

Impact of Watershed Management on Women and Vulnerable Groups

Proceedings of the Workshop on Comprehensive Assessment of Watershed Programs in India



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Editors

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Empowerment of Women for Equitable Participation in Watershed Management for Improved Livelihoods and Sustainable Development: An Analytical Study

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Abstract

Watershed programs are recognized as potential engines for agricultural growth and sustainable development in rain-fed areas. Success and sustainability of watershed programs are directly related to collective action for conserving natural resources to enhance crop productivity, livelihoods for sustainable income development and gender equity. Women are key players as managers and direct actors in managing natural resources in the watershed and addressing the household food security. However, often they have passive role in decision-making process because of their low educational levels, social customs, and economic dependence.

Women participation awareness on development activities, workload dynamics in watersheds, empowerment of women and decision-making for livelihood activities in Adarsha watershed in Ranga Reddy district, Powerguda watershed in Adilabad district and Janampet watershed in Mahboobnagar district of Andhra Pradesh were studied. Similarly, capacity building needs and institutional framework for women empowerment and drivers of sustainable development in these watersheds were assessed and analyzed. In Kothapally watershed, women groups were collaborating to explore new livelihood opportunities to increase income. However, farmers got tangible benefits, 2 to 2.5 fold increase in crop productivity by conserving natural resources with collective action and good leadership. It was observed in Powerguda that women even without formal education worked collectively and managed watersheds efficiently to enhance crop productivity by 25 to 350 per cent and managed income-generating enterprises at community level to increase family income upto 77 per cent due to livelihood training, policy interventions and with good leadership of women. Increasing economic resilience of the poor by federating SHGs at *mandal* level, helped members to run commercial activities largely enabling women to realize

their socio-economic potential and improve the quality of their lives. The results from detailed case studies were used to analyze critical factors and institutions essential for enhancing collective action and impact of watershed programs for improving livelihoods and conserving natural resources. Through empowerment of women along with men, the issues of harnessing gender equity and enhancing collective action were identified as critical for efficient management of natural resources and income-generating livelihoods for sustainable development in the integrated watershed management.

Introduction

Women constitute more than 50 per cent of the world's population; own one per cent of world's wealth and 550 million women live below poverty line as reported by World Food Program (WFP). Two thirds of the illiterates in the world are women, have no property rights (women hold 1/1000th world's property) and have no economic independence (70 per cent of the world's poor are women) (UNDP 1997). According to Census of India, 2001 literacy among women in India was 54.2 per cent, while the literacy rate for men was at 75.8 per cent, leaving a gap of 21.6 per cent between men and women in literacy rate. According to "Draft National Policy for Women in Agriculture (2008)", women constitute 40 per cent of the agricultural workforce and this per centage is rising, currently 53 per cent of all male workers, but 75 per cent of all female workers and 85 per cent of all rural female workers are in agriculture. Women as economic providers, caregivers, and household managers, are responsible for ensuring that their families have basic resources for daily lives. They are often the managers of community natural resources, and have learned to protect these resources in order to preserve them for future generations (managers of sustainability). Although, women play a pivotal role in agriculture development, more than 55 per cent of female agricultural workers are considered labourers rather than being the owners themselves even when their family owns land. Participation of women and resource poor is of paramount importance for the effective implementation of watershed programs, to become effective vehicles for integrated development of communities and sustainable impacts.

In the drought-prone rain-fed areas watersheds are recognized as growth engines for agricultural as well as overall development to achieve food security. Community participation is an important aspect of watershed development programs, and it is necessary to include equity and gender parity into the program design itself. Inclusion of women and resource poor is of paramount importance for the watershed development to become truly participatory in both implementation and impacts.

Water is most important driver for four of the millennium development goals (MDGs) i) to eradicate poverty, ii) promote gender equity and empowerment of women, iii) environmental sustainability and iv) to build global partnerships for development. Gender equity and women empowerment are human rights that lie at the heart of development and achievement of the millennium development goals.

The Task Force report identified i) improving social capital investments in water infrastructure as a catalyst for regional development, ii) pivotal role of community-based organizations in water management as precursors for achieving listed MDGs. Similarly, improved water availability helps women to allocate more time for maintaining family hygiene and health, child care-giving and also more time for productive endeavors. This gives women the necessary leisure to build up the social capital and participate in economic and group activities. Water source closer home puts women at less risk for sexual harassment and assault. Promoting gender equality and empowerment of women is associated with other three MDGs of reducing poverty, building partnerships and achieving the sustainable development.

A close look in a typical watershed village in India provides insights in women's role in daily work schedule where about 50 per cent of work load of household chores is taken by women as against 13 to 15 per cent by men (Table 1). In overall farm production women contribute 55–66 per cent labour force (Venkateswaran 1992). In the Indian Himalayas on a hectare of land, annually women work in 3485 h as compared to men's 1212 h, which illustrates the significant contribution of women to agricultural production. Women accounted 93 per cent of total employment in dairy production (World Bank 1991); 16.8 million women were employed for animal husbandry in rural India. However, dairy cooperatives have women membership of only 14 per cent.

Table 1. Major activities performed by women and men in watersheds.

Activity	Malleboenpally		Mentepally	
	Women (%)	Men (%)	Women (%)	Men (%)
Household chores	54	15	46	13
Student	20	21	24	30
Hired labor	36	19	41	27
On-farm work	46	42	44	44
Off-farm work	2	17	3	7
Other	9	21	6	13

Several studies in the recent past while assessing the impact of watershed programs in India have documented important lessons learnt (Farrington and Lobo 1997, Samra 1997, Kerr et al. 2000, Wani et al. 2002, 2003, Joshi et al. 2004 and Wani et al. 2008a). Participatory watershed management is a multi-disciplinary, multi-institutional approach for NRM and providing food security through diversification of livelihood options and increased productivity. Evaluation of number of watershed programs indicated the extent of peoples' participation and its importance in success of development process, role of institutions for enhanced community participation. Watersheds with better community participation and sound technical inputs enhanced the impact. Supporting policies are must for effective watershed development programs (Joshi et al. 2009 and Wani et al. 2008).

An important concern in watershed development is the sharing of the costs of land and water resources development, equitable distribution of the benefits consequent to enhanced crop production. The focus on land development often gave projects a male orientation. Even though government guidelines encouraged greater participation of women in watershed groups, women were often not recognized as members of the watershed committee in their own right; they were viewed as being there to fill the quota required under the guidelines (Seeley et al. 2000). At present in some parts of India social customs do not allow active participation and involvement of women in functioning of committees and village organizations. Watershed development in India is gender insensitive as all the benefits accruing are being cornered exclusively by men (Angurana, 2003). Women were generally the losers in watershed development as they lose the access to common lands for grazing of animals and fuel collection (Meinzen-Dick, 2004). Women generally paid the cost of development in most watersheds such as plantation programs in the common pool resources.

In most watershed programs insufficient attention was paid to the social, institutional and economic issues relating to the sustainability of investments. The eight arms of the holistic development as shown in the figure 1 are the impact pathways for the watershed programs.

The purpose of the current study is to identify the sustainable impact of watershed development programs by leveraging the institutions for collective action and harnessing the gender power through "Prosperity and Harmony" in watersheds. The specific objectives are i) to understand the constraints for promoting equity and empowerment for women in integrated watershed management programs (IWMP), ii) to identify critical areas for capacity building, and iii) to identify mainstreaming institutional and policy needs for gender perspective in IWMP.

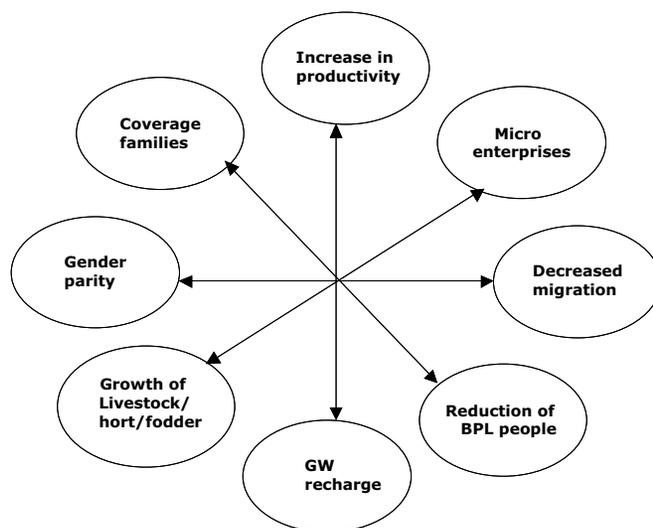


Figure 1. Eight arms of holistic development through watershed programs.

Methodology

In the state of Andhra Pradesh about 2500 micro-watersheds of 500 ha each are developed under various programs. For the purpose of study three watersheds were selected. In these watersheds the management was with community based organizations (CBOs) and women had significant roles to play.

Table 2. Profile of selected watershed villages for the case study.

	Adarsha watershed, Kothapally	Powerguda	Janampeth
Proximity to city	Yes	No	Yes
Social background	Mixed community	Tribal – homogenous community	Mixed community
Watershed interventions	SWC + productivity enhancement + limited income generating activities such as vermicomposting, nursery raising and livestock rearing	SWC + limited income generation activities such as oil extraction unit, nursery	SWC + commercial activities – Mahila Samakya undertake financing, highway restaurant, etc.
Managed by	Women SHGs for specific activities + WC representatives	Women SHGs, watershed implemented by women	SHGs are federated under Mahila Samakhya commercial activities
Emphasis	Productivity enhancement	Service provider using NRs and technologies	Commercial activities for income generation

The details of the selected watersheds are described in the Table 2. Out of the case studies Adarsha Watershed in Ranga Reddy district, Powerguda in Adilabad district and Janampeth in Mahboobnagar district were studied in detail for the process and the impacts as well as the drivers of the success (Wani et al. 2003, Sreedevi et al. 2004, and D'Silva et al. 2004).

In all the three case study watersheds as well as Lucheba watershed in southern China, we organized focused group discussions (FGDs), using the common questionnaire with the women and men groups separately. The FGD interviews revolved around the issues related to women, particularly in terms of rights, workload, decision making, access to information and earnings, social capital development, nature of the institutions, drivers of the success, and the type of benefits accrued and their distribution amongst the men and the women members. Information documented includes collection, compilation and analyses to study the relationship amongst studied variables and the type of interventions, and approach adopted for watershed development. We described watershed development processes below.

Adarsha Watershed, Kothapally, Medak District

In Adarsha watershed, Kothapally, ICRISAT-led consortium adopted the farmer-centric, holistic, and participatory approach for developing the watershed to increase the agricultural productivity and incomes. Based on the meta analysis results and the interlocking constraints faced by farm households prompted ICRISAT to launch its learnings of 25 years in strategic and on-farm development research. ICRISAT-led community watershed approach espouses the Integrated Genetic Natural Resources Management (IGNRM) approach where activities are implemented at landscape level by the community (Wani et al. 2003). Research for development (R4D) interventions at landscape level are conducted at benchmark sites representing the different SAT agroecoregions. The entire process revolves around the four E's (empowerment, equity, efficiency and environment), which are addressed by adopting specific strategies prescribed by the four C's (consortium, convergence, cooperation and capacity building). The consortium strategy brings together institutions from the scientific, non-government, government, and farmers' groups for knowledge management and sharing. Convergence allows integration and negotiation of ideas among actors, resulting in convergence of various programs addressing the core issue of improving livelihood and protecting the natural resources. Cooperation enjoins all stakeholders to harness the power of collective action. Capacity building engages in empowerment of the communities for sustainability.

The important components of the new model, which are different from earlier models, were:

- collective action by farmers and initiating participation from the beginning through cooperative and collegiate mode in place of contractual mode;
- integrated water resource management (IWRM) and holistic system approach through convergence for improving livelihoods as against traditional compartmental approach;
- a consortium of institutions for technical backstopping;
- knowledge-based entry point to build rapport with community and enhanced participation of farmers and landless people through empowerment;
- tangible economic benefits to individuals through on-farm interventions by enhancing efficiency of conserved soil and water resources;
- low-cost and environment-friendly soil and water conservation measures through out the toposequence for more equitable benefits to larger number of farmers;
- income-generating activities for landless and women through allied sector activities and rehabilitation of waste lands for improved livelihoods and protecting the environment.

Crop Production Activity

Reducing rural poverty in the watershed communities is evident in the transformation of their economies. The ICRISAT model ensured improved productivity with the adoption of cost-efficient water harvesting structures as an entry point for improving livelihoods. Crop intensification with high-value crops and diversification of farming systems are leading examples that allowed households to achieve production of basic staples and surplus for modest incomes.

A case in point is Kothapally watershed. It is a prosperous village on the path of long-term sustainability and has become a beacon for science-led rural development. A significant reduction in mean runoff (44 per cent) and peak runoff rate were responsible for the significant reduction (69 per cent) in soil loss. Due to additional groundwater recharge, additional 200 ha in rainy season and about 100 ha in postrainy season were cultivated with different crops and cropping sequences. The productivity of maize increased by 2 to 2.5 times under sole maize and four-fold under maize/pigeonpea intercropping system. The area under maize/pigeonpea and maize-chickpea has increased by more than three-fold and two-fold, respectively. Farmers could gain about Rs 16,510

and Rs 19,460 from these two systems, respectively. The average household net income has increased to Rs 15,400 within watershed as compared to Rs 12,700 outside the watershed area. Farmers' incomes from crop production were doubled in 2001 compared to the 1998 levels.

In 2001, the average village income from agriculture, livestock and non-farming sources was US\$ 795 compared neighboring non-watershed village, which had US\$ 622 (Fig. 2). The villagers proudly professed, “We did not face any difficulty for water even during the drought year of 2002. When surrounding villages had no drinking water, our wells had sufficient water”. To date, the village prides itself with households owning 5 tractors, 7 lorries and 30 auto rickshaws. People from surrounding villages come to Kothapally for on-farm employment.

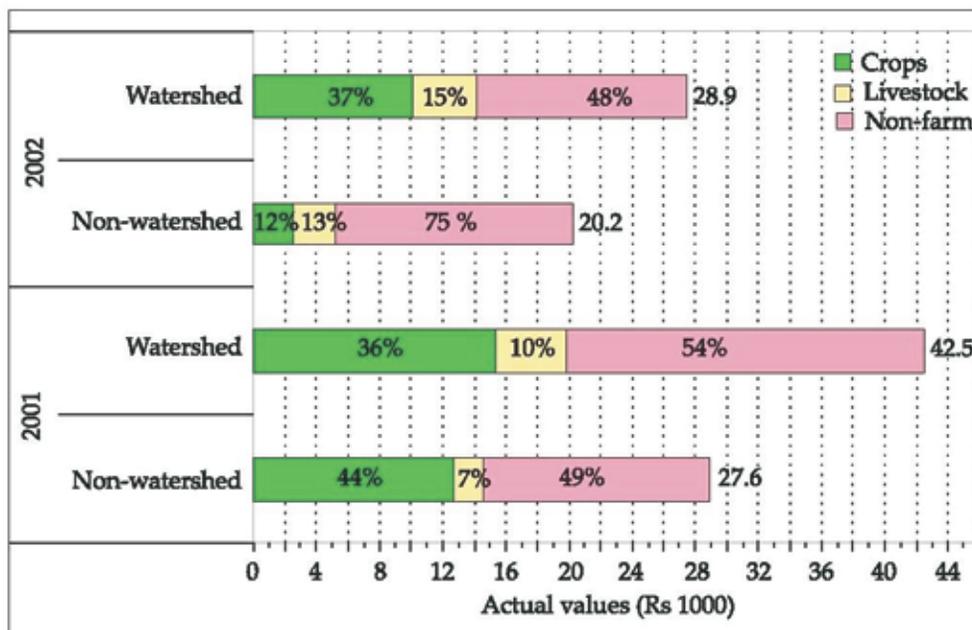


Figure 2. Income stability and resilience effects during drought year (2002) in Adarsha watershed, Kothapally, AP, India.

Income-generation Activity

Building on social capital made the huge difference in addressing rural poverty in watershed communities. In this watershed, emphasis was laid on farm-based interventions as well as agriculture related allied income-generating activities for landless/women group members with the objective of increasing the income

(Wani et al. 2003; Sreedevi et al. 2004). For empowerment of community members and technical backstopping, a consortium was formed comprising research organizations, university, development workers, policy makers, and farmers. Enhanced participation of the vulnerable groups like women and the landless through capacity building and networking was observed. Many women adopted vermicomposting as micro-enterprise and became earning members of the family (Wani et al. 2008; Sreedevi et al. 2009)

Demand driven selection of the watershed, more participation by the farmers, integrated approach, team effort and collective action by the stakeholders, social vigilance and transparency in financial dealings, increased confidence of the farmers, low-cost water harvesting structures, which provided benefits to several farmers, tangible economic benefits to a large number of small farm holders, good local leadership, and concerted local capacity building efforts were some of the drivers of higher impact. (Sreedevi et al. 2004; Shiferaw et al. 2008)

Powerguda Watershed, Adilabad District

Crop Production Activity

In Powerguda, though the approach adopted was similar to the Adarsha watershed, it was distinct as the women self-help groups (SHGs) implemented the watershed program and being a tribal area the community had access to the forest resources. The SHGs with the watershed programs had six-fold higher savings than those without such programs in Adilabad district. The introduction of improved land management practices such as broad-bed and furrow and bullock-drawn tractors, along with high-yielding cultivars increased agricultural productivity by 20 to 350 per cent. Powerguda farmers, particularly many women, learnt new techniques in planting, land preparation, and intercropping. Many of them grew vegetables for the first time. Over three years, there was a remarkable change in cropping patterns shifting from cotton to soybean and vegetables (D'Silva et al. 2004).

