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# GENDER AND WATERSHED DEVELOPMENT

202.1 92GE

- Dr. Marcella D'Souza \*

## I. INTRODUCTION :

Today watershed development is being promoted as an effective approach and an instrument for poverty alleviation in rural areas. The underlying assumption is that once the natural bases of production are regenerated and strengthened most of the basic livelihood needs of the community living within that watershed would be met to a large extent.

Since a long time now, much money and resources have been directed towards conserving and regenerating natural resources along watershed lines. However, it was found that once the externally initiated effort was completed, the benefits either did not materialize as expected or did not continue for a substantial period beyond completion of the project. Documentation of these efforts has revealed that this was largely because the intended "beneficiaries" (local population) were hardly involved in its planning and determination. They were merely used as labour or objects of largesse, and therefore developed no stake either in the quality of the effort or in the maintenance of the measures implemented. *Referrals ?*

Today however, in both developmental theory and practice, people are seen as the subjects and protagonists of their own development and well-being. A successful watershed development effort and management is only possible when the people living in that area understand the relationship between the environment and their own social and economic well-being, decide to come together and labour together to conserve, regenerate and manage their environment appropriately in order to realize their plans and hopes, i.e. they must "participate" in the fullest sense of the word.

As the former Sarpanch, Shri Badhe of village Mendhwan of Sangamner Taluka, where WSD was successfully undertaken, puts it : "Watershed development has brought us together. We have put aside our differences; we do "shramdaan" (voluntary labour) together; eat together from one plate and have decided to work together for the development of our village".

In this paper we shall focus primarily on the impact WSD measures have on the lives of women and on the relationships between men and women, namely, gender impacts. A subsequent paper will explore a possible approach aimed at mitigating some of the negative impacts of WSD while capitalizing on the possibilities and opportunities it offers for building up the capabilities of women, namely, empowerment.

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General: gender-specific but no distinction mtr/rch of ymg/old. see pg p. 8.

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## II. THE GENERAL SITUATION OF WOMEN IN INDIA :

The situation of women in rural India is generally characterised by hard work, both at home and on the farm, primitive hygiene conditions, poor nutritional status, little access to health and educational facilities, illiteracy and superstitiousness. They are entrusted with responsibilities of attending to the well-being of the family

(nutrition, health), and are yet marginalized in matters pertaining to upbringing of children and village affairs. They possess no assets, do not have their own funds and have little access to resources.

In the eyes of society the woman has a status secondary to that of man. This process has been so internalised that even in her own eyes, her identity is derived either from that of her father, her husband or her male children.

## III. GENDER IN WATERSHED DEVELOPMENT :

Watershed development has often been described as anti-woman. It is alleged that "women's participation" means that they do the laborious work - digging of soil, raising bunds, planting trees and contributing "shramdan" (voluntary labour) while men enjoy the privilege of decision making and controlling the financial benefits.

As in most programs, unless conceived by women to respond to their needs, watershed development by itself could be very gender discriminative. Moreover, since in our society it is the man who owns title to the land and who is supposed to have the aptitude and the ability to grasp technical know-how, the general tendency is that men take over watershed development as their domain of interest and influence.

Women are seen primarily as executors of decisions made by men and earners of additional income to supplement the meager family kitty. Wherever watershed development projects have been implemented it has been observed that the bulk of the labour force constitutes women (even up to 70 % in most cases), while they are hardly represented in the decision making processes relating to organization and implementation. Moreover, implementation of a successful watershed development effort involves considerable social discipline e.g. ban / control of free grazing, ban on tree felling as well as local contribution towards costs which usually takes the form of free labour (shramdan). This shramdan is largely

### WHAT IS WATERSHED DEVELOPMENT

(i) What is a Watershed ?

A watershed can be defined as the drainage basin or catchment area of a particular stream or river. Simply put, it refers to the area from where the water to a particular drainage system, like a river or stream, comes from. A watershed may be small, consisting of a few hectares, or huge, covering several thousands of hectares.

(ii) What is watershed development and management all about ?

Watershed development refers to the conservation, regeneration and the judicious use of all the resources - natural (like land, water, plants, animals) and human - within a particular watershed. Watershed management tries to bring about the best possible balance in the environment between natural resources on the one side, and man and grazing animals on the other. It requires people's participation because those who destroy it would have to want to regenerate and conserve it.

