

# **THE FEMINIZATION OF AGRICULTURE IN ASIA: IMPLICATIONS FOR WOMEN'S AGENCY AND PRODUCTIVITY**

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## **ABSTRACT**

*One of the long-standing issues and bottlenecks for women is having equal economic importance men are enjoying. Rural women face a distinct disadvantage, since they are the ones who sacrifice their opportunity for education and skill development to manage land and agriculture. Women are largely excluded from training, extension and irrigation management. The phenomenon of increasing feminization of agriculture in many part of the world has drawn policy attention. The increased number of women and agricultural production was brought by male rural out migration, the growing number of households headed by women and the development labor-intensive cash crops. All of these lead to change in the traditional gender division of farm work: women taking up at lower wages the tasks formerly did only by men, such as land preparation, cultivation of crops, spraying pesticides, harvesting, post-harvesting and marketing of the produce. This paper explained complex interrelationship between women agricultural producers and their lack of rights to land and related factors of production. It further explores implications for the producers' economic agency and productivity; whether or not women's participation in agriculture has undermined farm income. Gender equality is a social desirability that must be put into social practice to reduce gender discrimination. Technological empowerment, unmediated control and ownership of land, enhancing of agricultural management skills and knowledge of women in agriculture are ways by which agricultural production could be improved thus, overcoming poverty and income inequality.*

Key words: feminization of agriculture, gender inequality, productivity, agricultural producers

## **INTRODUCTION**

In recent years, Asia experienced a consistent poverty reducing pattern and low income inequality. However, the picture of overall games in gender outcome is more nuanced. Women's experience of economic growth and macro economic reform is mediated through their gendered position within the household and outside. The problem lies in power, poverty and in inequality, not in the physical availability of resources. Women face a distinct disadvantage, since they are the ones who sacrifice their opportunity for education and skill development to manage land and agriculture. Lacking informal rights to land in many Asian countries, women are largely excluded from training, extension and irrigation

management. The deep-seated social inequalities (e.g., the household division of labor, gender norms on women speaking in public and constraints on their mobility and pervasive violence within the home and outside) go against women having an effective voice in community management or farmers' associations.

This paper is an attempt at drawing attention to the complex interrelationship between women agricultural producers and their lack of rights to land and related factors of production. It further explores implications for the producers' economic agency and productivity; whether or not women's participation in agriculture has undermined farm income.

Studies on land and agriculture in Asia and Africa showed that gender inequalities

(both socially-embedded and the new development such as the increased gender wage gap in rural China during the marketization of economy) affect rural and agricultural development (Agarwal 2003; Lastarria, 2002; Kelkar, Nathan and Walter, 2003; FAO 2006; and Song and Chen 2006). And that ensuring equal lands and asset rights to women and men increases economic opportunities; encourages investment in land and crop production; improves household food security; enhances women's agency and leads to better agricultural management.

The trend towards the increased number of women and agricultural production appears to be linked with a variety of factors, such as male rural out migration, the growing number of households headed by women and the development labor-intensive cash crops. All of these lead to change in the traditional gender division of farm work: women taking up at lower wages the tasks formerly did only by men, such as land preparation, cultivation of crops, spraying pesticides, harvesting, post-harvesting and marketing of the produce. Despite the substantial amount of time allocated to domestic work, it was also reported that rural women has a kind of empowerment in the absence of men: they manage small budgets and household decisions. Further, women's mobility is increased as they go to the local market to sell their products. However, in the case of bigger items, they tend to rely on the older male relatives. In an analysis of feminization of agriculture in China, Zhang (2002) noted that rural women, particularly younger generation women, increasingly control household income and make decisions about the sale of agricultural products, investment and purchase of large items such as houses and consumer durables.

## **FEMINIZATION OF AGRICULTURE**

The phenomenon of increasing feminization of agriculture has drawn policy attention in recent years. However, the causes, the extent and its impact on women and productivity have not received sufficient concern in policy and practice throughout the ESAP region (IFAD, 2005). Insufficient attention to some work arena, where women are most active, such as cultivation of crops and vegetables,

regeneration of degraded forests, wasteland development and watershed development, had shown that women's contributions and concerns remain invisible in planning and thus, are ignored in AKST institutions (Sujaya, 2006). Further, the stress on self-employment and dependence on institutional credit in most land-based economic activities meant that women, who are mostly landless in many ESAP countries, would not be eligible for assistance beyond the rearing of livestock for income.

Although it has been recognized that rural women have an important role in livestock (such as animal care, grazing, fodder collection, cleaning of animal shed, processing of milk and sale of livestock products), their control over livestock and product is minimal. With some regional variations, women account for 93 percent of employment in dairy production in India. But 75 percent of dairy cooperative membership is male (Sujaya, 2006). Women's livestock activities have been conventionally viewed as an extension of domestic work around the house, sometimes if it fits to their work, no economic incentives are given for economic development. There is, however, one exception in terms of dairy process, whose distribution of milk cattle became one of the main activities in poverty reduction programs in India. More importantly, introducing taxes and limits to over grazing, controlling burning and deforestation (largely caused by the expansion of livestock sector) are yet to be proven as effective steps for increased in productivity and sustainability.

