



## A KEEN ANALYSIS OF GENDER DIMENSIONS IN AGRICULTURE: A CASE STUDY OF MIZORAM

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### ABSTRACT

India as an agrarian economy employs large section of the society in primary economic activity. India being endowed by diverse physical features host numerous tactics of farming's carried out by both gender, None can ignore the participation of each gender, the necessity of gender roles in agricultural activities within the country become an interesting research gap, thus, research has been conducted to find out gender dimensions, by assessing female work participation in Mizoram and examining the contribution of female workforce on agriculture in Mizoram. To ensure wide and explicit coverage of the study literature review has been done specifically for this paper, reports published by govt and reliable organizations have been splendidly covered to draw the finest output.

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## INTRODUCTION

Women are the backbone in the development of rural and national economies. They comprise 43 percent of the world's agricultural labor force, which rises to 70 percent in some countries. In Africa, 80 percent of the agricultural production comes from small farmers, who are mostly rural women. Women comprise the largest percentage of the workforce in the agricultural sector, but do not have access and control over all land and productive resources (SaquinaMucavele, MuGeDe), "Women, Gender and Development, Republic of Mozambique - Southern Africa". 19th October 2012. Here, gender refers to the relation that exists between women and men no matter what form the relation takes. According to Moore (2001:78), gender is 'the way society expects people to behave on the basis of their physical difference'. Moreover, other scholars Estegenet, Fanaye and Hirut (1999) states that, gender describes all the socially given attributes, roles and activities connected to being a male or female. In many societies people think that there are different kinds of activities performed which are assigned to men and women. Some tasks

are exclusively left to women and others to men (Moore, 2001). Gender role among agriculturalists has its own long history. Scholars indicated that women were originally in charge of gathering food and since they spent much of their time at home, they came to know means of planting their own food. Though women were considered to have started cultivation, through time, the situation has been changed and it became the duty of men. However, the role and the contribution of both male and female, in the agricultural activities, is not necessarily the same in all parts of the country. In addition assisting their husband in various agricultural activities as soil preparation, manuring, weeding, harvesting, etc, women also spend their time in breeding of livestock (Frank, 1999). In spite of their active participation in agricultural production activities, women get little value due to their lower position in the society where men are considered as the producer (Hanna, 1990). In some cases, both women and men are equally considered as producers and have equal position and value in both agricultural production and decision making (Tadele, 1994). In India, agriculture remains the main occupation and around 70 per cent of the population is engaged in it. Many women in developing countries are occupied in agriculture. Like other low-income countries where women contribute 60-80 percent of agricultural activities, in India around 70 percent of the labor in farming activities was contributed by women according to the record of Registrar

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General of India in 2011. Swaminathan (*“Gender Issues in Agriculture”*, 30th December 2005.) the famous agricultural scientist describes that it was woman who first domesticated crop plants and thereby initiated the art and science of farming. While men went out hunting in search of food, women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food, feed, fodder, fibre and fuel. Women have played and continue to play a key role in the conservation of basic life support systems such as land, water, flora and fauna. They have protected the health of the soil through organic recycling and promoted crop security through the maintenance of varietal diversity and genetic resistance.

### Objectives of the Study

- )] To examine gender roles in agricultural activities in India.
- )] To assess female work participation in Mizoram
- )] To analyze the contribution of female workforce on agriculture in Mizoram.

### Gender Roles in Agricultural Activities in India: Overview

Agriculture has been the backbone of the Indian economy and it will continue to remain so for a long time. It has to support almost 17 per cent of world population from 2.3 per cent of world geographical area and 4.2 per cent of world's water resources. The economic reforms, initiated in the country during the early 1990s, have put the economy on a higher growth trajectory. The workforce engaged in agriculture in the year 1980-81 and 2006-07 witnessed a very small decline; from 60.5 percent to 52 percent. India has an estimated 180 million hectares of farmland with 140 million of which are planted and continuously cultivated. The traditional agriculture is still dominant as many farmers depend on livestock in crop production, for manure as fertilizers, and the use of animal powered ploughs. Women usually spend more hours in farms than men in agricultural activities. Women make essential contribution not only to the agriculture but also to household expenditure and protection of children's welfare. Table 3.1 presents the roles of women in various agricultural activities as per the record of Registrar General of India. The major livelihood activities here are (i) land preparation, (ii) seed cleaning and sowing, (iii) inter cultivation activities, and (iv) harvesting, reaping, winnowing, drying, cleaning and storage (post-harvest activities).

