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CONCEPT AND CONTEXT OF NEW EMPLOYMENT OPPORTUNITIES FOR WOMEN IN AGRICULTURE

Introduction

'Inequality thy name is man-woman relationship' is the description that we can have at this juncture, when it comes to man and women relationship in most parts of the world, However, as rational beings, we are constantly working to understand the reasons for this unequal relationship (gender studies) and try to overcome this inequality by means of adopting a number of measures (Gender and Development Practice). The collective name that we have given to these measures can otherwise be called as 'means of Women's Empowerment'. Increased participation of women in workforce is seen as one of the important ways of this empowerment process. Since agriculture happens to be one of the oldest and most extensively practiced occupation in the world by women; an analysis of the dynamics of the employment situation of women in this sector in the form of *'the concept and context of new employment opportunities of women in agriculture'* would be very timely to understand better the process of empowerment of women. As mandated, the discussion in its essence, is in the context of the north-eastern region of India.

(II). "Concept" and "Context" Defined

'Context' of new employment opportunities in agriculture can be defined as the development in the social, economic (technical), political , ideological (cultural) and psychological levels in the household, community or state that triggers off or has the potential to trigger off changes for women's work participation in agriculture. It can be development (changes) in the existing institutions or creation of new institutions. One 'context' can influence another 'context' and they are therefore interrelated in a cause and effect relationship. For example, political context can influence economic context and vice-versa.

'Contexts' give rise to 'concepts'. For example, in the world of women's work in agriculture, development of new technology (context) can create new employment

opportunities in agriculture (concepts). 'Concepts' are therefore the probable explicit work avenues (work categories) or qualitative and quantitative changes in the existing work avenues (work categories) that manifest themselves as offshoots/consequences of either creation of a new 'context' or a change in the existing 'context'. 'Concepts' can also influence 'context' over a period of time. The relationship between them is like Hirschman's relationship between SOC (Social Overhead Capital) and DPA (Directly Productive Activities) in his famous linkage theory.

(III) Agriculture and the North-East

Before we discuss the details of the context and concept of new employment opportunities of women in agriculture, it will be in the fitness of things, to provide an outline of the agricultural situation in the North East in some of its important dimensions. This will help us in better understanding the task that we have set to analyze in this paper.

The North-Eastern Region of India, comprising the states of Arunachal Pradesh, Assam, Mamipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, has a total cropped area of 5.3 million hectares and a population of around 39 million. The region falls under high rainfall zone and the climate ranges from subtropical to alpine. The region is characterised by difficult terrain, wide variations in slopes, altitude, land tenure systems and diverse cultivation practices. The transport and communication system is poorly developed and as a result majority of the areas in the region remain still inaccessible. The infrastructure facilities like supply of input, marketing, institutional credit and extension services are inadequate. Majority of the population, predominantly tribal, is dependent on agriculture and land-based activities. The agricultural production system in the region is predominantly rain-fed, mono-cropped at subsistence level. Slash and burn agriculture is still practiced in almost all the states except Sikkim on steep slopes with reduced cycle of 2 to 3 years as against 10-15 years in the past. Sixty seven percentages of its total main women workers depend on agriculture for their livelihood (table-1).

Table-3.1**Male and Female Rural Farm Employment in the North East (except sikkim)**

India/N.E/ NE states	Male(M) Female(F)	Percentage Share		
		1981	1991	2001
All India	M	81.70	79.70	68.34
	F	89.10	89.55	77.05
North –east	M	75.66	70.49	59.32
	F	89.25	75.04	66.53
Arunachal	M	67.98	59.80	62.58
	F	96.10	91.65	86.73
Assam	M	NA	70.91	58.51
	F	NA	66.29	60.87
Manipur	M	77.82	62.40	59.33
	F	77.72	80.00	63.68
Meghalaya	M	86.92	74.50	72.37
	F	87.89	84.08	80.79
Mizoram	M	77.32	75.68	79.33
	F	95.95	93.89	90.99
Nagaland	M	69.73	74.26	89.85
	F	96.64	93.10	86.56
Tripura	M	75.70	69.12	55.06
	F	83.12	77.81	69.53

Source: Authors calculation based on various census reports

This of course, varies from state to state. States like Mizoram, Nagaland, Meghalaya and Arunachal Pradesh have very high percentage of woman workers (higher than the national average) engaged in agriculture.