A Gender Assessment Report of China for IFAD (2005) indicated that women constitute about 70 percent of the agricultural labor force and perform more than 70 percent of farm labor, though it varies from place to place. The general pattern is- the poorer the area, the higher women's contribution, largely as subsistence farmers, who farm small pieces of land, often less than 0.2 hectares. In India, close to 33 percent of cultivators and nearly 47 percent of agricultural workers are women (Vepa, 2005). This feminization of agriculture is caused by increased "casualization" of work, unprofitable crop production and distress migration of men "for higher casual work in agriculture and non-agriculture sectors", leaving women to take up low paid casual work in agriculture (Sujaya, 2006: 5). Throughout the region, women more likely work in agriculture

than men do. Also, manufacturing industries tend to employ a fairly large number of women followed by trade industries, hotel and restaurant businesses.

### AGRICULTURAL PRODUCERS

Official data for the year 2001 in India reported that 53 percent of male workers, 75 percent of all women workers and 85 percent of all rural women workers are in agriculture, and surprisingly, this percentage has declined less than 4 points since 1972-73 (Government of India, 2001, quoted in Agarwal, 2003:192).

During field visits in 2003 and 2005 to four IFAD projects in Bangladesh, agricultural officers said that nearly 20 to 50 percent of the women from poorer Muslim households regularly worked in transplanting, irrigation and related paddy production activities. The traditional gender roles ‘women do post-harvest work’ and ‘men do field labor’ have changed during the past 10-15 years, largely due to extreme poverty in some areas and change in social norms and traditions. In a recent visit to Kaligong in Gazipur district in August 2005, I learned that women, working in the fields began increasing around 10 or 12 years ago. Now a woman agricultural worker can get 80 to 100 taka a day. While a man gets 120 taka for the similar work, all without food (Author’s field notes). Jahan (1990) cited in his study that FAO reported about 60-70 percent of women from landless and near landless

households work as agricultural wage laborers. According to Jordans and Zwatreveen (1997) said that, ‘In some areas in north-west Bangladesh, women equally share all tasks in rice production, even the presumably male’s task of irrigation’

Official data and social perceptions are silent on women’s agricultural work, with the exception of admitting their role in livestock and home garden-based vegetable production. The reluctance to admit to this form of work may have been because- it was considered to violate *purdah* norms or simply because it revealed the poverty of the household. Some of the women interviewed said that such work was done only by socially excluded ‘others’: women of the low caste Hindus and indigenous Garos. However, this was not the case and many women from poorer Muslim families were also taking up such work (Kabeer 2001). A similar truth about poorer rural women’s work in paddy production and vegetable cultivation was reported by Rownok Jahan about Khulna and Jessore areas (Author’s interview, August 2005). The proportion of women’s employment in South Asia (Table 1) showed that a large number of them were engaged in agriculture.

In India, we can understand better the changes in the sectoral distribution of labor by using National Sample Survey (NSS) Rounds of 1993-94 and 1999-2000. We agreed to what (Shah, 2004:3) said: “Despite the various efforts for improving the coverage of female workers,

Table 1. Sectoral composition of employment by gender

	Bangladesh		India		Nepal		Pakistan	
	M	F	M	F	M	F	M	F
Agriculture/Fisheries	54.3	75.7	53.1	74.8	67.1	85.2	36.0	64.2
Mining	0.4	1.1	0.7	0.3	0.1	0.0	<0.01	<0.01
Manufacturing	7.2	7.7	11.5	10.1	7.7	3.9	14.0	14.6
Utility	0.3	0.2	0.4	0.0	0.5	0.0	1.0	<0.01
Construction	2.9	0.5	5.7	1.7	6.2	1.1	7.5	0.3
Trade, Hotel, Restaurant	18.0	2.5	13.1	4.3	7.3	3.7	17.3	1.9
Transport, Storage & Communications	7.2	0.4	5.2	0.4	2.7	0.1	7.3	0.4
Finance & Business	1.0	0.2	1.6	0.5	0.9	0.2	1.1	<0.01
Community, Social & Personal Services	8.8	11.9	8.7	7.9	7.5	5.6	15.7	18.4
	100	100	100	100	100	100	100	100

Source: World Bank Paper by Maitreyi Bordia Das, 2006:3

several of the activities such as collection of fuel, fodder and water; unpaid work in home based enterprises; and agro processing work are not adequately captured even by NSS surveys”

The primary sector as defined in the NSS Rounds included agriculture, forestry and fisheries sector. It includes mining and such other extraction as well. But this should not make much difference to the comparisons.

What this wanted to show is that: there is some structural change in rural women’s sectoral workforce participation. There is very little movement out of agriculture. As shown in Table 3, there was an increase in women’s participation as agricultural laborers. A recent study of gender and agriculture in Maharashtra region in India (Parikh, Acharya and Krishnaraj, 2004) noted the increase in the number of women working in the capacity of laborers, while most of the cultivators were men: from 51.58 percent (men 38.70 percent) in 1991 to 54.22 percent (men 41.63 percent) in 2001. The 55<sup>th</sup> NSS Round of 1999-2000 noted that 57.70 percent rural women and 45.60 percent rural men were engaged as agricultural laborers in the same region. Although these women gain in incomes, it is relatively less as compared to men. The daily agricultural wage of women was reported in the range of Rs.35-38, while that of

men was Rs.45-50; with unemployment in the range of 8-10 percent (NSS 55<sup>th</sup> Round, as given in Parikh, Acharya and Krishnaraj, 2004).

In fact, for both women and men, there was some deterioration in their status as cultivators, reflecting either loss of land by some households or the addition of new households that were landless, or a combination of both of the above.

