



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

# IJDR

*International Journal of Development Research*  
Vol. 08, Issue, 02, pp.19122-19133, February, 2018



ORIGINAL REVIEW ARTICLE

OPEN ACCESS

## IMPACT OF TECHNOLOGY AND ENVIRONMENT DEGRADATION ON AGRICULTURE AND WOMEN'S WORK

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### ARTICLE INFO

#### Article History:

Received 15<sup>th</sup> November, 2017  
Received in revised form  
12<sup>th</sup> December, 2017  
Accepted 23<sup>rd</sup> January, 2018  
Published online 28<sup>th</sup> February, 2018

#### Key Words:

Machines,  
Labour,  
Environmental concerns,  
Wider social.

### ABSTRACT

Technological innovation and environmental degradation have been prime agents for the existence and altering of social systems, historically world over. If latter provides basic resources for survival and sustenance and builds essential link between man and nature for human existence; the other provides tools (machines, industries etc) with which to exploit resources for the same by earning livelihood (central to work). These are the changes seen and experienced not only in material world in terms of change in economic production from agriculture to industry, but also in terms of social- material relationship of production formed among various social actors, especially gender relations, with respect to women and work; when their work has been considered predominantly as parochially exploitative, informal, soft menial household. Various feminist theorists, environmental conservationist have conceived to understand this relationship between women and work (especially in the context of rural agriculture and allied activities), by framing an essential link between technological innovations – environmental degradation as having an important impact to analyse the changing nature of work in relation to women participation in agriculture, as central to development practice. Till date most of the debates, discussion and concerns have surrounded around men's workforce and his labour, even though originally women have been actively involved in these sectors whose contributions though is supplementary but it is equally significant for sustaining agricultural growth as well as preserving wider social- environmental concerns, which has been largely ignored. It is this relationship that this paper seeks to explore holistically by first, a) building a theoretical framework of understanding the relevance between women and work and its changing relationship; b) with regard to technological innovations and environmental degradation altering the economic production system of agriculture and hence, women's relation to work – given social, cultural, economic context of a society, which so far has not been given much attention.

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**Citation: Bhaskar Chakraborti, 2018.** "Impact of technology and environment degradation on agriculture and women's work", *International Journal of Development Research*, 8, (02), 19122-19133.

### INTRODUCTION

At the turn of 21<sup>st</sup> century, world over societies have experienced a massive change as well as carrying forward of some form of traditional institutional relationships in its social-cultural relationship especially in economic organization. The main anchors of this transformation are two interrelated processes of interaction between technological innovation and environment degradation with societal variables and its impact thereupon on one of the central aspect of human society – economic structure.

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We all have witnessed some transformative changes being caused by these factors in terms of shift from traditional agriculture, cattle breeding to modern factory industry. At the same time claims are being made with regard to equal share of impact of technological orientation (under capitalistic tendencies) of economic activity on the ecological downturn and environmental degradation, affecting not only agriculture and allied services (one of the main source of subsistence for more than half of the population in developing and less developing region) but also the gender relationships of production and differential work patterns so produced between men and women, especially the latter in terms livelihood and work. So far, a lot has been advocated, reported, and discussed about Men farmers committing suicide in Vidharbha,

Maharashtra; men farmers losing employment in the rural West Bengal aftermath of building steel industries; tea plantations workers collecting tea leaves in Tea gardens in Northeast; Men losing employment in forestry due to environmental degradation and deforestation—as matter of impact of technological shift turning every sector into a mere capitalist enterprise. In such scenario, increasing emphasis has been given on its impact on Men's work and labour, inherently creating and accentuating traditional conception of sexual division of labour based on physical hard work of men and soft domestic tasks of women, which historically has never been considered formal work outside private sphere even though they are involved in agricultural and allied task outside private domestic sphere; with a patriarchal sense of private property. In such a case, a new fresh gender approach to 'work' and 'labour' with wider social – economic – political – ecological structure is needed to bring back women's unheard, invisible exploitation as well as contribution it makes or it can make to curb its impact in economic and ecological sense. It is this latter relationship that has been increasingly scanned by various feminist thinkers, ecologists like Vandana Shiva as well as many development practioners, to ascertain work and ecology as a new parameter of establishing and analysing women's relationship to the nature, economy (work) and society at large, as they believe that it can help restore ecological imbalance. This becomes important at the heart of analysis and provides a totally different framework of defining/conceptualization of work, technological innovation and environmental degradation in context of the level of women's participation and its impact on them, when for annals they have been kept under extreme subjugation.

This is because women since time immemorial have enjoyed their own privileged position in relation to nature, ecological preservation – known as earth goddess, source of sustenance where their prime role was to sustain family through basic household work, collecting grains and planting trees on the farm for daily livelihood. So, if at any time, nature is technologically manipulated or is a victim of environment degradation, it directly affects not only sources of livelihood (work culture) for women folk but also their entire source of sustenance, which then becomes a reason for their further subjugation in society. Their attempt to work was and is never recognized as formal organized work even though the level and amount of work done by the rural women folk is much more arduous and painstaking in context of agriculture and the allied services, than their counterparts who either migrate to towns or are involved in the same work but have a differential aspect in terms of wage. The underlying premise to this aspect is not only the economic conception of work in the context of women and men work differently, but also the social – political – cultural patriarchal framework of property relation (ownership of property and its use) within which the changing economic relationships of production, labour and hence work between the gender operates, given the impact of technology and environment degradation on the society as a whole. Thus in the task of this paper in the given spatial frame, the attempt is being made to uncover, the relationship between four different yet interrelated variables – technology, environment degradation/ecology, economic production(agriculture-allied services) – women work within a wider frame of capitalist development. This is done by way of first laying down a theoretical/conceptual premise on which these variables interact with each other, given the perspectives from ecofeminist and ecological standpoint, in relation to emergence

of new forms of patriarchal relationships. Then secondly elucidating with empirical accounts the current changing relations of the same, with respect of status of women work in forests, agriculture, water conservation, and allied services; and how it affects or affected by larger social organization of the society.

## THEORITICAL UNDERPINNINGS

Here a two pronged yet interlinked conceptual analysis will be made in order to understand the links and how their marginalised position is created by external force of capitalism can be visualised-

- WOMEN – PROPERTY RIGHTS (on her labour, tools, land) – SEXUAL DOL –WORK (ECONOMIC- AGRICULTURE)
- WOMEN – ECOLOGY/ENVIORNEMENT DEGRADATION– TECHNOLGICAL INNOVATION -WORK