**Table 1.1. Share of Farm Women in Agricultural Operations**

Sl. No	Activities	Involvement (Percentage)
1	Land preparation	32
2	Seed cleaning and sowing	80
3	Inter cultivation activities	86
4	Harvesting reaping, winnowing, drying, cleaning and storage	84
	Average contribution	70.5

Source: Registrar General of India, New Delhi, 2011

Table 1.1 shows extremely higher contribution of women in the various agricultural activities in India that on the average they constitute 70.5 percent of the total labour in agriculture. The activity where the contribution of women is highest is interring cultivation, i.e. cultivation implies that diversification of different crops sown in the same field, where they contribute 86 percent of farm manpower. This is followed by harvesting and post-harvesting activities (84 percent), while it is lowest for land preparation (32 percent).

**Table 1.2. Statistics indicating the contribution of Women in Agricultural Livelihoods in India**

1	Total Women Population (2011)	494.83 million
2	Total Women Workers (2011)	127.05 million
3	Total Women Main Workers (2011)	72.65 million
4	Total Women Marginal Workers (2011)	54.40 million
5	Total Women Owner Cultivators (2011)	41.30 million
6	Total Women Agriculture Wage Workers (2011)	50.09 million
7	Total Women Household Industry Workers (2011)	08.08 million
8	Total Women Other Workers (2011)	27.57 million
9	Total Women in Organized Sector (2001)	04.80 million
10	Total Women in Livestock, Forestry, Fishing, Hunting, Plantation, Orchards and activities (1991)	01.32 million

It is understood that land preparation work is by nature male friendly, so relatively lower female role is being observed. The observations here points to the fact that women are the main workers in Indian agriculture. Much of these agricultural works are by nature physically demanding, involving long periods of standing, stooping, bending, and carrying out repetitive movements in awkward body positions. Even when technological change has brought about a reduction in the physical drudgery of agricultural work, it has introduced new risks, notably associated with the use of sophisticated machinery and the intensive use of chemicals often without appropriate safety measures, information and training. The table shows the varying demand for agricultural women labour in India according to the seasons according of different activities. To enhance the above information, the various indicators of women's participation in agricultural livelihood activities are presented in Table 3.2. Table 1.2 shows statistics about women in India, which shows that there are millions of women who are engaged in agricultural activities for their livelihood. Another important source of data is Census of India (2011), according to which there are nearly 127 million cultivators, 107.5 million agricultural laborer's and 6 million other farm workers engaged in livestock, forestry and plantations. Of the total agricultural laborer's, 38.0 per cent were female and 61.9 percent male workers. Also, among livestock, forestry and plantation workers, 78.3 percent were male workers and 21.7 percent were female workers. About 99.2 percent of agricultural workers were reported to be unorganized and unprotected.

The women have significant contribution in the Indian agricultural practice and they constituted around half of the total workforce. According to 2011 Census, the percentage of women in rural areas who depend on agriculture for their livelihood is as high as 84 percent. At the same time, 33 percent and 47 percent of women workforce are cultivators and agricultural laborers respectively. Meanwhile, the data do not account for work in livestock, fisheries and various other ancillary forms of food production in the country. According to Human Development Report (2009), 94 percent of female agricultural labor force in crops cultivation was in cereal production, while 1.4 percent worked in vegetable production, and 3.72 percent were engaged in fruits, nuts, beverages, and spice crops. Women's participation rate in the agricultural sectors is about 47 percent in tea plantations, 46.84 percent in cotton cultivation, 45.43 percent growing oil seeds and 39.13 percent in vegetable production. While these crops require labor-intensive work, the work is considered quite unskilled. Women also heavily participated in ancillary agricultural activities.

**Table 3.3. Gender Distribution of Work Participation Rates**

Years	India		Mizoram	
	Male	Female	Male	Female
1971	52.50	19.69	-	-
1981	51.09	19.08	56.04	43.06
1991	51.08	22.05	55.18	44.82
2001	68.40	31.59	56.29	43.70
2011	74.49	25.51	59.74	40.26

