Tribal Livelihood Practices and Food Security: A Study on Role and Responsibility of Tribal Women in Odisha (India)

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I. INTRODUCTION

The Beijing declaration of 1995 promised a better world! A world in which women would have equal rights, an equal share in all spheres of society, where women would be empowered and human rights would be women rights! A special platform during the Beijing conference was devoted to 'gender and environment', linking gender inequality to lack of access to resources and food insecurity. Since independence Government of India and Government of various states have taken lots of initiation for development of tribal livelihoods. Lots of programmes are implemented for sustaining their livelihoods. The development policy for the tribals has changed its strategy continuously in search of sustainability. The social scientists have laid emphasis on the importance of cultural fabric of the tribal world to accelerate this process.[1]

Coping strategies used in response to crisis further contribute to the erosion of livelihoods.[2] Food security as defined by FAO is the condition when all people have equal access to sufficient and nutritious food all time. The two main reasons why livelihood and food security issues remain critical for a country like India are (1) the heavy dependence of the majority of the population on the agricultural sector for employment and as a source of income and (2) the large number of undernourished people, the majority of whom are below the poverty line and spend a considerable proportion of their total income on food. Nearly 70% of the country's population lives in rural areas .[3] And the agricultural sector provides employment to about 60 percent of the country's total labour force.[4] Livelihood and food security usually go side by side. There is no such different between these two concepts and the availability of sufficient food to each member determines the livelihood progress of that household.

The concept of livelihood is rapidly gaining acceptance as a valuable means of understanding the factors that influence people's lives and well-being. 'It is comprised of capacities, assets, and activities required for means of living. A livelihood will be sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capacities and assets, both now and in the future, while not undermining the natural resource base' (Carney, 1998:4). Sustainable livelihood is a way of thinking about the objectives, scope and priorities for development, in order to enhance progress in poverty elimination. Sustainable livelihood aims to help poor people achieve lasting improvements against the indicators of poverty that they define.

During the last 50 years the planning process in India has failed to reduce the disparity between the tribal and non tribal populations. Today, the first and foremost problem before tribal communities in India is how to earn and sustain livelihoods. There are varieties of livelihoods practices by the tribal communities in different part of India and elsewhere, such as by the hunter-gatherers, pastoralist, shifting cultivators who live in different environments (Siva Prasad and Eswarappa, 2005). Sustainable livelihood can cope with and recover from external stresses and shocks such as natural disasters; seasonal shifts in prices, employment opportunities; food availability and market trends.

1.1 Core principles of sustainable livelihood

A household is a group of people who eat from a common pot, and share a common stake in perpetuating and improving their socio-economic status from one generation to the next."

"A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain its capabilities and assets both now and in the future, while not undermining the natural resource base." The Sustainable Livelihoods Framework (below) is a tool for understanding how household livelihood systems interact with the outside environment – both the natural environment and the policy and institutional context.

1.2. Livelihood practices of tribal population

[1] Upadhyay, 2000
[2] International Federation of Red Cross and Red Crescent Societies
[3] Census of India, 2011
[4] Government of India, 2002.

They do not have high life style, modern dress pattern or food choices. But they work hard in the field, collect fuel, forest products from dense forests to fulfil the food demand of their family. Whether male or female, it does matter for tribal communities, rather to have sustainable livelihood and food security. Food crises increasig day by day and put their livelihood in danger situation all along. Their livelihood has been based on shifting cultivation and forest products. The traditional livelihood system was based on customary, usufructuary rights of tribal communities over land and forests. It was also an 'extensive' system of production. The 'common pool' nature of resources supported customary rights and prevented the intensification of production, in the interest of conserving and sustaining the long-term productivity of livelihood resources.[5] Customary practices and indigenous livelihood pattern of tribal people becomes obstacle on the way to achieve their right over their own local forests accompanied by huge displacement and migration gradually. Commercial exploitation of productive resources of tribal community proves the dominant nature modern capitalism.