Women, in any society is conferred with a social position, status in the society which then determines it's – social, economic, and political entitlements in that society as opposed to men, be it with regard to family, property relations, decision making, and work for livelihood. Underneath this lies the prime conception of sexual DOL (Division of Labour), which acts an engine to further this process. Division of labour has been a concept which is opined by various evolutionists and made famous by feminist and primarily Marx. The concept of DOL connotes that, in a given society different sections, as per age and gender particularly are entitled to do particular specialised task (work at the expense of giving up certain amount of labour power) as per their abilities and capabilities. For instance, in traditional societies, Men are the hunter as they are considered to be strong enough to do physically demanding task, and women are entitled to look after homestead, family and the farm. The main reason for such an arrangement in the society so as to avoid any conflict of role play (status and equality) and task performed so as the ecosystem can function well with such a division of labour. This is one of the crude ways of defining. However, the reality and its functioning is not so simple (equal) and free of polemics as it appears from above statements. Maria Mies – in her article titled 'social origins of the sexual division of labour' –has attempted to revive the debate of the search for the social origins of unequal and hierarchical relationships in general and the asymmetric division of labour between men and women in particular. This attack is directly laid out against the dominant positivist, functionalist and evolutionist school of thought who have so far restricted themselves to some crude biological determinism of DOL– like Engels and Marx. This search for the social origins of this relationship is part of the political strategy of women's emancipation (Reiter, 1977). At the heart of the matter is first, the revival of the debate on sexual division of labour. First from the dominant– biological determinism/naturally attributed conception of oppression and dominance based on biologically given physical attributes of the ability to work and not to work in a particular, leads to gender hierarchy, where men are considered more superior in showing their maximum physical abilities at work coz they are naturally ordained to be so as opposed to their counterpart. Men are considered more hard headed, than women who are attributed more with soft skills to look after the private sphere / household / look after the social reproductivity of the family

than work out in the public sphere of employment /for collecting sustenance for economic productivity. And even if they work outside home – in allied activities like cattle breeding, grain thrashing, dung making it is not considered production for livelihood / formal work / public sphere of wage earning work; rather considered as what Marx calls as production for life and not livelihood, the notion which Maria Meise critics. However, a section of ecofeminist called deep ecologist have defended the natural conception, which seeks to establish a condescending link between ecology as female re presentation ‘mother earth’, a source of nurturing, conservation, providing source of sustenance, just as women symbolised in the social sphere. As a result of this, women are often relegated to a subordinate position in the social structure, which is naturally attributed as a given condition by nature. There is no social element of oppression, subjugation attached to it, because of this. Too often this concept has been used to explain social inequalities or exploitation relations as inborn and hence, beyond the scope of social change. This further translates also into the conception of labour for the same. In fact under its influence, often the aspect of women’s work – as a labour (or labour power) is overlooked or never considered till date. Due to the biologist definition of women’s interaction with nature, her work both in giving birth and raising children (production for life), along with other domestic chores and contributing in allied agriculture activity does not appear as work or labour. The concept of labour or work is usually reserved for men’s productive work under capitalist conditions, which means work for the production of surplus labour, though women also perform such surplus-value generating labour. Under capitalism the concept of labour is generally used with a male or patriarchal bias, where women are considered only as a menial domestic counterpart.<sup>1</sup> The sexual DOL, according to this definition, could be considered as one between human labour and natural activity. This concept also obscures the fact that the relationship between male and female labourers or workers is relationship of dominance and even of exploitation.

The term exploitation is used here in the sense that a more or less permanent separation and hierarchization has taken place between the two categories in terms of producer and consumer. However, what is interesting here to note is that why this division of labour became a relationship of dominance and exploitation, an asymmetric, hierarchal relationship? Meise traces the blame of such a conceptualisation to Marx’s writing of Capital on Labour. For him, ‘productive labour’ is one which, by a change of natural matter, produces a product for human use, for the satisfaction of human needs (Capital, vol.I, 1974). However, in the Capitalist production, this concept of productive labour is narrowed down to mean only the production of surplus value for the realisation of capital. According to her, this sought of conceptualisation suffers from some narrowness. By way of this conceptualisation he has theoretically contributed to the removal of all ‘non productive labour (that is, non wage labour, including most of women’s labour) from public visibility. On the contrary she argues that, this general production of life or subsistence production – mainly performed by non wage labour women and others – constitutes the perennial basis upon which capitalist productive labour can be built and exploited. She considers the capitalist production process as one which comprises both: the super exploitation of non wage labourers upon which wage labour then is possible. Thus, she considers it pertinent to search the origins of the hierarchical sexual DOL, should not be limited

to a moment in history, but one needs to answer this question by developing materialist, historical, non – biologistic concepts of men and women and their relations to nature and history. Add to this, sexual division of labour then does not remain as a problem related to family only but rather as a structural problem of a whole society – guided by conventional culture, values, moors and norms. In this context Maria argues that it is important to make distinction, between women’s and men’s appropriation of nature, as they are not biologically given but rather a result of long social historic process. They are differently defined in each historical epoch – depend on principle mode of production dominant in that stage for satisfaction of human needs. Women necessarily had to secure the daily bread, not only for themselves and their children, but also for the men if they had no luck on their hunting expeditions because hunting is an economy of risk. Gathering of plants, food, animals etc, was right from the beginning a collective activity of women. It has been proved conclusively, particularly by the critical research of feminist scholars, that the survival of mankind has been due much more to ‘women – the gatherer’ than to ‘man the hunter’. Even among the existing hunting and gatherers, women provide up to 80 percent of the daily food, also in the early mode of production there was enormous increase in the productivity of female labour which, according to most authors, made the production of a surplus possible for the first time in history. Fishers – says, they collected surplus grains and nuts in gathering stage. Also, the technological precondition for the collection of surplus was the invention of containers, jars etc. Whereas men contribute only a small portion by hunting ( Lee and de Vore, 1976, quoted by Fishers,1979). This man the hunter model has been and is still used as an explanation for the advancement of the causes of social inequalities. Feminist scholars challenged this model, as a sexist projection of modern, capitalists and imperialist social relations into pre-history and earlier history. This projection serves to legitimize existing relations of exploitation and dominance between men and women, classes and people as universal, timeless. In spite of this, we were not able to prevent the establishment of hierarchical and exploitative relations between the sexes.

*We can conclude that the various forms of asymmetric, hierarchical division of labour, which have developed throughout history up to the stage where the whole world is now structured into one system of unequal division of labour under the dictates of capital accumulation, are based on the social paradigm of the predatory hunter/warrior who, without himself producing, is able by means of arms to appropriate and subordinate other producers, their productive forces and their products.*

This extractive, non reciprocal, exploitative object – relation to nature, first established between men and women and men and nature, remained the model for all other patriarchal modes of production, including capitalism which developed it to its most sophisticated and most generalised form. The characteristic of this model is that those who control the production process and the products are not themselves producers, but appropriators. Their so called productivity pre supposes the existence and the subjection of other – and in the last analysis, female – producer. What emerge from this basic concept of sexual DOL are other main components of this process which are essential to the understanding of the theoretical links established here – of Work, Labour, and rise of Private property under capitalism, technology, ecology and women.

Marx beautifully puts it in the following words – he uses the expression ‘appropriation of the natural matter to conceptualize ‘work’ in its broadest sense: work as appropriation of nature for the satisfaction of human needs. Labour in the first place, a process in which both man and nature participate, and in which man on his own accord starts regulates, controls the material re-actions between him and nature – which Marx calls appropriation of nature, with some tools (technology) which changes entire economic nature as well as ecology. By thus acting on the external world and changing it, he/she at the same time changes his own nature. The labour process in its elementary form is, according to Marx, a conscious action with a view to producing use – values. In a wider sense, it is the appropriation of natural substances for human requirements. This exchange of matter between human beings and nature is the everlasting nature imposed condition of human existence, or rather common to every historical phase. (Capital: vol, 1). As with the development of Capitalism, one of the mode of organisation of socio – economic activity develops – private property system, as opposed to communal ownership of property primarily land that existed in earlier epochs. The land now came under direct individual ownership, which meant differential ownership and usage rights of the powerful and the subordinate structures. Engels, was the first one who explicitly talks of its emergence in his work titled Private property, family and state. According to him, the determining factor in history is, in the last resort, the production and reproduction of immediate life. The former pertains to sources of labour for subsistence and the latter pertains to reproduction of human life - aka family. He brings in economic and historical materialistic explanations when it comes to patriarchy and private property regime there in. He adds that, the monogamous patriarchal family was the first form of family based not on natural but on economic conditions, namely on the victory of private property over original naturally developed, common ownership. And it is system of private property that becomes the sole reason of estrangement and alienation of man from man, and man from nature, the root cause of all violence (Marx).