(iii) What are the components / sectors of watershed development ?

Watershed development involves the following components / sectors :

- Human resource development (community development)
- Soil and land management (conservation and use)
- Water management (conservation and use)
- Afforestation
- Pasture (fodder) development
- Agricultural development
- Horticulture
- Livestock management
- Energy management

(Ref: Guidelines on "Participation in the Indo-German Watershed Development Programme" - pg.11)

contributed by women. The ban on free grazing and tree felling increase her workload as it is her responsibility to feed the cattle and to keep the home fires burning.

It therefore appears, prima facie, that watershed development is gender discriminative. However, experiences gained from several projects have revealed a mixed picture. While there are some immediate negative effects, there are also significant benefits that accrue to women especially in the interim and long term. WSD also opens up several fora and opportunities which, if anticipated and handled sensitively, can lead to empowerment and enhancement of the status of women within their community.

#### **IV. IMPACTS OF WATERSHED DEVELOPMENT :**

We shall now consider some of the impacts, both positive and negative, on women and their lives as well as on gender relationships.

##### **1. THE CONTEXT**

In what follows, the author draws upon first hand experience obtained as well as observations made from several watershed development projects particularly those being implemented under the Indo-German Watershed Development Programme (IGWDP) in Maharashtra.

The majority of the projects share the following common characteristics :

1. They are usually located in drought prone areas having an annual rainfall ranging from 150 mm - 800 mm. The average rainfall of the bulk of the projects varies from from 250mm. to 500 mm.
2. There is an acute problem of drinking water during summer.
3. Hills and wastelands have sparse vegetative cover and are mainly barren and degraded..
4. The geological profile is that of the Basaltic Deccan Trap.
5. Agriculture is largely single cropped and rainfed.
6. Crops are mainly coarse cereals.
7. The watershed effort is supported by a reasonable external wage input as well as external technical expertise. The people contribute a part of the costs by way of "Shramdan".
8. The project is implemented by those living within the WS, organized by a Village Watershed Committee (VWC ), supported by an NGO. The VWC is a watershed level representative body that is nominated by consensus by the Gram Sabha ( village body).
9. A Ridge-to-valley approach is followed with emphasis on soil conservation and biomass development. Controlled grazing and ban on tree felling are enforced on treated areas..
10. The watersheds generally range from 500 ha. up to 1500 ha.
11. The time taken for completion of implementation measures which includes the preparatory Capacity Building Phase (CBP) is between 5.5 - 6 years. For the purpose of our analysis we shall divide this time spent into 3 periods - immediate (year 1); intermediate (years 2 - 4), and long term (year 5 onwards)..

general  
characteristics

## 2. THE BENEFITS.

We shall discuss the positive impacts of WSD in treated areas under the following headings :

### A. Physical and Economic Impacts :

- i. Employment and Income
- ii. Food Security
- iii. Fodder availability
- iv. Fuel availability
- v. Savings and credit
- vi. Water availability

### B. Social Impacts -

- i. Migration
- ii. Education
- iii. Status and Decision Making
- iv. Basic Health and Hygiene

### A. Physical and Economic Impacts :

#### (i) Employment and Income :

A sustained effort at WSD has a notable impact on employment, income generating opportunities and length of the agricultural season.

In rain-fed agricultural rural areas, except for a few months, there are hardly any work opportunities within the village. In fact, during the agricultural season too, especially in drought prone areas, the entire demand for work cannot be met in the village itself. Hence poor peasants and agricultural labourers have to go to towns or distant villages in search of work (e.g. construction sites, sugarcane cutting, digging of wells, brick kilns etc.). With wage supported watershed activities starting in the watershed, the people, especially women, avail of this opportunity to enhance the family funds. This has a direct bearing on the family welfare and stability.

Afforestation and pasture development require a large amount of planting material (saplings and grass seeds). In order to meet this need, nurseries are usually developed in situ wherever water is available. This is an activity that is most frequently associated with women. In addition to generating substantial income, nursery raising equips women with skills and knowledge which are an asset. Women can and do avail of this opportunity to decide what saplings are to be grown to meet their needs. From the fifth year onwards horticultural operations enhance employment opportunities available to women.