Income-Generating Activities

Between 2000 and 2003, investments were done in new livelihood enterprises such as seed oil mill, tree nursery, and vermicomposting. A women SHG managed an oil extracting machine [worth Rs 375,000 provided by Integrated

Tribal Development Agency (ITDA)] to support income-generating activities in the community. Seeds of *Pongamia*, *neem*, and other trees are crushed in this machine to extract oil that is sold in the market. The oil mill has become an important source of income to Powerguda. The women SHG planted about 8,500 *Pongamia* trees in 2002 and 2003 and 10,000 in 2004 to augment the oilseeds supply in future. Since October 2003, Powerguda has discovered a new income-generating activity in tree nurseries. The community decided to invest in a *Pongamia* nursery about Rs 30,000 received from the World Bank as part of environmental service payment. For the first time, 147 tons of carbon was sold by women SHGs from India to the World Bank (D'Silva et al 2004). Women had developed a full-fledged nursery facility and are supplying seedlings to the forestry department and earning regular income

Average family income increased by 77 per cent in three years from Rs 15,677 in 1999–2000 before the government invested in watershed development, to Rs 27,820 in 2002–03. Seasonal migration from villages has ended totally, or is negligible. It appears that watershed and agricultural development, complemented by other investments, have provided sufficient employment and income opportunities for the rural people to escape poverty and to stay in the village.

Since 1999, Powerguda has charted a new path of development using watershed management as the growth engine, women SHGs as institutional anchor, and a total ban on the consumption of alcohol in the village as a social platform. These steps have enabled Powerguda to march ahead of the other neighboring hamlets. The people, especially the women leaders, are very proud that they have been able to outperform other villages in social, financial, institutional, and environmental development. Powerguda is distinguished from other hamlets due to the strong leadership provided by women through SHGs. Three of the four SHGs are run by women who dominate most of the development activities in the village. Trust, social cohesion, a sound local leadership and democratic functioning of local institutions are among the features of social capital in Powerguda.

Janampeth Watershed, Mahboobnagar District

Income-Generating Activities

The Janampeth watershed village is a step farther than the Powerguda and Adarsha watersheds. With the supporting policies from the government, SHGs

at the village and *mandal*, federated to be known as the Mahila Samayka Adarsha Women Welfare Society, increased their bargaining power as well as the financial and political leverage. The women SHGs federation provides a forum for women to discuss common problems. The SHG members consider the unity and solidarity among women to be one of the most important benefits of SHG membership. Also by standing guarantees for SHGs, the federations can help the SHGs to borrow money from financial institutions at lower interest rates. These loans are particularly useful for value-added services such as running a highway restaurant and other micro-enterprises. The federation takes care of book keeping and training functions of SHGs. The impact in terms of increasing the family incomes, building the social capital as well as trust amongst the women members from Janampeth is superior to the Powerguda or Adarsha watersheds.

Gender Analysis of the Case Study Watersheds

Collective Action

The results from the studies in all the case study villages over the period and through focused group discussions revealed that the IWMP approach adopted was different than the traditional watershed approach. In Adarsha, Kothapally and Powerguda watersheds had, it was an integrated approach with emphasis on productivity enhancement of major crops and natural resource related allied income enhancement activities. In Powerguda, the collective action was mainly for the service providing function, which was a step higher in the ladder of commercialization over the Kothapally, where collective action was mainly for enhancing the productivity of their lands with a limited opportunity for direct economic gain. The nature and extent of collective action was also directly related with the awareness of the women members (Table 3). The women members in Janampeth had high level of awareness about the activities undertaken. In case of Powerguda, the women leader Ms. Subhadrabai was well aware but the group members were not much aware about the operations as well as rules and procedures to be adopted. In Janampeth, the approach for improving livelihoods was on the commercial scale and direct economic gain was the main purpose. The women SHGs were federated and the collective action was at a macro-level and could get the benefits of common learning, exposure and opportunity to interact with more and diverse group members as well as reduced transaction costs. In Kothapally and Powerguda, the collective action was restricted at small group level in the village, exposure for

the members was restricted and transaction costs were higher in terms of load on the leadership.

Women Rights and Gender Equity

The impact of the model/approach adopted was distinctively evident in the case study villages (Table 3). In terms of rights the results revealed that Janampeth ranked on top for property rights where women held the property rights along with men. In Kothapally and Powerguda the property rights were with the men except in the exceptional and circumstantial cases where women headed households due to death of male member. The nature and the extent of collective action provided different exposure for the members. In Janampeth the commercial nature of the collective activities resulted in control of family financial resources by women. In Kothapally as well as in Powerguda although women family members earned the money the control of family financial resources rested with men. In Kothapally women group activities provided employment to women members mainly because of the type of activity undertaken. In Powerguda and Janampeth the collective action of women created employment opportunities for women as well as men.

Education and Social Status

The right education rested more with men and the results to tilt education in favor of women will need longer time. In Kothapally the education of boys and girls is distinctively same as no child labour exists in this village. However, in Powerguda, women are aware now about educating their daughters. Interestingly, female literacy (52 per cent) is higher than male literacy (48 per cent). The social status of women in all the three study watersheds was better than the normal watershed village. However, amongst the three watersheds Janampeth women enjoyed higher social status in the society than the women in Kothapally and Powerguda.

Women Workload and Wages

In terms of workload on women, it was higher in Janampeth than Kothapally and Powerguda where the workload was in the decreasing order. Looking at the extent of commercial activities undertaken by the women SHGs, the workload was imperative in Janampeth. Although Powerguda SHGs undertook higher scale of commercial activity than the Kothapally SHGs, the workload on Kothapally women was more than in Powerguda. The Powerguda women

employed men for undertaking specific activities and paid higher wages for men than women considering the nature of the works undertaken. Similarly, in Janampeth women members compensated their family labor in field by hiring additional labors from the market. The financial independence permitted women SHGs to workout the alternate arrangements to reduce their workload suitably. However, in all the three watersheds the wage differences between men and women labors existed where men were paid higher (Rs 50 per day) than the women labors (Rs. 30 per day). Traditionally men and women undertake specific farm activities and as observed in Powerguda, women felt that the specific jobs done by men need to be paid differently. In Janampeth, only women undertook marketing of agricultural produce where as in Powerguda and Kothapally men took up this activity (Table 3).

Table 3. Gender impact analysis of three case studies in India

Sl.No	Description	Powerguda	Janampeth	Kothapally
1	Rights			
	Property	Men	Men/Women	Men
	Financial resources of the family	Men	Women	Men
	Employment	Men/Women	Men/Women	Women
	Education	Men	Men	Men
	Social status of women	Medium	Good	Medium
	Awareness among women	Leader is completely aware?	Very good	Not to the mark
	Agricultural decision making	M/W	M/W	M/W
	Resistance by men	Nil	Initial	Nil
2	Workload on women	+	+++	++
	Wages (Rs/day)			
	Men	50	50	50
	Women	30	30	30
	Load of invisible work	Same	Same	Same
	Work load on men	No	No	Yes
	Time spent on economic work by women	+	+++	++
	Time on social/ community work	-	-	Medium
	Marketing of agriculture produce by women	-	Yes	-

Continued...

Table 3. Continued

Sl.No	Description	Powerguda	Janampeth	Kothapally
3	Access to Assets			
	Access to community assets	Men/Women	Men/Women	Men/Women
	Access to credit	Women	Women	Women
	Access to income	-	Women	-
	Access to information	Yes	Yes	Yes
	Access to service	Nil	Yes	Yes
4	Control on financial resources	Low	High	Low
5	Self-confidence	Slowly building-up	High	Low
6	Opportunities for exploration	Minimum	Very high	High
7	Understanding on health	Medium	High	Medium
8	Distressed migration	0	0	0
9	Driver identified	Leader	<i>Mahila Samakhya</i> (federation of women)	Improved water availability

*M=Men, W=Women

** +=Low, ++=Medium and +++= High

Women Empowerment and Decision-making

The results of the parameters such as access to credit, common pool resources, income, information, control of financial resources, self confidence and extended horizons for women are presented in (Table 3). In all the three watersheds only women had the access to financial credit, as the SHGs are for women only. This is attributed to the current policy of the government. The women members had good access to information. However the new opportunities for exploration were directly in tune with the extent of commercial nature of the activities undertaken. In all the three case studies the new watershed approach encompassing productivity enhancement and livelihoods approach had direct and positive impact on reducing the distressed migration of men and women from the villages. In case of Kothapally the awareness amongst the members was low, as most of the banking and financial transactions had to be done at *mandal* level bank situated 15 km away from the village. Decisions related to agriculture were taken jointly by men and women. This is a step in the right direction for sustainable management of the natural resources (NRs). Men did not resist the progressive measures of women in all these case study watersheds although there was some resistance by the male family members in Janampeth initially.

Drivers of Success

The drivers of success varied in all the three case study watersheds. In Powerguda, the success was directly associated with the strong and capable leadership provided by Ms. Subhadrabai. It may be noted that through training and exposure, illiterate Subhadrabai could become very capable leader and channel the energies of women for the sustainable development of the village using NRs. In Kothapally, the main driver of the growth and success increased availability of water resources resulting in increased agricultural productivity and triggering the agriculture-related allied activities such as vermicomposting. In Janampeth, it was the collective action and supporting government policy which enabled the women SHGs to undertake commercial activities successfully with the help of the leadership.

Looking at the matrix of community participation (Table 4), the mode of participation starts or is initiated through a co-opting or contractual process and slowly moves towards cooperative, consultative, collaborative and finally reaching to the successful collective action. Table 4 describes the type of participation and the associated control from the outside. Along with the increased level of participation the sustainability of the initiative also increases with the diminishing control from the outside. Using this matrix of community participation in the collective action the women SHGs from the three watersheds were evaluated (Figure 3). Janampeth watershed was found on the highest ladder of community participation where collective action or collegiate mode of participation is reached. This level of participation in the collective action is quite sustainable and the group can overcome most of the problems through their collective wisdom and opportunities. The Powerguda watershed is one ladder below for participation and they are acting together through co-learning. However, as there are limited market opportunities due to poor infrastructure facilities their sustainability relies on outside support. In case of Kothapally the women groups are collaborating together and have to graduate for achieving the sustainability through more collective action and explore the new opportunities to increase the income from the collective action.



Figure 3. Comparative level of women participation in three watershed case studies.

Table 4. Matrix of community participation

Mode of participation	Type	Outside control	Potential for sustainability
Co-opted	Tokenism	████████████████████	████████████████████
Co-operating	Tasks are assigned Outsiders decide agenda	████████████████████	████████████████████
Consulted	Local opinion sought. Outsiders analyze data and decide on the course of action	████████████████████	████████████████████
Collaborating	Working together but outsiders directing the process	████████████████████	████████████████████
Collective action	Local people set agenda and mobilize to carry it out, utilizing the outsiders as required and not as initiators or facilitators	████████████████████	████████████████████

Source: Cheetham 2002

Based on these three case studies on watersheds, to analyze the achievement of gender equity for women through integrated watershed management approach, the following issues need to be addressed. Most important need is to make available the technical know-how and do how for the women groups.

The existing institutions - formal and informal with the supporting government policies as is the case in Andhra Pradesh can be harnessed in the IWMPs for achieving more impact and sustainability. As functional literacy is able to enable the members and leaders to act collectively and harness the benefits, efforts must be undertaken to achieve higher functional literacy for women through quality trainings. Enhanced awareness of women's rights through deliberate efforts is critical for sustainable development of watersheds by harnessing the women power equitably. There is a need to involve younger generation of women in building up the social capital. There is need to harness the gender power through harmony in the watersheds at all the levels starting from the family to watershed. The new common watershed guidelines provide resources and policy support to address issues of gender and vulnerable groups' equity. However, without concrete actions by the implementing and co-ordinating agencies these provisions would not mean much.

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Equity in the Impact of Watershed Development: Class, Gender and Regions¹

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Abstract

Watershed development results in enhancement of ecosystem resources and productive potential. Moreover this enhancement takes place on the basis of public funds and through collective, community effort. Besides inclusion of landless, watershed projects lay special emphasis on women's participation at various stages of planning and implementation. The gender perspective within watershed projects could be viewed as providing a platform for gender mainstreaming, rather than bringing gender equity at the center stage. This paper analyses equity issue in watershed development.

Introduction

Attaining equitable benefits poses one of the most difficult challenges in implementation of watershed projects where the emphasis is on attaining productivity-enhancement while simultaneously addressing the issues of resource sustainability and equity in benefit sharing. The problems pertaining to equity in watershed projects, to a large extent, emanate due to the concerns for balancing (a) private-social benefits; (b) short term and long term gains; and (c) scientific (ie, 'ridge to valley' and integrated) approach vs. crop-productivity centric approach to resource management.

There are three major sets of factors influencing equity in generation and distribution of benefits from watershed projects. These are: (i) agro-ecological characteristics, locational features in upstream-downstream context; (ii) differential access and ownership, and access to natural as well as other forms of capital arising out of the socio-economic-cultural context; and (iii)

1. This paper draws heavily on the note submitted by the author to the Working group on Natural Resource Management, set up by the Planning Commission for preparation of the Ninth Five Year Plan. For details see Shah (2007).

inadequacies/ineffectiveness in policy design/implementation with respect to selection of technology, setting-up of the institutional mechanisms and development of market linkages². Since a large proportion of the investment in watershed projects is allocated to land-based activities, and that access to augmented water for irrigation is also linked to ownership of land, the project-benefits are generally tilted in favor of the landed and the men who own the land. Development of common property resources (land, water, forest) and formation of self-help-groups (SHGs) for promoting income-generating activities thus, become the main thrust of watershed projects for addressing the issues of landless and women. It may be noted that the income-generating activities are often non-land based; this may further marginalize the landless and women from attaining equitable access/control over productive resources.

Recognizing that the first two sets of factors, noted above are difficult to change as these differences are determined through the forces of nature as well as dominant socio-economic structures, equity considerations in watershed development tend to focus mainly on the third sets of factors ie, addressing the 'project-based-equity' (Ramchandradu, 2007). The focus on project-based-equity however, does not rule out the possibility of exerting positive impact on the other two sets of factors especially, by influencing the quantum of benefits and their distribution among different stakeholders within the community. Instead it could be argued that project-based-equity could pave a way for braking the structural inequities across class, castes, and gender, provided the issue of equity is brought to the centre, right from the initial phase of watershed development.

Watershed development results in enhancement of ecosystem resources and productive potential. Moreover this enhancement takes place on the basis of public funds and through collective, community effort. Thus it can be argued that the additional resource that has been created be assured equitably to everyone in the watershed, even as the prior right to previously existing resources are recognised and left largely undisturbed. Thus, without greatly disturbing prior rights and use, potential access to productive resources for the rural poor could be created by watershed development and thereby provides equitable access within a positive sum game framework (Joy et al. 2006). This would encompass

2. In a broader context, equity concerns in a project are influenced by a number of factors such as the differing conceptualization among various agents, limits to the radical agenda that could be taken up within a given time and space, macro level policies, and the revealed preference of the society for the kind of development approach to be followed (Sangameshwaran 2006; p. 2164). It may be noted that much of these is beyond the control of the local community in general and the marginalized people in particular.

the issues of what kind of technologies/activities to be undertaken, how much would be the flow of benefits in short and long term, and who will share the benefits.

Besides inclusion of landless, watershed projects lay special emphasis on women's participation at various stages of planning and implementation. The gender perspective within watershed projects could be viewed as providing a platform for gender mainstreaming rather than bringing gender equity at the center stage. The policy thrust till now was mainly on making women (or landless) participate in the project rather than dovetail the development process towards empowerment of the marginalized. In that sense the equity concern (including gender equity) in watershed projects is an after thought, hence to be addressed once the productive sector is put on the right track. This is more or less on the lines of the notion of 'project based equity' noted above (Shah 2000a).

It is pertinent that formulation of the Eleventh Five Year Plan has taken special cognizance of the issue of equity in benefits flowing from watershed projects. While the concern is valid, it is essential to place the issue in a proper context of relatively adverse agro-climatic, economic, and financial setting within which these projects are being implemented. Clearly, addressing the equity issue through watershed projects may require substantial increase in time as well as institutional support with the corresponding increase in funding. What is equally important is building up consensus on the issue of equity across various developmental interventions and convergence among them. Watershed project may create a basis for a progressive move towards equity and empowerment, and for the other interventions and processes to build further on that. In absence of this, what one may expect at best is project-based-equity as noted above.

Objectives and Coverage

Given this backdrop, this paper tries to focus on the following main objectives:

- to discuss the perspective on equity and examine the evidence from impact assessment studies;
- to review innovative experiences from various projects having focused on equity aspect; and
- to identify major learnings and draw policy implications.

The analysis is based on review of the existing evidence, and selected case studies prepared by scholars and practitioners from different parts of the country.

Equity in Watershed Development: Perspective and Evidence

Equity Across Class, Gender and Regions: Evolution of the Policy Space

In fact when it comes to gender-equity, the issues are further complicated as the discrimination is often more deep rooted, going below the community to household and individual levels. The constraints faced specifically in the context of gender-equity are: productivity gains are often limited to only a sub-set of the households thereby limiting the percolation effect to cover the resource poor; limited access to credit in absence of ownership of land; administrative difficulties in developing and managing CPLRs especially in absence of clearly delineated user-rights, non-sustenance of gains in productive employment and increased work burden among women in absence of simultaneous changes in gender division of work; and requisite amenities at work, lack of new skills benefiting from emerging market opportunities.