Technological innovations have been at the heart of the expansion of capitalism and lies at the centre of conception of work and labour. They are tools, weapons for productivity, as well as weapon to kill. With more complex lives and productivity and to meet competitive market demands, technological progress has been tremendous in almost all the sectors of the society. It is important to point here that it is not that these technologies per se are responsible between man and nature, and between man and man and man and woman. Rather these technologies are carefully socially engineered by those who possess the economic power to develop them and own them to serve their own ends. This means that the emergence of a specialised and efficient technology implies the possibility of establishing relationships of exploitations and dominance. Hence, it is important to see their role beyond as mere instrument. In the process of the interaction of these components with each other, they have an immense capability to change the external, ecological setting around them, which has increasingly contributed to environmental degradation with the establishment of modern industry, confiscation of natural land as private property etc, and intern altered man – nature; man – man in social – economic – political terms, especially in context to women, as they have an age old connection with nature, persisting throughout culture , language and history.

However, the ancient identity of nature as nurturing mother is changing. The female earth which was central to the organic world is now undermined by scientific revolution and the rise of market oriented culture. The mechanical order – the new mechanical philosophy of the mid 17<sup>th</sup> century achieved its ramification of the cosmos, society and self in terms of a new metaphor – machine. Order was redefined to mean the predictable behaviour of each part within a rationally determined system of laws, while power derived from active and immediate intervention in a secularized world. Redefine reality in this way led to achieve rational control over nature, society, and self. It is in this context that we need to analyse the relationship between technology – ecology and women work. For this, we need to go beyond the conceptualisation of technology as an instrument to the aspect of looking at it as a social – cultural construct of the society. It has both positive and negative consequences. *Positive* in the sense that, it helps women in carrying there productive activity with respect to agriculture and other allied activity like gathering, cow dung making etc. It contributes in increasing their productivity; however, *negative* impact is two pronged – more technological innovation would mean, also directly taking away of their productive power as being replaced by machines especially in the area of agriculture where most of the work demand intricate manual labour, and those carried out by women outside their domestic sphere.

Hence, the time, these new technological devices are deployed they take away major opportunity to expending there labour power. Thus again relegating them to the position of subordination, framed by the social – cultural setting of that society. The other way of its negative consequence can be with respect its attack on ecology itself. For instance changing the nature of seeds itself, cutting down of trees forestry which is main sustenance of women’s work, for placing some industry, poses another threat to their livelihood. As most of the work carried out by women in agriculture is for sustenance as well as on field for surplus. If this is taken away for them, it directly affects their livelihood and places them further into marginal position. This problem is further exacerbated when women are given no sense of private property right/ownership of the land, technical tools for work, as culturally in a patriarchal society. Hence, leading to less decision power of women in the area of workforce even though their participation is high, and gives higher returns in sense of female economic productivity, yet, the system remains, unequal, hierarchical, exploitative. Thus on the basis of above given framework, feminist have vouched for reconsidering the definition of Work for women, which is more holistic, inclusive and context specific in the given changing social – cultural setting of societies.

### **Women And Work – Sectoral Studies Of Agriculture And Allied Activites In Rural Areas**

Given such a theoretical background it is now important to dwell into study of various sectors like agriculture, forestry and food security & water management– to understand the actual nature of women’s work with respect to society; and its changing nature, impact on women due to technological innovation and environmental degradation. These case studies will establish the links between the concepts that lie underneath the entire process of their marginality as well as prospects for development.

## Forestry

Indian forestry is spread across wide expanse of land and regions across its terrain. Forests, are not only considered important for its ecological significance, but also for the economic, social, livelihood that it provides to people mainly indigenous communities and rural folk who are directly dependent on it. Amita Bavaskar, in her paper analysis the relations of tribal's, especially the women folks (among the poorest Indians) with forestry to understand the nature of marginality and development induced change they come across. She identifies the main cause in 'dependence without control'. To a large extent this poverty is a consequence of tribal communities' lack of control over resources that sustain them – both in terms of cultivable land forest and pastures. As most of them are either landless or have unviable holdings. And whenever, they face situations of drought, they migrate to nearby city for work – among them primarily men. Forest becomes important and strategic for two reasons – first, its direct link with a resources for agriculture, in terms of fodder, livestock, manure etc. (hence, if anything happens to them, agriculture suffers badly); secondly, politically, these areas are designated as forest lands with a key intervention by the state to protect them as per their welfare goals with their own system of institutional 'democratic governance' system. Due to this, forest dwellers never feel owners of the land, rather remain merely as encroachers and are often victims of hostility by the state. Hence, here, social – ecological – political considerations become equally important. Indeed, the State play's a strong role as a discriminatory agent. 'Resource displacement' where communities live in the same place but are denied previously exercised rights to natural resources.

*(This is main inherent role of capitalist state, which develops out of this scientific revolution, and hence plays an important role as an arbitrator between ecological resources – communities – women).*

*For instance state's initiative to replace forests of Bastar, Madhya Pradesh, with tropical pine were met by mass actions to uproot the saplings of alien species. More recently, tribal communities especially among western india have also mobilised for region wide struggles staking claims to forests through organsiations such as – kashtakari sangathana etc.*

Amidst this, women's relationship to work and nature is at a vulnerable point. Among the advice communities, their relationship to forestry is mediated through the gender DOL, as well as by age and marital status. Their greater responsibility in domestic sphere is – collecting fuel, fodder. Unlike men who may have ownership rights over agricultural land, women tend to have only customary rights over common property resources like forests and pastured. Even though they have a fairly better and complex understanding of forest species and how they should be harvested, this knowledge (just like women's work) is largely undervalued and taken for granted. Thus women's greater dependence on forest is matched only be lesser control over her labour as well as natural resources<sup>1</sup>. This sought of interdependence is very lucidly depicted by Chandni Bhatt in her paper, where she takes this perspective ahead, to derive a link between women – ecology movement, as a movement of up rise against deforestation and ecological degradation by women as collective bodies. *(Putting back the earlier subjective relation to nature into picture)*. The question of women's survival is closely linked with forests.

As it gives them solace during the time of distress and caters to their daily needs. It has become a source for their emancipation and realisation of their power of dissent and decision. It is here that she vouches for the need of Women's people's programme. It is local based people's programme to save ecology, retain political right to dissent and decision making, especially to women. Chipko Movement by women helped them to claim their political and ecological right on the saving the environment for its own sake as well as for themselves. She cites one major drawback of this – the social patriarchal framework of the society which renders the entire system unequal, women and ecologically insensitive; as well as to the role of modern state in terms of the government protection programmes led by them, which are implemented to promote their own as well as the wider economic interest of capital for urban masses, ignoring the rural, women workforce. And hence, calls for a deliberation to relook and revive ecological movement (also women emancipation of their own decision making power) like Chipko movement, representation of women in village van panchayat based on people's programme rather than on people's participation depending on their needs, capacities, local context; and the government agencies participate in these programmes.

