason that often the Santal widows declared as witch and murdered by close relatives (Kelkar and Devnathan, 1993). Lalhriatpuii (2010) writes about the Mizo women in Mizoram that they were extremely discriminated with regard to the inheritance of property, as they never given rights over the landed property. If there is no son in the family, the family property including ancestral home should go to the nephew of the father. However, it seen that the wife controls the kitchen garden. She too owns the pigs, goats and chicken. The homemaker retains the sale proceeds of the domesticated animals and she makes purchases of her own liking when visiting her parental home. Women are also adept at selling fruits and forest products in the weekly markets. They usually sell vegetables and horticultural products in the markets.

The tribal women in India have virtually no role to play in the social and political spheres. The tribal women had no place in the village councils. The women never represented in the traditional panchayat. It is only now, due to the mandatory provisions of the state, that some women being elected in the

panchayat. Nevertheless, even in such cases, usually husbands or relatives who already wielded enough power in the locality dictate the women. Even then, there is hardly any tribal woman MLA or MP in the country. In the case of Agatha Sangma, the Union Minister of Social Welfare, she is an exception; her father Purno Sangma happened to be a prominent politician of the country and also served as the Speaker of the Lok Sabha in Parliament for one term (Burnman, 2012).

The status of women in a society is a significant reflection of the level of social justice in the society. Womens' status often described in terms of their level of income, employment, education, health and fertility as well as their roles within the family, the community and society. Even after industrialization and the resultant commercialization swamped the tribal economy, women continue to play a significant role. Mostly women and children do collection of minor forest produce. Many also work as labourers in industries, households and construction, contributing to their family income. Despite exploitation by contractors and managers, tribals are more sincere and honest than non-tribals. The status of tribal women in matrilineal societies has observed better than that of women in a patrilineal society, e.g., their legal status is much higher than that of their counter parts in matrilineal societies and they have a significant role in the tribal economy (Awais *et al.*, 2009).

### **Literacy**

Tribal women play a significant role in the economic development of tribals as they contribute in various economic activities. Education is a crucial requirement for the sustained growth of a developing society and lack of it is largely responsible for the exploitation and pitiable plight of the tribals. The literacy rate of tribals was 8.53 in 1961 and steadily increased to 47.10 in 2001, yet it is far below the national rate of 64.84.

The female literacy rate among tribals is far lower (34.76 per cent) when compared to overall female literacy of the country (53.67 per cent) (2001 Census). Table I shows the literacy rate of general and schedule tribes population.

**TABLE I**  
**LITERACY RATE OF SCHEDULE TRIBES**

Year	Percentage of literacy in India			Percentage of literacy among Schedule Tribes		
	Male	Female	Total	Male	Female	Total
1961	40.40	15.35	28.30	13.83	3.16	8.53
1971	45.96	21.97	34.45	17.63	4.85	11.30
1981	56.38	29.76	43.57	24.52	8.04	16.35
1991	64.13	39.29	52.21	40.65	18.19	29.60
2001	75.26	53.67	64.84	59.17	34.76	47.10

Source : Selected Educational Statistics 2002-2003, Ministry of HRD.

There is gender bias in the literacy of tribal population as in other groups, the female literacy being lower than the male literacy. Though there had been five-fold increase in the literacy of tribal females, it is still much lower than the national average (Census, 2001).

### **Health**

Healthcare is a major problem in far-flung isolated tribal areas. Lack of food security, sanitation, and safe drinking water, poor nutrition and high poverty levels aggravate their poor health status. The tribal populations are less likely to afford and get access to healthcare services when required (Awais *et al.*, 2009).

Guite and Acharya (2006) had shown that the acceptance of a particular health care system among the tribal people mostly depends on its availability and accessibility. It was interesting to note that the tribal groups following traditional religion use traditional medicines were putting religious or supernatural value on it; the converted Christian tribes use the same medicine excluding its religious tune. The study reveals that education had been able to heal the traditional inhibition of tribal people to attend PHCs without ignoring the importance of traditional healing practices.

Pramukh and Palkumar (2006) in their study, showed that the tribal groups namely, the Savaras, Bogatha, Konda Dora, Valmiki, Koya, Kond

Reddi etc. believe in the power of prayers and rituals that enables some herbs to act as medicines to heal diseases among them. They attribute diseases to certain deviant acts of self and others towards elders, nature, and divine rules. Thus, their first priority was to get spiritual cure in a traditional way. Jain and Agrawal (2005) had revealed that the Bhills in Udaipur, Rajasthan, attribute disease to the act of deities and spirits of various kinds and by appeasing them, they believe, disease might heal. They depend on Bhopa (traditional healers), herbalist and Dais for cure of disease. Their study showed that people are, largely, inclined towards modern health care system too, without ignoring the traditional system.

Veena (2004) had conducted a study among the Ladakhis, which showed a blend of health care involvement. She found that in case of serious illness, people tend to attend modern health care facilities. However, in many cases accessibility of such facilities do not confirm people's acceptance of modern health care system. People invariably believe in spirit and other supernatural beings as causes of disease and priority of treatment inclined mostly towards traditional healers.

Nagda (2004) had conducted a study among the Rajasthanis, which showed that among the tribal people of Rajasthan, illness and consequent of treatment was not always an individual or familial affair. At times, the whole villages or the community may perceive as affected by such diseases and healing must do at community level. Such perception shows the integrity and responsibility of entire community towards an individual or family and vis-à-vis, which defined by existing, culture. In such cases, modern system has nothing to do in treatment.

Another study among the Meitis of Manipur revealed that though the people were educated enough, the concept of deities and their effect on human health were widely prevalent among them (Sunita, 2003). The author described the ill effect of the deity Hingchabi and the treatment offered by traditional healer Maiba. She showed the effectiveness of the use of medicinal herbs along with beliefs to heal an ill person influenced by the deity.

Kate (2001) revealed in his study on “Health Problems of Tribal Population Groups from the State of Maharashtra”, that the prevalence of sickle cell anaemia disorder was very high among the tribal groups of Bhil and Pawara from Nandurbar District and amongst the Madia, Pardhan and Oktar tribal groups of Gadchiroli District 20-20 per cent. The highest recorded of sickle cell anaemia disorder was among the Oktar group i.e. 35 per cent. The sickle cell gene was practically absent among the Mahadeo Koli, Thakar and other tribal groups from Western Maharashtra. The overall prevalence among the tribal groups was about 10 per cent for the carrier state and 0.5 per cent for sufferers.

Health institutions are rare. Till recently, an abundance of fruits, tubers, roots and leaves in forests on the one hand and indigenous health-care systems on the other, contributed positively to tribal health. Over the centuries, Tribal people have developed their own medicinal system based on herbs and other items collected from nature and processed locally. They have their own system of diagnosis and cure. However, the skills and natural resources are fast disappearing. Moreover, the traditional systems cannot treat or prevent many diseases that the modern medicines can (Awais *et al.*, 2009).

Tribals display a far less health modernity status as compared to the rest of the population. Their own beliefs, illiteracy, poverty, non-access to scientific information contribute to this low health modernity status. Their Health status can improve significantly by scientifically executed intervention with target-appropriate educational material and techniques (Panchbhai, 2010).

### **Employment**

The tribals in the past were usually forest dwellers and their livelihood largely depended on the food-gathering economy. More than the men, the women walked long distances to fetch wood and fodder. Besides, they also collected fruits, roots and tubers, gums and leaves for self-consumption and sale. The men also complemented them by collecting timber and logs. They climbed the trees to shake down the fruits that gathered on the ground by

women. As there has been large-scale deforestation, women have to slog harder to retain the gathering economy (Burman, 2012).

Chaudhary (2010) observed that in the tribal areas of Betul in Madhya Pradesh, collection and marketing of firewood was generally the domain of tribal women. They sold it at Sahpur and whatever income they have, they immediately spend it on meeting the basic requirements such as rice, pulse, edible oil, soap, detergent powder, tobacco, bidi and so on.