Orissa Tribal Empowerment and Livelihoods Programme- Generally food security is guaranteed by adequate production of food grains, food availability, and physical and economic access to food. A combination of economic, social, ecological and institutional factors contributes to the issue of food insecurity in the remote villages covered under the Orissa Tribal Empowerment and Livelihoods Programme. The programme is being implemented with financial assistance from IFAD and in partnership with the UK Department for International Development (DFID), and with food assistance from the World Food Programme (WFP). However the aim is to go beyond food security. The IFAD-financed Orissa Tribal Empowerment and Livelihoods Programme aims to secure and enhance livelihoods of the poorest people living in seven districts of Orissa in India. The ten-year programme (2003-2013) currently covers 1,034 villages and 56,180 households. About 27 per cent of the households are landless and 70 per cent are under the category of marginal farmers owning less than one acre of agricultural land. The programme uses a watershed approach for protecting and enhancing the productivity of the local natural resources and for ensuring livelihoods of tribal households. The watershed approach refers to the conservation, regeneration and judicious use of all the resources – land, water, vegetative, animal and human – within a particular watershed or drainage basin (see the picture) of a catchment area of a river or stream. Watershed development seeks to bring about an optimal equilibrium in the eco-space between natural resources, humans and animals.

Table 1 Cropping in tribal belt of Odisha

Family type	Cropping
Mariginal /small farmer	Wage, Non-Timber Forest Produce (NTFP),
Large family farmers	Agriculture, Non-Timber Forest Produce (NTFP),share cropping, animal husbandry

Source- Orissa Tribal Empowerment and Livelihoods Programme (2003-2013)

In Odisha tribal districts are more prone to food insecurity and there is lack of livelihood activities that give rise more production and profit. Due to insufficient food banks, they suffer a lot during various natural disasters and their problem leads to huge number of hunger death. Most of them are marginal and landless, thats why unable support themselves. The Government policies and programmes are not implementing properly. Administratively, Kandhamal District, Odisha constitutes 2 sub-divisions, 4 Tahasils, 12 CDB, 2 ULB, 153 GPs and 2506 revenue villages. Physio-graphically the entire district lies with high altitude zone with interspreading inaccessible terrain of hilly ranges and narrow valley tracts which guides the socio-economic conditions of people and development of the district. More than 50% of population constitutes ST community of aboriginal tribal races. In terms of socio economic development, the district has been ranked as a backward district in the state of Orissa. **Topography and climate** : Kandhamal district comes under the North-Eastern Ghat Agro-Climatic Zone of the state and the altitude ranges from 300 meters to 1100 meters from the Mean Sea level (MSL). **Rainfall:** Average Annual Rainfall-1522.95mm. Normal Rainfall-1427.90mm. Average No.of Rainy Days-79 days. **Temperature:** Maximum and Minimum - 43.50 C to 50 C. **Soil:** The soil is mostly Red-laterite group, which is porous having organic matters contents. As such, the water holding capacity is very low. The PH value of the soil varies 5.3 to 6.5, which is acidic in nature. The big chunk of land consists of red-laterite sandy loam soils being exposed to constant soil erosion and run off devoid of humus contents render in fertile and turn into barren wastelands. Main source of income is agriculture and forest produce. They have been living with a place surrounded forests and they depend upon their local forests for food and livelihood sustainability throughout the year.

1.3 Cropping pattern of Kandhamal district

- The total geographical area of Kandhamal District is 7, 64,900 Hectares.
- Out of which the cultivable area is 1.46.00 hectare (23.5%).
- The irrigation potential of the district is 10.3% during Kharif and 3.7% during Rabi season.
- The important crops of the district during Kharif season is Paddy, Maize and Niger.
- During Rabi Season, the irrigation potential is very limited as such; Rabi crops are grown mostly under available moisture condition.

[5] Sakti Padhi& Nilakantha Panigrahi,NCDS,Odisha

- In irrigated areas, crops like Potato, Vegetable and Mustard are grown. [6]

1.4 Objective of the study

1. To study the livelihood and food practices in the study area.
2. To find out the gender gap in work sector.
3. To study the role of women in livelihood practices and food distribution in the family.

1.5 Methodology

The research follows various methods to conduct a study. Samples were collected randomly from five tribal villages from Baliguda block of Kandhamal District of Odisha. From each village twenty women were selected as respondents under the study. Questionnaires with direct interview method were followed to collect information on the basis of objectives of the study.