The feminization of agriculture model in Asia is determined by two major factors. First, compared to men, women have much poorer access, control and ownership of land and other productive resources. They also have inadequate access to public services, such as training, extension and credit. Technologies are often designed for irrigated land in favorable areas and for male farmers. Poor farmers, mainly women, lack appropriate technologies. Women and women-dominated households represent a disproportionate share of the poor farmers in many Asian countries. Second, the present structure of rural society makes it difficult for all members of the household to migrate, since cities have even more limited resources for masses of asset-poor- who lack not only income but production-related assets, human capabilities, social capital and physical assets as well. Women constitute the majority of such people. As a consequence, men leave

Table 2. Employment of women in India by major sectors (in per cent)

		Primary (Agriculture +)	Secondary (Industry)	Tertiary (Services)
Rural	1993-94	86.44	7.60	5.61
Rural	1999-00	85.77	8.46	5.77

Source: NSS Rounds of 1993-94 and 1999-2000, as calculated by Sandip Sarkar, Institute for Human Development, New Delhi

Table 3. Status of work force in agriculture in India (in percent)

	Cultivator	Agricultural Laborers
<b>Women</b>		
1993-94	58.65	41.35
1999-00	56.73	43.27
<b>Men</b>		
1993-94	61.58	38.42
1999-00	59.56	40.44

Source: NSS Rounds of 1993-94 and 1999-2000

to become temporary laborers in cities. Women are left behind to take care of agriculture and land (a kind of insurance for migrant workers), children and the elderly. Thus, they have the compounded burden of productive and reproductive work. Its impact on agricultural productivity is yet to be determined.

## GENDER WAGE DIFFERENTIALS

There is an important question of gender wage differentials in agriculture and related industries. One possible explanation is that the differences in educational attainments and work skills between women and men are reflected in wage differentials (Gustafsson and Li, 2000). That, if women's skills and educational attainments are significantly lower than men have, there would be a systematic wage differential between the two genders in the labor market. And, women are most likely to be crowded in low paid jobs, due to their lower human skill and lower mobility (due to their domestic responsibilities). According to the National Census of China in 2000, women have an average of 1.1 years less schooling than men in the country as a whole. But the unexplained factor (gender discrimination) in the gender wage differentials in rural areas had been constant, with some decline in the period 1988 – 1995 (Mason, Rozelle and Zhang 2000). What is important to note, however, is the recent study by Wang and Cai (2006), whom in their analysis of China in their labor market, concluded that the major share (93.5 percent) of the wage differentials between women and men was attributed to discrimination rather than to capital differences between the genders. Likewise, MacPhail and Dong (2006) noted the rising gender wage gap in the rural provinces of Shandong and Jiangsu, China. Hirway (2006) arrived at similar findings in their study of the labor market in India. It showed that the wage differential was largely due to gender discrimination which encourages women's engagement in low levels of occupation, like unskilled and semi-skilled work, low-level management work and other related productive work.

If women have access to more highly paid market work, they are likely to spend lower number of hours for housework. As observed in case of China and India, women with a higher share of household income are

less likely to take the major responsibility for housework (MacPhail and Dong 2006; and Kelkar 2005). It is not surprising, therefore, that despite exhaustion due to longer working day and lower wages, women highly value market work. The earnings from market work are seen important by women as it raises their standing as that of an economic contributor to the household.

The wage differentials between women and men agricultural workers are based on a pre-assumed gender character. Employers and contractors offer simply lower wages to women, regardless of their performance on the job. In the given situation of social and economic neglect, women have no better options. They must work longer and harder to make ends meet, leading to exhaustion and injuries from stress and overwork, a common problem reported by numerous agricultural workers. "The wage rate reflects the opportunity costs of leisure and home production time, and an increase in the wage rate is expected to reduce the number of hours the person allocates to leisure and home production by including her/him to supply additional hours to the labor market (assuming a substitution effect); (MacPhail and Dong, 2006:44). Thus, there appears to be a negative relationship between the wage rate and time for housework.

Evidently, in India there is not much change in the overall wage disparity between rural women and men. The disparity lies more in the case of non-agricultural rural employment than in the case of agricultural employment. In Bangladesh, on the other hand, a substantial change in rural women's wage as a proportion of men's wage is seen, rising from 48 percent in 1984-85 to 75 percent in 2000. This change in the proportion of rural women's wage to men's wage is the result of a combination of two factors. First, there is the large growth of women's economic activities through Micro-Finance Institutions (MFIs). This has reduced the extent of rural women's underemployment to almost half, from 74.6 percent in 1993-94 to 38.2 percent in 1999-2000.

With underemployment falling and MFIs developing forms of income-earning activity, there is an obvious increase in pressure on the labor market. This pressure is further increased by the second factor – the migration of more than a million young women to work in the urban garment industry.

Table 4. Rural casual workers: women's daily money wages as a proportion of men's wages in India and Bangladesh (in percentage)

<b>India</b>	1993-94	1999-2000
Agriculture	68.3	69.39
Non-Agriculture	58.36	62.17
<b>Bangladesh</b>	1984-85	2000
Rural	48	75

Sources: NSS Rounds of 1993-94 and 1999-2000 for India and Statistical Profile of Women in Bangladesh (GoB 2002), Table 7.5 for Bangladesh

Table 5. Underemployment rate of rural employed persons, working less than 35 hours, in Bangladesh

	Women	Men	Total
1995-96			
National	7.07	12.4	34.6
Rural	74.6	13.1	37.9
1999-2000			
National	52.8	7.4	16.6
Rural	38.2	4.7	12.2

Source: Statistical Profile of Women in Bangladesh, (GoB 2002), Table 7.6

## DEALING WITH THE MARKET

The switch from production of food grains to cash crops, either raw materials for the industry like cotton, tobacco, oil seeds or goods for export such as vegetables and horticulture items was an important change that happened in India. But these movements, while important in some areas, particularly in the semi-arid regions of the Deccan Plateau, are not uniformly important all over India. In particular, the irrigated zones are still based on a combination of wheat and rice, given the prop of procurement prices higher than corresponding international prices.