Source: Census of India Reports, 1971-2011

According to the Food and Agriculture Organization, Indian women represented a share of 21 percent and 24 percent of all fishers and fish farmers, respectively. According to 55th of National Sample Survey (NSSO, 2001), agricultural labour households constitute nearly 32.2 percent of the total rural households. The self-employed in agriculture account for 32.7 per cent of the total rural households. In fact, the proportion of agricultural labour households increased from 30.3 per cent in 1993-94 to 32.2 percent in 1999-2000. While that of cultivating (self employed) households declined from 37.8 percent in 1993-94 to 32.7 per cent in 1999-2000. The proportion of female-headed households increased from 9.7 per cent in 1993-94 to 10.4 percent in 1999- 2000. Nearly 62.6 per cent of the rural households belonged to less than Rs. 470 monthly per capita expenditure class. Nearly 4.6 percent rural households reported that none in the family was (4) having any work, 27.7 per cent reported that only one male member was, usually working, while 27.8 households indicated that one male and one female member were usually employed. 22.8 percent female households reported that none of their person was usually employed and 39.6 percent mentioned that only one female member was usually working. The NSSO data further revealed that 7.2 percent of the rural households did not possess any land and 51 percent households possessed less than 0.4 hectare.

About 19.1 percent household possessed between 0.41 and 1 hectare and 11.5 percent between 1.01 and 2 hectares. Only 11.2 percent possessed land above 2 hectares. Thus by and large Indian farming is dominated by small and marginal farmers. In fact, the proportion of rural households not possessing any land or which possessed less than 0.4-hectare land was quite high in the states of Bihar, Goa, Maharashtra, Sikkim and Tamil Nadu. Also, the proportion of agriculture labor households was quite high in some of these states. It was 38 percent in Bihar, 41.7 percent in Maharashtra and Karnataka and 45.2 percent in Tamil Nadu. Another important source of data is Census of India (2001), according to which there are nearly 127 million cultivators, 107.5 million agricultural laborer's and 6 million other farm workers engaged in livestock, forestry and plantations. Of the total agricultural laborer's, 38.0 per cent were female and 61.9 percent male workers. Among livestock, forestry and plantation workers, 78.3 percent were male workers and 21.7 percent were female workers. About 99.2 percent of agricultural workers were reported to be unorganized and unprotected.

**Female Work Participation in Mizoram:** To have general idea on the status of female work participation in Mizoram, trends for gender distribution of work participation as observed in different Censuses is presented in Table 3.3. It can be observed that the female work participation rate in Mizoram has revolved around 40 percent since 1981, while the all-India

average is 25.51 percent as per the latest census. It is thus, clear that the female work participation in Mizoram is significantly higher than the all-India average. Table 3.4 presents the trend on the gender composition of main workers, marginal workers and non-workers in Mizoram since 1971. The percentage contribution of female workers on the total main workers decreased from 42.05 percent in 1971 to 36.56 percent in 2011. Similarly, female marginal workers decreased consistently from 69.77 percent in 1981 to 61.72 percent in 2011. However, the contribution of female marginal workers is significantly higher than that of their male counterparts throughout the period. At the same time, the percentage of female on non-workers has increased from 54.10 percent in 1971 to 56.66 percent in 2011. The trends being observed in this table indicate withdrawal of female workforce from main economic activity in Mizoram over time.

**Contribution of Female Workforce on Agriculture in Mizoram:** Agriculture occupies a prominent place in the economy of Mizoram. As per the Economic Classification of Workers in 2011 Census, about 55 percent of the total workers are engaged in the agriculture and allied sector. In the absence of adequate development in other sectors such as agro-based industries and other industries, it continues to be the main occupation of the people till today. Shifting cultivation (Jhumming) continues to be the prevalent method of cultivation. Though the Mizo society is patriarchal and male dominant, women are actively participating in the economic activities, mainly in agriculture. The women participation in various agricultural activities as observed in Population Census 2011 is presented in Table 1.5. Table 1.5 shows significant contribution of women in the various livelihood activities of agriculture in Mizoram. On the average, 40.26 percent of the total workforce is constituted by female and 36.56 percent of the total main workers are female. It is notable that the female workforce constituted highest portion in case of marginal cultivators (70.90 percent) followed marginal agricultural laborer (61.58 percent). At the same time, 39.96 percent of the workforce who are accounted as main cultivator, mostly shifting cultivation, was constituted by female. It is thus clear that female members of the society have contributed significant percentage in the agricultural activities in Mizoram in addition to their usual domestic responsibilities. Table 1.6 presents the gender distribution of persons across the economic classification of activities as per the latest census among the different districts of Mizoram. It can be observed that among all the Districts of Mizoram Aizawl has the highest number of main Cultivators both male and female (36249), where as Saiha has lowest number of main Cultivators (7064). We can see that Lunglei has highest number of Marginal cultivators (10677) and Serchhip has lowest number of Marginal cultivators (1054) among all the Districts. Meanwhile, Lunglei has highest number of total cultivators (45439). It may be noted that the Census classification of 'cultivators' includes all agricultural activities, excluding plantation, mostly cultivation and harvesting of annual crops. Considering the hill terrain of Mizoram where wet rice cultivation or terrace cultivation or other settled crops cannot be undertaken in majority of the cases, the persons involved in cultivation should be accounted for by shifting cultivation. Thus, 'cultivators' and shifting cultivators are synonymous in most cases in Mizoram. Since the total number of cultivators is found to be highest in Lunglei district, while the total population is highest in Aizawl district, it can be concluded that shifting cultivation is extensively practice in Lunglei district.