For instance when elections were held in one of the villages for Van Panchayat, four women were elected as Panches and one as Sarpanch, after a voice of descent and protest by women folk. Also along in the context of shift to people's programme emphasis on recognising local needs, for instance, under a number of forestry programmes the plans suitable to local needs were not planted, instead trees like Surai and Cheer were planted which are mainly for commercial use. She further identifies ecological loss or imbalance not only occurring due to natural reasons, but also due to man – made social political system. The social economic scenario of growing consumerism, market economies to fulfil needs of the urban folks, and modern industry. She recognises the importance of government role in terms of passing legislations, acts (forest protection acts etc), but is however, sceptical about their move, as it is primarily restricted only in saving the natural environment/ resources, but ignores the entire community of rural folks, especially women, who thrives on it for their daily sustenance and livelihood. Given such a scenario, governments should give up its character of provider and taker; and rather develop a sense of responsibility and commitment to guide the people's programme. Only this will help, bring qualitative changes in the lives of the local women and meaningful development promoted. In response to this Government of India has introduced number of policy regulations and forest protection acts, among which JFM (Joint Forest Management), holds its own strategic significance. Recognizing the symbiotic relationship between the adivasi and other people living within and near forests, the 1988 Forest Policy of India, states to recognises the following :

- Customary rights and concessions of the villagers to be fully protected.
- Domestic requirement of the basic resources should be the first priority on forest produce.
- The income and employment should be enhanced simultaneously
- A massive people's movement with the involvement of women should be created for achieving the policy objectives

A point to be noted here is significant, that this policy marks a wide shift from the policy in 1956, which prioritised the meeting of industrial and commercial demand for forest produce and maximising state's revenue. The new policy reverse the ball, essentially to mandate a shift from totally state controlled forest management to decentralised, participatory and local need based co-management. It was in this light that GOVT OF INDIA came up with a joint forest management act, of managing forest resources and protecting communities, through involvement of local village communities and voluntary agencies. This scheme is implemented in approximately 17 states in India. Parallel to this often preceding state promotion, there has also been a resurgence of grassroots community initiatives for regenerating degraded forests to deal with hardships caused by resource scarcities – community resource management has also come up. So far, the JFM has showcased increased positive impact across several states, with respect to increase in forest cover, productivity of species of plants and reached conclusions on its benefit to the community, the people and the villagers; however very few studies have disaggregated what has decreased under community protection and co-related that with who, within communities and households, has gained and who has lost on the lines of gender, class, caste. It is this last policy implication and practice that Nitya Rao, brings forth in a detailed analysis gender and equity concern in the local institutions. For this matter, it is significant to highlight the importance of disaggregated communities and households. They are not homogenous and represent varied social cultural groups by gender and age, rural folks who actually depend on forest for survival livelihoods.

They have a strong prevalence of inherent dynamic political and economic hierarchy of user and non user. These are graver in context of gender difference in access to and control over resources, perpetuated through social institutions like panchayat, their exclusion from the public sphere etc. it is important for the policy maker and analyst to take cognisance of these factors in order to spread the resources equally. Especially in the context of women where their important role as gatherers of forest foods, firewoods and subsistence goods made them economically valued members of the community (can be seen in their tradition of bride price.) Their proceeds or income from the sale or processing of common pool resource is respected as their income which they control although this is under threat of rapid erosion. In comparison, however, despite the hard work they invest in cultivating private lands, all income from private lands is strictly considered the male landowners income. This leads to two areas of inequality – property rights and political participation. For instance, the lack of alternative means of income or employment opportunity has given rise to harvesting firewood for sale. 'Headloading'; as this activity is called, has gained enormous importance as an occupation. It has been estimated that 2 to 3 million people are engaged in headloading, making it the biggest source of employment in energy sector in India. The majority of headloaders among them are tribal and poor women. Men are usually involved in selling these. However, now with the commencement of forest protection act, women of 20 villages in Bihar are in fear of losing their potential source of employment as headloaders, seeking for alternative source of employment to stop cutting firewood to support marketing. In contrast, women folks in the mountainous regions of central India enjoy higher access to natural resources, who are major gatherers in their communities.

All these are subject to socio – cultural variations in gender relations in different communities. Another trend with socio-economic change is that male dominated migration to the market economy has increased women's role in the subsistence sector, as prime bread winners of the family. One of the key features sighted of this policy is a move from centralised to a totally decentralised – local institutions driven. It showcases some autonomy on the part of the commoners for to access and control over CPR. However, this brings forth another problem with it, of who among the existing users of diverse levels determines or takes decisions about the access rules. Thus, who is included and who is excluded from participating in community decision making of CPR, will tend to determine who gains and losses. And this in itself brings women back on the stage of analysis, as it is particularly for adivasi and other poor women who are often most disempowered, forest users and whose rights of access to forests have enjoyed community sanction by tradition.

**JFM – Unequal Management:** the villagers in people's programme are made key holders of the forest products especially revenues earned from timber (25-50 percent); this revenue is almost long accrued to the diverse communities who are employed on working together, as it takes them time to replant these products again. And moreover, since the prime management objective of say timber production is predefined and made non negotiable in almost all the state JFM orders, villagers are left with no say in the decision. Hence they not only have to forsake current consumption in the short term but, in many cases are expected to do permanently. Another aspect is, Curtailed access to firewood and its differential impact – This is because of two reason, bringing forest under protection even prior to diagnosing the existing forest use patterns; and also with respect to increase in power of those who gain revenue from timber but do not work on forest, have now started having increasing say in forest products, even though they do not have to forgo their opportunity cost of current consumption for future gain. With respect to firewood collection, which is central to domestic use and survival income, is primarily a gender based activity, where traditionally they are supposed to collect dry, dead woods from the degraded forests; through the work of head loading. This overlooks several factors, first that degraded forests do not have much of these materials, hence extra and useless productive work, and it further semi-criminalizes their work when any sale and income earned on selling it forbidden for them. Secondly, this indirectly leads to further exploitation and puts women in unequal position, as they have to look for alternative options for instance stealing it or etc, which further reinforces their stereotypes and translates in property right differential. As well as landless and small/marginalised farming household who are involved into grazing.<sup>1</sup> Most of the time, it leads to conflict over denial of resources, women have come up front with going against such exploitation, faced abuses, went to police station, have put up protests. In response to this, government tried to compensate them for their lost opportunity cost of head loading, by providing them with supportive ad hoc activities which were first alien to their built environment, and moreover not feasible to the way they lead

<sup>1</sup> Unregulated grazing is considered to be a major cause of forest degradation. GOI, 1990, issued this ban, however grazing is never considered under JFM. Hence, households has to shift from livestock grazing to stall feeding, and depending on the gender roles for livestock care, there can be highly inequitable distribution of the increased labour and time required for it within household.

life – like fuel efficient cooking stoves. Access to basic NTFPs is not given in the presence of Market driven cash crop cultivation, which declines its availability to disadvantage women and subgroups. Prime focus has been on timber and firewood rather than on production of less valuable bushes, shrubs, grasses, creepers, extensively used by poorest women and men for subsistence and income. Given such loopholes in the act, there is a need to revise and device management alternatives as per different regions, as in example of Orrisa. It needs to done on the principle that no forest produce shall go outside the participating villages until the requirements for it within them has been satisfied. Any sharing between local institutions as well as forest departments should apply to only that part of the produce which is surplus to village needs, if any. Secondly, the interpretation of local needs should not be restricted to only 'bonafide domestic needs' but should explicitly include the need for secure incomes and livelihoods based on processing and selling NTFPs. Also, women be made active part as members, workers and managers in these local institutional bodies in light of the fact that most of the forest protection bodies are male dominated<sup>2</sup>, which differs as per representation of caste, class or ethnicity with context specific dynamics of wealth, power and cultural norms. However, not always in these rules are practiced in reality. Even though in states like West Bengal, it has been provided, it has not necessarily led to increased women's participation. Either such rules have resulted only in women's names being added to membership lists or even that has not taken place. Private property rights starts from formation of LI. Membership under JFM not only mediates an individual's ability to participate in decision making and defining management priorities but also his/her access to a variety of new property rights to produce from public forests. These include rights to collect process and market various forest products. Where the state JFM orders provide for distributing shares of income to individual members, it involves an explicit privatisation of property rights and its actualisation in terms of expression of serious gender and class differentiation not only in short term but on long term legalised basis.