Similarly with an increase in soil moisture as well as increased availability of water, the agricultural season lengthens specially from the third year onwards. Agriculture labour opportunities, earlier limited, are now available for a longer period within the village itself.

Depending on circumstances as well as markets, agro-based allied income generating activities like dairy, stall fed goat rearing, poultry etc. can also be undertaken particularly from the third and fourth years.

reduced male/migration & income earning for women.  
↓  
family welfare & stability & girls edu. (p.7).  
women's role in nurseries → income, skills & knowledge  
moisture retention  
↓  
longer agr. season  
↓  
employment of ♀ in agr. and agro industries

(ii) Food Security

With a reasonable wage obtained on a regular basis as a result of watershed activities (WSA), the family acquires additional purchasing power to augment the food intake.

In a tribal village Khodpakhindi of Yavatmal District, prior to WSD, the family diet in general consisted mainly of jowar. They could afford to have meat once a month or during feast days only. Today, two and a half years after the project started, their diet has improved. Besides jowar they regularly have wheat, vegetables and oil. Now they also have meat at least once a week.

more cash &  
more agr. output  
↓  
better nutrition.  
(But who controls  
use of resources in  
the households?)

With soil conservation measures and extension support, land and agricultural productivity increases from the second or third year itself. Farm production increases in terms of both food crops and farm products (e.g. eggs, chicken, dairy products, etc.). When this is coupled with information and inputs on nutrition and nutrition oriented agricultural practices, e.g. kitchen gardens, appropriate food crops etc. the nutritional status of the family and village is progressively improved. Food security is thus a direct consequence of watershed activities and provides the foundation for enhancement of nutritional status provided the latter is specially addressed..

(iii) Fodder Availability :

Obtaining fodder is largely the responsibility of women. Fodder and forage is obtained either from farm lands or Common Property Resources (CPR) i.e. village owned lands as well as government/forest lands accessible to villagers or private wastelands or from outside the watershed.

Largely due to indiscriminate grazing and poor quality of grasses there is an acute lack of sufficient and nourishing fodder available throughout the year. This does not allow for the rearing of high yielding productive animals. However, when free grazing is banned on CPR, or private wastelands & pasture enhancement measures are undertaken, good regeneration of naturally occurring grasses as well as establishment of improved nutritious varieties occur in abundance. Then women will not be required to go long distances in search of fodder.

Moreover, as the agricultural season lengthens and productivity increases, the agricultural residues also increase. This, in fact, is usually evident from the third year of project implementation onwards.

Wherever there is surplus fodder, the same can be sold, which further adds to the income. The above is usually evident from the second year onwards.

Khodpakhindi village of Nanded District, in the second year of project implementation, harvested and stored sufficient grass to meet the fodder needs of every family of the village for the entire summer season, even though the watershed was only partially treated.

land & water management  
↓  
over time quality  
& availability  
of fodder  
increase  
↓  
prod. use &  
surplus sold.  
(But see above)

It has been observed that the increase in the fodder stock results not only in additional livestock maintaining capacity, but also the rearing of high yielding productive cattle and livestock.

→ *livestock*  
*→ Revised quality*  
*↓ higher output*

Dongaon village of Nanded District, in the third year of the project, harvested 2,50,000 bundles of grass. The village has now taken bank loans and purchased 35 cross-bred cows.

In case the family does not have adequate amount of fodder, this can now be purchased from within or outside the watershed from the wage income obtained due to work available in the watershed as well as due to increased earnings from agriculture.

By the end of the third year of project implementation, the number of cross-bred cattle had increased substantially in village Mendhwan. Fodder requirements outstripped what was locally available and had to be met from external purchases. The villagers leased in grasslands from a watershed 45 km away which had a better rainfall and soil regime.

iv. Fuel availability :

With the environment bare and degraded, the woman has to go long distances to obtain good firewood, failing which she has to take recourse to thorny bushes, brambles and other poor quality fuel material. The search for fuel is her constant preoccupation. Much of her time and energy is utilized to keep the home fires burning. Moreover whenever WSD activities are seriously undertaken a ban on tree felling is usually enforced.