II. WOMEN, FOOD SECURITY AND LIVELIHOOD

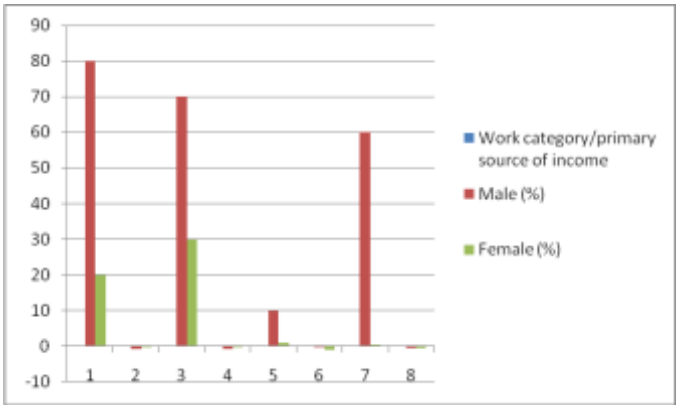
Food security emphasises that food security refers to secure and regular access by all people at all times to enough food for a healthy and active life. This food has to be safe, nutritious, used appropriately and meet food preferences. Food security can be achieved by ensuring sufficient availability or supply (e.g. through agricultural production or food aid) and also access (e.g. entitlements to food through market exchange, labour, or social networks).[7] Food insecurity is the opposite state of a lack of access to food or an adequate diet – either temporarily (transitory food insecurity) or continuously over time (chronic food insecurity). These definitions underline the temporal dimensions of food insecurity, the importance of addressing vulnerability and the centrality of secure and sustainable livelihoods to underpin food security.

Key elements of livelihoods approaches are relevant to food insecurity measurement at the national and international levels (participation, user focus, complexity of livelihoods: importance of access as well as food availability; importance of agriculture as well as non-agricultural activities etc) Further, sustainable livelihoods for poor people are recognised by international agencies as vital ensure food security.

Food security and livelihood always go side by side. There are lots of indigenous practices among tribal community in the state of Odisha. As far as the district under study they follow all such traditional and customary practices especially women. They are the chief manager household and follows all such tradition and customs. They do not feel any difference between works done by women and men. Livelihood of the family is only important for them, and women especially responsible for household food security in tribal districts. Because men are mostly addicted to alcohol and sometimes do not able to manage the household finance, take care of children and elderly persons in the family well.

Table.2 Gender analysis of work in the study area

Work category/primary source of income	Male (%)	Female (%)
Agriculture	80 (80.00%)	20 (20.00%)
Wage labour outside	70 (70.00%)	30 (30.00%)
Forest product collection	10 (10.00%)	90% (90.00%)
Selling forest products in the local market	70 (70.00%)	30% (30.00%)



Source: Primary data collected in 2007-08

Gender is significant in influencing livelihood outcomes. For example, gender differences in distribution and access to assets – such as credit or technology – are crucial in ownership and management of sustainable enterprises. Livestock are important in women's livelihood and asset portfolios. Women are being the main managers of household and work for better livelihood of family become victims of all discrimination in maintain better livelihood for themselves. Tribal family are more orthodox and traditional taboos are creating lots of problems for the development of women. Besides problems faced by women they manage everything very smoothly in the household as well as outside household work like agriculture, collection of forest products, selling them in the local market and so on. Women always work harder for the livelihood purpose of their family.

In Table-2 it has been found that though women are main managers of household with regards to taking care of children, cooking at home, and working inside home they are far behind productive workforce. Wage labour outside (70%), agricultural work (80%), marketing of production are men's work (70%) whereas hard labour in the agricultural filed bending down whole day, collecting forest goods (90%) in dangerous environment are women's work. Gender difference in work sector also found in this area. The most dominating field for male is agriculture, whereas the same is in case of

[6] Soil conservation office, Kandhamal, Odisha

[7] World Bank, 1986

forest produce collection. In tribal areas usually women collects kendu leaves, turmeric, and other useful things and sell in the market, but marketization is fully dominated by male, either as the male member is preferred to take the products to the market or the mediator is a male person who take all materials to the market place. It is the figure shows the activity of women towards livelihood development of the family. They have to work double times more than that of men in the family. Taking care of child, older person to serve food each and every work is done by women. Men only do outside work which includes a minimum rate of payment. Tribal women in comparison to general population are more laborious.