#### Possible strategies towards gender equity –

- *Moving from forest protection to participatory planning, management programme.*
- *Creating a conducive environment for women's participation –*
- *Role of facilitators in giving women a voice giving them recognition as members.*
- *The basis of facilitators needs to reworked – most of the initiatives carried out in this direction perceive women's participation as an instrument for conserving forests rather than understanding their variable needs and priorities to evolve appropriate management options keeping women at a centre stage. Also women's lack of awareness of alternative management alternatives needs to be revived.*
- *Making them aware of the invisible power dynamics during village meetings.*
- *NGO's increasing intervention for building strategies to empower women to participate by holding separate meeting for them*
- *Organising all women LI for JFM.*
- *Promoting separate women's organisations like Nari Bikas Sangh in WB.*
- *Forest department strategies and institutional constraints – they are an important and challenging component in the whole process to change, especially under the structural or institutional constraint it operates.... though even if women.*
- *Importance of increasing women staff within forest departments at all levels, until this happens, awareness about gender and equality concerns will not come up fully.*

**Food Security/Water:** Another important sector which was initially ignored and now revived by various scholars is to look at livelihood issues by directly linking it to access to physical infrastructure service, like water, energy as well as basic sustenance of food security, in the context of gender. Food is central means of subsistence in any rural and urban society, and those who are assigned this task are primarily women, who go out and gather firewood, looks after the plantation and etc. similarly is with respect to water. Women and water bodies have a close connection as women are considered to be the water providers for the families. The scarcity of water has put a new burden on the shoulder of women. Now they have to travel miles to fetch water for their families. This scarcity has created geographical distances between both of them. It implies more work and less survival options. The food crisis as rooted in masculinist agricultural science and development which have destroyed nature's capital and have excluded women as experts and producers of food (Vandana Shiva). The violence inherent in the green revolution for food-crops and the white revolution for dairying, is located and linked to shifts in the perception of food as a commodity, produced and exchanged for profit. Datye identifies this ignorance of equity issues regarding – water and food security. He suggests, in a degraded ecosystem, where the carrying capacity has exceeded due to the deficit of present production in relation to various needs, multipronged effort is required to achieve sustainability. Equal importance has to be given to improving efficiency and equitable distribution of water to assure the livelihood of the poor. This is challenged by the dominant paradigm of globalisation and privatisation which may result in restriction of access to the poor particularly women, while politically powerful and the land owning class will continue to waste scarce resources of water and energy. He suggests distribution and redistribution an essential precondition to create minimum and sufficient access necessary to motivate poor to participate in raising efficiency of resource use and to limit the exploitations. For this matter, a reassessment of the role of external inputs to meet the short term food and energy shortage.

#### MINIMUM WATER ASSURANCE AND LAND ALLOCATION

*The area of land for food security has been widely contested. However, if intensive production with and integrated system of production of supplementary food as well as allied activities like fishery, animal rearing and poultry is practiced, then small pieces of land with assured water can provide food security. Lot of other policy options for providing access to surplus biomass to be used as inputs for generating non agricultural incomes. Access to assured water thus becomes essential to rural poor, which can be given through appropriate water allocation and pricing policy. Also in many areas depleted aquifers and the degraded ecosystem are not capable of providing the biomass and water for basic needs. By transfer of water from the large streams, it is possible to stabilise the water supply of the local water storage and regenerate the local ecosystem by recharging aquifers. However he does call a need for a paradigm shift, to subsistence crop production by small and marginal farmers in the poorly endowed areas, and intensive culture in small plots to balance the nutrition and food security. The market oriented production neither provides the motivation nor has the capability to create the bio resources base in wastelands and in the degraded ecosystem.*

**STABILITY OF BIOMASS SUPPLY AND PRICE** – *public funds allocated for wasteland development or for water saving technologies or subsidised irrigation can be availed of to create a common water resource pool to provide the water for biomass production. It thus becomes the basis of a dispersed industrial production of goods for the resource poor in both urban and rural areas. He also adds, that simultaneously access to allocation of different types of land should also be ensured.*

#### SUSTAINABLE WATER PERSPECTIVE

*In here he concedes to the need of looking at water management ( ground water, irrigation water) along with greater reliance on local resources with emphasis on household food security, rather than on currently heavy subsidised chemical and energy resources which further creates inequality; through developing social instruments for development and conjoint use of ground and surface water.*

<sup>2</sup> Several studies indicate that male household heads neither necessarily consult their household women nor represent the women's priorities. In response then orders were issued in some states to have both men and women as representative. But even this is not sufficient, as the problem lies in the continued use of household as the qualifying unit of membership, on the implicit assumption that all families are nuclear headed. And moreover, even this does not represent the heterogeneous category of women, who are poorly in need and marginalised like widows. Thus it needs to open up membership to all adult women and men irrespective of their status within the household.

**Importance of Women Empowerment:** In here, he considers contribution of women as pivotal. Evidences have shown that, due to seasonal migration by male population for employment opportunities results in lack of motivation for restoration of vegetation, land and water resources. On the contrary women, traditionally have had higher motivation to take a leading role in creation of food security with minimum external input, provision of water for livelihood. However, they have also lost control over local renewable resources because of the privatization resulting from bio-technology based development of agriculture. Women's concern can therefore be better understood within a framework of sustainable land, water, biomass, and renewable energy based production system. However, till date no adequate plan / programme has come up with regard to degradation, where equal importance is given to women's livelihood, sustainable biomass and water use and creating opportunities for women to play a leading role in the development and management of bio resources. In this case, value addition activities carried out by self help groups can help increase self reliance. Alongside, there is a need to develop social instruments to implement the programmes with capacity building. Also, one needs to transform the functioning of the local institutional structures. Panchayats and cooperatives have often not been very helpful in facilitating the work of women's groups, engaged in creating productive assets by using the available funds and institutionalising the allocation and pricing arrangement for water and biomass. In response to this self help groups have come up for credit and small scale production and market activities. However, one also has to devise a proper system to ensure the public funds reach to women rather than disbursed to the cooperatives. Add to this, is a problem of present property relations wherein women have no ownership rights. For this, an immediate step of Common resource pool of water and biomass needs to be extended to women, and which should be separated from landownership. There is also a need to institutionalise the right of women to resources and stabilising the arrangement for equitable water sharing with minimum water assurance and sharing of the usufruct from common as well as private wasteland development at public cost. They have also thought of introducing women corporations in the state, like Mahila Vikas Mahamandal. And lastly, technology, support services and continuing education for sustainable productivity enhancement of the land and water resources. For instance, Organisation like KRISHI VIGYAN KENDRAS; BHARAT GYAN VIGYAN SAMITI are building capacities of local organisations in the ALL INDIA WATERSHED PROGRAMME.