*benefits to ♀:*  
*more resources,*  
*natural & cash,*  
*for fuel.*

Now, however, with additional income from wages from the first year itself she is able to augment her fuel stock by external purchase of wood or kerosene. Moreover, as a result of increased agricultural output, agricultural wastes are now increased from the second or third year itself. From year 5 - 6 onwards, as a result of afforestation and natural regeneration of root stock on both CRP and private wastelands, biomass by way of firewood, twigs and loppings augments fuel availability.

v. Savings and credit :

Women hardly have any savings and therefore in times of need have to borrow from the money lenders who charge exorbitant rates of even 100 % or more per annum. In the case of sugarcane-cutting migrants the entire family is, as it were, "bonded" for the following season due to the "timely" financial aid given by the contractors.

*Cash access to & control over*  
*Potential for*  
*women's credit*  
*groups.*

When women are motivated to form savings and credit groups, the money earned from wages and other activities can easily be used to generate initial funds for internal lending and utilization. This not only makes credit on demand available at reasonable rates, but also strengthens the bonds among the women in the village which empowers them. This begins within the first year itself.

In Nandkheda village of Jalna District, the capacity building phase of the project began in November '95. Because of motivation by the NGO, 60 women started savings by January '96. Their savings and credit groups function well today. The number of women in the savings groups have increased and their savings amount to Rs. 13,600/ as on the 1st. March 1997.

as a group,  
access to banking  
facilities

Usually banks do not like dealing individually with petty account holders because of high transaction costs. However, if the savings groups generate substantial sums of money, these become attractive and women can then, as a group, access banking facilities. This is already possible from the third year onwards.

vi. Water availability :

The search for potable water specially in summer, breaks the backs of women who have to trudge long distances and spend several hours each day to get water which is often unfit for consumption. In drought prone areas, tankers with drinking water come once in two days during the months of February to August, depending on the rains.

increase in  
groundwater  
↓  
reduced water  
collection to ♀,  
lower tanker  
supply costs to govt.

However, from the second year itself, in treated areas which have experienced a reasonable monsoon there is an appreciable increase in the ground water table which is reflected in an increased water level in the village wells. Clean drinking water is now available as well as water for protective irrigation. This has considerable impact not only on agriculture but also and particularly so on the quality of life and health of women and the family. Her anxiety and work load are now reduced to a considerable extent.

In village Mendhwan, district Ahmednagar, prior to 1993, every year during the months of April to end August, tankers of drinking water were brought twice daily to the village. In June 1996, despite 3 consecutive years of drought (rainfall of 170-200 mm drinking water was still available in the village and no tankers were required.

B. Social Impacts :

Better educational  
status girls/women  
(with add.  
inputs).

Participatory Watershed Development (PWSD) has a definite impact on the social situation and offers a variety of opportunities. Some impacts are a direct consequence of Watershed Activities (WSA), e.g. stoppage / reduction of migration. Others occur only if considerable efforts are made by way of social engineering towards achieving the desired objectives, such as improvement in the educational status of the girl child as well as the woman herself, health and hygiene and also increased involvement of women in decisions concerning land use and other organisational matters.

i. Migration :

Usually after the agricultural season is over, a large number of families migrate in search of work. This has serious consequences on the education of the children as well as on the quality of life of the family. Now, with work being undertaken on a sustained basis within their own watershed and which is adequately remunerated, migration is

either immediately or progressively reduced. This latter usually results due to earlier contractual obligations. However by the third year migration stops almost completely.

As Ratanbai of Dongaon relates : "Formerly half of the population would migrate by the month of December. This is now stopped because watershed development work is available throughout the year. Even the harvesting of grass provides employment opportunities. Now people do not migrate".

## ii. Education :

Stoppage of migration provides a situation of stability. It has been observed in several watersheds that this results in an increase in the number of school-going children and an increase in the schooling period. Parents now send their children to school since they do not migrate for work. Besides, they can afford it as they are now earning sufficiently from project measures to do without the income-augmenting activities which children undertake, such as sheep and live-stock herding. Furthermore, once the ban on free grazing and enclosure takes effect, free roaming cattle are reduced and replaced by high yielding intensively managed livestock. Normally, unless there is protracted drought, the returns thereof are substantially higher than those obtained from herding. Thus children are enabled to continue their education.

who benefits most,  
girl or boychild

The impact on the education of children is best noted among the tribal groups.