Economic activities of the tribes may be classified as food gathering including hunting and fishing, pastoral, shifting hill cultivation, settled cultivation, handicrafts, trade and commerce, labour work including agricultural and industrial labour. A tribal woman occupies an important place in the socio-economic and political structure of her society. They exercise free and firm hand in all aspects related to their social and economic life. In India, the tribes are at different levels of economic development and in each, women have a significant role. The main ones are food gathering and hunting, shifting cultivation, cultivation of land by ploughing and regions. Thus, the tribal women in traditional social structure had an important role to play in tribal economy (Awasthi, 2011).

Division of labour is mainly between herding and agriculture. In all other tasks concerned with life in the village, such as crafts, house building, watermills and work on boundary walls, there is division between men's work and women's work. Among Gaddis and Bhutias tribe the men are shepherds and women grow crops for food. It was equally valid for Bhils and Bodhs tribe, there in addition, men are out on different duties and women grow crops for food. However, the boundaries are not so clearly marked, as there is overlapping and deviations from the rule. There are as well cases where the rule is inflexible and times when change is possible (Veena, 2005).

## **B. Gender Mainstreaming in Agriculture**

### **Gender and Sex**

While nature has created two sexes- women and men- the essential differences between them is merely in the sphere of the biological functions of reproduction. In all other matters, the differences by way of values, mode of behavior, life patterns and the supposed vulnerability of women, their need for protection and their inferiority by way of physical strength and potentialities are made out by the needs of the family, society and state. These are denoted by gender, gender roles and gender differences, and brought about by socialization, historical traditions, customary norms and state machineries. Gender thus is an artifact, a social act and a political tool rather than a natural institution like sex. This gender can be altered, socially engineered and politically reconstructed while sex cannot be (at least as of now). Gender also implies that the relationship between women and men can be changed from a patriarchal to a just and equal relationship (Kaushik, 2007).

### **Gender mainstreaming**

Gender Mainstreaming has evolved since the early 1990s and been growing gradually ever since, mainly in developing/under developed countries. In September 1995, at the World Conference for Women in Beijing, China, the Beijing Platform for Action focused on the term “gender mainstreaming” which was later adopted internationally and recognized as a methodology in achieving equality between women and men. Following the Beijing conference, in 1997, the Economic and Social Council of the General Assembly (ECOSOC) adopted gender mainstreaming as the methodology by which the entire United Nations system would work toward the advancement of women and gender equality goals.

The most important and special concept of the process of gender mainstreaming is the fact that it contributes to equal opportunities, obligations and rights of both men and women. In a less complicated definition, gender mainstreaming means that gender equality becomes a full part of common policies. It implies a broader and more comprehensive definition of gender equality, giving value to differences and diversity. At the same time, it stresses

the need to (re)organize, improve, develop and evaluate policy processes and thus make it possible to challenge the male bias that characterizes society and the structural character of gender inequality.

UNDP defines gender mainstreaming as “Taking account of gender equality concerns in all policy, programme, administrative and financial activities, and in organizational procedures, thereby contributing to organizational transformation”. Specifically, gender mainstreaming implies bringing the outcome of gendered socioeconomic and policy analysis into all decision-making processes of the organization. It includes core policy decisions as well as the small everyday decisions of programme implementation. Gender mainstreaming is not a process, which begins and ends with women. It does not mean only having an equal number of women and men in the organization or supporting programmes exclusively for women, although it includes these aspects. Gender mainstreaming implies including women, but does not imply excluding men. UNDP sees gender mainstreaming as a strategy for bringing about gender equality through creating space for everyone – women and men in the organization as well as in communities – to contribute to the process of articulating a shared vision of sustainable human development and translating it into reality.

Gender mainstreaming in many countries of Asia has proven to be a driving force to motivate both men and women to find a peaceful mechanism to work together to face the challenges. Gender mainstreaming is “the process of assessing the implications for women and men of any planned action, including legislation, making women’s as well as men’s concerns and experiences integral dimensions in the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and social spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.” - United Nations, 1997.

Gender mainstreaming is known as a concept of ensuring that policy and decision-making takes account of cultural barriers, challenges, and men’s and women’s different interests and needs. Recent studies and reports have clearly made a point that gender equality and mainstreaming is highly

encouraged and recommended to reduce poverty and meet the United Nations Millennium Development Goals (MDGs). United Nations MDGs were agreed and signed by all countries in 2000 with the very first goal to “eradicate extreme poverty and hunger,” followed by other goals related to education, gender equality, health, environmental sustainability and global partnership. Considering the importance and impact that MDG Goal 3 has in poverty eradication, it is now imperative for all member countries to aggressively pursue gender mainstreaming to be able to fulfill this goal (Hilda, 2007).

An approach or a strategy to achieve broad-based gender equality throughout society – by getting gender issues into the mainstream. Essentially involves acceptance by the mainstream of gender equality as a worthy goal, and acceptance of responsibility by the mainstream to actively address the gender issues relevant to them, their relationships and work, with the aim of achieving gender equality throughout society. Gender mainstreaming can be viewed as a tool in achieving good governance because it seeks to ensure that the needs and priorities of all members of a society are considered and met, that all members of society participate and contribute to the process of governance, and that the benefits of development are distributed equitably amongst all members of society. Gender mainstreaming is not an end in itself – it is an ongoing approach to the way we think, relate with each other and do our work. An approach that emphasizes the need to increase the number of women and women’s active participation in mainstream activities, particularly in politics, leadership and governance; key decision-making processes at all levels, in all sectors. Based on the strategy the recognition of men and women has different life experiences, different needs and priorities, and are affected differently by policies and programs. Therefore, in addition to it being women’s right to participate in decision making – their participation makes sense from a government efficiency and effectiveness perspective – as it results in more effective government policies, programs and projects (Hanoi, 2004).

Gender mainstreaming, “the process through which an organization or a government ministry assumes a comprehensive gender perspective” (Ekaas and Funes, 2003) or “the process of assessing the implication of women and men of any planned action [sic], including legislation, making women’s as well

as men's concerns and experiences integral dimensions in the design, implementation monitoring and evaluation of all agricultural policies and programmes so that women and men benefit equally" (Opio, 2003) has become a buzzword in food security circles of late. Gender mainstreaming recognizes the fact that women and men have different situations in life and that policies must focus less on equality between the sexes but more on providing conditions that will enable women and men to reap equal benefit from them.

Successful gender mainstreaming depends on the following:

- a) Commitment at the country and donor levels to change policies and procedures so that gender concerns, particularly those of rural women, are incorporated into programming and policy making;
- b) Commitment by these same groups to mobilize resources; and
- c) A universal commitment to keeping gender and gender mainstreaming on the political agenda (Ekaas and Funes, 2003, 2003)

Gender mainstreaming has been well defined, and several publications already exist describing steps, which must be taken to realize it in practice and not only in rhetoric (Ekaas and Funes, 2003, 2003).

To achieve true gender mainstreaming, as well as to ensure the highest quality outcomes without doing harm, there is need to include this concept on the international agenda and to ensure that political will and adequate resources exist to ensure success. A review of experiences of gender mainstreaming in 20 country offices, carried out in 1997 by the Gender in Development Programme Unit, indicated that the process was neither uniform nor smooth. Several of the constraints to effective mainstreaming identified by the reviewers are relevant to the India office. These include - Disjuncture between global UNDP focus areas and country/government priorities.

- Limited awareness of UNDP gender policy among programme staff.
- Corporate policy not adequately reinforced by senior management.
- Poor use of existing information, documents and tools for gender mainstreaming.