#### **AGRICULTURE – (NON FARM)**

One of the allied nonfarm activity associated with agriculture is popularly known as dung work (cattle dung), popular in Indian rural context. In his study Jeffers, has tried to build a link between nature of women's work and rural development in North India. As per their ethnographic studies, he brings up the importance of cow dung economy, for its environmental reasons of being a source of potential fertiliser and manures and also brings forth how dung work is central to women's work which can be used to boosting rural economy/development, which has largely been ignored. In summary, this paper brings forth the following - It uses women's work in relation to cattle dung to address for a rural Indian economy theoretical issues that are also being raised by feminist literature in the west : in particular analytical inappropriateness

of the conceptual split so commonly made between production - reproduction; also, public – private spheres; - Taking it as a starting point to analyse the concept of development that affects not just females but everyone in the rural economy. Cow dung so far, has been considered for its symbolic use and is largely treated as a residual fertiliser, and an undesirable residual fuel. In part, this is because of male oriented approaches to agriculture; THORNER, 'capitalism is male dominated but cattle dung and dung work are largely matters of women.' What links this to women's position in society is that this work is usually considered undesirable, filthy, which rarely gives women direct access to or control over resources, wealth such work helps to produce. Work done by cattle dung which often goes invisible as any other work done by women, and its social economic implication on women's status in society and agriculture. In their study they found dung work as central part of their life. In these villages over 80 percent of the household own cattle, with the average being three animals. Cattle dung is privately owned. Dung which collects in animal's stall, belong to the owner of the stall. But if it lies unclaimed in public space can anyone gather it up, so those without their own animals have only unreliable access to it. Cattle ownership is not totally determined by the ownership of land. Most landowners with more than half an acre of land own milk and drought animals. However, no landless people own the latter one, but the former.

Cattle dung work is largely a matter for women, though all cattle are owned by men, and women's access to animals and their dung may be complex. The working unit in the village is primarily house hold, wherein women's work is organised through her household and her relationship to mother in law and sister in law. Even within them there is a difference in ownership. If they all stay together, jointly then each on will be entitled for a share. However, if it is separate, then she owns the entire share. Thus, some women are involved in quiet intricate animal care, which govern which animal's dung they can collect and when. Dung collection is work of women, men restrain from handling it. Women are hardly enthusiastic but have to comply with men's refusal. Within this however, there are caste differences as well. The work carried out is tiring and required carrying of heavy head loads, even at times of pregnancy they are expected to work, only in exceptionally ill circumstances she is detained from doing the work; and a replacement is searched who is also a women. The returns from the work are actually good, owing to the high quality fertiliser produced. Thus women can be given a considerable cash value, either in terms of income or opportunity cost of using dung in these ways. However, most women are not paid, since it is entirely based on family labour, nor do they obtain any informal credit for the contribution this makes. Given such an outline, feminists cautious us of how unviable it can be to put the water tight analytical concepts of production–reproduction; public – private sphere in this context, where in the work carried out by them is not solely within the domestic or private sphere, without taking note of the contributions their work - whether private, reproductive, or in public - makes to production. To maintain such dualities leads some problems. Hence, we need to look at it in an integrated framework of production and reproduction. Specifically dung work is productive, as a part of agricultural activity as it is related to major cash crop – and also reproductive work to do with cooking, consumption, the reproduction of household sustenance depending on the season. It is actually production for use which has an exchange value, even if is rarely realised;

it is the work done in private spaces that hold importance for the public spaces of the fields where subsistence and especially cash crops are grown. This invisibility of women's work reflects the seriously deficient ways in which 'development is generally conceptualised. Apart from mere feminist consideration, it also has great ecological implications of ignoring it. As in India, 30 percent of rural energy consumption was provided by animal wastes, as opposed to Pakistan's which is 80 percent. Burning of almost 400 million tonnes of cattle dung leads to loss of 20 million tonnes of potential grain output, in Asia and Africa. Looking at dung work also highlights some ecological changes. Women's work, like men's is not timeless, and several changes have taken place since then. For instance, the increasing use of firewood, and cooking stove have led to less use of cattle dung for cooking. This is primarily because of land being taken away for grazing, and most of the agricultural land turns into cash crop, hence availability of cattle dung and rearing of cattle is reduced. For instance, forests, which are usually considered unproductive had and still has economic uses not only for providing wood fuel, but also dung for those without animals. Food grains have been granted a dominant sway in the Indian agricultural scene that the loss of jungle goes almost unnoticed. Similarly, the work of women tends to be closely linked to the availability of land and as with respect to other aspect of women's work it has not been covered in the official land and labour issues in India. This has been further accelerated by commercialisation of forest turned into agricultural land and claiming that – the use of cow dung as a source of non commercial fuel is virtually a crime does not get us very far. Socio – economic indicators – apart from the above the village demography itself shows a male bias – with almost 1169 males over females in 1981. Most of the authors have argued that the structural consequence of the north Indian kinship system leaves women powerless and perceived as economic costs rather than benefits. Certainly, an attempt to improve the position of women by increasing their workloads, without attacking their lack of rights to property and income will leave women worse off than they are at present. In this sense, development specialist needs to revive the need to reconsider women's work.

#### **AGRICULTURE- (AGRICULTURAL WORKERS)**

Women's work and Agricultural Technology – It is important now to highlight the status of women and her work as 'agricultural labourer' in subsistence agriculture and the rural development strategies both at local and national levels. In these strategies again women are rendered to peripheral position in agricultural and rural development programmes; and their multiple roles and work in the rural economy which is generally ignored in the andocentric environment of planning and policy making. There is a need to present their modern participatory social role in the current era, in Indian context during and after the period of green revolution. This brings forth often neglected or ignored link between green revolution inequality between women and men. This needs to be put in the place within the wider context of capitalist development taking place in third world countries and vulnerability of women in this respect. They suffer from a two pronged attack – exclusion from new technology and economic exploitation whereby they are denied their rightful participatory role in development; and secondly, within the family and community where they continue to be under gender domination and subordination. The female work participation

in rural areas in 1981 shows an increase of 365 women per 1000 men in the category of total workers, who are usually engaged in unpaid household duties have been considered non workers. During 1911-1951, women's proportion in the total work force declined from 525 to 408 per 1000 males. In 20 years, the gap between male and female population grew by 50 percent. And in the same period (post 1951) the number of women workers in agriculture declined from 31 to 25 million, while that of men increased by 34.3 million. In non agriculture sector, women workers declined from 9.3 to 6.2, while men increased from 32.8 to 48.4 million. One of the major setbacks of GR is women's unemployment; during 1961-71 form 60 million to 34 million. All these statistics are indicative of increasing poverty and reduction in the level of employment and not of improving rights and opportunities for economic participation.