Pimpaldhara is a tribal hamlet of the Bhojdari Watershed consisting of about 25 families. Three years ago, prior to the initiation of the project, not a single child registered in the village school. Today 15 children ( about 50% ) now regularly attend primary school.

Whenever encouraged and facilitated, women have also expressed a desire to be made literate and informed on various matters affecting their lives.

Both the above two impacts have been observed from the second year itself.

## iii. Status and Decision Making :

Wage supported WS measures enable women to acquire their own funds. The regular cash income thus earned enhances their status in their own eyes as well as in that of the family and society. It gives them a sense of security. This has an impact on gender relationships. It has been observed that women gradually gain self-confidence and self-respect.

Participatory WSD (PWSD) necessarily involves organisational processes and mechanisms and as such offers a number of opportunities for women. As most of the effects of WSD have an impact on women's daily chores such as fuel and fodder availability, water and food security it would be very beneficial, nay, important, that women participate actively in decisions concerning land use, types of trees to be planted as also in other organizational matters.

income earning &  
enhanced self respect  
enhanced cty & hh  
status  
impact on gender  
relations  
greater say in hh  
decisions?)



Sunanda of the Darewadi WSDP emphasised the importance of woman's participation together with their husbands in land use planning ( LUP) when she said, "Men think in terms of crops that fetch money; but we women would like crops that meet the household's food requirements first while the rest of the land may be used for cash crops".

use  
women's adm. roles  
~~also used~~ (by whom?)  
to negotiate greater  
say in <sup>gain</sup> public  
decisions.

Wherever men leaders have been encouraged and nudged to give greater space to women - and this is possible since women contribute the bulk of the labour force (60 - 70 % on an average), earn a regular income and are responsible for about 70% of farm chores - women gradually and non-conflictually are being inserted into the institutional decision making mechanisms of the village and the watershed development effort. It has been observed that women acquire a greater status in society, respectability, more self-confidence and a greater say in matters concerning the family. While these changes are not drastic, they are nevertheless perceptible from the third year onwards as is evident judging from the way women interact amongst themselves, with their men-folk and often in the articulation of their hopes and dreams for their children and family.

iv. Basic Health and Hygiene :

This is a direct consequence of enhanced nutrition, access to clean drinking water, improved living conditions, basic knowledge of promotive health and prevention of diseases and access to basic facilities.

better access to better  
drinking water  
security + cash  
↓  
better health  
(condition: link  
with PHC, HE).

Watershed development results in increased availability of clean drinking water, food security, as well as increased income from enhanced agricultural productivity, allied activities as well as wages. If this is coupled with inputs on promotive health and prevention of diseases, together with access to health facilities made possible due to increased income, a definite improvement in the health and hygiene conditions is possible especially from the third year onwards.

It has been observed that in several villages where such inputs were given, the number of women visiting medical practitioners as well as the frequency of visits has increased considerably. Minor ailments which were ignored earlier are now attended to.

We shall now present schematically the beneficial impacts on women and gender relationships as discussed above.

