

1. Introduction

Indian Economy has been advancing at a rapid pace, thanks to the growth of the service sector in the country. One cannot but deny the fact that this growth has been highly exclusive, further increasing the gaps between the haves and have-nots. This is mainly governed by the fact that the majority of the Indian population still resides in rural areas, being forced to depend only on agriculture. However, agriculture sector has not been able to even retain a steady growth rate over the years, leave alone keeping pace with the overall economy. There are a lot of deliberations already happening on this issue and there seems to be an overall consensus that the key to rural growth would be in increasing agriculture productivity, promoting livelihood diversification and increasing access to markets and financial institutions.

Government policies to promote agriculture growth rate have however, still been majorly governed by promotion of irrigation. The fact remains that water resources are becoming extremely scarce and as per the CWC revised estimates in 1996 points out that India has already created about 64% of the ultimate potential for irrigation: 89 million hac out of about 139.9 million hac from all sources.¹

What is thus essential is to have a system which gears up a more holistic farming system approach with more attention being given to the needs of farmers in rainfed areas. As of now the only programme which caters to the needs of rainfed dryland farmers is the Watershed Programme. The participatory watershed development program in India, started in 1994-5 is a major leap in India to address land degradation and the need for increased agricultural productivity. Paradoxically, while women are the primary workers in dryland agriculture, they are almost excluded from the core of the program implementation. While the SHGs of women are involved in savings and credit, the actual program related process of planning and implementing are exclusively located in the men dominated User Groups and watershed committees.

In almost all societies we see a clear division of labour among men and women, designating certain tasks exclusively to each other. In rural context this assumes particular significance since a large part of the sustenance of the farm households is dependent on the "care economy" which is a clear task of women. This care economy depends on natural resources to a great extent to meet the daily requirements of fuel, fodder, water and in some tribal areas even food. If the opportunities and access to decision-making institutions are not equal to men and women, these issues which only women can relate to aren't articulated and therefore not addressed. This leads to not only a negative impact on women but also on the overall goal of the programme which emphasizes on the need to involve the primary stakeholders, yet fails to recognize who are the actual primary stakeholders.

This paper attempts to review the watershed programme in this context, trying to ascertain the actual involvement of women in programme planning and implementation. It derives mainly from field case studies, the trickle down impact which it has had on women's life as well as recognizing specific initiatives which have helped make gender relations at village level more equitable. In this context, it would also be important to analyze the changing rural scenario in context of achieving the goals of a watershed programme and the scope it offers for empowerment of women.

2. Women and Watershed- Review of existing policy and programme

Drought proofing in ecologically sensitive areas of India has been one of the priorities of the state. Central government conceptualized programmes like the Drought Prone Areas Programme (DPAP) and the Desert Development Programme (DDP) in 1971 to support drought proofing in selected parts of the country. From time to time, expert committees were constituted to suggest improvements in the contents and strategies of these programmes. The most important among these was the Technical Committee headed by Dr Ch Hanumatha Rao (1993) which brought in a real shift in the programme.

¹ Institutional reforms in Indian Irrigation; Ashok Gulati, Ruth Meinzen, K.V.Raju; IFRI, Sage Publications India Pvt Ltd. (2005)

Based on these recommendations, the Ministry of Rural Development, Government of India issued Guidelines for Watershed Development (1994). These Guidelines have achieved the difficult task of integrating drought-proofing agenda with community participation, appropriate technical interventions, capacity building support and participatory processes. To increase the involvement of the Panchayat Raj Institutions (PRIs) in planning, implementation and management, subsequently another new Guideline called Guidelines for Hariyali was issued in 2003. While the pros and cons of these new guidelines could be well debated, we would now limit focus to the objectives of the watershed programme in lieu of involvement of women.

2.1 Specific mention of women

The Guidelines state the objectives of each watershed development project as promoting economic development, the restoration of ecological balance, and giving *“special emphasis to improve the economic and social condition of the resource-poor and the disadvantaged sections of the watershed community such as the assetless and women”*. Under the Guidelines, watershed projects should start with general awareness-raising, followed by the establishment of user groups and self-help groups that include women or are exclusively for women. Representatives of these groups, together with other villagers, should then go forward to form the watershed committee. This is intended to ensure adequate representation in the committee of different sections of the community.