- Weak data base and collection of gender data not seen as a priority for project formulation.
- Project formulation process top-down, not sufficiently participatory or sensitive to field realities.
- Gender mainstreaming seen as the responsibility of the Gender Focal Point, rather than as an organizational mandate.
- Limited funds for mainstreaming. (Moving from policy to practice A gender mainstreaming strategy for UNDP India)

The challenges of gender mainstreaming in agriculture have their roots in everyday family life. It pertains to the misconception that gender work relates to women and that this poses intrusion in private lives. There is therefore need to change mindset or attitude. The change of people's minds on gender should not only take women to champion gender. (Opio, 2003)

Over 80 percent of the MDG's target group live in rural poor agriculture areas, hence agriculture and farming become a critical component in the successful attainment of meeting the MDGs by 2015 in many parts of the world, mainly in Asia and Africa. Gender mainstreaming in agriculture and farming produces benefits that go beyond project performance. Many factors contribute to successful gender mainstreaming in rural areas, one of the most important components being Education and Training.

Despite the increased awareness and the availability of information on existing gender disparities in agriculture, the current extension services have not successfully addressed gender in the design and implementation of the services. Women in particular have limited access to extension services due to a number of factors. These include lack of awareness of different gender roles and needs in the curricular and training of extension workers. There has also been inadequate gender attention in the development of technologies for crops, livestock, fisheries and forestry. The provision of agricultural services is male dominated and yet no efforts have been made to train men to work with women and be aware of the strategic and practical needs of women within agriculture (Opio, 2003).

Because of the overall gender policy framework, a gender policy on agriculture was developed with the help of MOLGSD to support the gender mainstreaming efforts within the sector (MAAIF 1993). The Poverty Eradication Action Plan (PEAP) as well as the Plan of Modernization of Agriculture (PMA) (MAAIF/MFPED, 2000) in compliance with the overall policy framework of gender mainstreaming, recognize that persistent gender disparities hamper agricultural productivity, economic efficiency and growth. Hence the National Agricultural.

Advisory Services (NAADS) and NARO (NARO, 2000) in their plans have recognized the need for addressing gender concerns in all their activities. The paramount driving force is the desire to increase relevance, efficiency and effectiveness in addressing the needs and objectives of all stakeholders (Opio, 2003).

Yaqoob *et al.* (2009) in their study on the “Gender Equity in Agriculture” found that the maximum participation of rural women in different sub-sectors of agriculture but further analysis reflected clear cut discrimination in land ownership, tenure, access to inputs, trainings, and credit facility. The finding of research study highlighted the immediate attention of Government, policy makers and law and order authorities to have a glance over such discrimination and reframe their rules and regulation, and mode of implementation.

Gender inequality is therefore dominant in the sector and this constitutes a bottleneck to development, calling for a review of government policies on agriculture to all the elements that place rural women farmers at a disadvantage. The women-in-agriculture programme in Nigeria, which was established in cognizance of this and the shortcoming in extension services for women farmers, has been a huge success. Women’s groups, non-governmental organizations (NGOs) and civil societies have empowered, given rural women farmers a voice, and effectively championed their cause. Women farmers now have better access to farm inputs and credits although many barriers remain and would have to be addressed to further enhance their role. Rural women farmers deserve better recognition and greater

appreciation of their tangible contributions to agriculture and rural development and food security (Yemisi and Aisha, 2009).

Mishra et al. (2008) reveals that women did most of the hard work in animal husbandry and crop production while men were involved in those activities where major decision making was needed. Majority of the women respondents were in the age group 25-50 years (58%), illiterate (58%) and belonged to the category of marginal farmers (48%). A strong impact of socio-economic factors such as age, education and land holding was observed on the relative participation of farm women in different activities. In total they spent about 14-17 hours per day on different household and farm activities, illiterate (16.35 hrs. /day), landless (17.3 hrs./day) and women in age group of 25-50 years (16.5 hrs./day) were found to be more involved in different activities per day.

According to Nosheen et al. (2010) television followed by friends, relatives, radio and local farmers were their most frequently used sources of information on gender equality by the female. For males, the most frequent sources of information were local farmers and relatives followed by friends, television and radio. Female respondents trust more on the information provided by television followed by friends, relatives and radio. On the other hand, male order of trust on the information falls in decreasing order as local farmers followed by relatives, friends, television and radio. The information sources like inputs/output dealers, books/booklets and both the male and female respondents considered extension agent. It is, therefore, suggested that information ministry to educate their spectators on practicing gender equality and mutual consultation on household, community and livelihood strategies related issues through TV talks, dramas, serials and other shows at national and international channels. Print media of the country are also further suggested to present the case of gender equality in a more strong and convincing manner through their programs and articles.

Mrunalini and Snehalatha (2010) had expressed that gender studies are predominantly undertaken to identify the gender gaps as per the development issue and work towards equalizing the development benefits. Drudgery of gender in crop activities has been the issue of concern for

delivering technology benefits among them. Drudgery in crop activities were differently prioritized men and women. The principal factors contributing to the set priorities are found as work demand on time and posture at work for men and work demand on time, posture, work exertion, perceived difficulty and workload for women. The results guide in selection of suitable technology that can reduce the factors of drudgery.

Lal and Khurana (2011) in their paper examine the ways in which greater integration through agriculture impact women and men differently and ensure implications for growth and creation of many jobs for women in agriculture sector. Jobs that bring many household resources under women control leads to greater earnings in the family. Although, women are more than ever finally employed, differences in wages earned by women and men persist in all countries. Women also have less access to productive resources especially in developing countries. Due to these reasons and women's lower education level compel the women have a greater tendency to remain in subsistence agriculture. Professional women continue to discrimination in hiring and promotion. The impact of liberalization and globalization on women is important not only because they represent almost half of the total population, but also because they face constraints, which make them less beneficial from the liberalization.

### **C. Role of Tribal Women in Agriculture**

Women's roles and status all over the world are generally determined by social institutions and norms, religious ideologies, eco-systems and by class positions. The Indian social systems exhibit such grave disparities. Indian women are not a homogeneous group. Their traditional roles are not identical in all strata of society. Norms and taboos governing their roles and behaviours within and outside the family, the structure of family organisations and social practices and the positions accorded to women in a community differ considerably across regions, cultures and levels of socio-economic development (Prakash, 2003).

Tribal women face problems and challenges in getting a sustainable livelihood and a decent life due to environmental degradation and the

interference of outsiders. The strategy for tribal development, and especially for women, needs improvement, betterment, development and upliftment to effect their empowerment. Tribal women have adjusted themselves to live a traditional life style in the local environment and follow occupations based on natural resources. Undoubtedly, the programmes, oriented towards the empowerment of tribals, particularly women, have improved their socio-economic conditions and status. However, there are wide variations across regions and tribes in terms of work participation, sex ratio, economic productivity and social life (Awais *et al.*, 2009).

In many parts of the country, slash and burn cultivation or jhum cultivation, as it called in the Northeast, was in vogue. Jhum cultivation was a women's enterprise it is they who almost entirely managed the show. While the men mainly felled the trees and spread them around on the ground to dry before collectively kindling fire, the women were engaged in broadcasting the seeds, weeding and harvesting. The women preserved the seeds at home and took the decisions about the crops to be cultivated every season. The men mostly guarded the crops from wild animals and trapped wildlife, big and small. Due to the population explosion and in-migration, jhum cultivation is gradually losing its viability. Tribal women are losing their labour work and in many places of the Northeast like Nagaland and Arunachal Pradesh, migrant male labourers are employed. Apart from the hill areas, in present days tribals have also opted for settled cultivation in place of the forest-based economy. They prefer to raise cash crops and exotic high-breed crops. The women displaced from their work. In West Bengal, the Santhal tribe women migrate in groups or go for 'namal' down to the southern districts for weeding and transplanting after completing the cultivation work in their own dry areas (Burman, 2012).

Tribal women performing agricultural operations have classified into four categories:

- The landless agricultural labourers
- Women cultivating their own piece of land and also working as wage labourers
- Women working in their own land due to dearth of labourers and

- Women supervising the agricultural operations performed by the labourers (Padmaji and Reddy, 2003).