**Table I : WOMEN AND WATERSHED DEVELOPMENT.: IMPACT ON KEY INDICATORS AND TIME FRAMES**

INDICATORS	PERIOD				
	Immediate Year 1	Year 2	Year 3	Year 4	Long-term Year 5 onwards
<b>(A) Physical and Economic Impacts</b>					
(1) Availability of Income opportunities :					
a. Work Opportunities					
i. On Site (WSD <sup>*1</sup> )	●-----	-----	-----	-----	----->
ii. Nursery raising		●-----	-----	-----	----->
iii. Fields (Agri.)own and others		●-----	-----	-----	----->
iv. Horticulture					●----->
b. Allied Activities			●-----	-----	----->
i. Poultry			●-----	-----	----->
ii. Dairy				●-----	----->
iii. Stall fed Goat rearing				●-----	----->
iv. Fisheries				●-----	----->
v. Non-farm activities				●-----	----->
(2) Food Security					
a. External purchases	●-----	-----	-----	-----	----->
b. Own farm production		●-----	-----	-----	----->
c. Kitchen Gardens		●-----	-----	-----	----->
(3) Fodder availability					
a. Agricultural residues			●-----	-----	----->
b. Common Property resources <sup>*2</sup>			●-----	-----	----->
c. External purchases			●-----	-----	----->
d. Private wastelands			●-----	-----	----->
(4) Fuel availability					
a. External Purchases	●-----	-----	-----	-----	----->
b. Own farm <sup>*3</sup>			●-----	-----	----->
c. CRP					●----->
(5) Savings and Credit					
a. Internal generation and circulation (village level)	●-----	-----	-----	-----	----->
b. Access to banking system			●-----	-----	----->
(6) Water availability for households and farming		●-----	-----	-----	----->
<b>(B) Social Impacts<sup>*4</sup></b>					
(1) Stoppage of Migration <sup>*5</sup>	●-----	-----	-----	-----	----->
(2) Improvement in women's status (participation in land use decisions, in VWC <sup>*6</sup> meetings and Gram Sabhas <sup>*7</sup> )			●-----	-----	----->
(3) Educational Status					
a. Women		●-----	-----	-----	----->
b. Children		●-----	-----	-----	----->
(4) Health and Hygiene			●-----	-----	----->

\*1 WSD - Watershed Development

\*2 CRP - Common Property Resources : Village owned lands, Government owned lands which are made accessible to the villagers

\*3 Agricultural residues

\*4 The social impacts other than stoppage of migration do not occur automatically. They depend crucially on a variety of factors as also the management input of the NGO.

\*5 Migration begins to taper off and stops by the 3rd year of project activities.

\*6 VWC - Village Watershed Committee

\*7 Gram Sabha - Village Meeting

### 3. THE NEGATIVE EFFECTS ON WOMEN :

While women do benefit from watershed development, their work load, as well as hardships nevertheless increase considerably. Moreover, since successful watershed development necessarily involves the participation of all groups in the village, should conflicts arise, and the project stops, this group, namely, women, would be hardest hit. This group constitutes the majority of the labour force and puts up with the greatest amount of hardships resulting from adhering to the socio-cultural discipline involved in successful participatory watershed development (e.g. ban on free grazing, tree felling etc.). This therefore is the most vulnerable section of society and suffers from considerable stress and insecurity.

#### A. Economic Impacts :

##### (1) Employment and Income Opportunities :

- more earnings, but also more work + less alt. time use  
a) at work site  
b) in agriculture  
c) spend in agro-based activities  
exp. extra work for poor women here (see p. 12)
- A woman's need for money and the availability of work in the village itself encourages her to put in about 7 - 8 hours per day at the watershed site, besides the usual house work. Her working hours/day then usually become 16 - 18 hours. Thus she does not have time for relaxation or her own education. Besides she cannot give her children the time they need.
  - With watershed development, agricultural productivity increases. With about 70 % of the farm activities being done by women, specially the laborious and non-mechanised works, her work load now increases. For instance, when 1 crop is harvested per year, at least 3 months of women's labour is required: now with the possibility of a second crop, 6-8 months of women's labour is demanded. Thus increase in agricultural productivity leads to an increase in the work load especially of the tedious kind.
  - With the increase in the availability of fodder as well as water, people feel emboldened to undertake agro-based and allied activities such as animal husbandry and the processing of agro products. Usually it is the women who work hard at the caring, feeding and cleaning of the animals and the sheds. Furthermore, processing of agro products is usually done by them. However, the marketing of milk and other produce is controlled by men. So, while the labour is the women's, the control of the income is the men's. Thus gender inequities are further endorsed and perpetuated.

##### (2) Food :

- not always control over use of resources:  
who controls use of produce?  
compare case in Kakamega, Kenya.
- It is normally the man who decides what crops are to be grown on the farm. Wherever there is increase in the availability of water, farmers tend to go in for cash crops instead of food production. In addition to increasing the work load of women, the real danger is that food and nutritional requirement of the family may not be adequately met from home production. This has happened in the case of the successful cooperative dairy industry in India.
  - In such circumstances, where household requirements are not met by one's own farm production, the same would have to be purchased from others or from urban centres. This

leads to a depletion of the household savings and outflow of village income to urban areas. These purchases are normally done by the women from the money they earn, thus resulting in a decline in their financial position.

(3) Fodder :

loss of the resources (fodder, fuel) hit poor women hardest.