However in practice, the involvement of women is limited to savings and credit groups. In many cases, such groups are formed as a perquisite for getting sanction for the project plan and then simply left out. There is no effort whatsoever made even to ensure the continuity of these groups for saving and credit activity after the watershed project is over. Even in places where there have been more strong groups particularly in case of NGO promoted watersheds, these remain fairly indulged with their savings activity having no direct link to programme planning or implementation. Infact there has been a general tendency to use the revolving fund (a meagre Rs. 10,000 per SHG) to promote income generating activities for women which are non NR based.

Provision of nominal representation for women in the committees, as they are necessitated to have representation from Self Help Groups is another major means to attempt gender balance. This had however lead to women often not being recognised as members of the ‘watershed’ community in their own right as farmers and resource decision-makers, but are seen as ‘quota women’. There are instances where male members on committees take all decisions (often at meetings which women can not attend because of the inconvenient time or social restrictions) and send the final resolution to the women members for their signature. Such women are not in a position to question the decision, or worse, if illiterate, they place their thumb-print on the document without knowing what they have agreed to. This particularly arises in cases where the promoters of the committee are not able to facilitate the process properly or are not sensitized enough to understand the need for women's representation in the committee. Women thus involved in watershed committees are often not given a chance to voice their opinions, or lack the self confidence and access to information to participate in informed decision-making. There are but also several cases where women in watershed committees when backed by a strong SHG have taken up lead roles in ensuring effective implementation and also voicing of women's concerns in the planning process. Token participation of two or three individual women in a watershed committee does not seem to be working much given the current situation.

2.2 Women as a part of primary stakeholder group

The other key aspect of the watershed project is the participatory approach through different common interest groups for implementation. This is the ideal, with the watershed plan prepared according to the needs and preferences of local people who are members of the Watershed Association. A genuine representation of marginal farmers, the landless and women in the committee should generate a process that is as concerned with water and common pool resources as with private land management. It is thus assumed that livelihoods will improve because of the increased agricultural income; both crop and animal productivity, availability of water, fodder and fuel wood; through effective natural resource management.

In practice but, watershed development is still viewed as exclusively a private land-based programme leading to productivity enhancement and conservation. Land-based watershed projects are often perceived by the agencies involved as ‘men’s’ projects and consequently not women’s concern. Men, who have title to much of

the productive land, are perceived to be the natural target-group for watershed work. This is reinforced by the Guidelines' budgetary allocations, which target a large amount of the money at land development activities. The development of local organisations, envisaged in the Guidelines, is at best used as an instrument for achieving the physical targets and collecting community contribution.

2.3 Gap between actual and espoused impacts

The watershed programme had been fairly successful in bringing in an integrated land treatment approach rather than the earlier scattered approach. The technically preferable ridge to valley approach for watershed treatment has also been effective particularly in popularizing the concept of soil and moisture conservation. This has had quite significant impacts in terms of agriculture productivity and to some extent drought coping as discussed in the subsequent section.

Unfortunately though it still fails to achieve the two significant objects envisaged in the programme; one effective involvement of primary stakeholders and two the development of common pool resources for restoring the ecological balance. Women have been at the receiving end thus, as they are the effective primary stakeholders, as users and developers, in both common land and private land. However, denial of property rights particularly agriculture land had lead to them being systematically ignored by all institutions, households, community and government bodies in planning processes.

On the other hand, the watershed programme has altered access to Common Pool Resources (CPRs) such as village common lands, forests and water resources through the creation of, for example, tree plantations in these areas. The closure of common lands for tree plantations leads to the loss of access to grazing areas. Protection of a degraded area may transfer harvesting pressure to another area and this increases women's (and children's) drudgery as they have to travel a greater distance to collect their daily requirements of fuel and fodder. Further, development of wasteland may change the species balance and some shrubs, grasses and trees valued as medicinal herbs or food by women and poorer households may be lost.

Without planning processes giving focused attention to the resource use patterns of the poor and women, such CPR development often curtails, rather than increases their resource access. To add to this, it often falls to them to contribute the necessary free labour on behalf of their households, thereby further increasing their drudgery.