Women play an important role in sustainability of livestock through caring of animals, grazing, fodder collection, cleaning of animal sheds and processing milk, whereas men take the responsible for fodder production (Ishaq, 2005). Sahir *et al.*, (2005) revealed that women faced different problems and hardships, which hindered their development and progress. Nosheen *et al.*, (2009) opined that about 70 percent of the population of the country is living in rural areas. In these areas, women are actively involved in all spheres of life they participate in agricultural farm operations, make feed, collect fodder, clean animals and their sheds, make dung cakes, collect manure for organic fertilizer, milking, process milk products and market them, rear the children, work as labourer and participate in all social functions.

In tribal communities, the role of women is substantial and crucial. They constitute about half the total population but in tribal society women are more important than in other social groups, because they work harder and the family economy and management depend on them (Awais *et al.*, 2009). Women constitute half of the work force in agriculture especially in developing countries. A farmwoman is the backbone of Indian agriculture and has an agriculture-based economy. Agriculture along with other related fields like forestry and logging provides employment to 60 percent of India's population. Agriculture also accounts for 8.56 percent of the country's total exports (Torkelsson, 2003).

A tribal woman can participate actively in all agricultural operations including, digging, sowing, manuring, transplanting, weeding, harvesting, preparing the granary, threshing, winnowing and storing food grains (Figure 1). In agriculturally back ward areas, tribal women forbidden to touch a plough and cannot dig the ground but in all other agricultural operations, women participate actively and traditionally, these are a female's job. Processing of food grain is exclusively a woman's job. Every morning tribal women dehusk millet and paddy in husking levers and then clean the grains and cooks them. They not only save money, but also earn it, unlike females of other communities (Awais, *et al.*, 2009).

Sinha and Singh (2000) in their study on the “Involvement of Farm Women in Jute Production Technology” found that farm women’s contribution to collecting weeds, weeding by Khurpi and uprooting of weeds was 85, 87 and 100 per cent respectively. In addition, the involvement of farmwomen was quite high in land preparation (37.5 per cent) than male (33 per cent) and in inter-culturing 77.33 per cent as against 11.00 per cent by male. Women’s contribution to certain jute specific operations like thinning, carrying jute stick to rating tank and fiber extraction was 90 and 88 per cent, respectively. The findings conclude that since the involvement of farmwomen was very high in jute production, training with regard to new technology should given to increase their efficiency for doing these operations in skilled manner.



**ROLE OF TRIBAL FARM WOMEN IN AGRICULTURAL OPERATIONS**

**FIGURE 1**

#### **D. Programmes and Policies for the Welfare of Tribal Women**

India has the largest concentration of tribal people anywhere in the world except in Africa. The tribal are children of nature and their lifestyle conditioned by the eco-system. India with a variety of ecosystems, presents a varied tribal population throughout its length and breadth. The areas inhabited by the tribal constitute a significant part of the under developed areas of the country. The tribal live mostly in isolated villages or hamlets, a smaller portion of their population has now settled in permanent villages as well as in towns and cities (Vaid *et al.*, 2011).

The constitution of India initiated the tribal welfare programmes by incorporating important provisions. These provisions not only put an end to the policy of indifference which had been followed during the pre-independence period, but also gave testimony to tribal welfare programmes, making them a constitutional obligation for the future governments of the country (Varghese, 2010).

Since independence, particularly with the inception of five year plans, concern for tribal development has always been high on the government's agenda. The credit for this goes to both the framers of the constitution and to the first prime minister, Pandit Jawaharlal Nehru, who not only took a great deal of interest in tribal development, but also gave long term guidelines in this regard. He strongly believed that no development activity in the tribal areas should take place at the cost of tribal heritage. This is abundantly evident from his views on tribal development:

- People should develop a long line of their own genius and we would avoid imposing anything on them.
- Tribal right in forest land should be protected.
- We should try to train and build up a team of their own people to do the work of administration and development.
- We should not over-administer these areas or overwhelm them with a multiplicity of schemes. We should rather work through and not in rivalry to own their social and cultural institutions.
- We should judge result not by statistics or amount of money spent on them, but by quality of human life that evolved (Vaid *et al.*, 2011).

After the country became Independent, the Government of India is proposing the formulation of a National Policy on Scheduled Tribes. The policy seeks to bring Scheduled Tribes into the mainstream of society through a multi-pronged approach for their all-round development without disturbing their distinct culture. Scheduled Tribes are those, which notified by the President of India under Article 342 of the Constitution. The first notification was issued in 1950; the President considers characteristics like the tribes' primitive traits, distinctive culture, shyness with the public at large, geographical isolation and social and economic backwardness before notifying them as a Scheduled Tribe. Seventy-five of the 698 Scheduled Tribes identified as Primitive Tribal Groups considering they are more backward than Scheduled Tribes. They continue to live in a pre-agricultural stage of economy and have very low literacy rates. Their populations are stagnant or even declining (Encyclopedia of India, 2012).

The Tribal societies in India undisputedly considered as the weakest sections of the population in view of common socio-economic and socio-demographic factors like poverty, illiteracy, lack of developmental facilities, lack of adequate primary health facilities etc due to, perhaps, demographic phenomenon, tribal population constitutes a very small segment of the total population of India. There is no comprehensive study on demographic model depicting scientifically the demographic pattern of the tribal population in India. Though Government of India has conducted surveys on socio-economic aspects of tribal population, economically they live in abysmally poor economic conditions for years. Tribal population in India found predominantly high in a number of districts of Assam, Bihar, M.P., Maharashtra, Manipur, Orissa, Rajasthan, Sikkim, Tripura, Andaman & Nicobar Islands and Daman and Diu. This segment of population comprises about 460 different tribal groups showing different social and cultural characteristics (Saha, 2003).

### **Programmes and Policies for tribal development during the Five Year Plans in India**

The planning commission laid down the objectives and strategies for tribal development from time to time. The following are the account of the tribal welfare programmes in India during the various plans:

### **First Five Year Plan (1 951-1956)**

The First Five Year Plan outlined a positive policy for assisting the tribal. As assisting them to develop their natural resources and to evoke a productive economic life wherein they will enjoy the fruits of their own labour and will not exploited by more organized economic forces from outside. It is not desirable to bring about changes in their religions and social life, except at the initiative of the tribal people themselves and with their willing consent. It accepted that there are many features in tribal life, which should not only retain but also developed; and the qualities of their dialects and the rich content of their arts and crafts need to be appreciate and preserved. In the First Five Year Plan, Community Development Projects for all round development of rural areas especially the weaker sections were started (Planning Commission of India, 2002).

### **Second Five Year plan (1 956 -1 961)**

During this plan, the Ministry of Home Affairs provided fund to the Ministry of Community Development to establish Special Multi-purpose Tribal Blocks (SMPT) in areas with prominent tribal population (Planning Commission of India, 2002).

### **Third Five-Year plan (1961 -1966)**

Towards the end of the second plan, i.e., in 1959, the government of India appointed a committee under the Chairmanship of Verrier Elwin to review the SMPT Blocks. According to the recommendations of this committee, during the Third Plan period, SMPT Blocks were renamed as Tribal Development Blocks (TDB) and suggested it to be opened in all areas where over 60% of the populations were tribal (Planning Commission of India, 2002).

### **Fourth Five - Year Plan (1969- 1974)**

During the Fourth Five Year Plan, a series of programmes conceived and addressed to specific target groups. The Small Farmers Development Agencies (SFDA) and Marginal Farmers and Agricultural Labourers Development Agencies (MFAL) were the first two in the series. The Drought Prone Area Programme (DPAP) was another measure in the same direction

but with a difference. Tribal Development Agencies (TDA's) established on the pattern of SFDA, which addressed themselves to the problems of the tribal population. Six tribal development agencies started during the Fourth Plan (Planning Commission of India, 2002).