Agriculture is the main economic activity in the region and despite major impact of green revolution in the irrigated areas of the country; modernization of agriculture has escaped this region. The agricultural practices in the region are broadly of two types, viz., (i) settled farming practiced in the plains, valleys, and foothills and (ii) shifting cultivation practiced on the hill slopes. The region's agriculture is characterised by low crop intensity (117%). The available data on irrigation shows that about 24.42% of the net sown area is irrigated. The spread of HYV has been poor as evidenced from the fact that only 56% of the rice area has been brought under HYVs in NE states against 74% in the country. The status of agro-based industries in the region is not very satisfactory because of lack of development in this area. The population growth is higher than the growth in food grain production in the region.

The above discussion does not reveal a satisfactory picture of agriculture scenario in the NE region when judged against the rich water resources, flora etc., with which the region is endowed with. The region is a treasure house of genetic diversity and 6-7 thousand plant species constituting approximately 40% of the total flora of the country are represented here. A large number of economically important plants such as food, fodder, spices, oilseeds, fruits, vegetables, medicinal and aromatic, orchids and other flowering plants grow wild in nature.

(IV)Context of New Employment Opportunities of Women in Agriculture in NE

As discussed above, 'contexts' are the ideological, political, social, economic, technological, and institutional frameworks at the level of the household or community

or region that create and shape work avenues for women in agriculture in a region. Some of the important and specific ones are discussed below.

Increased Access to Education, Training and Health

Literacy rate for women has increased in the north east (58% as per 2001 census). This has had and will have its positive impact on the ideological, political and social planes in the household and community in terms of influencing the power relations. Along with better health, educational advancement shall increase the bargaining power of woman to claim ownership to land, credit and other assets etc., besides becoming an active partner in household and community decision making process. All this may happen through the positive changes that education and training are having and will have on the mindset, faiths and beliefs of both men and women. This is expanding and will expand women's mobility, their control over labour, produce and income, exercise of political power and participation in household and community decision making process.

Infrastructure Development

Over the last two and half decades, the quantity (see table 1-4 in the appendix) and quality of economic and institutional infrastructures in the NE region has got expanded and presently the central government is concentrating more on this. These developments have happened and are going to happen in the fields of physical transportation, electronic and tele-communications, irrigation, power, banking and insurance services. These developments are helping women in agriculture to move from subsistence agriculture to productive agriculture.

NGOs and SHGs.

Involvement of a good number of NGOs and formation of SHGs, that educate and train women in matters of participation in economic activities including agriculture, makes women more enterprising and reassuring. Development NGOs directly create job avenues for the woman folk in agriculture and allied sectors particularly in rural areas by

creating new quality job avenues and expanding the value addition chain. Recently, some of the NGOs are trying to integrate a gender perspective in the programmes that they undertake. These NGOs along with some government organizations are adopting a combination of three strategies to effectively empower women and create work opportunities for them. These strategies are : (i) advocacy strategies which aim at changes in the policy , legislation, resource allocation patterns and practices of different inter-governmental organizations, (ii) capacity building strategies which enhance women's ability to claim their due share of resources and power both in their families, communities vis-a vis the market place and government organizations, (iii) organizational strategies which help women to gain control over their self and economic, social, and political resources. The emergence of SHGs is strengthening women's bargaining power in the community and their resolve to stand on their own feet.

Emergence of New Institutes

Setting up of new and/ or revamping the existing institutes of research, extension, training, finance and marketing in the NER is going to have its impact on women's participation in agriculture. Institutes like IIT, bamboo institute, spice board, institutes of technology in various universities, agricultural universities, branches of ICAR, National research centre on Mithun, National research centre on Yak, national research centre on orchid, Krishi Vigyan Kendras, KVIC etc. are going to provide much needed research and extension services in agriculture. Institutes like NABARD, commercial banks, micro-credit organizations are meeting the financial needs of the women farmers. Many of these institutes have been sensitized about gender perspectives in their research and activities. Significant fallout of these research activities in the form of new and appropriate technology, is benefiting and shall benefit women in agriculture.