2.1 Food security and Women

The increasing population growth rate all over the world, predicts that global food production will create food insecurity by 2025 in the world. According to United Nations Population Projection in 2025, world population will grow to 8.5 billion which can leave a global food deficit of 700 billion tones and if the same continues definitely food insecurity will exist. So, it is high time to think to attend sustainable agricultural productivity and nutritional security as basic element of a social security.

When women are involved in supply of energy giving, protective and body building foods, the empowerment of women for food security is very much essential. The majority problems of India's food security are related to the resources and means of having access to stock powers of good grains. Lack of food is due to the lack of the means to acquire it not due to shortfall in food grain production. It is proved that Indian rural women are responsible for every phase of the food cycle- production, post harvest activity, marketing, meal planning and preparation. So here the question arises that how much is the involvement of women in food security of their families. Food insecurity affects people discriminately. For example when families are subject to starvation, children and women suffer the most due to their greater vulnerability or need for higher nutrition requirements. Growing infants, adolescent girls, pregnant and lactating mothers face for greater risk to their survival and physical intellectual growth from nutrition depletion. The proper utilization of available food depends on both the time constraint and the health constraint faced by women. If the women choose to cut down on domestic chores, then their poor food utilization will be the result of the time constraint. If they choose to push themselves even harder and there by compromise their health, then their poor utilization will affect their health and in either case the quality of food utilization will suffer. It is most important aspect as household management is totally in their hand and from household food security the whole food security status can be estimated. The household food security is the ability of the household to achieve sustained access to food of adequate quantity and quality to all household members. In the process of development women and children are vulnerable so also in the food and nutrition security. Basically women's food security has three dimensions like:

a) Inadequate purchasing power
b) Poor literacy
c) Inadequate food availability within the family unit. It appears that both food and non-food factors assume importance in determining the nutrition security of those vulnerable groups.

Women play a major role in overall food system from production to consumption level. They are engaged in all post harvest activities which include marketing, processing, street vending purchasing and preparation at home. They occupy a crucial position in the management of household responsibilities and are often reluctant to enter into organized sector of work, but they lack participation in nutrition and health awareness programmes. So that's why most of the times they do not have any information on food intake, diet, nutrition etc. Basically Women's role in ensuring nutrition security as well as take care of livelihood of their household is determined in two ways-

1. They are responsible for food acquisition from the family farm, through paid agricultural or non-agricultural work and
2. They prepare food for consumption by the family.

Tribal women as far as the present study is concerned are suffering from food insecurity and their livelihood is being affected by various factors. The overall scenario of the tribal belt of the state is found to be more neglected compare to other parts of the state.

Under one study conducted by UNDP on tribal food security, it has taken into consideration the situation of Orissa and condition of women in the area under study especially it centred on working with poor women, predominately tribal communities of the State with following strategies[8]:

(i) Revitalising women's traditional knowledge in sustainable management of natural resources, Strengthening the economic base of women from landless and resource poor families through facilitating access to women's groups to land, forest produce, technology and process for value addition, credit and market.
(ii) Increasing the productivity of the land cultivated by women's groups through a package of measures including support for construction of water harvesting structures, effective land management, organic agriculture, cultivation of subsistence crops rather than paddy and use of appropriate technology.
(iii) Strengthening household food security and breaking the cycle of indebtedness by enabling women's groups to manage an alternative community

[8] Draft report of GOI-UNDP on food security programme in Odisha

distribution system, through purchase and storage of buffer stocks of food grains.

(iv) Increasing women's access to and control of forest resources through support to women's groups to gain the right to collect, store, process and sell forest produce.

(v) Enabling the Department of Agriculture to reach out to women through existing networks of NGOs and women's groups.

(vi) Improving women's farming skills through ensuring their access to the agricultural extension system and resource groups on sustainable natural resource management.