Recognizing the problem of marginalization, watershed guidelines especially since the mid-nineties have made special provisions especially for inclusion of the landless and women various stages of planning and implementation (Arya 2007). All these are useful though not sufficient measures for addressing the constraints faced by women and the landless to become direct beneficiaries of the `core` activities of watershed projects. Given this context, stakes of women and landless remained confined mainly to on-site employment gains, development of activities allied to agriculture (such as rearing of small livestock, back yard plantation, nursery raising, inland fishery, etc.), thrift groups, and non-land based activities (such as food processing, traditional crafts, tailoring etc.) (Shah 2000). It is not clear as to what extent, these interventions per se may pave way for empowerment of the poor, unless the perspective on equity is clearly articulated and shared among all the stakeholders within the project.

Taking a stock of what has been achieved so far and what are the important lessons emerging from a large number of innovative watershed projects from different parts of the country, is very critical before launching the next phase of watershed projects during the Eleventh Five Year Plan, which has raised serious concerns on the issue of equity in watershed development.

Evidence and Emerging Policy Concerns

Inadequate Benefits and Inequitable Sharing

Given the fact that a large proportion of watershed projects are being implemented in low dryland regions with low and uncertain rainfall conditions, the issue of equity arises mainly from the water centric approach of treatments in watershed projects (Shah 2000). It has been observed that watershed development has by and large focused on creating water harvesting structures, which in turn helps enhancing soil moisture profile and groundwater. Obviously, the direct and tangible benefits of such structures would remain limited to a few farmers owning plots in the proximity. The other major intervention, covering almost all farmers within the village (micro watershed) is field bunding and land leveling. The problem with the former is that the benefits in terms of productivity is often small and has a long gestation period, whereas for the latter, the treatment is either not required or is not undertaken due to high cost and/or adverse environmental implication. The result is that only a few farmers would actually benefit from land leveling through watershed projects. In most cases these may be relatively better off farmers, having been able to bear the cost of financial contribution.

On the other hand, common property land resources (CPLRs) both-revenue waste-land and forest within watershed area- are rarely treated owing to legal complexity. In fewer cases where CPLRs have been treated, the actual benefits are often negligible due to lack of protection. The same holds true in the case of provision for drinking water, which otherwise would have helped women. The larger reality therefore is exclusion of landless and at times, voiceless as in the case of women, whose interests are often overlooked at the stage of designing as well as implementing the intervention. Hence, more than complete exclusion of small and marginal farmers, the issue is of limited and selective benefits from the project.

In this context, participatory institutions have special significance. It is therefore imperative that the design of the watershed treatment should take on board equity and sustainability aspects while planning for productivity enhancement. To the extent equity is constrained by the structural aspects like geohydrological and property rights regime which the onus is on ensuring that the expected benefits are actually realized and later on shared equitably. This is the crux of the participatory processes of watershed development.

Major Evidence

Recognizing that the equity aspect in watershed projects, especially in the major government supported projects, is at an initial level, its translation into actual practice is mainly in the form of an add-on to the 'core' activities of watershed development. This may be because the initial concern was mainly on taking the idea of participatory watershed projects to the ground level, getting positive results in terms of productivity enhancement, creating demonstration effects and setting up appropriate machinery for project implementation. As a result, most of the evaluation studies had focused on the issue of total benefits at micro watershed level (Deshpande and Narayanmoorthy 1999), rather than looking at the distribution, (Shah 2001). Similarly the studies have often focused on primary level indicators such as membership, presence, formation of SHGs, etc. Whatever limited evidence one finds from the literature is far from being encouraging. The evidence not only suggests low impact on equity, at times, they indicate increased deprivation in terms of women's/poors' access to resources besides bearing additional work load towards project activities.

Of late, the issue of equity in watershed development has been raised by a number of researchers and also policy makers. The recent report by the Parthasarathy Committee (Gol 2006) has recognized that watershed project must keep in mind interest of the landless (and also other marginalized communities). In absence of this, 'all the water harvested will be cornered by the dominant elite'. It is further noted that this issue had been flagged by a number of representations from the state government³. The study by Joy and Paranjape (2004) provides a fairly detailed discussion on the issue of equity and its specific relevance to watershed development. Underlining the emphasis on equity laid down by Eswaran Committee, the authors make a clear case for addressing the issue of 'equitable access to water or equitable sharing of the increased water' as the central thrust of equity in watershed development especially, in the context of dryland regions. In what follows we have tried to highlight some of the important findings from the existing literature (See Box 1).

3. A priori it may be assumed that the project under the Ministry of Agriculture (ie, NWDPR) is implemented in agro-climatically less difficult areas as compared to those implemented in areas characterized by drought prone and waste-land (as in the case of by MoRD). As a result, the former may have laid relatively limited emphasis on water harvesting structures, which in absence of special mechanisms for benefit sharing, results in benefits reaching only to a sub-set of farming communities. On the other hand, the projects under MoRD lays special emphasis on treating community land/waste land hence, may have better coverage of land poor households. There are however, no systematic studies to address this aspect.

Box 1: Evidence on equity issue in watershed development

Sl No.	Details	Authors and Project/Area under the study
1	No net increase in availability of grass, fuel and tree fodder from CPLRs under any of the projects. Most respondents said that they benefited from the projects; the landless and semi landless however, were the most likely to express satisfaction	Kerr, et. al. 1998 (Maharashtra, AP., Karnataka)
2.	Reduced availability from commons due to closure of the treated CPLRs; benefits increase along with size of the land holding	Kerr, et. al. 1998
3.	Benefits mainly from WHS covering maximum up to 50-60 households in a village	Shah A. 2001 (Gujarat, MoRD)
4.	No significant increase in gross return per acre among beneficiary vs. non-beneficiary households. The poor households have gained more mainly because of the direct employment on the project site	Reddy R. 2003 (Andhra Pradesh)
5.	Water harvesting structures have made significant impact; there are non-tangible benefits in terms of increased availability of water at various locations. But there is no mechanism for repair and maintenance (this may imply that in absence of this the impact may reduce and cover fewer beneficiaries over time)	Reddy and Ravindra, 2004 (Andhra Pradesh)
6.	All round positive impact on most of the impact indicators. Improvement in the economic condition of the poorest households in the project area as compared to other areas (it is not clear whether the income gain is sustainable in the post-project phase or not).	Teri 2005 (on WB project in Punjab, Haryana, Uttaranchal, J & K, HP) (not in reference list)
7.	In most watersheds there was nothing to graze. Village level decision making increases with land holding size	Pushkar R. et. al. 2004
8.	Special emphasis on low cost treatment and inclusion of landless in SHGs	Nayak 2005 (DANIDA, Ratlam)
9.	Contrary evidence of reduction in income inequality (by Reddy, R.) and increase in inequality (by Singh, et al. 1993) A number of innovative institutional arrangement for addressing the issue of equity by providing water rights, reserving access to CPLRs to the landless, waving of contribution by the poor	Joy and Paranjape 2004 (based on a review of WDPs in three states)
10.	Persistent gender bias in terms of representation in WDCs and wage rates	Sen Shah and Kumar 2006, MP.

The above summary of some of the existing studies suggests that there is very little evidence on 'Who Benefits' and 'How Much' from watershed projects. A recent study by WASSAN (2006) provides important insights on the issue of processes. For instance the study indicated that of the 55 micro watershed projects, 25 had made some efforts for identification of poor households at the initial stage of project implementation. The number however, got reduced to 11 at the subsequent stages of evolving institutions for the poor and planning; only 7 projects had sustained the focus on poor households at the time of execution. It is further noted that whereas inclusion of members of the weaker sections and women was an important criterion while formulation of the watershed committee, the focus got diluted at the time of planning. Moreover, consultation if any, was limited to dominant section of the village. Participation was low in 40 per cent of the sample watersheds. What is more striking is that while setting the priorities or activities to be included in the action plan, strong bias is usually towards the rich families of the village or convenience of implementation in terms of availability of funds, labour, etc. Use of labour is often given lower priority under the guise of non-availability of local labour.

The outcomes in terms of gender-equity, by and large, suggest the following scenario Arya (2007; p. 210):

- i) Lack of clear understanding on gender-equity and the path towards empowerment and absence of gender analysis with respect to the gendered priorities and roles;
- ii) Equitable distribution of benefits is not a crucial indicator of the project monitoring and evaluation system
- iii) Widespread misconceptions among policy makers and practioners such as: economic and environmental benefits may automatically lead to improvement in quality of life or gender equity; activities targeting only women are likely to succeed; and income generating activity by itself results in inclusion of landless and women as equal partners in watershed development.

The above observations clearly suggest that the economic benefits are not only limited in terms of coverage of beneficiaries, but also heavily influenced by the decision making processes at various stages of implementation. This brings us back to the central importance of institutional mechanisms that may ensure choice of appropriate treatments and at the same time distribution of benefits flowing thereof.

From Project-Based Equity to Empowerment

Given the fact that social transformation in terms of narrowing the class and gender differentials is a complex process, mere legislative enactments or statutory provisions within watershed guidelines may not be effective. It is here that the role of social movements and civil society organizations (CSOs) working towards larger goals of equitable development, may assume special role. It is encouraging that a number of initiatives have come from non-government organizations working with greater flexibility—procedural, financial, and temporal. What is more heartening is that some the learnings emerging from the NGO or donor agency supported projects have been internalized into the state-supported watershed projects.

We come across a number of interventions where different approaches have been tried out to address the issue of equity. These are of course different approaches tried out under varying operating environment and with differential outcomes. In what follows we have tried to summarise the major features of the approach and the major lessons emerging from each of these experiences.

Policy Implications

Institutional Challenges

Addressing the equity issues may require fundamental changes in the way local institutions are evolved. The acid test for an institution such as this could be that-it should at least bring on board intra-community conflicts with respect to watershed development, even if it may not be able to resolve them.

Multi-Pronged Approach

A number of operational devices have been suggested for attaining the equity objective in watershed projects (Kerr 2002). These include: (a) give priority to poorer areas; (b) use local labour; (c) consolidate the impact of water/irrigation to get that translated into increased demand for labour and better wages; (d) being sensitive to poor's needs; (e) promote non-farm activities for landless; (f) involvement in decision making process; (g) using subsidies selectively; and (h) ensuring user rights to poor (Drawn from the note prepared by Joy KJ).

In what follows we discuss some of the important policy implications for addressing the issues of equity across class, caste, and gender.

Landholders in Watershed: Locational Inequities

By and large, except a few exceptions, the experience has been that people who are favourably located in the watershed, especially in the valley portion get access to most of the recharged water. This can be tackled at two levels. The first one is the design of the project itself – the way physical interventions and financial allocations are made. Along with soil and water conservation measures in the upper reaches of the watershed, efforts need to be made for soil amelioration and conservation (measures like field bunds, low-cost water harvesting structures through out the toposequence vegetative barriers, mulching, etc.) so that the water holding capacity of the soil gets better while also improving the *in-situ* soil moisture conditions so that crops (vegetation) can survive longer dry spells (Wani et al. 2003, Wani 2008). There could be many technological mixes for this. The second is coming to certain prior arrangements by way of institutional arrangements as to how the increased resources especially, water could be used. Equitable distribution of the increased water is an important step. Here we are focusing mainly on the increased water that needs to be equitably distributed. It is observed that people respond to this in a much more favourable manner⁴.

Resource Poor Sections

Some of the measures that could be taken to address the issues of the resource poor:

- Wages: Machines to be used judiciously and only when local labour is not available. Also there should be strict implementation of the district schedule of rates (DSR). Also there is a need to revise the rates.
- Treatment of CPLR and privileged access to resource poor: CPLR is much neglected in watershed treatment. The resource poor, especially women, can be organised either as a cooperative society, as SHG or as a user group to take up the work of development and management of the CPLR. Funds from employment guarantee programs can also be channelised through this organisation as shown by the successful example of RGWM in Madhya Pradesh⁵.
- Phased grazing and arrangements for fodder: Often there is a condition to ban grazing and most of the PIAs do it in a blanket manner, closing the entire grazing area for cattle. This has impacted the resource poor more as they hold small ruminants. Instead of total grazing ban the program should advocate ban in a phased manner. An alternative arrangements for fodder, especially for resource poor, should be made as part of the program.

- Share in the increased water: The resource poor, including landless, should get a share in the increased water. They can use it in many different ways—they can use it to take somebody else's' land on a produce sharing arrangement, they can pool their share of water and use it for the faster development/regeneration of the CPLR provided they get privileged access, they can use for processing and other artisan-related works, etc.

Access to Bulk Biomass

It may be recognized that the livelihoods of the rural resource poor cannot be met entirely through primary production. It needs to be supplemented by non-farm incomes through different value addition avenues. The biomass produced as part of the watershed development programs can be made available for the resource poor on certain favourable terms.

Rights over CPRs⁶

A clear national policy accompanied by a Model Bill on common property resources (CPR) may be evolved to crystallize the notion of CPR and create a set of clearly identified rights in favour of local community. The bill may clearly state, in a graded manner, different kinds of rights and entitlements of the community (the three category of rights and, powers and functions as indicated in the following recommendation) and the legal nature of relationship of the state, line departments, *Panchayati Raj* Institutions (PRIs) over the resources by making the resource-dependent community as the primary stake-holders entrusted with the rights and responsibilities of maintaining, managing and improving the quality of the resources while deriving benefits from them. The details regarding collection of user charges and modality of sharing the benefits between different stakeholders may be spelled out in such a way that major benefits out of CPR goes in favour of UGs. Likewise, modalities for sustainable utilization and management of resources may be spelled out where the major responsibilities rest with respective user groups and/or management committee of multiple user groups.

4. The successful examples in this context are Pani Panchayat, Hivre Bazar, and Ralegaon Siddhi.

5. For details see, the note submitted by Shri Sachin Sinha

6. This part of the chapter draws upon the Report of the Working Group on Natural Resource Management, set by the Planning Commission for preparation of the Eleventh Five Year Plan. Inputs by Dr SK Sanghi and Dr A Ravindra from WASSAN are specially acknowledged.

Based upon the above approach an initiative has been taken under Sujala Watershed in Karnataka, for providing the users rights to different stakeholders in the proportion of 20:40:40. The 20 per cent share of income (annual or one time income) from CPR is to be given to *gram panchayat* for the benefit of larger community; 40 per cent share is to be retained by the management committee of multiple UGs towards repair, maintenance, watch and ward, further development of CPR, etc; and the remaining 40 per cent share is to be shared among the eligible UG members. It is however, essential to simultaneously adopt legislative approach to provide legal euthenics to the above mechanism. This may be done through an Act as is being currently attempted in Karnataka for creation of Tank Users Panchayat.

Enhancing Women's Participation and Mainstreaming of Women SHGs

Participation of women under public sector watershed program is very low inspite of sufficient evidence regarding their deep interest and heavy dependence on natural resources. Due to increasing migration, men are not readily available in the villages to actively participate in the program. On the other hand, participation of women in the watershed project does not take place properly unless they are organized in sustainable groups. A possible scenario for enhancing women's participation in watershed projects has been developed by Pangare (1998) during the early phase of the participatory approaches. Apparently, most of the features suggested before a decade, appear to be valid even now (Chart 1).

Enhancing women's participation may necessitate integrating within the framework of watershed program some important aspects such as (i) organizing all willing adult women in SHGs and their federations; (ii) allocation of separate fund for women specific agenda; (iii) preferential development of land and water resources owned by women headed households/ widows; (iv) payment of equal wages to women in development works; (v) adequate representation of 'organized' women into management committees; (vi) management of watershed program by all-women committee (having members from only women SHGs) and carrying out rest of the developmental activities through women SHGs; (vii) preferential allocation of usufruct rights as well as bidding rights over CPR to women SHGs and their federations; and (viii) focus on development of water resource for drinking purpose by human beings.

Chart 1. Perceptions of the Role and Contribution of Women in Watershed Development

Stage Activity	Present Role	Possible Future Role
1 Planning & Decision Making		
Formation of watershed committees	Limited representation on committees	Equal representation on committees
Preparing Project Proposals		
Survey	None	Assist in survey
Identifying soil-and water-conservation structures	None	Share knowledge and experience
Contributing land for selected sites	None	Assist in decision making related to contribution of land
Preparing budgets	None	Participate in decisions related to labour and other costs
2 Implementation		
Constructing conservation structures	Provide labour	Supervise, maintain ledgers, musters, make payments
Maintaining conservation structures	Provide labour	Initiate decisions on maintenance, supervision, maintaining ledgers etc.
Developing agriculture	Provide labour, limited decision making on family lands	Receive training inputs, contribute to community-level decisions
Forestry and tree planting	Provide labour, limited decision on selection of species, maintain nurseries	Participate equally in decision making on selection of species and areas for plantation, provide technical inputs, supervise plantation sites
Fodder and grazing lands	None	Participate equally in decisions related to development of grasslands, rotational grazing, stall feeding
Horticulture	Provide labour	Select fruit, process, market
Dairy, animal husbandry	Provide labour	Technical inputs, process milk, market
3 Management & delivery systems	None	Participate equally in decision making, provide technical inputs, share knowledge & information, ensure just distribution of resources
4 Social & welfare aspects	Have limited access to health & education	Identify community needs, ensure availability of welfare
5 Alternative energy programs	Provide labour	Identify alternate resources for energy; plan and implement

Recommendation and Way Forward

Imperatives for Future Policies

- Increased emphasis on tribal dominated forest-based economies with high incidence of poverty and at the same time, better potential for economic benefits due to relatively favourable rainfall and soil conditions, and large proportion of households operating marginal land. The allocation of fund under employment guarantee programs may be utilised for this.
- Dovetailing National Rural Employment Guarantee Act (NREGA) with watershed development should ensure systematic treatment rather than haphazard activities pertaining to land and water resources in the region. The NREGA-WDP Convergence Act in Madhya Pradesh should be assessed, suitably modified and adopted by other states.
- Resolving legal complications in treating CPLRs – both under revenue and forest departments, and also for accessing benefits from regeneration of such land.
- Introducing special package for the communities who received land under distribution of surplus land. Since the land distributed under the scheme is highly degraded, development of such land may deserve special support under watershed projects.
- Treatment and protection of CPLRs, provision of drinking water, and water rights to all households should be considered as necessary precondition for initiating watershed treatments.
- Treatments like land leveling, farm ponds, and farm forestry wherever feasible, may be undertaken irrespective of the poor farmers' ability to pay for the cost-contribution.
- Ban on deepening of well and incentive for adoption of water saving devices/crops should be introduced. At the same time encourage bore well scheme on group-basis. This may be of special significance to tribal areas as demonstrated by experiences of AKRSP in South Gujarat.