The switch from production for self-consumption to production for the market is important in the dry areas. It has brought with it not only new opportunities but also new risks. With farmers often looking for large loans to expand the area under production, any decrease in output or price carries the risk of large debts. This has resulted in the recent phenomenon in India of 'farmers' suicides'. Most often the men commit suicide, leaving women to fend for their families and themselves.

The phenomenon of farmers' suicides reveals at least two points. First, farmers need to learn the ways of dealing with the market, ways of minimizing or reducing risk. Rather than putting everything into one crop, it is necessary to adopt multiple-cropping methods. Downturns in output or price of one crop can be made up by upturns in income from another crop. Over a period of time, multiple cropping can yield a higher income than the 'boom and bust' sequence that characterizes single crops. Second, along with the promotion of commercialization of agriculture, it is also necessary to put in place financial, insurance and safety net measures to deal with income failures and losses. Most agricultural loans are still informal, from moneylenders and other irregulars. Political and economic force is often used for the recovery of loans. There is no system of orderly exit or bankruptcy, which is seen in industrialized countries. Neither are there modern systems of safety relief in the event of income declines. As the South Asian countries go further in the process of globalization, the above risks are going to increase and new systems of finance, insurance and safety nets will have to be put in place.

In their absence, the burden of such catastrophes will fall disproportionately on women, as they try every measure to keep their families going.

In Pakistan, there had been substantial migration of men to work in West Asia or elsewhere. Prior to this, women supposedly had no role in managing agriculture and other non-domestic activities. After substantial male migration, all these have changed (Lefebvre, 1999). There are, of course, conflicts prior to these changes, for instance, between older male relatives and the younger wives. But there are considerable changes through these conflicts. Women in the Neelum-Jhelum Valley areas played a substantial role in managing the household agricultural and other non-domestic economic activities. Other accounts also pointed out that women in Pakistan are quite comfortable and even happy with their new management roles and responsibilities. When men return after many years' absence, women do not easily or willingly give back the management roles to them.

#### **INCENTIVE PROBLEMS IN THE FEMINIZATION OF AGRICULTURAL WORK**

The export-related agricultural sectors where women are most active include cultivation of crops (rice in Vietnam and Thailand), and also in the so-called new agricultural exports, such as vegetables, and flowers in most countries. But in each of these countries, women do not own land and other assets. This is closely related to the performance in export-oriented sectors. Kenya, for instance, is well known for its entry into the export of high value vegetables. More recently, it has also become a case of a failure to maintain requisite quality by small holders in vegetable and fruit cultivation (Gibbon and Ponte 2005). An investigation of vegetable and fruit production for export in Kenya, conducted in 2003 (Nathan 2004), however, revealed another aspect of the problem – that of the erosion of women's incentives to produce quality output.

There are communities in Africa where there is a system of separate budgets for women and men. Men and women may both have separate plots (Kikuyu, Kenya and Mukono, Uganda), with women being able to take the income from their plots. Or, as with the Kalenjin and other pastoral communities, or

even with agriculturists, there may be separate products for men and women. Cattle belong to men, but small livestock (goats, sheep and chicken) belong to women. Or, coffee and tea belong to men, but vegetables belong to women. These divisions of products, as with garden plots, have nothing to do with labor performed. Women, in any case, perform the bulk of the labor. But conventionally, some products were recognized as belonging to women and some to men – the “big things”, like coffee and tea and big animals, belonged to men; while the “small things”, like vegetables, and small animals, belonged to women (Nathan, Reddy and Kelkar 2008).

But this does not mean that women are free to spend the money earned from their own crops, plots or livestock, as they wished. There are strong cultural expectations of women's responsibilities, which require that women spend their money for children and the family. If a woman spent money on herself, even buying much needed clothes, without the man's permission, she would be charged that she has a lover. Polygamy, of course, has been the prerogative of men alone.

Nevertheless, women do seem to value even the limited managerial autonomy they have in managing their own plots and having their own cash for household expenses. At least the woman could be sure that part of the income would be use for their children, and not be easily subject to being taken away for liquor or other women.

Women's plots were traditionally used for horticulture, growing vegetables and fruits mainly for consumption, with some sale. But over the last decade, the market for horticultural products has grown substantially, both for domestic consumption and for export – French beans (Kenya), vanilla (Uganda), tomatoes, cabbages, strawberry (Kenya), etc. Since this has become an important source of cash income, men have responded by reducing women's plots. Of course, women still have to perform just as much labor, since they do all the work, except land clearing, on men's plots too. But in reaction to this reduction in their autonomy, women (Mount Kenya, Sagana Scheme) said that when land is taken away from them, they do not work as well on such plots as they do on their own plots. “We have less land than we had earlier. When this

happens, I won't be so keen. I will still work, but not so well. Quality is also a problem then."

What this is trying to show is that: there is an important principal-agent incentive problem (how does the principal, in this case man as the land owner, ensure that the agent, in this case woman as the laborer, has an incentive to bring about the maximization of income?) involved even in household labor – women's lack of decision making power and autonomy can affect the extent and quality of work done on the farm.