- a. With the ban on free grazing, it is usually the poor, and that too poor women, who are often forced to graze their animals outside the watershed or pay compensation for grazed plants. This often involves considerable travel, conflicts with competing grazers or pasture owners and economic hardships. Often they would even have to sell their animals either due to social pressure or if the fodder requirements cannot be met as was the experience of Dongaon.

In the WS of Dongaon, in the first years of project implementation, villagers had to sell off large herds of local cattle and goats primarily due to closure of pasture grounds. The same experience has also been observed in other villages.

increase of work (fodder collection) nearest on poor women. (small holders).

- b. Furthermore, with introduction of stall feeding and cut-and-carry methods of fodder access, hardships to women increase, as it is often the women who get the fodder and not the men. This is specially true of small holders. The fodder grounds would usually be about 0.5 - 1 km away from the habitations as they are usually located in the forest and revenue waste lands which border the villages.

(4) Fuel :

- a. It is the man who usually decides on what species of trees are to be planted and he will normally go in for "productive trees" (timber & fruit producing, implement making etc.) rather than trees that could also respond to women's needs (e.g. fuel, fodder trees etc.). Women's preferences are often given the go-by.

tree planting needs of women not met.

In village Nandora, initially the decision regarding the selection of plant species was in the hands of the men who raised only one economic variety, namely teak. However when women took over the nursery, they raised fuel, fodder and fruit species namely zyzphus, bamboo, awla, bor, sitaphal, bihada etc. One of the women described her feelings thus, "Now the nursery meets our needs".

increase of work (fuel collection) nearest on women. Dung burnt - not used in crop.

- b. The responsibility of keeping the family stove burning rests on women. With the ban on tree felling, which is often wrongly interpreted as ban on loppings, she often has to walk long distances, even outside the village, to get firewood. To augment her fuel stock, valuable agricultural residues and dung are also burnt.

(5) Savings and Credit :

Usually the basic survival needs of a family are met mostly from the money women earn and save. It is often the experience that they have little control over their hard earned income & savings. Men impound it for purchase of assets which are

owned by them, or for their own needs and at times even for wasteful purposes eg. gambling and drinking.

Moreover it is observed that when women have access to credit either through their own SHGs or banks, their men folk tend to pressurize them to take loans for their own purposes.

In village Jondhiewadi, some men pressurized their wives who were members of a women's credit group to demand its liquidation so that they could get immediate lumpsum possession of the money that was due to them.

#### (6) Water Availability :

more private commercial interests of men over rule communal int. interests of women.  
↓ esp. larger landholders  
depleting water supply.

With increase in water availability the tendency of farmers is to increase the area under cultivation. Moreover, there is a tendency to go in for high value water consumptive crops, e.g. sugarcane, grapes. If this is done unrestrainedly, the ground water level gets rapidly depleted and the water situation quickly returns to the pre-project stage. Adequate potable water within a reasonable distance from the home and water for livestock are the first casualties.

class element comes in

↓ access to water, land, seed.

who manages & controls management of water resources.

Unless special care is exercised those who have access to resources can quickly exploit augmented ground water reserves. Thus a limited few would capture a major share of benefits. The losers are the rain dependent farmers especially the small ones. This leads to the surfacing of a new power elite (which might also include some or all of the elements of the existing ones) who take over decision making institutions, purchase additional lands and are generally conservative and acquisitive. This would then result in an increase in the number of landless, greater immiserization and marginalization of the small rain-fed farmer. The consequence is increased hardships to women.

### B. Social Impacts :

#### (a) Education :

more money for ♀ yet less time and energy left than men.

While women do want to improve their educational and knowledge levels, the long working days (16-18 hours) leaves them too tired and exhausted to really concentrate on the acquisition of skills and knowledge. Thus even if they do have disposable income, they are disadvantaged vis-a-vis men who, in a similar situation, generally enjoy some leisure and are able to travel and be exposed to a variety of learning and enabling opportunities.

children benefit for education but girls least.

During periods of drought when disposable income declines sharply, girls are the first to be withdrawn from school.

#### (b) Status and Decision Making :

The process of integrating women into the dynamics and politics of village level projects and institutions is by no means simple nor can be assumed. Access to income and own funds can also be a source of tension and discord within a family if the men folk feel threatened.

income → gender conflicts & tensions

funds can also be a source of tension and discord within a family if the men folk feel threatened.