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Understanding Gender Inclusiveness in Watershed Development through Reduction in Drudgery of Women: A Case Study from Doon Valley Watershed Management Project, Uttarakhand, India

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Abstract

This paper analyses the processes evolved and lessons learnt on gender inclusiveness in relation to food security through the reduction of drudgery and the empowerment of women in a government-led watershed development project. The Doon Valley Watershed Management Project adopted an integrated and participatory approach to eco-restoration. The project activities revolved around developing institutional, technical and financial infrastructure support to foster self-help by rural communities. Participation of local communities remained a central theme to developing local capacity, initiative and institutional strength for collective action. An analysis is made of the implications of this approach on food security, especially for women from marginal and poor families. One village is taken as a case study, to provide a micro-level analysis of the food entitlement and food availability situation before and after the project. Vital insights are shared, through the case study on the perceived differences observed before and after the project.

Introduction

The Doon Valley Project involved integrated watershed management over 2,408 km² of the Lesser Himalayas. It was funded by the European Union (EU) and implemented by the Government of Uttarakhand over the period June 1993 to December 2001.

The project adopted a participatory and integrated approach to watershed management. The primary objective was to arrest, and as far as possible reverse, the on-going degradation of the Doon Valley ecosystem, with a subsidiary objective to raise the living standard of the communities through their positive involvement, especially of women, in the project implementation.

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The project focussed on “village watersheds”, representing the area of influence of a village. The project normally worked for 4.5 years in each village (6 months micro-planning, 3 years implementation & 1 year withdrawal). Altogether 303 villages were covered in rolling phases. The project comprised seven technical components (social forestry, animal husbandry, soil conservation, agriculture, horticulture, minor irrigation & energy conservation), which were implemented with villagers in an integrated manner. A community participation component afforded a cross cutting activity for implementing all the works. One officer, aided by a core team with multi-discipline technical training, was deputed to handle all activities with the communities within a group of villages.

Priority was given to resource conservation and production technologies that gave immediate as well as long term benefits to the farmers, based on in-depth topical Participatory Rural Appraisal (PRA) exercises with the communities. Equity and gender issues were addressed during stakeholder analyses, especially in the creation of community assets. Technical plans were modified to incorporate grass-root needs. Priority was given to integrating conservation technologies and practices with socio-cultural values. Inputs in livelihood improvement methods were negotiated to ensure a strengthening of the livelihood support base.

During PRA planning exercises, the importance of the natural resource base was objectively explained to the community, through a watershed approach. Contributions by the project, that met immediate needs of the villagers, were clearly defined and linked to reciprocal obligations by the villagers for maintenance and a contribution in cash, kind or labour. The time-scale and sequence of activities were made clear to the communities from the beginning. Respective roles evolved as the project processes developed and were formalised in a Withdrawal Plan (take-over plan) for each village on project completion.

The project rationale was that successful development lay in effective village institutions. *Gram* (village) Resource Management Association (GAREMA) was formed in each revenue village during the course of PRA-based planning exercises, based on habitat-related social affiliations. The GAREMA comprised representatives of each household (1 female & 1 male) and an executive body that included women (33%) and disadvantaged people. The *gram pradhan* (chairperson of the *panchayat*) was the patron of this body, to ensure links with the PRIs – elected government organisations. The state of Uttarakhand has since taken steps to mainstream the GAREMAs with the PRIs.

Capacity Building and Policy Support

During implementation, the project helped the GAREMAs *and the SHGs* to develop their institutional capacity by framing their own rules, regulations and procedures. This was achieved by continuous action research into sustainable alternatives, through supportive training events and workshops for staff and GAREMA members. By 1998, this led to the evolution of Five-Policy Guidelines (Rules of GAREMA, Reciprocal Obligation Policy, Management of Revolving Funds, Strategy for Para-professionals, Withdrawal Strategy), which were accepted by Government in 1999. This led to doing concrete exercises with the villages on their withdrawal strategy.

The guidelines offered a tolerable limit of standardised institutional measures that could evolve in the context of specific socio-political and environmental situations, and provided a basis for scaling-up participatory projects.

Involving Women in the Project Process

Traditionally, women are the managers of the natural resources but most technical information from outside had been directed at men. The project therefore tried to facilitate a change from male-centred programs towards a sharing of knowledge, information and implementation practices with the women. Initially all project staff were male, which made it difficult to interact with women in the villages. Young women were recruited from universities and NGOs to work with the project staff as motivators to mobilise women. They were supplemented by village motivators, women recruited within each village, who became the focus for organising SHGs, especially among women.

The project addressed the specific problems of women in practical topics, such as drudgery reduction through promotion of gender-friendly technologies (cropping, fodder & fuel wood plantations, animal feeding troughs, cooking devices, hand tools), coupled with gender sensitisation training of the men. This gave women more time and confidence to participate in the social decision-making processes of watershed activities, as well as in income-generation via women SHGs.

Case Study of Bawani Village

This case study has been brought from one of the project village Bawani to assess the impact of the project approach on involvement of women in

watershed project. Effort has been made to understand the role of the village institutions in sustaining this initiative, through judicious management of common property resources and the institution to manage the same.

Background of Village Bawani

Village Bawani lies in the foothills in Narendranagar *tehsil* of Tehrigarhwal district in Uttarakhand. The village comprises five major hamlets (Baral, Japa, Kathia, Danela & Vireth). The hamlets lie in two different agro-ecological zones: Baral, Kathia and Danela lie in the sub-tropical zone, whereas Vireth and Japa are in the sub-humid zone. The two groups of hamlets are about 7 km apart and those within each zone are separated by 2-3 km. Out of a population of 115 families, six belong to the scheduled caste. In 1995, the literacy rate in Bawani was 38% for males and 8% for females. At project inception the cultivated area was 81 ha (20 ha irrigated and 61 ha rain-fed). The families owning the larger extent of land are mostly those in the rain-fed areas.

Before the project, most of the community land was infested with the weed shrub *Lantana*, which rendered the land unproductive. Except for days spent in agricultural land preparation, the men used to undertake wage labour outside the village. Women had a very hard life. Water from natural springs had very high lime content and was not potable, so drinking water had to be carried from sources up to 1 km distant. Women used to devote at least 4-7 hours a day on procuring fuel-wood and fodder from the forest, depending upon the season.

Project Input, Output and Outcome in Village Bawani

Project planning started in September 1995 with the constitution of a GAREMA. A thorough stakeholders' analysis was undertaken with the community before work commenced on developing any community assets, especially work related to irrigation facilities and afforestation. User groups were established to develop irrigation facilities. Emphasis was given to equally distributing works and assets by hamlet and ensuring inclusion of the poor and women.

The major technical and institutional inputs and grass-root outcomes are given in Table 1. This Table also shows the total amount of contributory funds mobilised under the different components and the proposed fund utilisation pattern in the Village Resource Management Plan (Withdrawal Plan).

Table 1. Institutional & technical inputs and major impacts – village Bawani

Sl	Component	Forestry	Minor irrigation	Animal husbandry	Energy conserv'n	Horticulture	Agriculture	Soil conservation	Community participation
1. Physical input (in Rs)									
		• 184,00 ha. plantation in 27 sites dispersed in all hamlets	• Canal - 6010m • Irrigation tanks-8 • Water harvesting tanks- 36	• NBC- 1/2 unit, • Chari- 8 • Tub-94 • Chaffcutter-34 • Gandasa – 15 • Fodder minikit-140	• Biogas - 36 • Pressure cooker-83 ha • Stove - 36 • Piyagnii Herth-17	• Private orchard-6.00* • Dryland horticulture-3800 • Vegetable minikit-203	• Terrace repair- 70.50 ha • Mimikit-487 • Agri. implement-7 • Compost pit-8 • Demonstration-8	• Stone checkdam- 377 • Crate wire-98 • Gully plug-73 • Pacca checkdam-8 • Riverbank protection-2.50	• Preparation of PRA plan • Capacity building of GAREMA & SHG • Formation of SHG • Trg and exposure visits • Keeping female motivator in the village backed by senior female motivator
2. Financial inputs (Rs)									
2a	Project	21,92,089	20,50,071	2,18,101	4,46,665	1,17,720	5,28,650	9,64,571	1,68,400
2b	Anshdan	2,19,388	1,76,376	38,108	62,469	10,692	61,038	22,330	--
2c	Shramdan								
	Individual	22,368	21,092	21,000	53,280	92,280	1,75,595	9,600	20,920
	Community	1,41,265	65,271	14,320				9,600	
3.	Major grassroot level outcome and impacts	• During 1999-2000 a total of 1016 qtl grass produced (850 qtl local, 166 qtl improved variety) • 1,96,400 trees planted (1,47,300 surviving in 2001) • 11,733 naturally regenerated plants survived. 30,468 grass slips planted after clearing <i>Lantana</i> infested areas.	• Irrigated area increased by 20.45 ha. Increase in soil moisture content. • Completion of transplantation work in 18 days instead of 30 days.	• Decrease in animal population (712 to 506) by end of Project, later increased to 576. • People started keeping improved breed buffalo: 76 Murrhah breed out of 143. • 45 hybrid buffaloes born. • Saving of 208 t yr ¹ fodder due to improved feeding methods.	• Decrease in fuel-wood consumption, saving pressure on the forest by 495 t yr ¹ . • Reduction in the drudgery of women: 3Rajma). to 4 hours time saved per day.	• Advent of <i>Jayad</i> crops (eg maize, French bean). • Advent of cash crops (eg ginger, French bean, <i>Rajma</i>).	• Increase in income from agriculture by Rs.7,862/- per ha/yr. terraces & improved moisture retention. • Levelling of sloping grass slips, 3,365 tree species cuttings to set cement flooring in local school. • Availability of 70t of husk from processing of crop residue (previously burned). 153 men participated.>80% survival in the 3rd yr.	• Increase in income of 3,050 Sisai; 1,275 to make a bigger wallowing saplings, 600 Guinea tank for buffaloes. • Shramdan Rs.6870/- given to treat 22 erosion prone sites (5.25 ha) of -prone sites (5.25 ha) over 4 yrs (1997 to 2001). 133 woman & 4 plantation sites with (previously burned). 153 men participated.>80% survival in the 3rd yr. • Remarkable rise in the faith of community on gender driven conservation led sustainable development	• Shramdan of Rs. 12,260/- of 3,050 Sisai; 1,275 to make a bigger wallowing saplings, 600 Guinea tank for buffaloes. • Shramdan Rs.6870/- given to treat 22 erosion prone sites (5.25 ha) over 4 yrs (1997 to 2001). 133 woman & 4 plantation sites with (previously burned). 153 men participated.>80% survival in the 3rd yr. • Remarkable rise in the faith of community on gender driven conservation led sustainable development
4.	Withdrawal Plan Provision (Rs)	1,64,238	54,000	24,800	28,600	2,400	2,500	47,123	2,82,310

Note: Withdrawal Plan "Community Participation" fund comprises: Rs 192,310 (Institutional & Social Fund) and Rs 90,000 (Loan & Dovetailing)

Impact of Project Intervention on Drudgery Reduction of Women

Major impacts were seen in the reduction of drudgery of women, as reflected in a comparative study between the daily diaries of women recorded in March 1996 and in March 2001 (Figure 1). This revealed that, by March 2001:

- Women had more time (2 hr) to sleep at night and also to take rest (0.5 to 1hr) during daytime. They reported that their health had remarkably improved.
- The time taken to go to the forest had been reduced by 3½ hr in the mornings and by 1 hr in the evenings.
- Women had time for themselves and for their children between 12.30pm to 14.30pm.
- The drudgery involved in fuel-wood and fodder collection had been reduced, in terms of distance travelled, seasonality, time consumed and weight carried.

(Source : Independent survey conducted in 2001 in village Bawani)

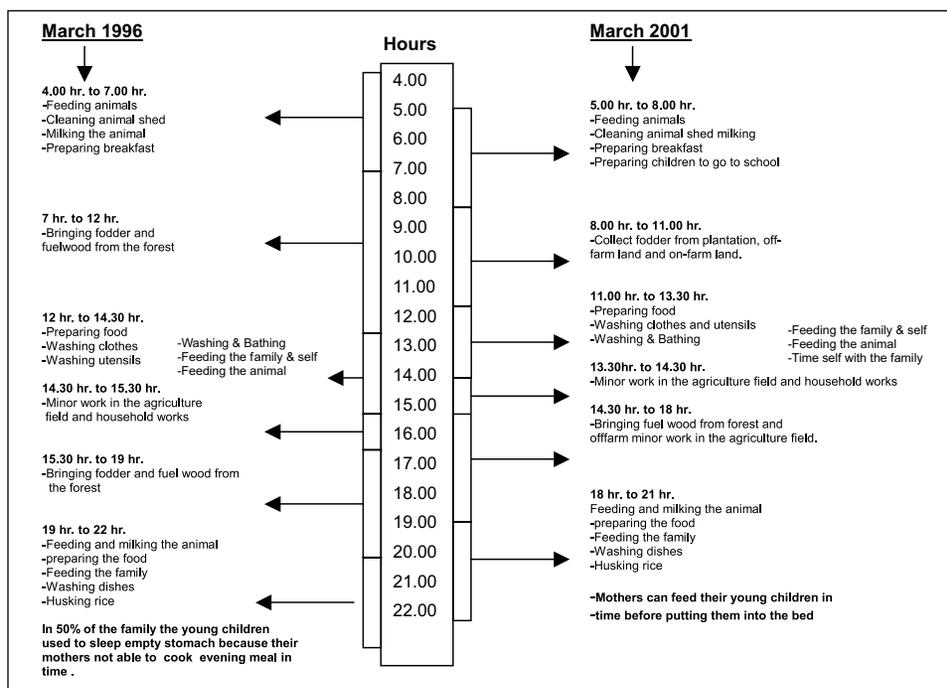


Figure 1. Daily calendar of women in Bawani – 1996 and 2001 comparison.

Source : Baseline study (through PRA in 1996) and impact study conducted in 2001

Impact of Drudgery Reduction on Well-being of Women

Impact of Improve Fodder Grass

While investigating drudgery with women, it was observed that they tend to carry relatively heavier head loads of fodder if the distance between the forest and the village is greater. The production of fodder grasses to the tune of 1,016 qtl per year (Table 1) in nearby plantations gave them opportunities for more frequent fodder collection trips. This, in turn, enabled them to reduce the weight per head load. The lighter loads coupled with reduction of distance have reduced the drudgery and associated ailments (eg. constant weakness & pain at the waist, headaches, leucorrhoea, body and limb fractures sustained from accidents in the forest). Reducing these ailments in turn reported the reduced incidence of anaemia and strengthened them against mortality from sepsis and haemorrhage during the childbirth.

Impact of Thresher

The wheat thresher installed in Bawani in 1997 is still being run at 2007 by the villagers in a business mode. This also reduced a lot of pressure on the forest and reduced the workload of women through generation of agriculture biomass to cater as quality animal feed during the lean period.

Impact of Biogas Plant

The installation of biogas plants and other fuel saving devices in the village saved 212 tonnes of fuel-wood per year. This reduced the seasonality, time and distance involved in collection of fuel-wood. Now women collect fuel-wood mostly during the afternoons from nearby forest. Women reported that they could now afford to prepare at least one vegetable, in addition to dal and rice, during daytime. Previously, they did not have time for vegetable preparation and cooking. Women stated that they were now able to give more time to prepare good quality food for the family.

Community Empowered to Draw Drinking Water Scheme

Although the project did not have funds for providing drinking water, GAREMA could pursue Water Supply department (Jal Sansthan), to implement the drinking water scheme, with the result that a drinking water scheme was implemented in Bawani in 2002.

Health, Hygiene, Vitality & Food Security of Women

In the opinion of the women, incidence of seasonal diseases has not only decreased between 1996 and 2001 but the number of days lost due to these diseases has also declined. Earlier they used to use home remedies and never sought medical aid. Thus, it could take two to eight weeks to cure a disease, which severely weakened the women. Due to greater awareness, the women now take medicine and even visit a doctor in time of need. They confirmed that seasonal diseases are now cured within a week. This awareness has shortened the ailment period and this, in turn, has helped women to maintain their health and vitality. The frequency of illness previously was mainly attributable to external hardship and internal weakness. The neatness and the hygiene of the children have also remarkably improved. The project constructed one toilet in this village in 1998 for demonstration purposes. Since then, nine additional toilets had been constructed by the villagers on their own initiative by 2001.

Decreased Drop-out Rates by Girl Children from School

Normally a girl child in this village used to quit school after Class V to help her mother with household chores, while her mother walked to remote forest areas to procure fodder and fuel-wood. Since 1996 the time spent collecting fuel and fodder has decreased. This reduction in the workloads of the mothers and their increase in awareness is reflected in rise in attendance by girl children (vis-à-vis the boys) in Classes VI, VII and VIII standard over the last 9 years (Table 2).