**Table 3.4. Gender Composition of Main Workers, Marginal and Non-Workers**

Year	Main Workers		Marginal Workers		Non-Workers	
	Male	Female	Male	Female	Male	Female
1971	57.95	42.05	--	--	45.90	54.10
1981	62.90	37.10	30.23	69.77	45.32	54.68
1991	61.32	38.68	32.68	67.32	46.99	53.01
2001	62.20	37.80	35.89	64.11	46.53	53.47
2011	63.44	36.56	38.28	61.72	43.34	56.66

Source: Directorate of Census Operation, Mizoram

**Table 3.5. Gender Distribution of Agricultural Workers in Mizoram, 2011**

Categories	No. of Persons			Percent		
	Male	Female	Total	Male	Female	Total
Total Workers	290740	195965	486705	59.74	40.26	100
Main Workers	263305	151725	415030	63.44	36.56	100
Main Cultivators	121598	80916	202514	60.04	39.96	100
Main Agri Labourers	16601	9863	26464	62.73	37.27	100
Marginal Cultivators	7884	19205	27089	29.10	70.90	100
Marg. Agri. Labourers	5887	9436	15323	38.42	61.58	100

Source: Primary Abstract of Population Census, 2011

**Table 1.6. General Distribution of Cultivators in Mizoram - District Wise**

District	Main Cultivators			Marginal Cultivators			Total Cultivators**		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
No. of Persons									
Mamit	16765	10172	26937	302	1430	1732	17067	11602	28669
Kolasib	10164	5316	15480	838	1674	2512	11002	6990	17992
Aizawl	20959	15290	36249	784	2233	3017	21743	17523	39266
Champhai	20080	15788	35868	782	1686	2468	20862	17474	38336
Serchhip	11394	9356	20750	295	759	1054	11689	10115	21804
Lunglei	21713	13049	34762	3039	7638	10677	24752	20687	45439
Lawngtlai	16143	9261	25404	975	2810	3785	17118	12071	29189
Saiha	4380	2684	7064	869	975	1844	5249	3659	8908
MIZORAM	121598	80916	202514	7884	19205	27089	129482	100121	229603
Percentage from the Total Cultivators									
Mamit	62.24	37.76	93.96	17.44	82.56	6.04	59.53	40.47	100
Kolasib	65.66	34.34	86.04	33.36	66.64	13.96	61.15	38.85	100
Aizawl	57.82	42.18	92.32	25.99	74.01	7.68	55.37	44.63	100
Champhai	55.98	44.02	93.56	31.69	68.31	6.44	54.42	45.58	100
Serchhip	54.91	45.09	95.17	27.99	72.01	4.83	53.61	46.39	100
Lunglei	62.46	37.54	76.5	28.46	71.54	23.5	54.47	45.53	100
Lawngtlai	63.55	36.45	87.03	25.76	74.24	12.97	58.65	41.35	100
Saiha	62	38	79.3	47.13	52.87	20.7	58.92	41.08	100
MIZORAM	60.04	39.96	88.2	29.1	70.9	11.8	56.39	43.61	100

Source: Primary Abstract of Population Census, 2011. \*\*Gender- divide is used for percentage

**Table 1.7. Gender Composition of Cultivators and Agricultural Labourers in Mizoram during last 5 decades**

Year	Cultivators			Agricultural Labourers		
	Male	Female	Total	Male	Female	Total
<b>No. of Persons</b>						
1971	65171	61481	126652	385	173	558
1981	79556	65989	145545	3465	1653	5118
1991	94878	83223	178101	6181	3346	9527
2001	113014	89861	202875	6710	4130	10840
2011	129482	100121	229603	22488	19299	41787
<b>Percent</b>						
1971	51.46	48.54	100	69.00	31.00	100
1981	54.66	45.34	100	67.70	32.30	100
1991	53.27	46.73	100	64.88	35.12	100
2001	55.71	44.29	100	61.90	38.10	100
2011	56.39	43.61	100	53.82	46.18	100

Source: Directorate of Census Operation, Mizoram

It is of academic importance to examine the contribution of female work force in the cultivation activities, i.e. the number of female cultivators. It can be observed from Table 3.6 that on an average 43.61 percent of the total cultivators was constituted by female members of the society in 2011, while a district wise analysis shows that the percentage of female cultivators is highest in Serchhip District (46.39 percent) and it is lowest in Kolasib district (38.85 percent).