The tribes being dependant on forest for their livelihood, specifically women should have positive role in decision making to earn more by adopting appropriate technology, storing, processing and marketing procedure. The existing traditional knowledge of women and gradually infusion of technology which can sustain natural resources meaningfully in the area under operation. Women's access to land and their product making proper use of credit linked to market networks. Land management organic agriculture, appropriate technology of crop system is vital for women and they are to take proper training under various government schemes. The role of DWCRA and DANTEWA is very much important for women empowerment is to be regarded while discussing the tribal women's food security and livelihood.

2.2 Food Consumption pattern and women

Proper food availability with distribution determines food security for all in a particular household. What the food consumption of a family tells is –'how much food taken by each family member'. Food consumption pattern of household is one of the criteria of ensuring food and nutrition security. It is sometimes used as vented criteria for an understanding of social stratification. It varies from culture to culture, religion to religion and also sometimes affected by food habits. Women's food consumption pattern is determined by these two factors-

1. Economic factors affecting food consumption pattern
2. Food habits affecting consumption pattern.

There is a basic distinction in the perception of food between tribal and other general caste. In the present study it has found that, generally people have a very systematic method, pre planned ways of food preparations. But for tribals whatever food in a day is meant for survival. Shifting in food habits is also one of the major factors influencing consumption pattern in general, but the tribal food habit and its consistency throughout the year does not make any difference in consumption patterns. History shows that several factors have influenced tribal food habits and their food ideology.

In this study the relative opening of their isolation, the degradation of forests, soil erosion, the land fragmentation and the implementation of various development programmes, particularly in agriculture with a dose of capitalism added to it , have influenced the tribal food habits. Women usually follow the traditional method of preserving paddy and other dry food items. Basically they use their seasonal food as far as possible. Their daily food chat in different seasons also characterized by availability of food items in the particular season. Though there is no such difference in seasonal food habits, but food grains and production method is different. The following table shows the food items of tribal in different seasons.

Table.5 Seasonal Food products in the study area

Season	Food items
Summer	Roots(Ranikanda, barada kanda), mahula, mango kernel, jackfruit, different leafs from forest, tamarind
Rainy	Kosala, kuiri, maka, kangu, vegetables from kitchen garden, paddy
Winter	Vegetables, maize
Autumn	Kandula, pumpkin, vegetables

Source: Primary data collected in 2007-08

Besides these women have also other activities to fulfil the demand of their household, such as women frame groups to help themselves with fund of their own. Now at present women are aware of SHG, funds under various schemes for livelihood. The better practice among tribal women is their strength to access the customary right on local forest.

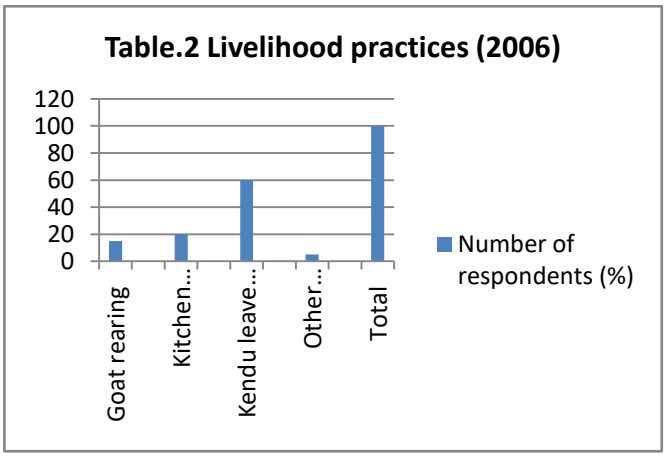
2.3 Livelihood and women

Livelihoods approaches may also provide a practical tool to tie together the concepts of food insecurity, hunger and poverty - providing the link between a multidimensional and people-centred view of poverty with an analytical framework based on people's strategies, assets and capacities. Generally livelihood in tribal district is very conservative as they do not have any such awareness on programmes, schemes to improve the livelihood of tribes and the modern technology that help in sustainability of livelihood and food security. Their existence depends upon the traditional practices and customary habits on food, occupation etc. The present study shows that women always busy in work both inside home and outside. They can feed each member of household from various source of income as well traditional method of making livelihood.