Table 2. School attendance (Bawani)

Classes VI, VII and VIII	Year 93-94	Year 94-95	Year 95-96	Year 96-97	Year 97-98	Year 98-99	Year 99-2000	Year 00-01	Year 01-02
Boys	31	24	32	28	26	26	27	25	35
Girls	6	5	5	14	18	21	24	33	36
% Girls	16.2	17.2	13.5	33.3	40.9	44.7	47.1	56.9	50.7

Data Sources: School records of Middle School, Village Bawani, Tehsil- Narendranagar, District- Tehrigarhwal

Factors Contributing to Women's Involvement in the Project.

Well Conceived Entry Point Activity

In September 1995 the project commenced interventions with PRA exercises. Involving women was difficult because they lacked time for meetings and did not appreciate the value to themselves of the initiatives promoted by the

project (Box 1). In order to win their confidence, in December 1995 the project consciously chose to involve only women in clearing a piece of community land infested with *Lantana* weed as an 'entry point activity'. After initial days of hesitation, the women began work and gradually started giving their time for GAREMA meetings, listening carefully to the proceedings. They voluntarily offered to weed out *Lantana* and to plant grasses in their own land. The women duly planted the initial area with improved varieties of grass (*Napier* and *Guinea* grass). Eventually, the villagers developed 27 plots of grasses covering 184 ha of village community land, spread among the hamlets. Five of these were protected by 'social fencing' and one plot succeeded even without any watch and ward system. Meantime, the project had developed a nursery for *Guinea* and *Napier* grass within the village, as source of planting material.

Organisation & Empowerment of Women Self-Help Groups

By 1998, it was possible to form five self-help groups (SHGs), involving about 60 women. These groups had regular meetings and accumulated savings. The women members started participating actively in the GAREMA meetings, voicing their concerns openly and taking firm decisions in front of the male members. By 1999, two of the five groups were linked with a bank to obtain loans for their ginger production.

Box 1.

Our women even feared to come out of the house to give water to a stranger. Now they go even to Rishikesh town without any fear.
(Shri Hari Singh, old man from Bawani Village)

Implementing Crucial Intervention in NRM

Women were involved in most of the plantation, soil conservation and minor irrigation works. The women earned 43% of the person-days of employment created by project work. At the same time, project staff motivated women to dispose off unproductive cattle and facilitated them in purchasing cattle of improved breeds. This resulted in a drastic decrease in the livestock population during the project period, when villages sold all their unproductive animals. After project completion there has been a slight increase in the animal population but mostly due to purchases of improved breeds of buffalo, accompanied by further decreases in the cow population. Most loans from the revolving funds have gone to purchase improved buffaloes. The villagers attribute this change to social decisions taken on closing areas for plantation, the greater availability grasses for stall feeding animals and the increase in availability of drinking water for animals. Indeed, they have invested the income earned from project work, mainly for purchasing buffaloes. On average, milk production increased from 2.5 to 3.0 kg per day per buffalo. These trends are illustrated in Table 3.

Table 3. Trends in animal population Bawani village

Animal	1995		1999		2002	
	Local	Improved	Local	Improved	Local	Improved
Cow	76	-	36	-	07	03
Ox/bull	140	-	116	-	114	-
Calf (cow)	60	-	21	-	3	2
Female buffalo	190	2	130	22	110	76
Male buffalo	1	-	-	1	-	1
Calf (Buffalo)	71	2	40	17	13	51
Sheep/Goat	170	-	124	-	185	-
Mule	-	-	9	-	11	-
Total	708	4	466	40	443	133
Total livestock	812		506		576	

Poultry data could not be obtained.

Enacting Social Values in GAREMA by SHG

While taking up social issues in the GAREMA, the villagers effectively stopped 11 households from making and selling liquor within the village. The women's SHGs played a major role in this campaign.

Inventing a Pro-gender Withdrawal Strategy through GAREMA After the Project

The mechanisms developed by the people of Bawani for rationally using their natural resources and community assets are reflected in the institutional norms that they devised and to which they are still adhering. The villagers generated revolving funds worth Rs 590,000. They earmarked a specific budget in their Village Resource Management Plan (VRMP 1999-2008) for environmental, social and institutional causes, which demonstrated a high degree of awareness and sensitivity for balanced and sustainable development based on equity (Figure 2). Out of the total provision of Rs. 70,000 set aside annually for such lending, Rs 20,000 have been earmarked for the poorest members of the communities, identified by the GAREMA in their VRMP as the focus group. Two members of a scheduled caste family, who belonged to the focus group, had taken loans under this provision and purchased mules.

The purposes for which grants can be made for social investments are:

- (a) for performing collective *shramdan*;
- (b) family welfare and family planning activities;
- (c) helping a deserted woman's family;
- (d) support to the poorest families on the death of an earning member;
- (e) capacity building of the women's SHGs.

Since 2000, these social provisions in the VRMP have been implemented with commitment by the GAREMA. Under this provision, Rs. 2,000 was given as a grant in 2000 to a woman whose husband had died that year of tuberculosis. The GAREMA is also giving an annual scholarship to a poor girl to attend school (about 6 km distant) and to enable her to complete Class IX onwards.

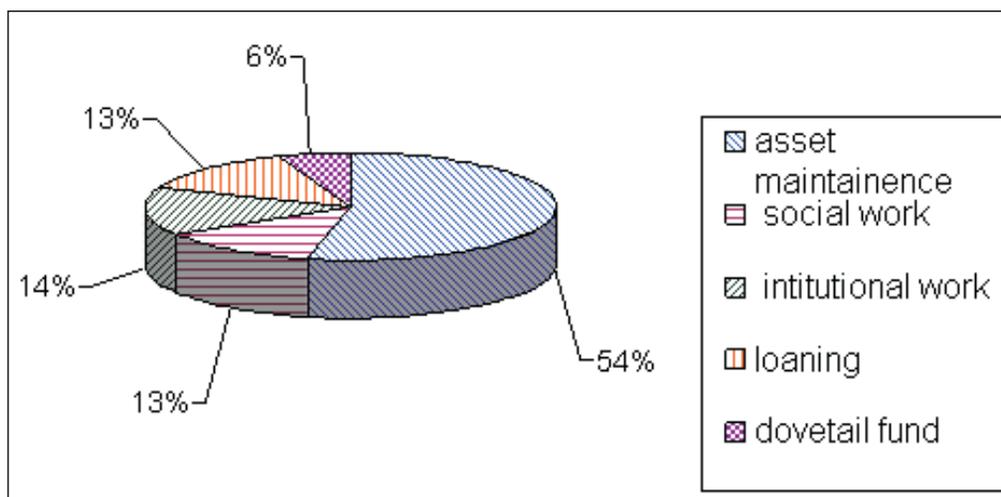


Figure 2. Pattern of utilisation of revolving fund in village Bawani.

Conclusions & Recommendations

The process of seeking women's participation was not an easy task for the project. The limited time, low motivation and restricted vision of the women posed practical difficulties in initiating SHGs. Many women needed more time and opportunity to appreciate what was achievable through an SHG. They were overburdened with work and had very little or no time for group activities. Similarly, taking women participants outside the village for exposure visits was often difficult due to their busy schedule of home responsibilities and their social and cultural prejudices. Sensitising men in the village meetings helped to

overcome these constraints. In many cases, the project staff 'learnt by doing'. As revealed in this case study, development practitioners often fail to perceive the impacts of technical inputs and drudgery reduction for women on food security in a village. By understanding and involving women in the technical interventions and analysing the impacts on them, many positive benefits for food security and nutrition can be identified.

A Number of Lessons can be Drawn from the Case Study

Women's Drudgery & Food Security

Food security for women can be addressed properly only where food entitlement and food availability can be matched with an ability to prepare and consume quality and hygienic food. Reduction in the drudgery of women, coupled with nutrition and health education, play major role in ensuring food security in the hill villages. Normally women, even from relatively economically secure families, are unaware of drudgery led hidden food insecurity faced by the family members, specially the minor children.

The Doon Valley Project first tried to understand the dynamics of how natural resource management, farming systems (including animal husbandry) and the role the women interplay in maintaining livelihoods. It was crucial for project staff to identify the critical interventions for women, which could break the chain of drudgery and facilitate their participation.

Empowerment through SHGs played a vital role in enabling the women to become aware of their entitlement for equal shares of food in their family. However, it required emphasising that even amongst women vulnerable groups (such as female children, nursing mothers and pregnant women) are sometimes unconsciously discriminated against, because of the prejudiced mindset of older women within the family, who normally decide the distribution of food.

The involvement of women in the project processes certainly increased their confidence and self-esteem. Women realised that their drudgery could be reduced significantly through improved natural resource management but this could be done only through collective decisions. Initial participation in meetings is very important for interaction, decision-taking and conflict resolution in natural resource use. This paved the way for community approaches to long term food security.

Capacity-Building for Women

As the settlement pattern and resource distribution of Bawani village are very diverse and dispersed, the spread effects of training and exposure visits were less for women than for men. Capacity-building training had to be focussed specifically on the gaps in the process of involving women. Focussed exposure visits were found to be more effective in raising the awareness of women to their drudgery than conventional training and workshops. However, technical training to the female village motivators (recruited for social development purposes) proved to be essential to disseminate technical knowledge to village women and to gain their feedback to make the technology more gender-friendly.

In many of the remoter villages, awareness could be raised only after four or five years of continuous interaction with project staff. However, in the villages of the foothills (such as Bawani), awareness campaigns on gender issues had a snowballing effect within a year or two. Leadership amongst women emerged in many villagers through the SHGs but it requires further support in terms of capacity-building to organise and mainstream women's concerns in future development activity. To be successful, SHGs should be based on social affiliations of the women (from a similar status) rather than on similar livelihood-based opportunities.

Income-Generating Activities for Women

The project had varied experiences on introducing income-generating activities for the economic empowerment of women in different zones. Animal husbandry enterprises could thrive with women of the remoter villages, where livelihoods were more animal husbandry-based. The value addition of agriculture-based economies had more impact in the villages of the mid and lower hills, which are reasonably well connected with markets. Off-farm, market-oriented economic activity could thrive only in those areas where women had enough spare time to pursue the enterprise and had easy access to markets.

Women in inaccessible areas relied mainly on social banking. Formal monetary banking did not prove to be a binding force for them. Introducing income-generating activities in these groups simply over-burdened them – the enterprises were not rewarding because of the high opportunity cost of the women's time.

In households where farmers were switching to cash crops, the social empowerment and economic awareness raising of women was a pre-requisite for retaining the income derived from cash cropping within the family.

Women and Watershed Development: Some Reflections Based on Experiences from IGWDP

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Abstract

Women as citizens need to be integral to the developmental activities so that they gain from the benefits and also are able to ensure that the activities taken up are not against their interest. IGWDP is an example that can be cited that provided space for women in public domain. It came to existence in the year 1992-93. Although, the major objective was regeneration of degraded watersheds in the drought prone/rain deficient rural areas of Maharashtra on critical scale, through involvement of non-governmental organisations and community initiatives, there have been some of the expected impacts like increased access to economic opportunities among women especially through SHGs besides equal wages at least in the project implementation phase. Some of the important learnings from the IGWDP may include ensuring equal wages, methodology for arriving at the unit cost of project implementation, ensuring decision-making role of women members in watershed committees, provision of support staff for implementation of women oriented activities, and providing resources for women to undertake certain activities that help reducing drudgery.

Introduction

“Without water we are nothing. (Even an emperor, denied water, would swiftly turn to dust). Water is the real monarch and we are all its slaves.”-The Enchantress of Florence: Salman Rushdie, 2008.

A current discussion on water is almost like what this character talks in the novel set in the medieval Mughal period during the reign of Akbar. Fresh water is posited as a diminishing resource and many people and communities especially the poor are characterized as the victims of its impending scarcity. Lack of access and exclusion of some are also highlighted in many studies and discussion platforms. Sound management practices, equity and access are the main concerns of these debates and discussions. Involvement of all

stakeholders in managing water resource arguably is seen as a solution not only for its efficient management, but also for ensuring equitable access among different segments of the community. The issue of gender and its relation to water has mainly emerged in this context: women despite being a key player in collection, usage of water, are also victims of water scarcity as they are often discriminated in terms of both access as well as participation in decision-making processes for management of water.

Watershed development, a nature regeneration program aimed at enhancing ecosystem services and farm productivity especially in dryland areas has emerged as a key intervention for livelihood support and decentralized development in rural India. Soil moisture conservation and development of water resources through harvesting of rainwater are the major planks of watershed management. Whereas the initial phase of watershed management had laid special emphasis on bio-physical and economic aspects, there has been a qualitative shift in the approach especially since the mid-nineties. The approaches developed in the past decade have increasingly focused on concerns like people participation, sustainability, equity, and inclusiveness with reference to gender aspects. Started mainly with projects supported by donor agencies and implemented by non-governmental organisations (NGOs), these normative concerns have assumed central thrust in most of the watershed projects designed and funded by the different Ministries in Government of India and also by the governments in some of the federal states. This has been reflected in the recently formulated 'Common Guidelines for Watershed Development Projects' that enunciate some of these features such as 'equity and gender sensitivity', 'centrality of community participation', etc., forming part of the guiding principles of watershed projects in the country (Gol 2008).

Given this backdrop, this paper discusses the experience from Indo-German watershed project (IGWDP), Maharashtra, an important initiative focusing on the various normative concerns, gender equity, into watershed projects in India. However, before examining the IGDWP-experiences, a brief discussion on evolution of gender concerns in watershed projects has been presented below.

Conceptualizing Gender and Watershed Development

With the emergence of feminist theories 'women's question' as different from the 'class and economic reductionism' brought into its fold some of the women specific concerns pertaining to production, reproduction, livelihoods

and environment. The next phase was marked by a series of theoretical development linking women with development and environment. While several of the conceptual developments have evolved out of the 'new social movements' related to gender as well as environmental issues, the basic difference among them emanate from the strands of political ideologies. While some theorist critiqued the modern development as anti nature and anti women (portraying women as victims of modern patriarchal development paradigm), others highlighted the privileged position women have due to their closeness to nature, hence a positive role for them that could nurture the nature and facilitate a development without destruction of the environment.

Most of these writings bordered on a very romantic idealization of women and environment without much empirical evidence or in certain cases citing isolated examples of static societies and economies. Since women contribute substantially to the livelihoods and environment provides the resources for the same in a rural economy, women have an added incentive to participate in environmental regeneration projects. Thus most of the projects try to build spaces for women's participation based mainly on the assumption that women have a major stake either based on their privileged position in relation to environment, their capacity to contribute to the efficient management or due to the livelihoods needs they have to meet from the environmental resources.

Often the logic of integrating gender concerns in developmental project and especially in environmental projects, revolves around one or a combination of the perspectives noted above. All these perspectives, though varied and contested, have made significant contribution towards mainstreaming gender concerns into the contemporary discourse on environment and development but, more importantly engendering the concept of development itself. Translating these perspectives into policy formulation, and thereafter in actual practice, however involve complex processes. The most commonly observed feature in policies and practice in this regards have been creating space for women's stakes and participation in decision making processes within public domain. Watershed projects are no exceptions to this widely prevalent phenomenon. Also women are posited as a 'homogenous group', which needs support and special provisions or space in the implementation process. It is argued that watershed development being land-based activities have certain inherent drawbacks for women's participation mainly due to exclusion of women from productive forces, in this case mainly land. It is thus important to note that whereas the gender dimension is part of the larger concern for equity in watershed development, this is seldom made explicit.

The experiences till now suggest that the gender concerns in a large number of watershed projects have been operationalised mainly through creating space and representation in various formal and informal institutions created under the project. It is assumed that the creation of specific space through 'women only' local organisations and representation in common institutions and platforms would gradually pave way for incorporating women's stakes and concerns into the decision making processes. This of course, is quite far from the vision of engendering development itself. In fact, doubts are raised even about effectiveness of the public space and representation of women for attaining even the moderate objectives of fulfilling women's legitimate needs and requirements from watershed projects. Commenting on the poor status of women and issue of lack of gender justice and equity in watershed projects a number of suggestions have been made by a recently appointed Technical Committee on Watershed Development Programs under the auspices of the Ministry of Rural Development, Government of India (GoI 2006). All these suggest that engendering watershed development is a long march from where the watershed projects stand today. Learning from the past experience therefore may have special relevance.

The following sections in the paper present experiences from IGWDP in Maharashtra. The analysis draws heavily upon the author's direct involvement in project implementation for more than six years and is also based on a brief review of the project conducted during 2004 and subsequent field visits as an independent researcher¹.

IGWDP and its Specific Strategies

IGWDP came to existence in the year 1992–93, a bilateral effort being financed by German Bank for Reconstruction and Development and funded through National Bank for Agricultural and Rural Development (NABARD). It was supported by a program coordinator and a specific technical team under the coordinator. The major objective was regeneration of degraded watersheds in

1. The paper mainly draws from a study done by the author together with Ms. Vrunda Vaze on Women and Watershed Development in IGWDP covering 10 watersheds, besides the experience of working with IGWDP, APRLP and as part of a documentation and back stopping support for DANIDA supported watersheds mainly in Madhya Pradesh and also being part of quite a few watershed evaluations and support services. However most details are from IGWDP due to its 'mode specific' characteristics unlike other bilateral programs due to different project management/support structures, costing, unit of the watershed etc. However, experiences of other programs are briefly used to compare or substantiate or to add a new dimension to the main conclusions.

the drought-prone/rain-deficient rural areas of Maharashtra on critical scale through involvement of non-governmental organisations and community initiatives. The technical team provided ongoing and backstopping support to the NGOs and village communities in planning, implementation and monitoring of the project. However, in the initial couple of years only large NGOs were involved in project implementation, mainly from 2 to 3 districts in around 13 watersheds. This is when a specific capacity building (CB) phase was introduced with the financial support of German Agency for Technical Cooperation (GTZ) and was managed by Watershed Organisation Trust (WOTR). Supporting PIAs successfully undertook the CB phase upto the full implementation phase of watershed.