**GR – Pauperisation And Marginalisation Of Women –** unemployment + stereotypes forcing them to take less paid, low status menial jobs. For e.g. Punjab has a lower level of women's participation in labour force, i.e. 1.18 percent. Moreover with replacement by new technologies, it has caused reduction in about one fifth of that involved in traditional farming. This has been pointed out by Maria Mies, in the context of West Godavari district of Andhra Pradesh. Women's work is not an indicator here of growing prosperity a wherein women of the more affluent classes do not have to work in the fields. Agriculture though still remains a dominant economic subsistence activity. Most of the produce grown is used for family first for consumption needs and then sold out directly or indirectly. DOL – women engaged in back braking task of transplanting, weeding, harvesting, which takes time, and asks for more labour. Men concentrate on jobs of picking seedlings, which is considered skilful and demanding application of physical strength. Hence, men receive more wages and job is graded higher. The logic of the superior or better paid work for men derives from the fact that they are assumed to be household heads and thus ultimately responsible for family. Women's work is considered secondary. They tend to accept their inferior position both in household and in labour market. This is called as social reproduction of values in sexual DOL. Gender disparity can also be seen in terms of wage differential. In India, women are generally paid 40 to 60 percent of the male wages and are given high labour intensive work. It may be pointed out that in villages of Etawah district, women in agriculture generally got one third less than men agriculture workers. All India disparity of wage differentials has increased by approx. 50 percent between that period. Undervalue of their production and reproduction activities has led to erosion of traditional ways on which agriculture and non agricultural economic activities were organised. Women of artisan and peasant families played an important role in decision making process. However with commercialisation they have lost this power too. All these have cumulatively led to underestimation of women's work. Due to this lack of decision making power and lack of training in technologically orientated agriculture - it has led to a socially and culturally – determined classification of work influenced by gender, caste and class line of Indian rural village. Where in women are kept away from the productive activity. For instance, ploughing and operating on potter wheel, is considered taboo for women. Women are prohibited to touch the grip of the plough, which is regarded as a sacred symbol of fertility. Pollution of this symbol is believed to bring natural calamity. The other activity in which they make immense contribution thought still

undermined is irrigation. Earlier when fields had no direct access to water, it had to be fetched from far off water bodies and drained in buckets. Women till date have been very active in this field. However, now, with coming of hand pumps and building of canals, their labour is no more required. And they moreover do not have access to modern facilities. And hence, most of them tend to divert to weeding which is not considered a very important task. Like other activities even marketing remains in domain of male. Even for women, any grain transaction that took place it was at home in the absence of any male member. However, in almost all cases money is kept with the women, but they have no control over it. The women wage workers, on the contrary, have more power and authority in their house.

Hence we see a confluence of the Social – Cultural – Economic – Technological – Ecological variables between gender dimension and status of women and work in rural India, as a repercussion of advancement in agriculture in terms of green revolution. It has been very lucidly demonstrated in this paper – social and economic status of women in Indian society; nature of women's work with respect to agriculture and how they have failed to cope up advancement in technology and hence rendered to work in their private sphere even though they make significant contribution in terms of production and reproduction of family and economy as a whole; this same thing is further perpetuated by wage differentials, and lack of property rights and ownership awareness for the same among them. Hence, there is an urgent need to recognise women as the technology makers and as technology users, as they have always been, to provide collectivisation of scientific knowledge and judicious distribution of development benefits among powerless, depended and disposed group of men and women.

**Women labourers and rice cultivation:** it is important to look at role of women as agricultural labourer for rice cultivation in particular. And challenges and justifies the arguments against a bipolar characterisation and ignorance of women agriculture labourers. Agricultural labourer's work is characterised by seasonality, low levels of skills and low wages. Among them, women agricultural labourer's work remains unrecognised. It is thought of something which is drawn upon when demand for labour grows up. Even their contribution to household income is treated as minimal or marginal. It is obvious that these are the reasons largely because of which women's work is usually considered low skilled and low productive. One characteristics of agricultural labour is that they are no homogenous group, and their relationship with their employers is based on a large variety of contracts, which vary as per regions. Also, most of the time, conventionally agricultural labour is associated with 'male labourers'. With respect to analysing women agricultural labourer we need to envisage why and how they come to work whether in their individual capacity as wives of male labourer, how they are paid, how they cope up with field work and other domestic works. Even the employers are not a homogenous body. A variety of factors like size of landholdings; ability to change from one crop to another etc makes them different from one another, and is directly reflected in their relationship with the labourer. Same is with the nature of land as a private property as it exist today, which as a result decides who to employ, as well as introduction of technology is influencing uneven demand for labour in regions. The labourers who either own or lease in land do not have sufficient land and their

access to resources like credit and water remains limited. Wage work remains the source of assured income. In agriculture, the capitalist landowner requires large number of workers with different skills, such as male labourer for ploughing, harvesting, female for transplantation, child labour for tending cattle etc. Given such a system, information on women agriculture labourer is considered limited and rather vague. As they seem to enter the labour market in different ways, for different reasons, at different levels. Sometimes the husband is a casual labourer and the wife, a permanent labourer or vice – versa. More often husband is a permanent labourer, and his wife supplements his work with no contract with the landowner. For instance, in one of the studies in Tamil Nadu it was found that wife of the agricultural labourer, worked in non agricultural activities without any return of the payment. Added to this, there is actually no uniformity in the task they do or not do. Overall it was found as per their study was that they did not do ploughing.

However, there are inter- regional variations with respect to tasks carried out. More than in any other states, women's work in West Bengal is invisible. In their study they found that, there are actually many hardworking, wage earning women. Most of the women did not enter into any contract directly with the employer; most often they worked to fulfil the husband's contractual obligations or to repay loans, and most worked as casual labourers. What they also found was that women very often combine a variety of work within a specific time. These include wage-work and non wage work and earning per item as well as mode of payment can vary. Also, it is commonly thought that all women do transplanting harvesting, but as per their study in the south they found that, it is invariably done by women of the traditional agricultural labourer groups who belong to SC/ST. Even those areas where men have generally pull out the seedlings from the nursery, often the hazardous job of planting them is left to women. It is common knowledge that agricultural labourer's work is seasonal. It is also known that agriculture labourers face severe unemployment and under employment. The tasks carried out by women are generally through self employment. In rice cultivation, weeding, transplanting and harvesting are generally carried out by women. Rice production everywhere is found labour absorbing. Women labourers have specific tasks, which by and large have remained unchanged. The fact that regional, communal differentiation does exist in their tasks performed, it does not belittle the relevance of women the production and processing of rice. However, what is sticking of the employment scenario is the intermittent nature of work availability. A few days of work followed by a spell of unemployment, then again few days of work and again unemployment. Impact of nature of their work on income – apart from the lower rates of wages they are paid almost everywhere, what is more significant is the way in which they enter the arena of work also influences income. For instance, women entering with no contract to work along with her husband, or with her mother in no return of wage payment, rendering their work done almost invisible, and submerged even if we make women's work visible to that of men. Along with gender discrimination, they also point out the working of class exploitation behind these pictures. As well as, even the conceptualisation of self employment is important here, as most of the work done by them is labelled under this, however, information is meagre in this area. Most of the time, the female herself does not realise the significance of her self employment and how much she gets out of it. In their study they came

across a opposite case in west Bengal. Here, there was at least one household in every village where the husband could not contribute anything to the household during the survey period, is a graver pointer to the situation of unemployment which male agricultural Labourer faces. This reflects the crucial nature of women's contribution to work once the male member fails as a bread winner of the family. In light of this, arguments of entry of women and child labour needs to be reconsidered. Another important aspect that can be looked at is the way in which proportional earnings of men and women correspond towards household maintenance. In their study they found that, most of the time, women have been more diligent in this regard of saving the money earned as income for emergency or getting household stuff, and if any day they do not have, they open their own small enterprise like in Kerela to sell idli and tea and save it for house. Men, usually spent part of their income earned to meet his own needs, on tea, food, bidi, alcohol.

### **Women Farmers In China's Commercial Agrarian**

**Economy:** As opposed to Indian agricultural scene, one needs to look at a more progressive view of the developed region of China's Commercial agrarian economy. On the basis of her field work, Ritu Agarwal shows how the process of market reforms has transformed the lives of a larger number of women in one of the China's villages from being round the year labour providers to that of farmer entrepreneurs, as significant actors in the rural economy. However, in her analysis she later depicts the institutional constraints that restrict these women entrepreneurs from participating equally in the market and make them vulnerable in number of ways. A condition very different as in India and the reason for that matter can be discovered henceforth.