A study of horticulture in Kenya pointed out that this problem of men taking over what used to be women's plots has led to a fall in exports of French beans, because of quality problems, which are critical in exporting to the supermarkets of Europe (Dolan, 2001). Studies of men's and women's plots in other parts of Africa, have shown that women weed much more on their own than on men's plots and that the reduction in output due to this incentive problem is more than equal to the higher output due to fertilizer use (Elson 1995).

The incentive problem is not only encountered when women's plots are reduced. It also happens when the plot is wholly men's plots. Men could, for instance, further divide a plot when they married again, reducing the amount of land a woman could use. Or, they could even sell a plot of land and thus, the wife was forced to leave. As a result, as one man pointed out, "Earlier we could not be sure of what the women will do," (Uganda, Libanda District, Riukiri Group). The land law in Uganda and Kenya too now requires the signature of a wife when a man wants to sell his land. These women both in Uganda and Kenya were well aware of. They felt that this gave them some security in use rights. "If he could sell the land we would not invest in land or agriculture," (Uganda, Libanda District, Riukiri Group).

### **WOMEN'S RIGHT TO LAND AND PRODUCTIVE ASSETS**

The issue of women's land ownership remains in most of South Asia. It is not just land ownership but also all that goes with it – access to institutional credit, training and extension facilities. Equal property rights for women are relevant for developing production.

They are even relevant for matters like raising wages, since the reservation wage (i.e. the wage at which a person will enter the labor market) does go up. To some extent, some projects enable women to use their access to capital as a means of acquiring access to and control over land, or related productive assets. As noted above, in parts of Bangladesh, women have taken land on lease through their loans from MFIs. In other places, they have taken control over the management and income from fish ponds from their husbands with capital from MFIs and training in aquaculture. In Andhra Pradesh, India, women in groups have leased land through the money in their Self Help Groups.

A recent ILO study observed that economic security is worsened by policies and institutions which do not realize that promoting women's control over their incomes and resources would help boost growth and development. This is one of the 'main forms of gender inequality across the world' (ILO, 2004: p. 86) and systematically neglected in social policy and income statistics. In Asia, 'a large proportion of women are not able to retain their earned income – over 40 percent in Bangladesh, over 40 percent in Gujarat and over 70 percent in Indonesia'. With regards to control over the way their income is spent, 57 percent of women in China reported that they have greater control than their husband on daily expenditure items. However, on bigger items, only 7 percent of the wives have the greater control of the decisions" (Bao, 2002, quoted in MacPhail and Dong, 2006:33). In South Asia, fewer women could make their decisions, Furthermore, discriminatory barriers and sociocultural rigidities remain the major reasons blocking women from obtaining effective control of property, assets and resources and restricting their mobility within workplace or employment / self-employment structures.

Secure and inalienable use rights, with full control, if not full ownership, are necessary for investment. In the absence of this security of use rights, which is now partially available because of the law, women would clearly not invest their own money in improving the land. Of course, the security of use rights in requiring a wife's signature is still limited. It is not the same as having a plot of land registered in your own name. Women pointed



to the limited nature of the security of use rights they now have. They pointed out that it was still possible for a man to produce another woman as his wife and bribe officials to allow the sale. When women purchased land in their own names, as a number of women had, they were obviously much more secure in their right to the land. To sell it they did not require the husband's signature, as some women pointed out, emphasizing the difference in the case of ancestral land where men needed the wife's signature.

Not being landowners is at least part of the reason why women are not perceived as 'farmers' even when they do much of the farm work. As a result, agricultural extension and information on new technologies are almost exclusively directed to men, even when women are traditionally responsible. Although vegetable growing is almost universally women's work, projects that aim to diversify agricultural production by promoting commercial vegetable growing (as in Bangladesh) often train, or used to train, the men. Something is 'inevitably' lost when the knowledge is 'passed on' to women. If women were accepted as owners and hence, as farmers, it is more likely that they would be targeted for training as farm managers, and not only as home managers. In Kenya, on the other hand, it was seen that agents of input suppliers, knowing that it was women who undertook vegetable production, directly approached women to inform them about the use of various inputs. Where there is a business at stake in influencing those who take the farming decisions, there is a tendency to approach women as farmers, while formal extension agencies stick to men as farmers.

In the midst of increasing feminization of agriculture, women lack title to land, which is one of the causes for the persistent gender inequality. A recent analysis of the state of Indian farmers by the National Commission on Farmers (NCF) emphasized that lack of title to land makes it difficult for women farmers to access institutional credit. For example, barely 5 percent of women seemed to have been issued with Kissan credit cards out of the many millions with whom such cards have been issued. Extension and input supply services also do not reach women at the right time and place. Therefore, as stressed by the NCF, there is need for a new deal for women in

agriculture" (M.S.Swaminathan, *The Hindu*, April 19 2005).

A new deal for women in agriculture, along with necessary inputs and credit support could increase the efficiency of resource use and thus, contribute to increasing production. This is borne out in an IFAD project in Bangladesh, the Aquaculture Development Project. In this project, women were exclusively trained in fish aquaculture and provided credit for commercial fish culture in ponds owned by their men. With this knowledge and credit system, women were able to transform pond aquaculture from a semi-subsistence mode to a regular commercial mode, with an increase in productivity of more than 50 percent (Nathan and Jahan, 2004). Women in Andhra Pradesh, India also used micro-credit to take on lease lands that were being fitfully cultivated and develop them into regular cultivation with higher productivity than earlier.