Government Initiative

Government initiative in the form of women friendly legislation enabling women to have access to parental agricultural properties, weather forecasting, providing facilities such

as agri-marketing, agri-extension, agri-finance, agri-insurance etc. do have their impact on women's participation in agriculture.

Political Empowerment

Positive changes in the form of reservation of seats in grass root democratic institutions is directly empowering the rural women in terms of community decision making.

Globalisation, Liberalisation, Look-East Policy and WTO

Globalisation has brought in new changes in the economic field which directly and indirectly influence women's participation in agriculture. Globalisation in theory, provides an opportunity for women in developing countries to produce for the global market. In a globalised world, the taste and preferences of the consumers change fast. Demand for environment friendly technology also increases. However, as the market becomes global, it is supposed to create enough opportunities of work for women in agriculture in terms of producing varieties of products on commercial basis. Under liberalization, as restriction on movement of produce eases, as information reaches everywhere on the click of a mouse, as capital and labour flow freely among regions and as inspector raj goes off; the market size for agricultural and agro-processed commodities gets enlarged. Further, under the look-east policy, Government of India has an ambitious plan to integrate the markets of the North-East India with that of the South-East and East-Asian Countries including Bangladesh. Once this policy becomes viable and operational, it is expected that this would create employment opportunities for women in the farm and allied sectors of the economy of the north-eastern region.

In the field of agriculture, the objective of WTO is to reform trade in agricultural commodities and make it more market oriented. Thus, theoretically, it looks that it would create substantial job opportunities for women in agriculture in developing countries in terms of having more market access in the developing countries because of reduction in export and domestic subsidies by the developed countries. However, this is subject to a lot of conditions and would be a long term proposition.

Farm Non-Farm Linkage and Diversification of Employment

A rapid development in infrastructure, development of new and appropriate technology, provision of expanded extension services, social, political and economic empowerment of women and spread of NGO network to rural areas; all these developments help in increasing productivity in agriculture, ensuring food security and environmental sustainability. Hence, subsistence agriculture gives space to commercial or productive agriculture. As a result of which, increased diversification of employment happens in the economy in the form of farm and non-farm sector linkage. This has its obvious positive implications for female employment in agriculture and allied sectors particularly in the rural areas.

Women Friendly Society

Although the status of women in N.E. society varies across communities, still in general their average social position is better than that of the women in the mainland of India. Meghalaya society is matrilineal. Other north-eastern societies, in different states, are ideologically more empowered than the societies in the mainland India.

V. Concepts of New Employment Opportunities for women in Agriculture.

As discussed in section-II, these contexts are inter-related with each other. Some even are consequences of others. For example, emergence of new research and training institutes, govt initiatives, infrastructure development, NGO and SHG revolution together lead to diversification of employment. Similarly, political and educational empowerments lead to demand for more research and training institutes. The creation of new work categories or qualitative changes in the existing work categories, often are the combined consequences of two or more 'contexts'. Segregation here becomes difficult, as many of these changes in the 'contexts' are simultaneous. However, the effects of 'contexts' like globalization and look-east policy, WTO etc. can to a great extent be

identified at least in theory. With this in mind, we discuss here the probable concepts (work avenues) in women's participation in agriculture in the N.E.

The traditional jobs that women undertake in the N.E in agriculture are sowing, transplanting, weeding, harvesting, threshing, and post harvest operations like shelling, cleaning, grading and processing. Social, economic and political empowerment shall help them to take part more in decision making process involving crop production, seed production and management, post harvest management of agricultural and horticulture produce, biomass utilization, livestock management, marketing and financial management. However, farming mostly, has been subsistence farming for the women in the N.E. In the light of above 'contexts', particularly because of new institutes coming up and diffusing technology, a number of gender neutral and simple devices/equipments for crop production and processing are being developed. Their adoption by women will not only help in improving agricultural production but also elevate the status of women through better jobs. Some of these drudgery-reducing technologies shall minimize women's workload, so that they can have time to devote to other new productive agricultural and agro-based allied activities (a good number of which have been listed below). Below, we list a number of probable developments in the concepts (work categories) which can be conceived as the offshoots of the 'contexts' discussed in section IV above.