IGWDP could be considered as a specific mode of watershed implementation if we compare it with other mainstream programs supported by state or certain other bilateral/multilateral projects. This has its implications on the kind of activities implemented or the strategies adopted for community participation, technology choice, women promotion activities, etc. A location specific and need-based conservation planning is done for each individual land holding and project cost is arrived on the basis of that. There is no fixed project cost in IGWDP as compared to most other watershed projects being implemented in the country. Each watershed of around 1000–1500 ha of area has 4-member watershed development team which includes a lady social worker/women promotion activity facilitator.

Project is divided into two distinctive phases and successful completion of the capacity building (CB) phase is a prerequisite for moving into the next phase of full implementation. Community mobilization, local institution building, facilitating project conditionalities, conservation activities/measures in some area, trainings and capacity building are the major activities in the CB phase. Activities pertaining to the involvement of women are also undertaken in the CB, especially those that are oriented towards soft components and space creation. Watershed development is undertaken on the basis of a specified and agreed upon 'operational system' with clearly defined stages, activities and expected outputs. Deviations and shortfalls (from the prescribed operational system) are often met with certain sanctions if rectifications are not made or corrective measures are not put in place. This at times, may hinder addressing the local dynamics – social, political and cultural – that are inherent in developmental processes. We could also say that participation of the community is with reference to a set agenda designed and decided by the support organizations.

Even though some activities pertaining to women such as formation of *mahila mandals* existed even before the CB-phase, the project introduced a separate unit (a women's development department with a coordinator, staff and a set of activities) in order to facilitate 'women's promotion activities/women's development activities'. It may be noted that in most cases what these activities implied is creating space for women's participation in project implementation without much emphasis on addressing the issues of unequal power relations or issues of gender and natural resources. Hence the following analysis would refer to the phrase 'women's promotion' rather than gender integration/concerns in watershed projects.

Activities to Integrate Women

Gender integration, as noted above, included two sets of activities: facilitating participation and supporting to undertake some women managed activities, mainly outside watershed and NRM agenda. There is a pre-defined strategy known as 'gender oriented participatory operational pedagogy' almost along the lines of the operational strategy in relation to watershed management mentioned earlier (WOTR 1999). This includes a set of pre-defined activities to be undertaken by NGO - PIA and women in villages. The main activities or outputs as elaborated in the gender operational strategy are appointment of women social worker at watershed level, formation of women SHGs, exposure and capacity building of the social worker, SHGs, providing at least 33 per cent representation to women, undertaking certain developmental activities which may be related to reducing drudgery of women or enhancing their income², formation of the network of SHGs within a watershed (known as Samyukta Mahila Samiti), deciding on activities to be undertaken as part of the women's development fund and so on.

The strategy though comprehensive than other watershed interventions, however, focuses mainly on addressing the 'needs' of women and harnessing their 'efficiency'. As a result, one finds that women/their groups are involved in tasks like managing water supply for drinking or domestic use or, taking care of the hygiene conditions, but do not have any clear cut role in managing

2. Under IGWDP Rs. 60000 during CB phase and 5% of the project cost or a minimum of Rs. 0.25 million during full implementation are earmarked for group and individual activities that could be undertaken by the SHGs and their members. It is known as Women's Development Fund and certain guidelines are put in place for its utilization. In most other programs like APRLP, DANIDA, etc., a revolving fund is provided for women SHGs in the APRLP watersheds were implemented by the village organizations (VOs) only comprised of women.

and developing the watershed or enhancing its resources. However, this does not mean that some of these stereotyped tasks women have undertaken can be undermined, especially in terms of exposure, collective identity, and income support for meeting some basic needs etc. Since most of the activities mentioned above are integrated into the project progress one could see its implementation without fail in all the IGWDP projects. Given the scenario of women's participation in different stages of the project implementation, in what follows we have tried to examine the impact of the project implementation on women.

Women and Watershed Impacts

Participation is expected to generate certain benefits of the development intervention. These benefits or impacts in a watershed development context could be both short term and long term and having positive or negative outcomes. Some studies have highlighted the impact of watershed on women (D' Souza 1998, Pangare 1998). With reference to IGWDP, the literature on impacts assessment of watershed development in this case and generally has more often than not focused on the short term benefits rather than those resulting from the core activity ie, regeneration of resources such as land, water and bio-mass. Also natural resource based productivity impacts are often presented in gender-neutral term as these impacts are ascertained at the household level. This is not to discredit the importance of the benefits received by women directly or as member of the households. What is however, being stressed is the critical importance of the gender specific impact that gets generated through regeneration of natural resources and management thereof. We have therefore tried to be selective in reporting those impacts that have special relevance in the context of gender equity.

Equal Wages

Payment of equal wages to women and men is an important indicator for recognizing women's work and their contribution in the sphere of production. Ensuring this depends upon the strategy one adopts for work implementation. In IGWDP this has been ensured by adopting the principle of 'payment according to the output' and implementation and wage payment of work through 'labourers' from the village (as opposed to farmers). Hence, everyone irrespective of their class and gender attributes gets same wage for the same amount of output. In all government supported projects and other projects such system is followed.

There were of course instances where equal and higher wage was resisted by the well-to-do farmers. This however, was successfully averted as the output-based payment was made as one of the non-negotiable features of the project implementation system in IGWDP. This is contrary to what one may observe in other projects where a large part of the on-farm work is undertaken through farmers, who in turn may not only follow the existing system of unequal wages but also pay the prevailing market wage rates that are often lower than what the workers are eligible for. Similarly, there are situations where large part of work is construction like check dams for which women are employed as helpers and paid lower wages.

It is observed that higher earnings among women, given the policy of equal wage rates in IGWDP, has helped them save more and invest in children's education. At times, this may have helped reduce migration though it may have only short term impact. On the flip side, women's participation in project related works may have resulted in contributing more in terms *shramdan* (free labour). In fact this is a price many of the women are willing to pay for getting the work in their own villages. Strangely, higher participation thereby higher contribution through *shramdan* is often misinterpreted as women's greater commitment and interest in watershed development. This kind of misplaced emphasis on women's participation needs to be treated carefully.

Access to Water and Fodder

Another impact often highlighted, as an outcome of watershed intervention is improved access to domestic water, fuel and fodder. The assumption is that due to the culturally determined division of labour in rural areas, the responsibility for getting these resources falls on women and improving access to these resources could help in reducing their drudgery and building a stake for them in the intervention. In most of the villages covered under IGWDP watershed projects access to water had increased to some extent. In a few villages efforts were also made to change the attitude towards division of work between women and men, encouraging receptive men in some households to share the domestic workloads like bringing water, helping in household chores, etc.

It may however, be noted that access to drinking water had improved especially when rainfall was favorable. There were instances where women took the initiative for managing potable water supply system with financial support from women's development fund. In one village (Nagdarwadi, Nanded district, PIA: Sanskruti Samvardan Mandal) women took the entire responsibility for drinking

water supply including its operation and management despite considerable resistance by men.

Fodder development in general and measures for protecting and regenerating forest land also helped improve fodder availability among the project villages. There were initial hurdles due to ban on free grazing in common lands for some time. Surprisingly, little emphasis was laid on preferential access to women or their groups for accessing fodder even in the villages where Joint Forest Management or treatment on forest land under watershed projects were already in place. Against this, there has been a general shift in the livestock composition in favor of stall-fed cattle, which increased the burden on women for collection of fodder. It is however, not clear as to what extent the change in livestock composition is due to watershed interventions, and what kind of support would have gone to help reduce women's work burden for collection of fodder in these villages except the attitudinal changes that we noted above.

It has been noted in several studies that watershed increases women's workload due to increased agriculture activity and livestock rearing coupled with engagement in SHG or income-generation activity. Even if activities are introduced to reduce the drudgery the time saved is appropriated in other activities. However, while discussing this, women found it as a non-issue and opined that 'leisure' or free time is not a very relevant concept, and it implied waste of time.

Impact on Production and Assets

Impacts on agricultural production and irrigation are often mentioned within the realm of households as mentioned already. It was difficult to ascertain the actual benefits realized by women since the larger perception, even among women, is that anything, which benefits the household is beneficial to women as well. When probed further about the income generated from the agricultures and their access to that income, the responses were somewhat baffling. In most cases the first reaction was an utter surprise as women did not see any perceptible increase in household's income. Even if increase in the income was reported, most of the women did not feel that actual access or control over the income is a problem. They also felt that they could always access a part of the income for their contribution to the SHGs.

The real problem however, is that of limited disposable income which is found in a few households and that too only during good rainfall years. The surplus if

any is generally spent on repair or improvement in the house, farm investment including water resource development, buying of livestock and above all social expenditure. It may be noted that most of the women reported positive impact of increased agricultural production on improved food security within the household. It is not quite clear as to how far this has mitigated gender discrimination in food consumption within the households.

Finance and Loans

Another benefit often cited is improved access to small loans from the savings in SHGs. Often the decisions to take loan and the purpose for the borrowing are taken by men within the household. It may however, be noted that SHGs benefits are not strictly linked to watershed projects and therefore such activities could also take place independent of the project. An important feature of IGWDP is the women's development fund, which is created as an integral part of watershed intervention. It was observed that the fund is often used for creating basic amenities such as construction of community halls, bathrooms, toilets, etc. At the same time the revolving fund is often used for purchase of livestock, cooking gas and other devices and small income generation activities. Recent experiences from some of the projects villages (three to five years after completion) revealed that the revolving fund is not repaid mainly due to absence of supervision or control by the project implementing agency. This has also contributed in closure of some SHGs in these villages. This is concerning as these SHGs could perform crucial role for promoting collective action among women. The issue of post-project support therefore may deserve special attention from the view point of gender concerns in watershed development.

Other Impacts

Another often cited impact is the confidence women have gained in managing the day-to-day life and in interacting with outside world through the process of their participation and involvement in the project. It is noticed that some of the women do gain confidence and become more vocal mainly due to the conscious efforts of the PIA. Apparently, the women who become more vocal also tend to play to the tune of the PIAs who need such 'confident and vocal' individuals to play the role of narrators of the success of the project. Nevertheless, strengthening of collective voice of women is found to be fairly rare. The few instances in which collective voice gets raised pertain to social issues like demand for imposing ban on liquor.

There are many other indicators of impacts like increase in education, social cohesion but there are problems of attribution as well as difficulty in establishing it empirically. But overall the impacts on gender lines are mixed and establishing that especially in relation to natural resources and productivity and livelihood require long drawn observations and data collection.

Summing Up

Women as citizens need to be integral to the developmental activities that are being pursued not only to see that they gain certain benefits that are specific to their concerns but also to ensure that the activities are not against their interest. Since the 90s there are many attempts both at policy and practice to integrate the concerns of women in watershed development. While this has been achieved in the case of some of the flagship projects such as IGWDP, there is still a long way to go and the most glaring lacuna is with reference to designing and implementing a strategy to enhance the role of women in decisions regarding resource development and access to and management of enhanced resources.

The experiences from IGWDP discussed in this paper did confirm some of the expected impacts in terms of increased access to economic opportunities among women especially through SHGs besides equal wages at least in the project implementation phase. Also the projects have created some space for women in public domain. Finally, there are instances of improved income/assets within households and communities.

The issue that remains inadequately addressed is that of attaining women's empowerment in relation to access and management of natural resources. It is also important to ask the question whether women's stakes or priorities with respect to resources and their use are independent or in conflicts with that of the household? How homogenous are the gendered priorities/preferences across class, caste and spatial identities? Or is everyone equal in relation to water especially in a scarce drought-prone region like most of Maharashtra and their position determined by access or non-access. Watershed development, a time-bound project with targets and procedural guidelines may face certain limitations in addressing some of the issues of inequity emanating from socio-economic-political structures.

Nevertheless such interventions could help in setting a stage for creating positive impacts on traditions and cultural practices in gender context. Some

of the important learnings from the IGWDP may include ensuring equal wages, methodology for arriving at the unit cost of project implementation, ensuring decision making role of women members in watershed committees as in observed in a few instances, provision of support staff for implementation of women oriented activities, and providing resources for women to undertake certain activities that help reducing drudgery. Other possible strategies could involve ensuring usufruct rights on common lands to women from poor households, facilitating NRM agenda and undertaking implementation through SHGs, providing technical skills to women, integrating gender issues and concerns in capacity building of not only women groups but also the decision making bodies like WC and WDT, gender equity based monitoring and auditing etc. Together these could contribute towards making small changes even though the way forward is long and arduous.

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Is It Possible to Include Equity Approach Within Watershed? Experience in Vadgaon Lakh

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Abstract

Women are usually the neglected lot. Although they help in the cultivation and work as family labourers, their role is considered supplementary. An analysis was done on the effectiveness of Indo-German Watershed Program (IGWDP) in guaranteeing benefits to women and other marginalised communities and the Samyukta Mahila Samiti, Vadgaon Lakh, which received a grant to undertake watershed development activity under IGWDP through NABARD. This paper thoroughly focuses on the issue of micro-credit activity within watershed project and more specifically on the 'effects on assets' and suggested strategies to overcome some of the barriers created by straight-jacket rules observed by many micro-finance institutions including NABARD, which is funding both SHGs and also watershed activities. The paper proposed that the goal of these activities has to stabilize individual enterprises and not to give doles.

Introduction

The idea of watershed originated with the group of social workers employed at Rural Campus of Tata Institute of Social Sciences, located in Tuljapur during the drought of 1992–93. Indo-German Watershed Development Program (IGWDP) was ongoing in Maharashtra at that point of time and Watershed Organisation Trust (WOTR), Ahmednagar, was involved in identifying the NGOs/CBOs who would be willing to work with the people of the village and implement the program after proper training and capacity building. The people from Vadgaon Lakh came forward and with collaboration with TISS completed the capacity building phase successfully in 1997. After submitting the feasibility report, actual project began in 1999 and was completed in 2002. The NABARD was appointed to disburse funds and monitor the program. Out of initial budget of Rs.95.96 lakh for 1300 ha, Rs.63.60 lakh was spent to cover the area of 1,122.11 ha. Average per hectare expenditure incurred on the project was Rs.5,668, which was considered well within limits prescribed by ICAR model watersheds.

Indo-German Watershed Program

The important features and conditionalities for Indo-German Watershed Program (IGWDP) were *shramdan* (voluntary labour), *chariabandi* (ban on open grazing), *kurhadbandi* (ban on tree felling) and women development program. A village watershed committee was established where two women members were incorporated. The committee objected to equal contribution to *shramdan* because the benefits accrued due to the program would be unequally distributed among the households based on their size of landholding in the project area. Hence, the new system of cash contribution was evolved whenever the labour contribution was not coming forth. *Charaibandi* has not been accepted by the villagers who had large number of animals, belonging to both classes, land owners and landless who generally tend goats. The landless labourers, who cannot have access to the fuel wood from private lands and had to depend upon the commons opposed *kurhadbandi*. IGWDP had provided 5 per cent of the project grant for women's development activity hoping that watershed would reduce women's drudgery by making drinking water available with ease and thus women would be free to pursue animal husbandry, sericulture and other profitable businesses.

Critique of the IGWDP Approach

Case for Unfulfilled Promises for *Dalit* and Women

Firstly, the project had placed prime importance on the technical aspect, which is basically a good idea, but then there are chances that it loses out on the participation of certain groups of the people who do not benefit from the project in the initial years. Ridge-to-valley is very sound, however, the strict adherence to it may have negative impact sometimes on cohesiveness of the community. Since, watershed treatment is a long drawn activity, spread over three to four years by the time it reaches to the farmers who are in the lower reaches they have already lost interest. It will be explained subsequently, how it happened with the *dalit* community in the case of Vadgaon Lakh.

Secondly, NABARD has very strict guidelines about the program being time bound. It works positively in terms of creating pressure on the village watershed committee, but its total lack of flexibility harms sometimes the farmers who are not vocal and socially marginalised. In the sequential arrangement of work plan their land comes for the treatment in the last phase, which is rarely operationalised. The case of *dalit* lands in Vadgaon Lakh can be cited to elucidate this point.