Women's ownership of land could lead to higher and better quality production and more importantly, it can, enable them to control the use of household income for their well-being and other household members. It can also benefit women through reduction in violence. An increasing range of econometrically robust studies showed that land and asset ownership by women has significantly better outcomes for their agency as well as for child survival, education and health, than those owned only by men (for discussion see Agarwal 1994, Kelkar 1992, National Commission on Farmers Report 2004).

Recent studies in India and other countries, have estimated the costs of domestic violence against women. This cost includes the direct economic loss experienced by the individual (such as through absence from paid work and/or lost productivity, expenses related to physical and mental health care, lost lifetime earnings due to disability, etc.), government's costs through its health and social sector expenses, the criminal justice system, employer and third-party expenses. The studying India showed that domestic violence against women can push economically fragile households into economic crisis (UNIFEM, 2005). An earlier study in India (UNIFEM, 2003) estimated that women lost, on average, five working days after an incident of violence. Violence against women also has personal and social effects, aside from the calculable economic costs. It is

a question of women's agency, very much needed for better outcomes from international trade.

With ownership of land and with a general improvement in women's economic status, there can be a reduction of violence against women. The improvement in economic status does not by itself, resulted in a reduction in violence against women. But it surely does strengthen women's economic agency and position, enabling them to resist, and thus, bring about a reduction of violence.

### **LAND, ASSETS AND EFFICIENCY OF RESOURCE USE**

Has women's participation in agriculture led to lower earnings? According to some studies, households headed by women and women-cultivated plots have produced lower yields. For a variety of reasons, women were considered less efficient crop producers (World Bank, 2002; Saito et. al, 1994; and Quisumbing, 1994). These were not proven true by a recent analysis of the effect of "women-headed" households on the efficiency of farming for all crops, rich wheat and maize, using village fixed effects and controls for ability in China (for a detailed statistical analysis, see Rozelle, Zhang and Brauw, 2006: 72 – 75). Using more than 5000 plot level observations in 60 villages in 6 provinces in rural China, the researchers concluded that, "when all the other variables in our model are held constant, women-run farms are not less efficient than those of men, implying that women-run farms earn at least as much revenue on their plots as farms run by men" (Rozelle, Zhang and Brauw, 2006: 74).

Similarly, in 2003 – 2004, the Krishi Vigyan Kendra (Agriculture Science Centre) monitored 40 women-run dairy units in Andhra Pradesh, India and noted that "the average milk yield increased from 380 to 610 liters per dairy, with a net increase in profit of Rs. 3,200,00 to Rs. 5,800,00 per unit per annum" (DARE/ICAR, 2003-2004:178).

Worldwide, in swidden systems, women are the chief producers in the swidden field and home gardens, choosing micro-locations, deciding on seeds, combining various plants together, weeding out the undesired plants, and so on. Women's knowledge of multi-storey, multi-crop agriculture needs to be built upon through selective introduction of results

of modern science in areas such as energy flows and bio-geochemical cycles, biotic and abiotic factors, which regulate plant development, renewable energy technologies, and management techniques" (Scialabba, 2000:14).

The enhancement of organic agriculture does not need costly investments in irrigation, energy and external inputs. On the contrary, what are needed are investments in capacity-building and related research. "This would entail a shift of capital investments from hard to soft technologies – that is from agricultural inputs (private goods) to knowledge building (public goods)," (Scialabba, 2000a:12).

Transforming the management and ownership status of household resources can help increase productivity particularly, where these resources are under-utilized. In Pakistan and Nepal, large-scale migration of men has left women as *de facto* farm managers. But the management decisions are constrained by their inability to access credit on time, as the land remains in the names of men, and their signatures are needed before credit can be given. There are consequent losses due to failure to procure and use inputs on time.

In South Asian countries, micro-finance has become a source of capital for women to acquire access to land. MFIs in Bangladesh, in fact, discouraged women from using loans to acquire land, since the return from land is neither quick nor regular. But women nevertheless, use loans to lease land, often leveraging their own capital with finance from their husbands. There were few purchases of land, but leasing in land has become quite common for women members of credit groups. Of 261 women of several micro finance groups in rural Bangladesh, 117 were reported to acquire through purchase or lease. In 87 instances, (including three of inheritance), the land was in women's names. Ten of these instances were those of two groups of women leasing land for vegetable production. In four instances, land was acquired in the joint names of husband and wife, while in 26 instances the land was in the name of the men alone (for details, see Kelkar, Nathan and Jahan 2004).

Leases are of three kinds: (1) share-cropping; (2) cash lease (either annual contract or a contract for a fixed number of years); and (3) mortgage – in return for a lump sum payment, the use of a piece of land is

transferred until the amount is repaid. The land leased by women in the microfinance groups is largely for growing vegetables, not field crops like rice and the terms are changing in favor of the tenant – for example instead of 50-50, with the tenant providing all the inputs, it is now 33-33-33 for land, labor and inputs. This reflects the rise in agricultural wages relative to the price of rice, which is also reflected in the growth of mechanization and in the greater involvement of women in field labor.

In India, the Deccan Development Society (DDS) has deliberately used savings and credit to enable groups of women to take land on lease. Very poor women can substitute labor for personal cash contribution. Leasing in land as a group makes the women stronger in the lease market. They are also able to lease larger areas of land (for details, see Agarwal, 2003). The women *sanghams* (groups) have developed 1000 acres of common land in and around their villages by raising neighborhood forests in 28 villages. They have now owned tree *pattas* (title deeds) in their own names.