(1) Diversification towards improved varieties of the existing crops (Rice, cotton etc.)

(2) Diversification in the cultivation of more remunerative crops like:

- (a) Plantation crops like, tea, rubber and bamboo.
- (b) Horticultural crops like orange, pineapple, guava, peach, plum, jackfruit, banana, and papaya
- (c) Spice crops like ginger, turmeric, chilly etc.
- (d) Others like mushroom, medicinal, aromatic plants and herbs
- e) Floricultural products like begonias, cineraria, dahlia, aster, gladiolus, rose, marigold, lilies etc.
- (f) Orchids (about 700 varieties of orchids are found in the NER).

Globalization and opening of NER to South and South East Asia, are going to create tremendous export opportunities of floral products like cut flowers, potted plants, orchids, dry flowers, essential oils and dried aromatic flowers. This is going to give rise to substantial work opportunities for women in agriculture. Women are very good in these activities vis-à-vis men. The world floral market is growing fast at the rate of 15% per annum and the total demand is estimated to be Rs. 300 crores annually. The climatic condition of NER is very suitable for cultivation of many of the rare orchids and flowers of the world. Domestic demand and foreign demand for medicinal, aromatic and herbal plants is also increasing at a very fast rate. Because of the typical climate and soil condition of NER, the region is a store house of seven thousand plant species, of which a good number have medicinal values. As per WTO requirements, if the developed countries provide market access by reducing export and domestic subsidies on agricultural products, processed foods; then countries like India will have competitive advantage, provided we take care of the sanitary and phyto-sanitary (SPS) measures.

(g) Organic Farming. The rest of the world and rest of the country demand for agro-products produced under organic farming conditions, is going very fast. The NER has a great potential here. Already Meghalaya has made a name in organic farming in the whole of the country.

3. Diversification in the form of Non-farm Activities

(a) Fishery: In all the Non-Eastern states, per capita production of fish is much lower than the annual consumption. However, NER has capacity to produce more by adopting scientific methods of fishery.

(b) Life-Stock Farming: There is ample scope for development in the farming of sheep, piggery, dairy and poultry. This profession is compatible with inherent chores performed by the women in the NER.

- (c) Bee keeping: This is an ideal economic activity for women. Initial investment is less but returns are high.
- (d) Other Non-Farm Activities: Non-farm activities like handicrafts, food processing, and bamboo and cane items, processing of forests based products like leaves, lac etc. have also potential for creation of jobs for women.

Besides all these, overall improvement in the 'contexts', shall create new job opportunities for women to be engaged in eco-tourism, agri-insurance, agri-clinic, agri-extension, agri-research, agri-irrigation, agri-co-operatives and agri-marketing etc. either as self employed or as private and public servants.

Progress so far to create job opportunities for women with concerted efforts of various govt., semi-govt. and NGOs though not satisfactory from the viewpoint of the increasing unemployment and declining work participation trend in the region, there lies a silver lining that, increased number of women due to technical and entrepreneurial education and training have shown up a behavioural disposition in terms of strategic visioning and innovation. This capability of the women folk of NE region is an indicator of their future role and status in the society particularly in reconfiguration of the economic value chain in their favour.

Conclusion

To conclude, globalization, liberalization, technological development, infrastructure development and WTO etc. are 'contexts', which have the potential to positively influence the quantity and quality of women's participation in agriculture and women in agriculture in NER are sure to get more and more employments both in the value chain and in newer concepts (work avenues) being created. However, in practice, many of these contexts are not unmixed blessings. Some studies undertaken till date, in the context of developing countries, show that the forces of globalization, liberalization, scientific development, infrastructure development largely have helped the male-folk to graduate to high-end and productive jobs leaving the women folk to take care of the

low-end primary agricultural works in addition to their house-hold chores. This has become a double burden on them. We feel that this is going to be a short period affair in the NER if at all it happens. In the long run, it is women who are going to gain the lion share of these ensuing opportunities, because women in the entire NE region are ideologically more empowered vis-a vis women in main land. Having said this, the fact is also that, this ideological empowerment has not greatly been translated into economic and political empowerment in terms of access to land, assets, information, knowledge etc. Hence, the need of the hour is to promote more such empowerment in the institutional levels. This will brighten their access to new work avenues as discussed above.