### **Fifth Five-Year Plan (1974 - 79)**

During the middle of the Fourth Five Year Plan, i.e., in the year 1972, the Planning Commission set up a "Task force on Development of Tribal Areas" with L.P. Vidyarthi as the Chairman. In their appraisal, the task force observed that in spite of various kinds of investment by the State and Central governments for tribal development in successive plans, the problem of the tribal reflected in primitive methods of agriculture, land alienation, indebtedness, and adverse effects of industrialization, low rate of literacy, poor health of nutrition etc., had not solved. During the Fifth Five Year Plan, an altogether new approach adopted towards tribal development. This was termed as Tribal Sub-plan. It envisaged the total development of the tribal areas and provided the mechanism for integrating the developmental activities of the government and the semi government organizations by financing through the Integrated Tribal Development

Project (ITDP). The Sub-Plan aimed at narrowing the gap between the levels of development of tribal and other areas, and to improve the quality of life of the tribal communities in general (Planning Commission of India, 2002).

### **Sixth Five-Year Plan (1980 -85)**

The Sixth Plan continued the Sub-Plan approach of the Fifth Plan. This supplemented by target beneficiary approach with the objective of narrowing the gap between the level of development of the tribal and other developed communities and bringing about a qualitative change in the life of a tribal community. The strategy of development lays emphasis on consolidation of the gains of protective measures, programmes of full employment, education and health services. The programmes under different sectors of development required to intensify with suitable modifications to remove the present inadequacies in implementation (Lal, 2000).

### **Seventh Five-Year Plan (1985-90)**

The basic premises of the Tribal Sub-Plan continued in the Seventh Plan also. The programme of tribal development with ITDP pattern was continued in the Seventh Plan also without any basic or major changes in the approach, pattern or structure, but better co-ordination was sought between various agencies, and social services were given priority. LAMPS (Large Agricultural Marketing Societies) were to be strengthened through broadening their popular base. Seventh Plan paid attention towards the rehabilitation of poor tribal and the removal of tribal women's backwardness (Lal, 2000).

### **Eighth Five - Year Plan (1992 -97)**

In the Eighth Plan, taking in view of the problem related to the implementation of schemes for tribal development, the planning commission tried to be more realistic. The Plan largely emphasized the re-orientation of administrative structural levels for functional co –ordination, interaction and effective delivery of services. The strategy of Eighth Plan also specifically aimed at improving the living environment of the tribal by giving those better social and civic amenities and facilities (Lal, 2000).

### **Ninth Five-Year Plan (1997-2002)**

Ninth Five Year Plan (1997-2002) has the strategy to achieve a seven percent growth rate for the economy. The main objectives of the Ninth Plan were the generation of adequate productive employment, eradication of poverty, empowerment of women and socially disadvantaged groups. It aims to ensure food and nutritional security for all, particularly the vulnerable sections of society. The Ninth Plan therefore, contemplates to implement people oriented planning in which the, government and the people particularly the poor can fully participate (Planning Commission of India, 2003-2004).

### **Tenth Five-Year Plan (2002-2007)**

To tackle the various unresolved problems of the tribal, the Tenth Plan formulated a comprehensive National Policy for Empowering Tribal through their integrated development, which will lay down the responsibilities of the different wings of Government with appropriate accountability (Planning Commission of India, 2003-2004).

### **Eleventh Five - Year Plan (2007-2012)**

Institutions like NCW, National Human Rights Commission, SC/ST Commission; Safai Karmacharis Commission urged to take up SC/ ST women's issues as priority. All the schemes of the various Departments, implementation of the Scheduled Caste Sub-Plan (SCSP) and Tribal Sub-Plan (TSP) maximized by earmarking of the funds in proportion to the SC/ST population. An important agenda for the Eleventh Plan was to ensure that the rights of tribal women over community land and forest produce were recognized and established. The economic base of tribal and other villages strengthened to prevent migration. The plan also purports to encourage, document and popularize tribal women's knowledge of indigenous, traditional healing practices. It tried to include voices of tribal women in both National and State-level planning forums that deal with women's issues (Planning Commission of India, 2008).

### **Twelfth Five - Year Plan (2012-2017)**

The inadequacy in the implementation of Tribal Sub-Plan (TSP), the Planning Commission constituted a Task Force chaired by Dr.Narendra Jadhav to review, re-examine and revise the existing TSP Guidelines in 2010. The Task Force found that the implementation of the guidelines has remained inadequate and hardly any Ministry is showing its TSP outlays under a separate Budget Head (major head 2225 and minor head 789 & 796). Moreover, allocations shown by Ministries are notional and lack criteria/assumption, transparency and uniformity in fund allocation. Hence, it is impossible to quantify the total amount allocated and/or spent by the Central government under TSP. Taking into account the problems, the Task Force recommended that substantial reforms be introduced in the TSP from 2011-12 for Central Ministries/Departments with a further aim to refine it from the 12 Five Year Plan.

The Draft Approach Paper (DAP) to the 12 Plan has also recognised many deficiencies in development of STs and raised concerns over the weaknesses in the process of implementation of policies and programmes

meant for these communities. It talks about devising a new system in the 12 Plan to overcome the past difficulties experienced in TSP.

### **Key Suggestions for the 12 Plan**

Taking into account the major gaps in implementation of TSP, to strengthen the implementation of TSP much more concerted efforts are required by the government. Following are some of the broad recommendations that emerge from the analysis, which could be incorporated in the 12 Plan.

**I.** Plan allocation for STs in the Union and state budgets should be in proportion to their population.

**II.** Funds exclusively meant for the welfare of STs should not be used for other purposes/sectors. Several instances have been found in some of the states wherein TSP funds have allegedly been diverted for other purposes such as expenditure on the Commonwealth Games 2010; construction of roads, bridges, stadiums, buildings and other State-owned assets like hospitals, flyovers and engineering colleges.

**III.** Non-Lapsable Central Pool of Resources for STs should be created and all the unspent amounts be transferred accordingly.

**IV.** The line ministries and departments of the Central and State governments that have not allocated the earmarked funds for TSP so far must do so by introducing special/exclusive/tailor-made projects. There are around 43 Union Ministries and Departments, which have not allocated funds for STs, due to their nature of engagement either as regulator, their primary role of policy making or being responsible for creating infrastructure.

**V.** Without corresponding schemes and tailor-made projects, no allocation should be made for TSP. Many departments and ministries have made notional allocations without exclusive schemes benefitting the STs. The “general sector” schemes should revise their norms and guidelines for creating special provisions and tailor-made projects for the development of STs. Several of the major development schemes of the Central government have no clear mechanism to earmark funds for STs.

**VI.** Most of the schemes rendering social services have very less focus on entrepreneurship and skill development. The general sector schemes (like SSA, schemes in higher education, ICDS, NRHM and JNNURM) do not have much clarity in their norms and guidelines about the specific provisions for STs. Scheme guidelines of IAY, that stipulate providing at least 20 percent of the allocation for STs, are worth emulating. Likewise, the guidelines of Swarnajayanti Gram Swarozgar Yojana (SGSY), which focuses on creating livelihood, seeks to ensure that SCs and STs would account for at least 50 percent of the assisted beneficiaries.

**VII.** Comparable beneficiary-disaggregated data on STs for each scheme must provided as against the data on the scheme outlays. A few schemes present beneficiary data in their reporting format. While ICDS and NRHM report fund allocations under minor heads, the supporting data on beneficiaries not provided. Further, important documents of the Union Ministries like Annual Reports, Outcome Budgets and Results Framework Documents (RFD) are not providing adequate information about the priority for SCs and STs in terms of physical targets and financial allocations.

**VIII.** Central Plan Assistance (CPA) for states should allocate funds for STs with proper revision in the norms and guidelines. Apart from the Centrally Sponsored Schemes and Central Sector Schemes, a substantial amount of funds goes through the CPA to states without outlining any physical and financial provisions for STs. Schemes like Rashtriya Krishi Vikas Yojana (RKVY), Backward Regions Grant Fund (BRGF), JNNURM and Member of Parliament Local Area Development Scheme (MPLADS) are not allocating funds for STs.

**IX.** The Finance Ministry in consultation with the Planning Commission and the ministries concerned at the Union and state levels must make accountable for the allocation to TSP as per the guidelines.