At the same time, female workers constituted 39.96 percent of the main cultivators, while among the different districts it range from 34.34 percent in Kolasib district to 45.09 percent in Serchhip district. It is interesting to observe the dominance of female workers among the 'marginal cultivators' in Mizoram. More than 70 percent of the marginal cultivators are constituted by female workers. Among the different districts, the female marginal worker percentage is lowest in Saiha

district (52.87 percent) and highest in case of Mamit district (82.56 percent). It is worth noting that female members usually have to take responsibility of household works and animal rearing activities, etc in addition to their normal cultivation activities, they can be simply put under marginal cultivators. A clear conclusion that can be drawn from Table 3.4 is that female members of the society in Mizoram have significant contribution in the various activities of shifting cultivation. Table 3.7 presents the trends on the sex (gender) composition of workforce on cultivation (cultivators) and agricultural laborer's during the last 40 years in Mizoram. In fact the term 'cultivators' is used to mean those who are involved in the agricultural activities, excluding those who are doing plantation works. Excepting few families who are engaged in wet rice cultivation, cultivators can be more or less taken as persons engaged in shifting cultivation. Thus, Table 3.7 is a clear indication on the contribution of female members of the society in shifting cultivation, and those who are working in agriculture as laborers.

It can be observed from Table 3.7 that the number of cultivators in Mizoram has consistently increased from 126652 in 1971 to 178101 in 1991 and 229603 in 2011. The number of female cultivators has also increased consistently from 61481 in 1971 to 83223 in 1991 and 100121 in 2011. The increase in the number of cultivator by more than 81 percent during this period is significantly less than the increase population during this period. The population has increased by almost 3 times from 332390 in 1971 to 1097206 in 2011. The trend clearly suggests gradual withdrawal of families from shifting cultivation (or agriculture in general sector) to other means of livelihood in Mizoram during this period. An alarming trend is the increasing number of agricultural laborer's by more than 70 times from a mere 558 in 1971 to 41787 in 2011. The number of female agricultural laborer's has also increased significantly from 173 to 19299 during this period. It may be reasonable to argue that the problem of landlessness has become one of the social issues in the State, which, if not checked with some policy intervention, can end in conflict in agricultural land relation in the future. The percentage contribution of male and female in the total number of cultivators showed that the share of female workers declined from 48.54 percent in 1971 to 46.73 percent in 1991 and 43.61 percent in 2011. So, the roles played by female workers in cultivation have declined gradually over time with the increasing roles of male workers. However, the decreasing share of female workers to the cultivators is accounted for by its increasing share in the total number of agricultural labourers. The percentage of female agricultural labourers consistently increased from 31 percent in 1971 to 35.12 percent in 1991 and 46.18 percent in 2011. Thus, there is an increasing tendency of females working outside their own field for wage employment over time.

### Conclusions and Findings

Women workers are the main agricultural workforce. However, they are not yet given enough room in the field of decision making in agriculture and ownership of land in most of the developing nations. In India, like other developing countries, female work participation is very low at 25.51 in 2011. In comparison to the national average, the situation is much better in Mizoram where the female work participation rate is more than 40. As per the record of Population Census 2011, more than half of the non-workers in Mizoram are

constituted by female, and they also constitute around 61 percent of the marginal workers, while 36.56 percent of the main workers are female. The situation suggests the active female work participation in Mizoram, though their contribution on marginal work force is significantly high. A district wise analysis showed that the district which has highest educational attainment in terms of literacy (i.e. Serchhip) has the highest percentage of female contribution in the cultivation, while Saiha and Lawngtlai district which have below the average literacy level in the state are among the bottom three in terms of female cultivators. A reasonable assumption that can be made is that gender role in cultivation is directly related to the level of education. Another significant observation is that the increasing trend of female contribution on agricultural labourers. This may be construed as alarming trend taking into account their security in work place and the responsibility of household activities they have to undertake. Of the major farming activities, the involvements of female workers are highest in case of inter cropping activities (sowing of different seeds in the field), and harvesting and post harvest management, while it is lowest for land preparation including forest clearance.

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