Mentioned above are market-mediated forms of land reform, in which those wishing to lease in land, acquire it from those wishing to lease out land. There are also other types of market-mediated land reform, for instance, in which land is purchased from a willing seller and transferred to a willing buyer. Unlike many of the state-sponsored schemes for distribution of government-owned land, in this case, relatively good quality land is transferred to the landless.

In the state of Andhra Pradesh, India, the government agencies, like the Integrated Tribal Development Authority and Schedule Caste Development Corporation, have purchased land from owners wishing to lease the land and have transferred it, free of any charge, to the landless. All such land can only be transferred in the names of women. Among the *Chenchu*, land has been transferred in the names of women. *Chenchu* men too conceded because for them it is better for the household, as there is little chance that women, unlike men, will lose the land because of drinking or gambling debts (for details see Nathan et al, 2003). Instead of waiting for a state-enforced land reform, women are making use of access to capital and the market system to acquire land.

It is well known that because of different gender responsibilities, women and men tend to have different priorities with regard to forest cover and composition. Men whose responsibilities are for cash earning, tend to be in favor of timber trees. Women, whose responsibilities include provision of food, tend to favor multiuse trees with a bias towards fuel and fodder production. Ignoring fuel and fodder needs in forest management decisions pushes their supply onto open access and state forests, with harmful effects for overall forest regeneration, as has happened with community forestry in Nepal. The Government of Nepal – IFAD Leasehold Forestry Project, organized largely poor women to regenerate degraded forests. This women-centered management system both provided larger household benefits, through more fuel and fodder production and increased income from sales of grass seeds, etc; it also increased forest cover and tree diversity (Nathan and Shrestha, 2004). An overall review of forest regeneration movements (Kelkar, Nathan and Walter 2003) showed that both management and regeneration suffered and conversely, when women were mobilized there was a greater impact on forest cover and environmental regeneration.

An important MDG target of increasing forest cover requires the full participation of women in forest management. Women's agency, political and economic, is important for yet another reason. A review of intensification of farming practices in upland Asia showed that the collection of fuel from forest lands was the last part of the household labor to be intensified and that it resulted from the very low opportunity cost of women's labor, which resulted in the overuse of women's labor and the wood fuel that was produced with that labor (Kelkar and Nathan 2005).

Aquaculture in fish ponds is an important livelihood in Bangladesh. But like land, ponds are entirely owned and controlled by men too. Two recent initiatives, however, showed how women can get access and control over aquaculture activities in fish ponds. In the mid-1990s, the Government of Bangladesh gave user rights over fishponds to women in the Oxbow Lakes Project of Government of Bangladesh-IFAD and DANIDA. They were also provided training and credit through an NGO. Since getting user rights to

these ponds, women have had to fight to retain control over them. There have been frequent attempts by men, connected to the ruling political parties, to take over these fishponds. So far, in a majority of cases, women have retained these ponds and used the income from fish culture activities to improve their own well-being and that of their households (Nathan and Appu 1998).

More recently, in the Aquaculture Development Project of Faridpur (Government of Bangladesh and IFAD) women, whose husbands owned ponds, were given capital and training for aquaculture. With this, they increased household income from fishponds, and their own control over this income. Though the ponds remained in their husbands' names, the fish enterprise was clearly their own. As one woman put it, 'the pond belongs to my husband, but the fish belong to me.' This is a kind of lease of the pond from the husband to the wife, with the fish enterprise clearly belonging to the wife. Women, who have established their control over the fish aquaculture enterprises, have used the lumpy income from fish to build assets like cattle and shops, and take land on lease. They have developed confidence in dealing with officials and other outsiders. Their self-esteem and respect for them within their families and in the villages have increased.

The above are instances of changes in the way resources are managed: in the first case, what was government-owned has been handed over to women; in the second case, women used capital and knowledge to take over effective management of ponds from their husbands (Nathan and Jahan, 2004).

Access to capital can enable women to get control over land and related productive assets. But what is done in these projects in small numbers can be generalized by a law to end the traditional systems that deny women's rights to land. Passing such laws are only the first step. The rights will need to be established in practice. "Without reasonable income security, people lack real freedom to make rational choices and be socially responsible. Without collective and individual voice, the vulnerable will remain that way," (ILO, 2004: p.275). In response to the global orchestration on the feminization of poverty and to meet the demands from concerned civil society and women's organizations, women

could be considered as individual subjects of poverty reduction through well-designed policy measures and its implementation for unmediated resource control and the development of related capabilities.

### **WHY ARE LAND AND ASSET RIGHTS FOR WOMEN SO CRITICAL? WHAT DO RURAL WOMEN SAY?**

#### **Social and cultural gender norms change when women acquire control on land/property/assets**

My fieldwork findings (in connection with production networks, microfinance and sex trafficking) in rural areas in Bangladesh, India and Nepal suggested that women's control over assets or land results into effectively breaking the vicious circle of poverty-patriarchy-illiteracy-ill health, including HIV infection. With independent land rights, women are able to address the local world of male dominance, and of stigma and humiliation in case of any transgression of the gender norms.

Women's vulnerability to HIV/AIDS can be halted only by providing women and girls unmediated access and control (not through household or head of the household) of productive resources such as land, trees, housing and an enabling environment to make use of economic opportunities to work outside the home.

Women's exclusion from control and ownership of property/land and inheritance rights leads them to, in the words of young women from rural Nepal "if we are not taken care at home, we go to our parental home. If parents reject us, we go to India" (refers to the sex trade in Mumbai) (Author's field notes 2004).