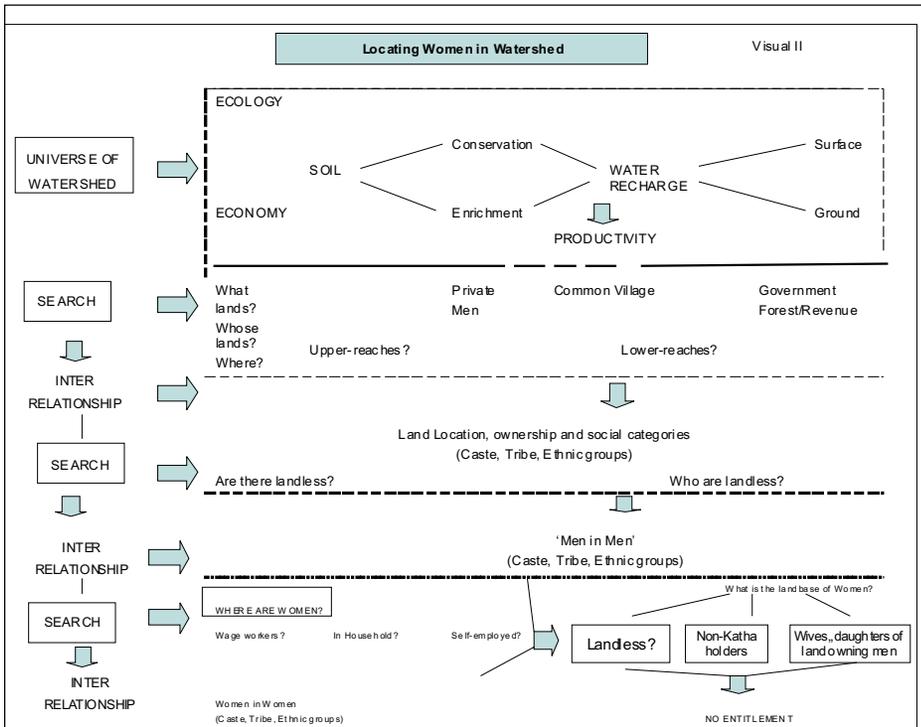
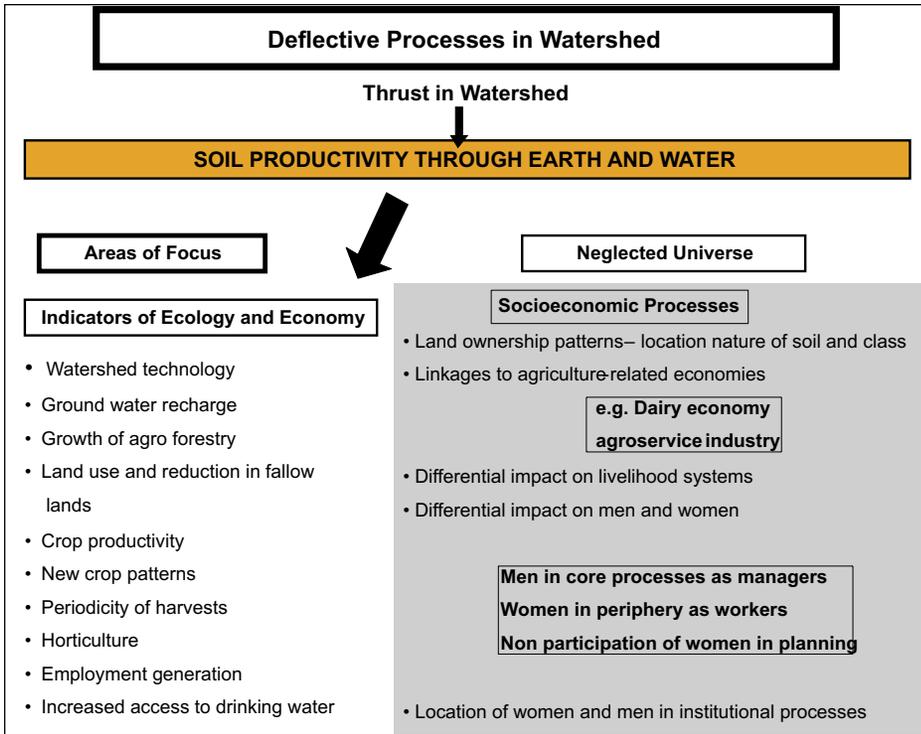
Thirdly, although concern for women's involvement is explicit in the program actual grant, the carrot for them to be involved comes last, ie, when 80 per cent work is over. Women do get some opportunity to be part of the exposure tours and also as nursery workers but their exposure to management issues is very limited. Also, the SHG program and the revolving fund for the same is perceived as a fall out from the watershed program, which is technical in nature and the women's fund is considered as a social welfare activity to supplement family income. Very few women are land owners or cultivators and watershed activity is linked exclusively for the landowners, who are the main stakeholders of the project.

In brief, in the first phase the Indo-German Watershed Development Program revolved mainly around technical issues of earth treatment. Watershed as a basis for holistic development of community did not exist at that point of time. The credit question for the farmers who are equipped with underground water was too never taken up. It was expected that they would take advantage of other NABARD schemes, or the schemes for well digging under Employment Guarantee Scheme for the *dalit* farmers, etc. But the question of credit, defaulters, also of high interest rate, which has exploded the agricultural policy when farmers are driven to commit suicides in Vidarbha was also not discussed.

It has to be also mentioned that the Tata Institute of Social Sciences (TISS) also did not have holistic perspective and did not do much efforts to deviate from the sanctioned course of action. Particularly, there was no special social worker

I have borrowed these two charts from the document, 'Watershed Gender Processes Implications' (Part I) by Uma Ramswami and Bhanumathy Vasudevan, which explains the gender context for women in Watershed Activity. Based on those parameters prescribed here, I am going to investigate how much gender perspective was followed by the TISS (NGO) and benefits were achieved for women in case of Vadgaon Lakh watershed activity.

As explained in the graph No. 1 clearly it is seen that out of two spheres existing in any mini watershed basin only one sphere is constantly under focus and the other remains neglected. The success of watershed is measured and monitored by the indicators of 'Ecology and Economy' but socio-economic processes are either ignored or added as an after thought, or fall out of the main activity.



Indicators of 'Ecology and Economy' are well known such as;

1. watershed technology;
2. groundwater recharge;
3. growth of agro forestry;
4. land use and reduction in fallow lands;
5. crop productivity;
6. new crop patterns;
7. periodicity of harvests;
8. horticulture;
9. employment generation;
10. increased access to drinking water.

Women are usually the neglected lot. Although they help in the cultivation and work as family labourers, their role is considered supplementary. The graph has identified invisible gender dimension in the watershed activity. This context is used to explore the impact of watershed on women in Vadgaon Lakh.

The second graph introduces more complex sociological picture around the issue of watershed. Although, watershed activity includes private land and public land and is supposed to increase productivity of all kinds of lands, its results and benefits are accrued differently to different people in the village because of their social status, which includes caste, tribe and ethnicity, which divide people within the community. The location of land within the watershed basin too becomes another parameter based on which the benefits get distributed unequally among the landowners. Women because of their gender and social status are at the bottom of this hierarchy and therefore get the least benefits from such a comprehensive activity as watershed. Among women too there are other differences, which are hierarchised on the basis of caste, tribe, and ethnicity and of course land ownership. The benefits percolate layer by layers. An attempt is made here to analyze the process of empowerment of women in Vadgaon Lakh against this complex social fabric.

Impact on Women

Labour

It was noticed that out of average 200 labourers who worked for three years 40 per cent used to be women labourers, coming mostly from the landless families, small landholders' families and also *dalit*. They used to come with husband and the payment would go to the man as he was considered the head of gang. There were fewer women labourers from Vadgaon Lakh in the beginning when the worksites were at the ridge, far away from the village. As the work progressed to area treatment, ie, the contour bunding in the farms, women worker from Vadgaon Lakh increased. Also, a woman supervisor came forward to monitor the work of the gang and take measurements and write muster. It was an unusual step because very rarely educated woman has been found among the labourers.

Drinking Water

There were five hand pumps in the village and one bore well for drinking water. Three community wells were also existent. During post watershed period it was noticed that all the wells had water availability even during the three successive years of drought, and no tanker was required for the domestic water use. The piped water system in the village was working minimally because of old pipelines and shoddy work, but the water source was recharged. No private connections existed, only stand posts were available.

Food Security

As per the report prepared by the TISS staff at the end of fourth year, in 2002, (Kshirsgar 2003) when it was a drought year the cropping intensity appeared to have increased from 115 per cent to 125.65 per cent in the post implementation period. As compared to the base period, the net irrigated area increased by 92.81 per cent in the post project period mainly due to various water conservation measures adopted in the project. The result of this study revealed that not only the water level in wells in the project area had increased substantially in the post project period, but some wells, which were very low yielding and used to dry early in the pre-project period, have started giving good yields, and that for a relatively longer period in the post project period. Number of wells has also increased from 75 to 84 between the two periods. The report also mentions the changes in the cropping pattern such as transfer from staple crops to cash crops to some extent. Women were happy with the changes.

Fuel and Fodder Availability

There is no investigation about the availability of fuel in the report. Regarding fodder, one notices that the number of cows and bullocks had gone down, -27.97 and -28.81 per cent, respectively. Buffaloes too decreased by -10.96 per cent. Only increase is noticed among the sheep and goat population, ie, 14.90 per cent. The explanation offered was that the farmers prefer to hire tractors instead of maintaining of bullocks. Cows too were of indigenous varieties and hence they were discarded for the crossbreed cows. It corroborates with the fact that two tractors were bought in the village in the post project period and also 27 per cent increase in electric pumps was noticed along with 7 new oil engines, where there was none earlier.

If one looks at the sources of income it appears that there is general increase in average incomes from all the sources, such as crops, livestock, wages and others. They are 124.42, 108.15, 106.37, 4.86 per cent, respectively. At the same time the composition of income from different sources too has changed. Income from crops changed from 42 per cent to 52 per cent and income from 'other' category came down from 42.12 per cent to 25.83 per cent. It can be discerned that agriculture activity must have become more vibrant and hence fodder and fuel availability must have increased.

Water for Productive Use

The idea of water for women to carry out productive activity was not envisaged in the IGWDP from the beginning. About 5 per cent of the project fund dedicated for the women's activity was also given very late in the project cycle and hence there was no possibility of building any structure for water storage especially for women. However, I started to discuss many possibilities with women. There was 40 acres of land belonging to Devsthan, for which bids used to be invited in the *panchayat* meeting and the land was leased for year or two. Thus, there was a possibility that women's group could bid for taking over this land and start cultivating partially. Those who work on the land would get daily wages as per the agricultural labourer and the produce could be sold and all the members would share the profit. Another possibility was that some orchard could be developed on that land and it could become lasting asset. The horticulture department had a scheme of supporting horticulture for three years, mainly reimbursing wages, so that the enterprise can continue for 15 years minimum to accumulate sufficient surplus to sustain the activity. The land could be used for mulberry cultivation and developing sericulture where again women would get some wages as well as profit.

Two problems were cited by women. One, was that the land was too far away, ie, 4 k.m. for their liking. And another, more important was that there was no source of water. We started looking for source of water, if possible community source, or private source, from where water could be brought through pipe to this place, not for the entire piece but for a small plot. Then it was realized that the community well is far away and it was not worth to get pipeline laid from that place. The private source also was not very near. The third alternative was to create the source through the grant. We believed that watershed had created sufficient mechanisms for recharging aquifers and it was possible to sink borewell in the plot and get self sufficient in water resource. There was fund available with the women. However, we realized that NABARD was not ready to give permission for this kind of investment. We persuaded the officials that it was a common piece of land. Tomorrow women's enterprise might fail but the source will remain with the community and with water resource the lease price for the land will increase and the *gram panchayat* would be in a position to make more money. It was also argued that if the NABARD envisages women to cultivate mulberry they must also foresee that the water source is the necessary condition for the mulberry to survive. Against this background we found that NABARD officials envisaged that individual women, ie, the women with land in their own name or the women with persuasion of their husband would embark on the individual enterprises such as sericulture or dairy, etc. They were afraid of any cooperative or collective enterprise, which may fail because of disputes. Thus NABARD had given a mandate of setting up revolving fund for women to facilitate micro-credit activity through SHGs. Elaborate functioning of this activity is described below, with the focus on exploring whether the micro-credit can succeed to achieve financial success for women's enterprises.

Sericulture: Collective Activity

Before we proceed to analyse the micro-credit activity, it must be describe the sericulture activity was undertaken by the Samyukta Mahila Samiti (SMS) as a collective enterprise. Once the idea of bidding for the Devsthan Land failed we started looking for any private land to be made available to us on lease, which could be nearby. Fortunately, one such plot of land was made available by one farmer with promise of water, at an unreasonably high price with a plea that he is sacrificing his sugarcane crop on that plot and hence SMS must compensate him for that. Activity went on for nine cycles of rearing of silk worms, which did not produce big profit but was able to pay wages and all the input expenses. It provided work for three to four women for six months period. However, we had expected that it would be a training ground for women to learn and then

some of them would start their own enterprise, which would be more profitable to them since there would be more family labour available. However, during the third year there was a serious drought and the farmer could not provide the women's collective water for mulberry plantation. Also, women realized that tending of worms was very delicate and almost 12 hours duty since the fresh leaves have to be supplied for every feeding and cleaning activity was to be carried out every now and then. Slowly the enthusiasm died. The plantation had to be uprooted to make way for the farmers' crop. Anyway lease terms were very stringent and hence it might not have been very viable activity with a small plot. The scale was also a problem. Women were using a special hall built through the NABARD money and also the other equipment such as racks and nets, etc., was bought as assets from the NABARD grant.

Apart from the economic failure of this project we also realized that the funds for the women's activity are designed very late in the watershed timeframe. Hence women's involvement starts very late and some of these issues of right to water and land are not discussed thoroughly within the watershed committee and among women. At present right to water is totally equated with right to land and those who have land could access the newly accumulated water through either well or bore well. It takes several sessions to make the community to understand the special feature of water as a common property resource. When 80 per cent of the grant provided by NABARD and given as charity by the German Bank, it was public money provided to the farmers to improve their private lands, so that water conservation ability of those lands would increase. There is anomaly here. The water accumulated in the aquifers throughout the watershed has to be treated as public property and has to be shared by all, landed and landless in some proportion agreeable to all. This principle is evolved in *pani panchayat* experiment in Saswad *taluka* of Pune. Women and landless did not show courage to argue that they too should benefit from the watershed activity by accessing water right. NABARD too was not willing to grant funds for accessing water through borewell and pipeline for women's activity.

The late funds also have its repercussions in terms of women not showing interest in watershed committee meetings. They did participate for educational tours in the capacity building process and also for nursery activity for plantation on the common lands in the initial period but for two years their interest got suspended. They started forming SHGs once the special grant was announced, by which time the watershed activity of treatment was almost over.

Samyukta Mahila Samiti, Vadgaon Lakh

Vadgaonlakh village received a grant to undertake watershed development activity under Indo German Watershed Development Program, where grant disbursement was done by NABARD. Towards the end of the project women of the village received Rs. 4 lakh for social and economic development. Five micro-credit groups were already set up in the village covering 69 women, including women from *dalit* community. All the groups were affiliated to SMS. One hall was built as a part of social empowerment process and utensils were bought to be rented out for festival and wedding purposes cooking, so that there would be permanent source of earning for the SMS. There was an attempt to develop collective economic activity in the form of seri-culture. But it did not take off after nine cycles because of two main reasons; drought did not allow the mulberry garden to flourish after first year, and temperament for nurturing silkworms, which requires very careful tending for a short period of one month was lacking among women. Third activity envisaged was disbursing individual loans for small enterprises, such as goat rearing, dairying, poultry, bangle selling etc. Initially one lakh was allotted for income generating activity under SMS, which was a registered body.

Profile of the SHG Activity

Women were members of their own small saving group or SHG as is popularly known, as well as they were members of SMS. The membership to SMS was conditional to being a member of any one of those groups. Per month saving of each woman member was Rs. 20, which would contribute to her own SHG. The women had access to two sources for their loan needs. In their own groups they could go for consumption loans and the SMS loan was reserved for income-generating activity. The distinction was made such a way that within their groups the rate of interest was monthly Rs.3 per Rs.100 borrowing. The interest for the loan from SMS was Rs. 1 per Rs.100 borrowing and the period for returning loan was longer, ie, over the period of two and half years.

Following tables provide profile of the women members and the activities they were doing before the revolving fund was distributed.

Profile of SHGs before the Loan Disbursement from NABARD Fund

Sl. No.	Items (Variable)	WADGAON LAKH
A) PERSONAL PROFILE		
1.	No. of SHG	5
2.	No. of SHG members	69
3.	Average age	36
Caste & Education		
4.	General	79%
5.	SC.	21%
6.	Literate	40%
7.	Illiterate	60%
B) FAMILY PROFILE		
8.	Family members (average)	06
9.	Landless	22%
10.	Landholders	78%
11.	Land irrigated (average)	9.5%
Nature of work		
14.	In own farm	49%
15.	Agriculture labor	43%
17.	Service	4%
18.	Labour	4%
19.	Own monthly income (in Rs.)	469
20.	Earning persons (average)	2
21.	Monthly family income (average)	4553
Main source of income		
22.	Farming	54%
23.	Milk	12%
25.	Labour	27%
26.	Service	4%
27.	Business	3%
28.	BPL families out of 69 members	38%
29.	Bank defaulter	41%

Contd...

Contd...

Sl. No.	Items (Variable)	WADGAON LAKH
C) SHG ACTIVITY PROFILE		
30.	SHG loan never taken	43%
31.	SHG loan once taken	50%
32.	SHG loan twice taken	6%
33.	SHG loan have taken more than twice	1%
34.	Amount of SHG loan taken (average)	Rs. 960
35.	SHG loan returned out of total Saving	35%
36.	SHG loan in the process of returning	24%
37.	No of SHG defaulters	0
Purpose of SHG loan		
38.	Health	17%
39.	Function	20%
40.	Rituals	3%
41.	Household expenditure	12%
42.	House repairing	2%
43.	Agriculture	12%
44.	Business	10%
45.	Education	0
46.	Other	24%
47.	No. of rotations of loan granted	40

The caste profile shows that 21 per cent belonged to SC and education wise only 40 per cent were able to write and read. The family profile explains that landless were 22 per cent and those having irrigated land were only 9.5 per cent. Their nature of personal work throws light on their situation of financial autonomy, which complies with our experience that they were not willing to pay more than Rs. 20 per month because many of them had to ask money from their husbands. In some other villages where mainly the agricultural and construction labourers were members, they could spare Rs.50 and some times Rs. 100 as monthly saving. Almost 49 per cent were working in own farms and thus may not have financial autonomy. 54 per cent have reported that their main source of income was farming and only 27 per cent said that they were mainly dependent on labour. Monthly family income on an average was reported as Rs. 4553 only for the family of six on an average.