**X.** An independent authority/commission chaired by the Cabinet Secretary/Chief Secretary should created for the progression of STs with necessary administrative, executive and accountability mechanisms to monitor TSP up to the district level (CBGA, 2011)

## **Tribal Sub Plan**

The Tribal Sub Plan (TSP) Strategy has adopted for all round development of tribal areas throughout the country since Fifth Five-Year Plan. Under the TSP approach, almost entire tribal inhabited areas have covered, depending upon their population percentile under one of the following.

- Integrated Area Development Project (ITDPs)
- Modified Area Development Approach (MADA)
- Clusters
- Primitive Tribal Groups

The TSP approach ensures allocation of fund for tribal areas from State Plan as well as Central Ministries, at least proportionate to population of tribals in the state (from state plan) and to the overall proportionate tribal population for the country from the budget of Central Ministries and Financial Institutions (Sinlung, 2008).

The strategy of Tribal Sub-Plan introduced in the Fifth Five Year Plan implemented in 21 States and two Union Territories, covering all the States/UTs where Scheduled Tribes have been specified except tribal majority States and UTs.

### **The essential features of TSP are:**

**(i)** Recognise that there is no uniform solution to the variety of problems facing tribal regions and tribal communities; therefore, accept the uniqueness and formulate policies, programmes and schemes to suit each individual situation and especially for vulnerable sections like Primitive Tribal Groups (PTGs), bonded labourers, shifting cultivators, forest villagers, displaced persons, etc.

**(ii)** Evolve appropriate frame for development with emphasis on tribal people at the national and state level through Sub-Plan exercise, ensuring adequate quantification from State and Central Plan funds, with budgetary mechanisms (Separate Demand / Major Budget Heads etc.) to ensure accountability, non-divert ability and full utilisation.

**(iii)** Accord is the highest priority measures to protect tribal people from exploitation.

(iv) Restructure the administrative and institutional set up to suit the local needs and aspirations.

(v) Supplement state efforts substantially by the Union Government through Special Central Assistance (SCA).

In May 2003, the Ministry of Tribal Affairs issued fresh guidelines for release and utilization of Special Central Assistance (SCA) for Tribal Sub-Plan. The prominent features of the new guidelines are:

- The tribal population living below poverty line should cover alone under SCA-financed activities, with a special emphasis on raising their socio-economic status to that of the rest of the population in the Blocks/District/State.
- Adherence to the provisions of the Panchayati Raj Act of 1992 and the Provisions of the Panchayats (Extension to Scheduled Areas) Act of 1996 in planning and implementation of TSP, including the SCA funds, should ensured in letter and spirit.
- Before sanctioning the SCA to TSP, it is a pre-requisite to formulate specific schemes/programmes that have a direct bearing on the economic development of tribals as suitable to their social, economic and ecological situation. The schemes/programmes thus formulated should be sent in advance as proposals to the Ministry for examination/discussion and approval (Menon, 2003).

### **Government Schemes and Programmes related to agriculture for the welfare of Tribal Women**

Agricultural Development is a complex process and challenging one. There is good evidence to show that agricultural growth benefits even the poorest but, regrettably, the impact on the poor appears to remain too modest to support a lifestyle meeting the minimum norms of human development like adequate education, health and nutrition and proper housing (Rao and Jeromi, 2000).

Regardless of the level of development achieved by the respective economies, women play a pivotal role in agriculture and in rural development

in most countries of the Asia-Pacific Region. Women play an indispensable role in farming and in improving the quality of life. However, their contributions often remain concealed due to some social barriers and gender bias. Even the government programmes often fail to focus on women in agriculture. This undermines the potential benefits from programmes, especially those related to food production, household income improvements, nutrition, literacy, poverty alleviation and population control. Equitable access for farmwomen to educational facilities would certainly improve their performance and liberate them from their marginalised status in the society (Prakash, 2003).

The Central and State government of India had implemented several schemes and programmes for the welfare of tribal women, some of the schemes and programmes are discussed under the following heads.

### **Land Purchase Scheme for Scheduled Caste/Tribe Women**

Tamil Nadu state government had implements this scheme exclusively for poor women belonging to the schedule caste and schedule tribe by the Department of Adi Dravidar and Tribal Welfare. The Land Purchase Scheme aims to provide agricultural land and various other agricultural inputs, to the landless, small and marginal female farmers belonging to scheduled castes and tribes.

The beneficiaries can avail maximum of Rs.2 lakh for the purchase of agricultural land and Rs.1 lakh for land development as a loan. Tamil Nadu Adi Dravidar Housing and Development Corporation (TAHDCO) and banking institutions at the ratio of 50:50 would share the amount for the beneficiaries (Ministry of Tribal Development, 2011).

### **Macro Management Mode of Agriculture**

Macro Management Scheme aims at all round development in Agriculture through Work Plans prepared by the States. These include:

- Reflection of local needs/crop/regions specific/priorities etc
- Providing flexibility and autonomy to States
- Optimum utilization of scarce financial resource
- Maximization of returns
- Removal of regional imbalances

The Centre and the States in the ratio of 90:10 would share the outlay of the Work Plan. In the case of North Eastern States, however, the entire expenditure will be borne by the government of India. Central assistance for work plans will be in the ratio of 80% by grants and 20% by loans. Individual, family, community, women, SC/ST, and OBC can avail and benefit from Macro Management Scheme. Selection of beneficiaries had done through recommendation of District Agriculture Officer.

### **Integrated Cereal Development Programme (ICDP)-Rice**

Increase in the overall productivity of rice based cropping system in Eastern, Northeastern and Southern States helped in the adoption of cropping system's approach by the farmers. Centrally sponsored scheme is for the welfare of individual, family, community and SC/ST and OBC. The major programme components covered under the ICDP-Rice are:

- Field Demonstration
- Farmers Field School
- IPM Demonstration
- Seed Distribution
- Farmers Training
- Sprayer P.P. Equipment
- Hand Tool
- Farm Implements
- Power Tiller

Selection of beneficiaries had done through recommendation of District Agriculture Officer (Ministry of Agriculture, 2005).

### **Seed Village Programme**

Quality seed is the key input for realizing potential productivity. Ideally, seed should replace every year for hybrids and every three to four years for non-hybrids. Therefore, it is necessary to improve the availability of quality of the seeds to raise the Seed Replacement Rate (SRR). The major programme components covered under the Seed Village Programme are:

- Organizing seed production in cluster (or) compact area
- New high yielding varieties should replace the existing local varieties
- Increasing the seed production
- To meet the local demand and timely supply at reasonable cost
- Self sufficiency and self reliance of the villages
- Increasing the replacement of seed rate

The Scientists will identify suitable area for seed production. The foundation/ certified seeds or University labeled seeds will supplied by the University through Krishi Vigyan Kendras (KVKs) and Research Stations at 50% subsidy cost to the identified farmers in the area. The farmers will use these quality seeds and take up their own seed production in a small area (1 acre) for their own use. The crops are Rice, Pulses and Oilseeds (TNAU, 2008).

### **Integrated Scheme of Oilseeds, Pulses, Maize and Oilpalm (ISOPOM)**

The Department of Agriculture and Cooperation has been implementing the following Centrally Sponsored Schemes under TMOP&M for increasing the production of oilseeds, pulses, maize and oil palm in the country:

1. Oilseeds Production Programme (OPP)
2. National Pulses Development Project (NPDP)
3. Accelerated Maize Development Programme (AMDP)
4. Oil Palm Development Programme (OPDP)

### **Oilseed Production Programme (OPP)**

Centrally Sponsored Oilseeds Production Programme (OPP) implemented in 28 States covering 408 selected districts in the country. The programme designed to supplement the efforts of the state governments to increase the production and productivity of various oilseed crops such as groundnut, rapeseed /mustard, soyabean, sunflower, sesame, castor, safflower, linseed and niger grown in the state. The mission was design to harness the best production, pricing and management technologies to

accelerate self-reliance in oilseeds and vegetable oils through effective implementation strategies.