3. Impact of Watershed Programme on Women- Some Case Studies

Nevertheless, the situation is not only negative; there have been enough instances where women have been ready to take on the increased drudgery in lieu of the increased benefit which they might incur in future. What for a development worker may be increasing burden on women, they themselves often look forward to it as a means to improved livelihood and well being. According to Marcella D'Souza (1999),² women indicate their willingness to carry out this extra work provided it leads to the fulfilment of four basic needs:

1. Access to a reliable source of safe drinking water within a reasonable distance, and improvements in health and hygiene.
2. Access to a steady flow of income to ensure food, fuel and financial security.
3. A secure future for their children through education.
4. Participation in household decision-making and community affairs

Keeping this framework in mind, it would be interesting to analyze a few watershed projects implemented by AKRSP(I) particularly those which seemed to have achieved a level of implementation quality and impacts. For a better analysis we take up two cases where watershed treatment has been of highly good quality, but without specific interventions to involve women and two where in specific interventions have been made. To be able to reach a more balanced judgement, I have taken one non-AKRSP(I) case in the former section. This case from Adarsh Goan scheme is based on the Ralegoan model and should thus provide an ideal case for quality implementation of watershed project. Also, this case has been evaluated independently from a Gender

² D'Souza, M. 1999. Watershed development: creating space for women. In: Farrington, J., Turton, C. and James, A.J. (eds). Participatory Watershed Development. Challenges for the Twenty-First Century. Oxford University Press, New Delhi.

perspective by noted economist Maithereyi Krishnarajan, thus having the added advantage of using authenticated secondary information.

3.1 Cases of Watershed Treatment with no specific efforts to involve women

3.1.1 Hiware Bazaar Watershed Development Project, Maharashtra³

Based on the Ralegaon Siddhi model of development, the Government of Maharashtra devised the 'Adarsh Gram Yojana' (Ideal Village Scheme) in the 1990s, aimed at overall development of the village – agriculture, employment, water resource augmentation, etc. The implementation of the programme has been based on the following "Panchasutri Karyakram" (the programme of five principles):

- *Shramadaan* (voluntary labour);
- Ban on open grazing;
- Ban on tree cutting;
- Ban on liquor consumption; and
- Implementation of family planning.

In an evaluation study of Hiware Bazaar project, villagers claimed that such integrated efforts for village development have brought about commendable results:

- The village today boasts of 95 percent literacy.
- Ban on grazing increased production of grasses from 200 tonnes in 1994-95 to more than 5,000-6,000 tonnes in 2001-02.
- Ban on felling trees has increased the biomass to 900,000 trees and soil erosion has reduced considerably.
- Ban on liquor has been total; it has increased human efficiency.
- 'Shramdan' has not only helped in inculcating work culture among people but has also helped in creating assets. Hiware Bazaar has set new standards for community development because of overwhelming participation of villagers.
- Water tables in the village have risen from about 70-80 feet below the surface to 20-25 feet
- Fodder availability has increased from 1,500 metric tonnes to 6,000 metric tonnes.
- Milk production has increased from 300 litres to 3,000 litres a day.
- The village claims to have only 12 families (out of a total of 220) below (out of a total of 220) below the poverty line and plans to eliminate poverty by 2004

Hiware Bazaar is thus a showcase of what could be achieved if there is proper leadership, careful planning of natural resources, co-operation between the government and people, participation of the villagers, and transparency in governance.

Sources of funds for watershed in lakhs	: Hiware Bazaar
Govt. Grants	: 67.40
Villagers Shramdan	: 10.15
Beneficiaries Contribution	: 109.14

Empowerment of Women

However, watershed development *per se* did not lead to direct empowerment of women, in spite of the fact that the programme included forming of SHGs for women. The majority of the women (67 per cent) felt that the level of collective action amongst women has remained unchanged (32 per cent would like to differ on this, though). Opinions were divided about the level of participation of women in village level meetings: 56 per cent felt that women are more vocal in the meetings now, whereas 40 per cent felt that there has been no change. Data suggest that some women have felt the changes, but the village as a whole would take time to internalise this. Part of the problem also lies with perception: what some might perceive as increased participation, others might not. Last, there has been no impact on skill upgradation of women despite the fact that skill improvement has been one of the aims of watershed development.

³ Alka Parikh, Sarthi Acharya and Maitreyi Krishnaraj, Impact of Maharashtra's Agricultural Policies on Women Farmers: A Gender Budgeting Analysis, Discussion Paper Series 8, Human Development Resource Centre, UNDP, India, April, 2005

The general condition of women, though, has improved because of the overall development of the village through 'trickle down' effect, although the distribution of gains is different for men and women (as shown by our food and cloth consumption data). There is more prosperity, fewer water problems, and little worry for collecting fuel and fodder. Women's drudgery has surely gone down. So there is empowerment in the material sense, though not so much in the social sense yet.