Money as the measure of respect of women: in rural Bangladesh, women often use the phrase, *Garam Taka* (weighty money). It is money that has weight, and women's control over their earnings and assets gives them weight within the household (Kelkar, Nathan, Jahan 2004).

#### **Rural women defined/redefined their dignity against patriarchal social norms**

They have aspirations for their economic agency and they do not want their daughters

to become what they had been. Aspirations relate to how people want to be in future and lead to creation of new needs to bring change in economic and social base of the existing capabilities. This, in turn, leads to a shift in the production objective – from subsistence production to maximization of income and saving –cum-accumulation to meet new needs.

“I do not want my daughter to face this humiliation, so I want her to be educated,” an indigenous Chenchu woman, from India said (Nathan and Kelkar, 2004). Chenchu women have been able to move out of ‘a culture of apathy’ (Douglas, 2004). They now aspire to change themselves, their men and most of all, their children. The growth in the market for NTFPs, however, has allowed for new possibilities in acquiring income beyond immediate needs. At the same time, there are also new needs that require higher income. Women always mentioned medical and educational expenses as needs that required additional income. Increasing the household income and having control over it, as well as regular savings have shown them a way to move forward in realizing their aspirations.

“Land [like other productive assets] is an opportunity for change. It is a way to have access to other resources, such as water, seeds, new technologies and bank loans”, an anonymous, India (ILC and IFAD, 2004).

“When we earn our own money, we are less frightened of arguing with our husband, on spending decisions”, an anonymous, India (ILC and IFAD, 2004).

“If our husbands want us to eat, then we eat, it totally depends on them. If the land were in my name, he would no longer beat me, and he would take care of the children as well” an anonymous, India (ILC and IFAD 2004).

“I gave 20,000 Taka to my husband for his fuel wood business, now my voice is louder than his”, Rashida, Bangladesh (Kelkar, Nathan and Jahan 2004).

“If the land is in my name or a business is managed by me, I, as a woman, have a better position in society”, Kalpana, Bangladesh (Kelkar, Nathan and Jahan 2004).

“If you have no money, there is no value for your choice. You are sitting in a corner like a little thief... if you have assets, everyone loves you”, anonymous collective

discussion in Bangladesh (Kelkar, Nathan and Jahan 2004).

“If we have sampotti [property and assets], our samman [dignity/prestige] will be permanent. Samman is closely linked with sampotti”, Gul Akhter, who recently acquired 1.5 decimal of agricultural land in her own name, Bangladesh (Kelkar, Nathan and Jahan 2004).

## CONCLUSION

### Understanding Fragmented Views and Strategies

The increasing feminization of agricultural has deep and wide ranging impact on agricultural productivity is a very important lesson. Thus, it may rank as one of the leading focuses for agricultural policies. That efforts in capacity development of (women) farmers, extension outreach, training in agricultural technologies and women’s effective rights to land and assets (trees, water bodies, housing and so on) can produce large and multiple pay offs.

A recent study entitled: “Women’s Property Rights as an AIDS Response” (Swaminathan, Bhatla and Chakraborty, 2007) pointed out the fragmented views of women on property rights. This may be true. However, I would argue that in relations of domination, the systems of classification and concept of relations are shared between the dominant and the dominated. Thus, the hegemonic role of *purdah*, lack of property rights, and seclusion/exclusion/dependence as the cultural norms of gender relations means that, this is expected as a norm by men as well as by some women. As Bourdieu (2001) argued that culture is a form of capital which makes it possible for certain individuals and groups (of men and some women) to maintain and enhance their social, economic and political power. This type of social order plays an important role in the reproduction and perpetuation of gender inequality and women’s exclusion from land and assets rights.

This kind of colonization of mind is paralleled by another understanding of economic change and cultural system with women’s place in it. There are rural poor and semi illiterate women who collectively define a *sammani mohila* (woman with dignity). “A woman who has land, education and

knowledge; health is also important. We do not agree with the traditional idea of *purdah-nashin* (women in *purdah*) as being respected. *Purdah* is like a prison; one who stays at home and whose resources are under the control of husband or son, is like a prisoner. One who is working outside home, who has his/her own money and independent earnings, is educated and is free to go anywhere. She is the *sammami mohila*.” a group discussion with the rural women in Bangladesh (Kelkar, Nathan and Jahan 2004).

Indeed, cultures are not static, not something given for all time. The sources of change in a culture are varied, including intercultural discussion and communications, where information technology has a major role to play. The cultural ceiling that effectively prohibit women from being recognized as economic contributors needs to be overcome in order to increase the potential of human society, including women’s agency and productivity.

Gender equality is seen only as a goal, a social desirability to which many people think they should seem to agree. Certainly, that is step forward to reduce discrimination. This social desirability, however, needs to be translated into social practice. Some important strategies towards achieving this may include: (1) studies on innovations, based on women’s aspirations and equality of access to livelihood opportunities with their independent, unmediated control and/or ownership of land, assets and related factors of production; (2) building an enabling environment for strengthening individual capabilities of rural women to manage land, agricultural produce and assets; (3) enhancing policy understanding on how rural women’s individual and collective voices suggest new and modified agricultural strategies.

Technological empowerment of women in agriculture (a current program in India) has to be backed up with unmediated asset ownership of women; a process to enhance agricultural management skills and knowledge; a wide spread gender sensitization in rural areas through information and communication technologies, which helps to develop a social understanding of women as producers, farmers and economic contributors. In other words, women’s unmediated control and ownership of land, new technologies, and irrigation and

management skills give them and their households a livelihood with dignity. These if done hand in hand, are stronger measures in overcoming poverty.

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