### **National Pulse Development Programme**

Under this programme, emphasis had been given to increase the coverage as well as the yield per unit of area. It is a centrally sponsored scheme for community, women farmers, SC/ST and OBC. The major programme components covered under the NPDP are:

- Purchase of breeder seed, certified seed and distribution of certified seed and minikits
- Organisation of Block and IPM demonstrations
- Distribution of sprinkler sets
- Distribution of improved farm implements and plant protection equipments
- Distribution of Rhyzobium cultures and micro-nutrients and
- Training of farmers

Selection of beneficiaries had done through recommendation of District Agriculture Officer.

### **Accelerated Maize Development Programme (AMDP):**

Programme was implemented in all maize potential districts in 26 States. There has been increasing trend in area, production and productivity of maize since the inception of the scheme in 1995-96, Mission-Mode Approach under TMOP&M. This scheme was sponsored by central government for the welfare of community, women, SC/ST and OBC. The major programme components covered under the AMDP are:

- Input demonstration
- Incentive for improvement of farm implements
- Farmers Training Programme
- Farmers Field School
- Integrated Pest Management Demonstration
- Publicity through Electronic Media

Selection of beneficiaries had done through recommendation of District Agriculture Officer.

### **Oil Palm Development Programme (OPDP)**

Oil Palm cultivation assumes significance in the augmentation of the indigenous availability of edible oil as it is the highest oil yielding perennial crop. The components of the scheme are:

- Assistance for planting material
- Assistance for cultivation costs
- Drip irrigation
- Training
- Extension and Publicity
- Development of seed gardens
- Front line demonstrations
- Leaf Nutrients Analysis Laboratories
- Testing of oil palm genotypes under varied environmental conditions
- Assistance for diesel pump sets
- Expansion of area of Oil Palm and
- Installation of drip irrigation system

Selection of beneficiaries had done through recommendation of District Agriculture Officer (Ministry of Agriculture, 2005).

### **National Scheduled Tribes Finance and Development Corporation**

National Scheduled Tribes Finance and Development Corporation (NSTFDC) was been set up by the Government of India in April, 2001 as a Government Company under Section 25 (A Company not for profit) of the Companies Act, 1956. NSTFDC is a fully owned Government of India Undertaking under the Ministry of Tribal Affairs and managed by a Board of Directors with representation from Central Government, State level Channelising Agency, Financial Institutions and persons representing Scheduled Tribes etc. NSTFDC is the apex institution for financing, facilitating and mobilizing funds from other sources and promoting human resource and

economic development activities of the Scheduled Tribes. The NSTFDC operates in

1. Financing overall viable income generating schemes for the Scheduled Tribes having annual family income upto Double the Poverty Line (target group) through the State Channelising Agencies (SCAs) and other recognized institutions nominated by the respective State /UT Governments.
2. Providing Micro-Credit Finance
3. Providing grants for skill development programmes, also channelised through the State Channelising Agencies
4. To fill the critical gaps by providing backward and forward linkages, for activities undertaken by the target group
5. Providing advisory services to target group and SCAs
6. Upgrading skills of officers of State level channelising agencies, through periodic training programmes
7. Providing grants to SCAs for enabling them to computerize their database pertaining to NSTFDC assisted schemes in their States/UTs

The beneficiary (ies) should be from Scheduled Tribes Community. Annual family income of the beneficiary (ies) / member (s) of Co-operative Society or any other form of Legal Association should not exceed Double the Poverty Line (DPL) income limit (presently Rs.31,952/- p.a. for rural areas and Rs.42,412/- p.a. for urban areas) Ministry of Tribal Affairs ([www.nstfdc.nic.in](http://www.nstfdc.nic.in)).

## **E. Review of Related Studies**

### **Women in agriculture**

Khanduri and Chandra (2011) carried out a study on “Participation of Women in Decision Making Process in Rural Garhwal of Uttarakhand”. The study was based on 110 women respondents selected randomly from Chamoli district of Uttarakhand with the aim to examine the participation of women in decision-making process related to home and farm affairs. The study revealed that the overall pattern of decision-making process related to home and farm affairs, the maximum decisions were taken by all family

members (33.64 per cent) followed by 27.27 per cent, 20.91 per cent and 18.18 per cent decisions taken by women and male, women alone and male alone, respectively. The participation of women in decision-making process related to home affairs was comparatively lower (13.64 per cent) than farm affairs (28.18 per cent), while in case of males, the situation was just reverse as the participation of male in decisions related to home affairs (27.27 per cent) was higher than the farm affairs (7.27 per cent). Thus, males were dominating the scene regarding decisions related to home affairs as compared to their female counterparts, whereas in decisions relating to farm affairs it was the women who dominate the scene. This was a unique situation of the rural Garhwal of Uttarakhand, where women perform more than 80 per cent home and farm activities but their participation in decision-making has been less than 20.91 per cent. It shows that there was a clear-cut gender bias in the society, which explains traditionally subjugated status of women, as well as their role in decision-making process. These gender biases shall improve with the improvement in the education of women in rural areas of Uttarakhand.

The study on “Drudgery Experiences of Gender in Crop Production Activities” was conducted by Mrunalini and Snehalatha (2010), was an attempt to obtain and analyze the gender prioritized drudgery experiences in crop production activities through a sample survey of 200 farmers distributed equally by gender. The survey was conducted in five adopted villages of Chevella Mandal, Andhra Pradesh in the year 2007-08. Results of the study highlighted that drudgery in crop activities were differently prioritized men and women. The principal factors contributing to the set priorities was found as work demand on time and posture at work for men and work demand on time, posture, work exertion, perceived difficulty and work load for women. The results guide in selection of suitable technology that can reduce the factors of drudgery.

Chayal *et al.*, (2010) carried out a study on “Analysis of Role Performed by Women in Agriculture”. The study has undertaken in Bundi District of Rajasthan. A sample of 200 farm women was selected as respondents through proportionate random sampling. The selected

respondents were interviewed personally using well structure questionnaire. The findings showed that cutting, picking, cleaning of grains, drying of grains, storage, processing, weeding, winnowing was the major farm operations mainly performed by farm women. Participation of farm women in agriculture was significantly affected by socio-economic variables like age, family, income and landholding.

A study on “Participation Level of Rural Women in Agricultural Activities” was carried out by Amin *et al.*, (2009). It was planned with the objective of determining the involvement of the rural women in the agricultural activities. Tehsil Faisalabad was the area selected for the study. Eight villages were select at random. From each selected village 48 farm families were randomly select, making a sample of 384 farm families comprising husband and wife leading to a total 768 of respondents. To draw the conclusions, the data has collected, analyzed and interpreted by using appropriate statistical package. The results reveals that most of the activities were dominated by the husbands with the remarkable contribution of wives, such as wheat harvesting, wheat binding, wheat threshing, prepare land for sugarcane, sugarcane sowing, sugarcane peeling and binding, gur making, sowing paddy, weeding, harvesting. Contribution of wives’ has seen higher in seed cleaning and picking of vegetables. Clear policies and strategies should formulate on the promotion of women’s advancement in agriculture.

Mande *et al.*, (2007) carried out a study on “Knowledge of Farm Women regarding Post Harvest Technology”, in Ahmednagar District of Maharastra state, it was found that a larger proportion of farmwomen were middle aged, illiterate to neo-literate, belonging to medium socio-economic status, had small size of land holding and medium state of modernization. They used least information sources and had medium level of politeness with low social participation at large. Majority of farmwomen had low level of knowledge in storage methods (86 per cent), control measures against pests (80.67 per cent), storage pests and their nature of damage (80 per cent), drying period (67.33 per cent) and low cost storage structures (66.66 per cent). All the selected independent variables except social participation namely, age education, socio-economic status, farm size, state of

modernization, social participation, sources of information, politeness, involvement in farming were found to be related with knowledge of farm women about Post Harvest Technology, (PHT).