In Kadus Watershed, payment of wages is accompanied by a memo outlining details. Some women requested that wages due to them for work done be paid to them in 2 parts with 2 separate memos - one in their own name and the other in the name of another person, usually their married daughter or a relative living outside the village, in whom they have confidence. They would hand over to their husbands their "own" memo and wages and keep the other memo and wages to themselves. This they saved or invested to meet the needs of the family in times of crisis or to give useful gifts to their married daughters when they visited.

If gender related issues are not handled sensitively, appropriately and with patience, there could be a backlash which may result in greater marginalisation and oppression of women.

Furthermore, due to internalization of cultural restrictions and practices, women find it difficult to openly and clearly state their expectations and points of view. Often, they echo the views of their men-folk thus immediately reaffirming their current situation of "obedient wives", "handmaids" to their men.

(c) Basic Health and Hygiene :

boys greater benefits from access to health nutrition & education than girls.

As is the common trend in villages, boys are given preference in both education and nutrition vis-a-vis girls. With an increase in disposable income and food availability, while the absolute quantum available to both increases, boys gain relatively far more than girls. Thus, girls lose out relatively, health-wise, physically and educationally. During periods of protracted drought, or when food is in short supply, girls are the first victims. Not only is their nutritional intake reduced relative to their male siblings, their health problems also are attended to much later than that of their male counterparts.

V. WOMEN'S REACTION :

In my interaction with women, I have observed that despite the limitations and hardships mentioned above, women nevertheless are willing to accept the extra work load as well as the hardships for 3 primary reasons :

- (1) They want to have access to a steady flow of income in order to enjoy food and financial security especially for times of crises e.g. if abandoned by their husbands or widowed.
- (2) They want to ensure the future of their children by sending them to school, because they realise that unless their children get educated, their lives would be as filled with hardships as their own, if not more so.
- (3) They want to participate in decision making at home (utilisation of funds, upbringing of children, land use and village affairs) and thus be accepted and respected by society.

In order however, to lighten their burden and also to ensure that their hopes are realized, they have expressed the need for

The following:

- (i) training programs, opportunities for study (non-formal classes) and exposure visits so as to broaden their horizons and improve their skills. Such visits also serve the purpose of socialisation and relaxation.
- (ii) day care centres for children which would not only provide quality care for their children but also free the parents for work.
- (iii) Drudgery reducing alternatives e.g. by the use of alternate improved energy sources, potable water sources, functioning and efficient pumps close to their homes, availability of better fuel like kerosene, better agricultural implements etc.
- (iv) the possibility of saving securely as well as the availability of loans as and when required and without much bureaucracy.
- (v) access to health and hygiene facilities since nutritional deficiencies, intestinal infections and other preventable diseases are a major cause of fatigue and debility which affects intellectual and physical productivity as well as acts as a drain on their meager income.
- (vi) reasonable assurance of a steady income through other income generating projects even after the watershed development project is completed.

Thus, I have observed that there is a strong desire on the part of women to acquire a sense of identity which would be accepted by society and to move from creaturehood to personhood. Where such a possibility exists, women are willing to accept the hardships involved.

## VI. CONCLUSION :

Watershed Development by itself is not gender discriminative. It is the socio-economic and cultural framework existing within a particular watershed that determines gender relationships and discrimination. In the rural agrarian setting in India this framework is definitely biased against women.

In such a system, any external infusion of resources (finance and technology) with no reference to the underlying transfer and power mechanisms will necessarily strengthen existing inequalities and biases.

Hence, if a particular initiative is not to become gender discriminative, thought must be paid not only to the "control" and the "delivery mechanism" but also to the "distributive" effect and mechanism.

Participatory Watershed Development, wherein space is created for women's active involvement, not only addresses the core concerns of women, but also offers them the possibility to get integrated into the socio-economic-political life as also the decision making processes and institutions of the village and also matters pertaining to the family.

Thus Participatory Watershed Development, which plans and allows for women's empowerment can discriminate in favour of women especially in the interim and long run even though initially, and for a time thereafter, women are saddled with additional chores, burdens and responsibilities.