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Appendix-1(Tables)

Table 1: Road infrastructure in NER

State	1982				2001			
	Total length	% of surfaced roads	Road density		Total length	% of surfaced roads	Road density	
			Per 100 sq km.	Per lakh population			Per 100 sq km.	Per lakh population
Arunachal Pradesh	12753	16.20	15.26	2031	18362	31.04	21.93	1662
Assam	59579	13.70	75.87	299	87173	14.79	111.14	327
Manipur	5321	37.10	23.80	371	11434	33.79	51.21	479
Meghalaya	5211	53.00	23.17	392	9497	69.14	42.34	412
Mizoram	2508	45.40	11.89	514	4970	58.09	23.58	558
Nagaland	6287	14.00	38.04	813	21021	30.69	126.8	1057
Tripura	7973	16.20	76.10	387	14031	31.29	133.81	440
NER States	99632	18.30	39.06	375	166488	25.68	65.27	433
All India	1545891	47.30	47.02	226	2442671	57.91	74.31	238

Source: Authors' calculation based on data from Basic Statistics of NER, NEC, (1982) & Basic Road Statistics of India for 2001 (provisional) of Department of Road Transport and Highway, GOI.

Table 2 : Per capita consumption of Electricity in NER(in Kwh)

States	1981-82	1989-90	1999-00
Arunachal Pradesh	7.9	56.6	68.6
Assam	33.5	92.7	95.5
Manipur	7.9	79.5	69.5
Meghalaya	31.0	106.4	160.3
Mizoram	5.6	65.0	120.7
Nagaland	34.2	58.6	84.7
Tripura	14.5	45.0	95.5
All India	120.5	236.0	354.75

Source: 10th Plan document (2002-2007)

Table 3: Villages electrified in NER:

State	Percentage of inhabited villages electrified		Percentage of rural households having electricity (2001)
	1980	2000	
Arunachal Pradesh	9.9	60.5	44.53
Assam	20.4	77.1	16.54
Manipur	16.5	91.7	52.53
Meghalaya	13.5	47.1	30.26
Mizoram	11.8	99.0	44.14
Nagaland	36.0	98.4	56.88
Tripura	17.0	94.7	31.75
NER	18.5	73.5	--
All India	44.6	86.3	43.52

Source: Authors' calculation based on data from Basics Statistic of Northeastern Region, NEC, (1982 & 2002).

Table 4: Net and gross irrigated area and irrigated holdings in NER.

State	percentage of Net irrigated are to net sown area (1981-82)*	percentage of Net irrigated are to net sown area (1994-97)	Percentage of holdings receiving irrigation. (1991)
Arunachal Pradesh	21.4	19.5	NA
Assam	21.2	20.7	6.34
Manipur	46.4	46.4	45.77
Meghalaya	25.9	21.7	37.43
Mizoram	12.3	7.3*	NA
Nagaland	40.5	29.0	18.31
Tripura	11.8	12.6	11.32
NER states	22.5	21.1	-
All India	28.0	37.7	46.52

Source: Based on data from Basic statistics of NER, NEC, (1987)* & Thorat and Sirohi 'State of Indian Farmer' (2004).

Table 5: Banking infrastructure in NER

State	Average population (in 000) per bank office ^	
	1981	2002*
Arunachal Pradesh	29	15
Assam	36	21
Manipur	36	30
Meghalaya	21	13
Mizoram	41	11
Nagaland	18	28
Tripura	20	17
NER states	32	21
India	19	15

^ include only scheduled commercial banks. *As against 2001 population

Source: Banking Statistics, Basic Statistical Returns, RBI (1981 & 2002).