Kiranjot and Kunwarjeet (2005) carried out a study on “Women Participation in Farming under Varying Landholdings” in rural Punjab, represented by 5 distinct landholding categories clearly indicates an active participation in most of the selected activities but ranged from 65.21 per cent to 98.40 per cent in varied landholding categories and in different activities. Women belonging to landless families were participating in harvesting, weeding and sowing operation jointly with female and male members. The picture was similar 10 cases of families of small and marginal landholdings. The independent participation of women and joint participation with other women, however, decreased with increase in land holding and participation in harvesting and weeding decreased substantially. The least, independent participation of women was observed in seed treatment and fertilizer application mainly due to the technical aspects involved. Low participation of women in irrigation management to the restriction of movement outside the house at odd hours.

Antwal *et al.*, (2005) carried out a study on “Decision Making Pattern of Rural Women” in three agro-climatic zones of Maharashtra underlying Marathwada Agricultural University, Parbhani, to know the decision making pattern of rural women with respect to three major areas-farm, animal husbandry and home and family. A total of 3000 rural women belonging to five distinct landholding categories were interviewed personally with the help of structured interview schedule. The collected information was analyzed by using simple frequency percentages. The result shows that independent male decision was prominent in both farming as well as animal husbandry. Whereas in the area of home and family, joint decision making figured at the top showing greater partnership between male and female members. However, male members exercised greater dominance over female in all the three areas.

## **Tribal women in agriculture**

Kalyani *et al.* (2011) carried out a study on “Role Performance of Tribal Women in Agriculture - A Study in Agency area of East Godavari District, Andhra Pradesh” with the following objectives as to ascertain the work participation rate, their contribution to the family income and role performance of tribal women. A sample of 100 tribal farm women, 25 each from four panchayats *viz.* Thallapalem, Pedagedada, Bornagudem and Thantikonda of two agency mandals (Rampachodavaram and Rajavommangi) in East Godavari District of Andhra Pradesh were selected based on stratified random sampling procedure. The tribal women worked for about 12 to 15 hours per day involving in agriculture and allied activities. The tribal women collected minor forest produce like amla, soapnuts, shikakai, adda leaves, hill brooms, firewood, bamboo, gumkaraya (kovela gum), and sold these products in the nearby shandy and exchanged the produce for their daily requirements through barter system. Results revealed that the work participation rate and role performance of tribal women in agriculture and allied sectors was higher as compared to their male counterparts and contributed lion's share to the family income. The study revealed that lower the economic status of the family, the higher was the contribution towards their family income.

Chauhan (2011) carried out a study on “Role Performance of Tribal Farm Women in Agricultural and Animal Husbandry in Gujarat” with the following objectives as to study the participation of the tribal farmwomen in agriculture, animal husbandry and household activities along with correlations and study the tribal farmwomen’s involvement in decision making at home, crop and animal husbandry. From the Navsari district, the six villages namely Adada, Aat, Chhapra, Hansapor, Matwad and Mogar were randomly selected for the study. From the total, 6 tribal dominated villages and 120 respondents were selected. Further, from the same list of tribal farm families, the tribal women who were decision makers and within the age group of 20-55 years were screened out. Finally, by using random sampling technique, 20 respondents from each village were selected, thus a random sample of 120 respondents were selected for the study. The statistical tools such as frequency, percent and correlation coefficient were used to interpret the data.

Based on the study it was seen that participation of farm women was the highest in sowing, weeding and nipping / picking and threshing. Farmwomen took self-decision for decoration of house (79.17 per cent), selection and preparation of food (70.83 per cent) in case of home management. Farm management has dominated by husband and majority of the farm management decisions has taken by their husbands; animal husbandry management was completely dominated by women's self-decision. The relationship between independent variables like age, education, herd size, land holding, family size and number of children of the respondents and their participation in crop cultivation were observed positively significant. Whereas the negative relationship was observed in case of occupation, type of family and age at marriage. The relation between independent variables of the respondents and their participation in animal husbandry was found negative for all of the independent variables except type of family.

Joshi *et al.*, (2011) carried out a study on "Technological Empowerment of Tribal Women through National Agricultural Innovation Project", was an attempt to study the impact of National Agricultural Innovation Project (NAIP) on technological empowerment of tribal women with regard to improved animal husbandry practices. The study was conducted at 8 villages of Kherwada panchayat samiti of Udaipur District, Rajasthan covering 120 tribal women. The results indicated that NAIP had made significant impact on technological empowerment of tribal women as the beneficiaries exhibited higher knowledge than the non-beneficiaries in all the components of improved cattle, goat and poultry rearing practices.

Borgohain and Akand (2011) in the tribal development blocks of Kamrup and Lakhimpur Districts of Assam, carried out a study on "Time Utilization Pattern of Tribal Women in Animal Husbandry". Data was collected from 348 tribal women by a pre-designed interview schedule. Different socio-personal characteristics showed that most of the tribal women were in older age group, belonged to nuclear and not heading the family, illiterate and rearing smaller herd/flock size. Time spent pattern of the tribal women in various animal husbandry operations in descending order, were preparing feed for animals (29.33 minutes), providing water to the animals

(21.24 minutes), cleaning animal shed (20.42 minutes), grazing animals (19.28 minutes), milking (18.06 minutes), cutting and bringing fodder (16.39 minutes). The study also revealed that most of the animal husbandry operations were female dominated as compared to their male partners. Regression analysis proved that family educational status, flock size (sheep/goat) and age of the tribal women were highly correlated with time spent on animal husbandry operations. Similarly, regression analysis indicates that herd size and family education had influence of 18 per cent with the time-spent behaviour of tribal women.

Bose (2010) carried out a study on “Community-based Adaptation of Tribal Women to Climate Change in Semi-arid India”. The results of the study project and the impact of recurring droughts on indigenous communities in semi-arid districts of western India revealing the root causes of drought in this region, indigenous peoples’ perceptions of drought-related vulnerabilities in relation to climate change and relevant action to combat the problem. Further, the adequacy of policy responses and community adaptation strategies were analysed. The study showed that several policy options failed to reflect the development of the area, leaving indigenous people vulnerable to climate change. The effect of lack of finance after crop damage from drought and indigenous communities’ sole dependence on forests (as safety net) had overcome through women’s self-help groups adopting tribal, community-based adaptation initiatives. It concluded with the recommendation that community-based adaptation should be identified and prioritized in policy designed to implement drought-risk reduction activities.

Suthar and Kaushik (2010) carried out a study on “The Impact of Physical Work Exposure on Musculoskeletal Problems among Tribal Women of Udaipur District”. It was undertaken in six villages of Udaipur district namely Kiyawtum Ka Falan, Bhutia, Khurabad, Dharod, Dal and Gud. A random sample of 30 rural tribal women ranged between the age group of 20 years to 50 years was selected. Incidence of musculoskeletal symptoms, information on causes of pain, workload and severity of pain were assessed by self-structured questionnaire and body map technique. Results indicated that work related musculoskeletal problems and disorders affected all the parts of body

viz. hands, wrists, elbow, neck, shoulder and back in upper body region, hips, knees and calf muscles in lower body region while performing the activities at home as well on farm.

Chandra *et al.* (2009) carried out a study on “Role of Rural and Tribal Women in Conservation of Village Ecosystem: A Case Study of Nanda Devi Biosphere Reserve, India”. This study focused on understanding gender roles, responsibilities, and its access to control over resources of rural and tribal women in conservation of village ecosystem in and around village of Nanda Devi Biosphere Reserve. The findings primarily dealt with gender relationships and gender-sensitive strategies in promoting village ecosystem management through partnerships with local communities.

Kumar *et al.*, (2002) conducted a study on “Utilization Pattern of Knowledge Gained through Various Training Programmes by the Tribal Farmers and Farm Women of Meghalaya”. In order to assess the effectiveness of training in knowledge gain and its subsequent utilization pattern, the study was conducted among 258 tribal farmers and farmwomen of Meghalaya who had undergone five different training programmes (Mushroom cultivation, fruit preservation, piggery, poultry and rabbitry). The study had shown that the farmers gained more knowledge as well as ahead in its utilization also in comparison with the farm women in all the cases except in fruit preservation. Significant association had also been found between some selected socio-economic characteristics of the respondents and their knowledge utilization pattern (Plate I).

Plate I

Plate II