The process of commercialisation of China's agriculture began in the late 1970s, when CPC (Communist Party of China) made agriculture at its top priority of modernisation. It came up with several institutional changes, boasting of rural marketing, and increased intervention of state in deterring pricing and sale of farm products. It came up with **two** important policy reforms – a. HRS, household responsibility system, wherein state monopoly is significantly reduced over agricultural organisation and management. B. Introduction of commonality economy. It marked a departure from socialist model and in furtherance of market reforms. Abolition of state control in purchasing and marketing of farm produce + restoration of rural and urban free markets. In official parlance, it was known as promoting socialists market economy and it has been argued that the market mechanism was introduced to deal with inefficiencies of allocation and distribution that occur within the central planning system. This reworking of relations between state and market has brought about significant changes at the intra households for their survival and welfare strategies. She concedes that it is going to have serious implications for women in terms of intra household relations and matters of gender equity. Women's choices within the household are largely determined by this new institutional arrangement which largely structured along market principles. The Chinese translation of entrepreneur means one who is engaged in private enterprises which is defined strictly in case of Urban China. It is important to highlight them, because it is this distinctive capability to take initiative on their own to enter business of cash crops that makes them different from other farmers. They have been able to carve out their own way of development. And what is more significant is that there entry into the domains of male dominated activities mainly in

rural china. Changing nature of women's work – China encouraged liberation of women during its liberalisation phase in 1949. China, under socialist regime at that time, was ideologically committed to women's liberation and considered their participation in the social production as a necessary condition. The land came under collective ownership, which abolished the patriarchal control over women's labour in significant ways. This certainly gave women the freedom to get involved in the remunerative work outside home.

The introduction of HRS scheme has provided freedom to farmers to take up income earning opportunities outside their villages. Due to this, men began to leave agriculture for wage work in the cities, leaving women of the household to look after the land as well as the house. This was known as feminisation of agriculture. Where in now, though women were given greater responsibility to look after the land issues, but she was burdened with two equally time taking activities land, household. And wage labour market began to be dominated by men, was a picture of greatest degree of gender differentiation that was found. Though women have experienced progressed and gone beyond the traditional gender DOL. However, they often face a range of institutional constraints when they attempt to start, sustain and expand their ventures. It exists primarily in the presence of lack of institutional support that limits their options to compete equally with men in highly competitive market. They are primarily identified as –

**Marketing opportunities:** One of the major changes that occurred in Chinese economy was the rise of free and periodic local markets that provided an impetus to sell the produce; also to some extent, even the state intervenes through its varied political and bureaucratic institutions to regulate these markets. Women face constraints in getting access to these markets. This is because of their restricted mobility of interaction and transaction to the household and rural seller, due to which they remain largely uninformed about the new developments. Due to this also, they tend to sell their produce to wholesale traders who intern will be selling them in the larger provincial market. The role of this middle man also harms the prospects of women farmers as they have to depend on contracts to sell their produce. Also, there is lack of access to new technologies and marketing skills to further upgrade their production to suit the market demands. Due to these reasons, even though women produce larger and work harder than male counterpart, they earn less revenue. Even finding sufficient capital to invest and innovate is limited. Lack of institutional credit facility.

**Unequal access to farm inputs:** This is prompted by the boasting of export led agricultural production for which high quality produce was encouraged through best tools and practices to survive in the competitive market. In this situation, access to these resources for women becomes critical; because if they do not have, they again have to depend on men for that matter. And in any case this forms an important basis of determining factors of when, how and where to produce. In the absence of these they lack behind in the competition. The present institutional setting does not provide Chinese women farmers with a level playing field as compared to male counterpart. This has led to new DOL within household where women farmers are getting tied down to local rural markets and men expanding their business in the

cities. One of the solutions offered in this regard is appropriate training and knowledge.

**Women's land rights:** Access to and control over cultivable land is one of the most important factors that determine to a great extent women's equal participation in the family farms. In the post reform china, the peasant household has been given the main production responsibility and is conferred with user – rights over land to allocate it rationally. In recent times there have been debates in China on whether land can be considered as private property and can be easily sold and purchased in the free market. The present situation gives freedom to peasants to rent out their land and only transfer their user – rights in land. In this situation farmers can further lease out lands on rent basis for agricultural production. However, in case of women who are running independent enterprise they have to depend on family to take on extra land. Given the ambiguities in women's individual rights over land, it is not clear whether they would be benefiting from this situation or not. In most of the situations, the rights of women over land are also structured by marriage, inheritance, customs which determines women's access and control over land. More specifically it is usually a women's relation to men as daughter, wife or mother that defines their entitlements to land. Besides local customs and practices prevailing also determines the same. Due to this, they often find it difficult to take their own independent decisions on the matters of land use and other issues, and hence depend on men for that matter. Thus, all these market changes led, first, to free women from the institutional constraints that existed under the earlier over regulated socialist economy. Secondly, it considerably weekend the institutions of patriarchy embedded in earlier agrarian relations. Thirdly, production of cash crops redefined gender relationship, DOL. Fourthly the rise in the economic performance led to a new social- spatial category of rural elite women farmers and entrepreneur, as a distinct class in rural china. They were considered model farmers. However the author suggests state initiated specific gender empowerment schemes needs to be linked with lives of the local women in China.

## Conclusion

Work has always been a source of empowerment, expression and extension of self, that one can potentially explore especially in the case of women who have been associated with it be it in a public or sphere ( as per the crude distinction that is often made). Attached with it also comes, not only the ability to work but also A. Carrying forward or challenging various social, cultural values; as well as B. Aspect of gaining political power of decision making. These are the critical factors, both external and internal for women to be placed in a position where they are. Hence, as one can derive the link to capitalism/development as a project is carried out under strong gender ideology; to persist the economic assumptions of western patriarchy aimed at profits subjugates the more humane assumptions of economics as the provision of sustenance, to make for a crisis of poverty rooted in ecological devastation. The thought that the expansion and diffusion of the development process would improve women's economic position proved to be wrong.

Development not only led to the creation of wealth but also created poverty and dispossession. Earlier tribal, women and peasants were fighting against liberation from colonialism and now its development. The development process has led to various degradation and loss of political control over nature's sustenance base. As the burden of work for the women have increased this has affected their health, nutrition and educational status. Development has destroyed productivity and impaired natures renew ability. Development has lead to more violent forms of oppression like patriarchy and gender subordination. The assumption that has been made is that nature is unproductive and production takes place only when mediated by technologies for commodity production, even when such technologies destroy life. it is a stage of not development, underdevelopment but mal development (Vandana Shiva). It is a term synonymous with women's underdevelopment which simply means the domination of man over nature and women. The impact of it is that it set a process of exploitation, inequality, injustice and violence that reduces women from creators of life to being resources in the fragmented model of Maldevelopment. Such increasing Maldevelopment and ecological destruction creates poverty that touches women most severely, as they are the "poorest of the poor" and also they are the primary sustainers of society with nature. This sought of development, has brought back two sought of poverty. One is being poverty as subsistence and misery as deprivation. Thus in order to re-establish a workable and positive link between the aforementioned links, one needs to revive the feminine principle as a non-violent, non-gendered and humanly inclusive alternative for development to be truly development in the given paradigm.

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