A positive effect of *Adarsh Gaon* was also seen on the education of girl children. Since it has been ensured that all the children attend school, all girl children have also been put in school. With curbs on alcohol consumption, the violence against women has decreased.

3.1.2 Mokasar Watershed Development Project, Gujarat

The Aga Khan Rural Support Programme (India), working since 1985, believes in enhancing rural livelihoods by empowering village organisations to manage their natural resources. It adopted a watershed approach (i.e. multi-sectored interventions with the village watershed as a unit) for enhancing incomes for rain fed villages and hence when the Ministry of Rural Development (MORD) initiated the Watershed Programme, AKRSPI took up work as a Project Implementing Agency (PIA). This case relates its experiences in the village of Mokasar in the semi arid block of Chotila, Surendranagar District, Gujarat State. Surendranagar is drought-prone area (the only district in Gujarat with all its blocks declared drought-prone by the state government) with a high degree of inter-caste conflict and remnants of a feudal structure.

The major achievements of the watershed project has been as follows;

- Control of run off and treatment of drainage line has lead to increase ground water availability. This has resulted in number of borewell in villages going up. This along with construction of checkdams and other water harvesting structures has also lead to enhanced irrigation.
- Crop production almost doubled for most crops particularly, cotton, jowar and bajra after SWC work and tripled with introduction of improved varieties through agriculture extension services. The availability of water has led to the adoption of cotton in large quantity and farmers are adopting mix farming.
- There has also been an increase in vegetable cultivation and horticulture following the introduction of drip irrigation.
- Improvement in agricultural yields led to increased incomes the villages.
- In many cases with improved incomes and increased labour availability at village level migration has reduced drastically.
- Due to reduced migration the education among children has improved.
- Availability of drinking water has increased with the installation of a water supply scheme and recharge borewell.
- It has been ensured that the poor and the landless are not left out in the sharing of benefits. Under relief work the landless and 'poorest' farmer did labour work on common land. This created employment and savings for them. Land levelling and contour bunding was also done on the lands of the poorest farmers.
- The conflict among villagers has reduced. They have worked together for the development of the whole village. They have also been negotiating with other external agencies to take up activities like cattle camps during droughts.
- Collective action among the villagers has increased. They have also initiated a movement for reduction of social expenditures during marriages, deaths and other such ceremonies.

Sources of funds for watershed in lakhs	: Mokasar
Govt. Grants	: 19.63
NGO funding	: 10.53
People's Contribution	: 7.11

Empowerment of Women

Again here like the earlier case but watershed development did not lead to empowerment of women. Women's involvement in the initial stages was limited to formation of 3 SHGs. However, two of these SHGs have are

already on the verge of being defunct. The only involvement of women has been for contributing labour in the construction of WHS and in the implementation of the drinking water supply scheme. Infact the third SHG which is active is also the one formed at the time of this scheme being in progress. This clearly shows that if women's concerns are addressed, they are ready to come forward. However, what is necessary is to provide them the necessary space and opportunity to voice their concerns.

In case of Mokasar, this was so lacking, that the watershed committee has never shown confidence on the SHG for release of the revolving fund. In spite of this though focus on capacity building of these SHGs has been very less. Mokasar, a model watershed village which receives a number of exposure visits from other organizations (to the extent that the watershed committee charges Rs. 1000 for each exposure visit) has yet to have even one active women leader.

The general condition of women, may have improved because of the overall development of the village, however, their status within the community continues to be at the lower level.

3.2 Cases of Watershed Treatment with specific efforts to involve women

3.2.1 Piprali Watershed Development Project, Gujarat

Piprali village of Chotila Taluka again in Surendranagar district. It is a predominantly agriculture based rainfed village. 61 per cent of the households in the village own land and 72 per cent of the land is rainfed. The men in the village requested AKRSP(I) for support in 1994 after they realised the benefit from water recharge and land upgradation work (as part of reclamation work) in nearby Sokhda village. The Watershed Group (WSG) was thus formed, consisting of men. Subsequently the question "why not women" came up, and a women's SHG came into existence. Though the women were initially hesitant, 11 of them gradually came forward. Then the number increased to 30. There are at present 2 women's SHGs and 2 WSGs.