Table-6 Distribution of women according to their livelihood practices

Livelihood practices	Number of women (%)
Goat rearing	15 (15.00%)
Kitchen garden	20 (20.00%)
Kendu leave products	60 (60.00%)
Other activities	5 (5.00%)
Total	100

Source: Primary data collected in 2007-08



In the research field, the study was done among tribal women. On the road side agricultural fields, women were doing manual works, working in the nearby forests on the top of the hill. Women are regarded as the best household manager and they have to gone through double burden of household work as well as outside work. 60% of women have opinion that the major source of livelihood and fulfilment of food demand is forest produce and they also collect fodder, and kendu leaves business is totally on their hand. Besides these other activities such as goat rearing, kitchen garden are mainly maintained by women in this area. Other activities include seasonal practices that provide them a cup of financial support whenever they need. Human existence does not only depend on the two square of meals but also it means their good health, nutritious food, and much more that define better livelihood for a household. It is very much encouraging for women in taking care of household chores, working outside for better livelihood in tribal belts. They usually don't complain rather enjoying their work. But unfortunately the approaches to provide them better livelihood failed to benefit them, who are in need rather misutilised some wherelse.

III. CONCLUSION

Incorporating a livelihoods approach to the analysis of food security would have numerous advantages. Livelihoods principles could inform efforts to improve and adapt the "undernourishment" measure. The tribal belt of the state is more prone to draught, poverty, hunger death. They have no such knowledge on the development programmes and policies for the development of livelihood and food sustainability. Tribal people do not have legal rights over their habitations, they are unable to access many state livelihood related programmes. There has been controversy over the Scheduled Tribes (Recognition of Forest rights) Bill, 2005, which specifies 13 rights for the adivasis, including access to and ownership of minor forest products, grazing rights, habitat and habitations for primitive tribes, settlement for old habitations and unsurveyed villages, and community rights to intellectual and traditional knowledge relating to forests and cultural diversity. Entitlement over land will be given to those adivasis who have been cultivating forest land since 1980, up to 2.5 hectares per nuclear family. The bill aims to look at the rights of adivasis along with their responsibilities for conserving the forests and protecting wildlife, while seeking to end the inefficient and monopolistic exploitative hold of the Forest Department over the adivasis by nominating the Gram Sabha (village council) as the authority to recognise and verify their claims.

Livelihoods approaches can provide an effective and practical vehicle for linking rights based approaches, measurement and action to reduce food insecurity. In particular, these approaches are relevant because they provide, a way into addressing the realities of subnational variation and diversified livelihoods, a tool to improve indicators on food insecurity by drawing on contextual realities, a framework for the analysis of food insecurity in a given context and incorporating, vulnerability and policy into the analysis, a framework that links poverty and food insecurity with issues related to social capital, empowerment and participation.

Women play a vital role in ensuring sustainable food security in the household. They are chief manager of household food security and should get all sorts of opportunity in development programmes related to livelihood, food security, skill development trainings. All international programmes under FAO, ILO emphasis on women's role and participation, thatswhy these organisations support voluntary organisations, NGOs and private and government agencies financially and instrumentally. Gender is significant in influencing livelihood outcomes significantly. For example, gender differences in distribution and access to assets – such as credit or technology – are crucial in ownership and management of sustainable enterprises. The UNDP's Social Development and Poverty Eradication Division (SEPED) have integrated technology into its Sustainable Livelihood framework (see UNDP 1997) as gendered access to and use of technologies is crucial for livelihood outcomes.

So, lastly it can be concluded that livelihood for tribal women is very tough. They do not have access to development programmes fully and no such awareness among them. Food habits, dress up style, day today life is far different from the urban, and some of the rural parts of the state of Odisha. Now they are coming to urban cities for income, self employment but in a very few percent. Today young girls come out of home and doing study, staying in urban places, but they can't help in spreading awareness among other tribal women and girls of their own areas. Food security and livelihood go side by side, but getting two squares of meal for each member in the family is a headache of women only. Because women are key role player in home management. The trend needs to be changed for tribal sector especially women and girls who manage the household.

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