An underground check dam was constructed with labour contribution of the villagers and material provided by AKRSP(I). Women, being more concerned about water, did most of the work on the check dam. However, this did not address their main concern as a PRA exercise done in the village showed: women were more worried about the lack of drinking water closer home. In Saurashtra region, the water in tubewells was both saline and high in fluoride. The women had to walk up to their fields to collect water if available there or go to *Virdas* at the river side. Looking at this, a percolation well and the roof-rain water harvesting programme were then started.

Discussions with the women in this village on the impact of watershed project has revealed the following;

- Construction of water harvesting structures has increased surface water availability and also lead to enhanced irrigation.
- Crop production almost doubled for most crops particularly, cotton, groundnut, paddy, pigeon pea, jowar and bajra after SWC work and tripled with introduction of improved varieties through agriculture extension services. Improvement in agricultural yields led to increased incomes.
- Workload of both men and women in agricultural work has increased, as both men and women agree. Women say that there is more weeding to do because of increased soil moisture. There is constant vigil to be kept over bunds and water channels.
- The drudgery for water collection has reduced. Where earlier a woman had to spend one hour to fetch one pot of water and spend day or night for water fetching, those who have rooftop harvesting structures in their houses now get up at 6.a.m. most months.
- Thus, on the whole, time spent on paid and unpaid activities by women was less than earlier. Men's work, on the other hand, has decreased more after mechanisation, as they have not taken on any aspect of women's traditional work.

Empowerment of women

The involvement of women in the watershed project though began through SHG, has been focused also on natural resource management. Thus the women were able to voice their concerns of drinking water, which lead to introduction of the activity. Not only this, women themselves took up a lead role in the construction of the percolation well. This has not only reduced their drudgery, but also raised the confidence of the women.

The confidence of women is seen in the fact that in 2003 when the manager of the bank from which the men's group had taken loans and not repaid asked women to sign some documents, they refused and said that they had nothing to do with the money that the men in the village had borrowed.

Life has changed in many other ways – the women have better clothes, men consult women on several issues within the household, the women have an identity and are able to control more cash. New roles have come in e.g., marketing of produce; women now also operate buttermilk churning machines, the flourmill and electrical gadgets on their own. **Champaben, an woman leader says that though women can learn even to plough using the tractor, they will not do it as “if we learn to drive the tractor, men will expect us to do that work too”.**

3.2.2 Sorapada Watershed Development Project, Gujarat

Sorapada in Sagbara Taluka in Narmada District has 366 households of the Vasava tribe. Around 120 households in the village are resettled population from the Ukai dam site. They are landless and dependent mainly on wage labour. The land in the village is mostly undulating, runoff of water and top-soil therefore high. With the average landholding being only 3.5 acres per household and mainly rainfed, dependence merely on crop is very difficult.

AKRSP(I)'s first interaction with the village was in 2001 for watershed development activity. A Watershed Association of 11 members and an MVM was formed right at the beginning. Now there are 9 SHGs of women. The MVM formed in 2001 has in particular been very active in the village. The women of the MVM remember only difficulties before the entry of AKRSP(I);

- Crop production almost doubled for most crops particularly, paddy, pigeon pea, jowar and bajra after SWC work and tripled with introduction of improved varieties through agriculture extension services. This had led to total food security for most of the households in the village
- Improvement in agricultural yields and livestock activities led to increased incomes.
- The initial activities led to local employment generation thereby reducing seasonal migration. With improved incomes and increased labour availability at village level overall migration has also reduced drastically.
- There have been several cases wherein, landless women have with the help of SHG loan, leased in land for cultivation.
- More households were using biogas in the village. This reduced the burden on women for collecting fuel for cooking as well as cooking time.
- Since livestock per household had increased in watershed villages, it led to an increase in the time spent by women on livestock related activities in watershed villages.
- The number of consumable goods at family level has increased. Many homes have pressure cookers, mixer, fans, TV and have also managed to purchase additional jewellery.

Empowerment of women

The women's groups initially functioned effectively as savings and credit groups. With sustained capacity building efforts, the women leaders became increasingly confident and articulate, particularly in the watershed development project and also took up charge of other activities like repair of handpumps in the village. The MVM also took up the activity of collective agriculture input supply in the village with the help of the local women's federation. In 2005, they also have become an active part of managing the agriculture tools and equipment library set up by the women's federation. Livestock per household has also increased as the SHG has been able to leverage the benefits of SGSY scheme. The women joined a milk cooperative and have successfully managed to thwart attempts by a village leader to corner benefits from the cash collections by changing their membership to another cooperative. With women's groups being very active in all development related initiatives in the village, their visibility at village level has also increased. The Village level Women's Associations (MVMs) have become known in the village and even school teachers started inviting women representatives for public functions such as on Independence Day.

There is an increased awareness in Panchayat activities. Women's groups have gone ahead to put up their own candidates in elections and also come together to campaign for them. Three women active in the MVM have been elected to the gram panchayat. The women have also taken up many social issues, notable among them has been curbing the awful custom of a widow not wearing a blouse for twelve days after her husband's death. In many cases focus on educating the girl child has increased. Daughters of active women leaders of SHGs have even gone upto study in colleges staying at hostels.

3.3 Analysis of the cases

Using the framework giving by Marchella, we can see that in all the four cases, access to a reliable source of safe drinking water within a reasonable distance was available. However, unlike any other activity this was not one of the mainstream activity. It either emerged as a priority on separate discussions with the women's group (Piprali) or as a self initiative of the women's group (Sorapada). One also need to note that even in a village like Mokasar wherein women have not been that active, taking up of drinking water scheme has become a source of motivation for the women to come together and voice their concerns.

Women, being more concerned about water, their main concern is about the lack of drinking water. Thus in most watershed projects, where women are not given an opportunity to raise their concerns, drinking water has not been given high priority. A study by Development Support Centre in 2003-04, states that out of the 26 watersheds studied in Gujarat only 9 had attempted to address the issue. In Hiware Bazaar too there was not any special efforts made for drinking water supply at household level, it was the result of increased raising water tables.

The second aspect is access to a steady flow of income to ensure food, fuel and financial security. As can be seen, food security has been achieved for most households in all four cases, which counts as a major impact of the watershed project. However, in Mokasar, where women have not been active, a clear shift to cotton is seen, which impacts food security levels particularly during droughts.

However, in terms of fuel security there has not been much progress. Infact in Hiware Bazaar, there was a ban on felling on trees without an alternative arrangement. Only in Sorapada, wherein women were specifically involved one could see a rise in biogas plants. This reduced the burden on women for collecting fuel for cooking as well as cooking time. In Surendranagar, fuel is not a major problem, due to abundance of prosferious. Nonetheless, a study of watershed projects in Gujarat by UNDP clearly states that a large proportion of women even in watershed villages in Gujarat continue to collect firewood like in villages without watershed although they walked lesser distance and also, the time spent on collection of fuel was less.⁴

Financial security in terms of credit is limited as is the case with most SHGs in India. Watershed project does but increase household incomes. However, it assumes that this would trickle down to women. This has not been the case in any watershed project, wherein women's group is not active. In the latter two cases, but women have specifically mentioned their increased control over cash. Infact with women's milk cooperatives coming up in villages where women's groups are strong enough, women are having a direct access to the increased income from livestock.

Increased in education opportunities for children is another major impact of watershed project seen by women. However, it's only in cases where women have come forward that one can see a visible difference in education of the girl child.

Participation in household decision-making and community affairs is again limited only in those cases wherein women have been actively involved at all stages of the project. AKRSP(I)'s experience has shown that the women's groups initially functioned effectively as savings and credit groups. With sustained capacity building efforts, the women leaders became increasingly confident and articulate, but they had little say in the

⁴ Darshini Mahadevia, Vimal Khawas, Impact of Agricultural Policies and Programmes on Women of Small and Marginal and Agriculture Labour Households: Gujarat, Discussion Paper Series, Human Development Resource Centre, UNDP, India, November 2004

interventions or activities in the village. Gradually the women's groups started managing village assets; that is, check dam, group wells or forestry plots etc and acquired greater importance in the village and greater say in the village level decisions. Many women groups have taken up the manufacturing of organic compost as income generating activities, construction of check dams, managing group wells and drinking water interventions and even entire watershed projects.

Women have been particularly active in personal supervision to ensure quality work at village level. In many cases women have also been imposing norms for utilization of common resources particularly water in times of drought. Thus not only does it bring about a change in women's own lives, but is also an asset to the better implementation of watershed project. One needs to realize that with a slight change in approach, there could be tremendous results achieved from this very programme in terms of women's livelihood improvement and empowerment. (see table 1).

Table 1: Impacts on women's life with different approaches of Watershed Projects

	Addressing practical gender needs	Addressing strategic gender needs	Negative Impacts
Watershed projects with more focus on household	• Increased food security • Increased availability of labour and reduced migration • Increased Income from agriculture • Increased access to credit • Increased access to fodder		• Increased Agriculture Workload • At times increased ground water irrigation may reduce availability of drinking water in the long run
Watershed projects with specific efforts to involve women (in addition to above)	• Reduced drudgery of drinking water • Increased Income from livestock • Increased access to alternative fuels	• Women take up non-stereotype roles like supplying agriculture inputs, managing group wells, check dam construction, tractor projects, etc • Increased visibility of women at village level and active involvement in PRIs • Curbing of social practices biased against women • Education of girl child increases	• Increased Livestock Management responsibility

These are the experiences from different initiatives which are successful in addressing many key issues relating to gender imbalances. They indicate that for this, a two-fold strategy is required. They are strategies for

- Addressing practical needs and
- Strategic needs of women.

The first one can be achieved only when any program is made sensitive to various needs of women and are incorporated into project design and strategies. If emphasis is only on meeting the practical needs, it may not dissolve the present discriminatory structure against women and may even reinforce the stereotypes. Therefore simultaneously efforts are to be there to dismantle those discriminatory beliefs and structures. Women need even separate space for that, to exert and influence those structures. If the implementing agency has consciously

introduced this gender component in the programme implementation, there is a higher level of women's empowerment. Watershed programme, implemented with this perspective, did lead to increase in awareness about Government programmes among women. It had led to higher participation of women in public activities, more non-traditional aspirations for their daughters, and improved participation in decision-making at household level.

4. Changing Scenario and Opportunities for increased involvement of women

The traditional "watershed treatment" approach has its focus on physical treatment of land has quite neglected the role of women in natural resource management. While the new guidelines intends to change this approach in reality still the largest budgetary allocation in watershed goes for land treatment, having not changed anything at grass roots level. However, there have been many positive experiments by NGOs which show the need and impacts of women's involvements in watershed projects. This further assumes significance in the fact that if the watershed project has to really fulfill its objective to improve rural livelihoods in large areas for small farmers, it would have to shift to the **watershed plus approach**. This means inclusion of economic interventions which ensure that higher biomass production does lead to increased incomes and that institutional interventions ensure sustainability by providing benefits even in the absence of an outside agency. It is well recognized that there is high value addition by combining physical productive infrastructure activities such as soil and water conservation measures, afforestation, irrigation systems etc with economic activities such as savings and credit, agricultural inputs and out put marketing. However such an integration of economic and physical infrastructure activities can be achieved by designing appropriate village organisations which may offer an alternative to the "only micro credit" or only watershed (physical) treatment.

This needs to be further cashed upon as a opportunity ensure greater involvement of women in watershed projects. Women's group or SHGs, as a part of the economic infrastructure of watershed projects, need to be supported for taking up these additional activities as a part of the watershed project rather than only focusing on revolving fund for IGA. This could include provision of improved agricultural inputs, modern technology (see box) as well as linkage with markets. This would mean that all agriculture extension services be targeted to women. The group approach in extension being promoted would need to be in line with these women Self Help Groups. Again, if we need to open up avenues for diversification, focus would have to be laid on targeting women, given that they are already the major players in sectors like, livestock management, fishing, vegetable cultivation, agro processing, forestry, etc. This in turn would offer immense opportunities for both income generation and food security to women farmers particularly the poorest.

5. Conclusion

Watershed development programmes are important instruments of both agricultural development and rural transformation in poor agrarian economies. However, like any other programme formulation and implementation, watershed development too requires a hardware component (in this case, undertaking earthworks and plantations etc.) and software component (like community development, training, participation, etc.). Watershed programmes as such provide the hardware component. The software component is provided by different approaches suggested within 'good governance' frameworks. What is generally observed is that while the hardware component does have a generic trickle down impact on women, thereby addressing her practical gender needs to some extent. However, specific software interventions are essential to ensure that women's concerns are prioritized within the programme as well lead to promotion of women's empowerment. These demonstrated strategies though are in different contexts are highly relevant and, the learning be feed into the mainstream watershed program. There is need to reorient the key actors involved in the program and make changes in the program implementation structures on these lines. Watershed program though cannot be a sectoral program; it cannot also leave any aspect untouched as it talks of development of resources in the watershed area. These resources include human and this is the key for sustainable development of natural resources. The guidelines clearly envisage this and emphasizes on institutional development at village level with focus on gender and equity.