SHG profile shows that there was no defaulter so far and second round of lending has started, meaning the transactions were stabilising. Family functions, health and agriculture were prominent needs for loans and under 24 per cent loans were recorded as in the category 'other', which is likely to be used for the purpose of returning loans taken from the relative or buying daily necessities, etc. For business purpose only 10 per cent of loan amount had been spent.

Formulations of Rules for Lending for Business Purposes

When the SMS received grant from NABARD it became necessary to formulate rules for borrowing, which were more strict than the ones they were doing in their own groups. The loans by the SMS were given to set up businesses, ie, asset creation, which would ensure that the discipline is maintained for determining eligibility criteria for loan disbursement as well as loan repayment. Following rules were made collectively under our guidance.

- It was accepted that the amount distributed should go to all the five SHGs in an equal manner. This rule was essential because of the diverse composition of the SHGs. Surprisingly enough almost equal number of women from Amrapali SHG came forward to demand loan as from the other four SHGs and their record of repayment was also found quite satisfactory. Amrapali SHG was formed by all *dalit* women.
- Another important rule laid down was that the woman should come with a proposal of any particular income-generating activity and should stick to it once the loan is disbursed. For that two women from the group should remain guarantor. The principle of mutual guarantee is the core of SHG activity. No collateral is required for loanee
- The third rule was that the woman should not have had pending loan, mostly consumption, from the mother SHG, before she demands the loan for income generation. It was visualized that she would take the inexpensive loan to repay the expensive loan from the mother SHG. In fact, the logic used for keeping the interest rate for SHG loan higher than the SMS loan was that the members would use the loan for doing private money lending activity, which prevailed in all the villages.
- The rule for disbursing loan was strict to ensure that it would be only for the income-generating activity, performed by woman. This was to avoid tendency of men taking loan for their activity of farming and other businesses under the inexpensive loan scheme. However, it was noticed that two women took loan for peeling of *dal* (lentils) machine and it was diverted for digging of well for the family farm. They were pulled for this act of violation several times, but they could not help because the promised government subsidy did not

come through. But otherwise out of 32 loans disbursed in the first round, 31 were used for genuine women's activities, and the dairy was accounting for 19 women.

- However after one and half year now, when it was realized that still lot more money has remained in bank unutilized, it was decided to give it out to the male in the family of the woman member, but at a higher interest rate of Rs. 2 per month, for Rs.100. This revision was found favour from men, because they could now access cheaper loan compare to the informal market. Only two loans have been disbursed so far.
- The maximum amount of loan was fixed at Rs.5000 per person regardless of amount of her saving in the SHG. Usually the consumption loan is always disbursed in proportion to that of the amount of saving. The idea of fixing amount at that level was that more women should get opportunity to take loan. This idea was easily accepted because not many were planning to buy crossbreed variety of buffalo or cow.

Also, indigenous buffalo was available for approximately Rs.5000–6000. Women preferred indigenous variety because she is less expensive to maintain. This was a wise decision, we thought. Unless one was thinking of devoting full time to this activity and making a real business out of it there was no point in taking crossbreed buffalo which costs around Rs.12,000–14000. The crossbreed buffalo requires more fodder and richer nutrients such as cotton seed cake (pend). Also, she could not be taken out for grazing because she is too delicate and vulnerable to diseases.

- The repayment rate chart for each bracket of loan was prepared. Break up between the loan amount and the interest amount in the total repayment is given to each loanee with clear columns indicating how much would be the repayment of loan amount and how much was interest amount every month. The interest amount was getting reduced every month because the interest was charged only on the balance loan.
- The repayment rate was almost 100 per cent. Only one request was received for condoning half the amount of loan, because the buffalo bought by the woman member apparently died soon after she was purchased and there was no income generated from the loan. The request was rejected twice by the members. The reason given was that the purchase might not have been done with genuine interest of conducting business. It was possible that to do favour to the relative the animal was bought and unfortunately it died. However, it prompted the members to look for insurance agent and insured the buffaloes at some cost but at least get cover for risk of death of an animal. At that point the price of animal is determined by the average

rate prevailing in the animal market. In case of this request of condoning, after much discussion it was decided to condone her interest amount but the loan amount had to be paid regularly. The woman was happy.

- However, in case of insurance the experience proved negative. Buffalo bought by one member met with an accident and she could not walk. The member wanted her to be operated and went to the agent to get insurance cover. He was asked to get the proof of accident, ie, the FIR registered with the Police Patil and also from doctor about the injury. Both of them asked for bribe to supply the necessary papers. The woman decided to sell the buffalo to butcher instead of spending money on bribe and then get the insurance money to operate on her buffalo.
- How to prevent cheating was a genuine problem, although one thought that it was difficult to hide anything, when concept of privacy was a little lenient in a village society where neighbours live closely to each other. But one incident proved that women could be smarter than we thought. It was felt that the two guarantors need to be punished in these kind of cases, whose responsibility it was to check that the transaction was genuine or not. A woman member pretended that she bought a buffalo of her neighbour, but allowed to keep it in the same stable as before because she did not have a space to keep the buffalo. When questioned why the buffalo was milched by the neighbour, she replied that because she was offering Rs.100 per month to the neighbour as her salary and that she was doing that job for her. Everybody knew that it was a fake transaction and the lady might have used the loan for something else.
- The rule was made that the saving of the guarantor would be frozen/ confiscated if the loanee did not observe commitment of repayment for successively three months. This rule had not been enforced so far. However, not many instances of default had taken place.
- One novel idea was suggested by the NABARD for the type of loan to be sponsored. Activities such as buying a gas cylinder or constructing a toilet should be accorded some premium and interest rate should be zero for the same. Initially only two women came forward for loan to build latrine in their house. However, after a year later, the decision was taken by the SMS to participate in the Total Sanitation Campaign ie, open defecation free village campaign, which meant that Rs. 50,000 be kept in fixed deposit apart from Rs.1,00,000 which was used as a revolving fund. The funds were released as loans without interest for those members who wanted to build latrines. The fund was released as revolving fund for this activity.

Attempts for Bringing a Principle of Equitability

After successful implementation of the regular loan disbursement the social worker in the TISS thought of bringing new element of equitability in the scheme. It was realized that it was becoming difficult to repay the loan for those who had only one buffalo bought through the loan scheme, after the buffalo became dry and was impregnated for the second round. Out of 10 months of pregnancy it was learned that first two to three months she continues to give small amount of milk and for seven months, no income could be generated from her. Thus the idea was mooted that we should give the member holiday from paying the loan amount although the interest amount would be recovered every month. It meant that instead of 30 months duration the loan would be extended for 36 months duration, of course with interest too extended for that period. It was also suggested that we should advance another loan to buy one more buffalo if the member is keen so that she would continue her business of supplying milk to her customer and make at least some money and would be asked to start repaying that loan. Thus she would be burdened with the new loan, plus its interest and the interest of the old loan for some time. After 7–8 months her first buffalo would deliver and then she can start repaying her remaining first loan. For a period of two to three months, she would have two milching buffaloes, which would help her to put her business on track. With two loans disbursed for two buffaloes within eight to ten months, her total repayment period would be for 60 months, ie, three and half years. It is reasonable time to build a business from scratch.

After explaining the principle of equitability, that we need to help poor women to be economically independent and hence give some concessions, women rejected this suggestion by majority. In fact last year when there was a drought for third successive year, many women approached for some leniency for repayment, ie, postponement of the repayment of loan amount only, although interest would be paid on time. This idea too was rejected by majority. The reason appears to be that who took loan form minority than those who did not take and thus could not understand the difficulties of running a business. Also, one woman who asked for postponement was *dalit*.

We tried to explain the basic philosophy, which needs to be followed while conducting the loan transactions under SMS. And that was that the SMS was not there as money lender or a bank to extract surplus and make profit. The money has basically come to build their businesses. Interest is charged for servicing and not for making money.

Business Reality

The experience of dealing with this issue of condoning or postponement of repayment prompted us to investigate the realities of their businesses, especially dairy business. One of the reasons dairy business was preferred by women was because there was possibility of sale of milk within the village itself. One farmer in the village was collecting milk and supplied milk to the Sainik school in Tuljapur. Thus there was a ready market. Although the rate offered was very low, ie, Rs. 10 per liter but it was without hassle and hence it was preferred. The average yield per day was 3 to 4 liters. However, we realized that after calculations of cost of feeding buffalo and taking into account the cycle of weaning and milching, hardly any surplus was remaining with her for repayment of loan amount and interest on top. Surprisingly, none of the woman members was calculating the labour cost of tending the animals. Hence whenever the question of 'profit' used to be discussed mainly depending on their perceptions, it was based on income earned per liter minus cost of feeding the animal. One calculation was that Rs. 40 was earned for 4 liters of milk per day and the cost of feeding the same animal was Rs. 36 per day. Thus, there was a profit of Rs.4 per day while the buffalo was yielding milk. Some women reported a yielding of only 2–3 liters of milk, while it was realised that they were feeding inadequate quantity. However, no labour cost and the cost of feeding during weaning period was taken into account. Similarly no depreciation was calculated. Also, period of tending a calf and its gestating period of two years, after which the she calf could be impregnated too was not calculated. The important consideration was that it was a good investment, because at the time of emergency the animal could be sold and money could be made available for emergency consumption purpose.

Women with own farm were finding it easy to tend the animal and thus were not calculating the cost of fodder, which was made available through the left over of the crops and sometimes specially grown grass and crops varieties for the animals. Thus, for them purchasing buffalo was easier decision. However, it was realized that the repayment of loan was taking place not through the income generated through sale of milk but through some other income, either from farm or from wage labour. Thus capital formation or investment generation was not becoming possible from the income generated from the buffalo. Out of five to seven years of effective milk yielding period for buffalo, first two years were required for repayment of loan, within which period the capital formation was done from some other income. Later period of three to five years the income would be seen as a profit cum labour cost, which was a real income for

woman. However, during the same period she needed to start saving again for next loan amount when the animal would become redundant.

In case of a woman having no farm the whole exercise of calculating her profit was ridiculous. Because just one animal would not yield her much income after spending for fodder and other feed, which needs to be bought on cash. Her income was generated during the first three years of loan repayment from other activities than sale of buffalo milk alone. The point is that the capital building process is happening outside this loan transaction and not through the activity for which loan is transacted. It has many policy implications, which would be discussed subsequently.

Aseem Prakash corroborates this observation (Prakash 2002). In his paper he cites that MYRADA, big actor in micro finance activity has observed that repayment of loan after failure of income generating activity is done through the selling of the asset itself. Three prominent activities where this phenomenon was observed were:

- i) sericulture – where out of 32 enterprises initiated 12 were failures and the repayment happened through sale of assets;
- ii) horticulture – five out of 17 were failures and the plots were sold;
- iii) non-farm activities – 19 out of 33 were found failures and assets had to be sold for repayment.

It is likely that the failure might have been due to the fact that the opportunity cost for labour has not been taken into account while preparing the proposal.

The similar experiences is cited by Kalpana in her evaluation of Tamil Nadu government's initiative. Monthly repayment schedule is so strictly observed that women have to pledge jewellery, reduce their food intake, sell personal assets or borrow from the informal moneylender. It appears that the balance between the reaching poor and the sustainability of the MFI (micro finance institution) is always very difficult to manage. Any program developing as a mass program would encounter these difficulties. This particular example also makes it clear that there is a need to make segregation among poorest women and poor women, which would help designing different interest rates and different repayment schedules for these two categories of women. In this connection Malika Bose's experience of SHG women's meeting, affiliated with highly rated MFI in India, which claims to have reached the poorest of the poor women, that they were told indirectly to choose women members who have, 'ability to pay' is very revealing.(Bose 2005: p12).

Policy Recommendations

The experience of democracy among women members of SMS was very revealing. The dominant paradigm of loan transactions was so much internalized by them that they would not like to shift to other paradigm, which needs to be built as enabling but not exploitative. In a way they are trapped. On the one hand they compare their loan transactions with moneylender's business, which is a feudal practice and is still entrenched in rural life. They are concerned that their cheap loan should not be diverted to that practice. On the other hand, in the modern times the government has made available agricultural loans to the farmers through variety of mechanisms as an alternative to the moneylenders. But the interest rates were kept so high that majority of them became defaulters. Capitalism did not help to erode money-lending practices of the feudal era. In this situation, NABARD's grant as a revolving fund came as an ideal alternative. It combines the advantage of 'easy access to loan' from feudal era, and 'the principle of cost of servicing to be recovered' from the modern times. If some mechanisms are built in for poorer women, this third alternative would help to generate surplus with these women. Policy makers should realize that they should not whip up women for contributing to enhance their fund by paying high interest rate to sustain and expand the micro-finance institution activities.

Another important consideration could be to explore whether along with credit, women members are also given advantage of the Employment Guarantee Scheme. Tending of animals is a productive activity, which could be carried out with payment of wages at least for the period of three years. ie, during the asset building process. The wages could be at par with the wages of woman agricultural labourer in that area. It should become possible because although the EGS in Maharashtra is supposed to be used for infrastructure building activities in the countryside, some funds are also diverted to horticulture development program, where the benefits are going to the farmers with land. (Horticulture Development Program, under EGS: 2002, Agriculture Department, GoM) Farmers' labour cost is reimbursed through the EGS fund. It is interesting to note that the brochure mentions that tenant can also apply for the scheme provided he shows the agreement of tenancy. In the same vein it can be suggested that asset building activity of individual women, ie, dairy business, particularly for those women who belong to the category of BPL could be helped under the EGS, for three years. Their name could be erased from the EGS list once they avail this benefit.

Conclusion

We have focused on the issue of micro-credit activity within watershed project and more specifically on the 'effects on assets' and suggested strategies to overcome some of the barriers created by straight-jacket rules observed by many micro-finance institutions including NABARD, which is funding both SHGs and also watershed activities. We proposed that the goal of these activities has to be to stabilize individual enterprises and not to give doles.

It will require that women members get convinced about more flexible interest rates and loan repayment schemes for diverse needs. In addition, the state should design some assistance in terms of application of EGS rules to support building of poor individual women's enterprises. These enterprises could be dairy or horticulture. In fact micro credit activity is noticing some kind of stagnancy and unless some radical changes are thought about the business proposals the micro-credit movement would not go forward.

Many researchers have advocated that many services need to be provided along with SHG activity, which can be instrumental in improving livelihood opportunities through a combination of raising incomes, reducing vulnerability or alleviating oppressive debt relations, along with implementation of multiple projects benefiting the same beneficiaries gaining access to more than one intervention, such as building skills and providing access to water and sanitation. We think that this wisdom needs to be incorporated with the schemes designed by Mahila Arthik Vikas Mahamandal (MAVIM) in Maharashtra and other micro-finance institutions. Loans with Employment Guarantee Scheme would help to stabilize the businesses for the women of BPL families and would provide the intended multiplier effect.

While advocating for women's inheritance rights in case of land Agarwal (1994) has emphatically said that donor agencies and the government, must shift their focus away from the preoccupation with micro-credit delivery towards the creation of productive assets, especially landed assets, in women's hands and towards enhancing women's capacities as farmers. SHG program within watershed activity too would become more meaningful and equity principle would appear more embedded within the design rather than remaining as a fall out.

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Women in Watershed Project- The Intended Clients? Experiences from AKRSP(I)

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Abstract

Though 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 male-dominated user groups and watershed committees. The provisions of nominal representation for women in the committees is an attempt at 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’. This paper makes an attempt to analyse some watershed programs where women have not been involved and some cases where women were involved and a comparison was made to understand the reach and benefits of the program to community as a whole and women in particular.

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. Add to that, 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 the CWC

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revised estimates in 1996 point out that India has already created about 64% of the ultimate potential for irrigation: 89 million ha out of about 139.9 million ha from all sources².

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 rain-fed areas. As of now the only program which caters to the needs of rain-fed dryland farmers is the watershed program. The participatory watershed development program in India, started in 1994–95 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 male 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. If the opportunities and access to decision-making institutions are not equal to men and women, 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 program 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 program in this context, trying to ascertain the actual involvement of women in program 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 program and the scope it offers for empowerment of women.

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

Women and Watershed – Review of Existing Policy and Program

Drought proofing in ecologically-sensitive areas of India has been one of the priorities of the state. Central government conceptualized programs like the Drought Prone Areas Program (DPAP) and the Desert Development Program (DDP) in 1971 were started 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 programs. The most important among these was the Technical Committee headed by Dr Ch Hanumatha Rao (1993) which brought in a real shift in the program.

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 program in lieu of involvement of women.

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 prerequisite for getting

sanction for the project plan and then simply left out. 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 program 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 SHGs 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. Women 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.

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 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 watershed development is still viewed as exclusively a private land-based program 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 re-inforced 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.

Gap between Actual and Espoused Impacts

The watershed program 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 it still fails to achieve the two significant objects envisaged in the program; 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 program 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 balance of species and some shrubs, grasses and trees valued as medicinal herbs or food by women and poorer households.

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.

Impact of Watershed Program 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. It would be interesting thus 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 - one, 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 perspective by noted economist Maitherey Krishnarajan, thus having the added advantage of using authenticated secondary information.

Cases of Watershed Treatment with No Specific Efforts to Involve Women

Hiware Bazaar Watershed Development Project, Maharashtra

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

- *shramdaan* (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 per cent 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 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 <i>shramdan</i>	: 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 program 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. Lastly, 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.

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.

Mokasar Watershed Development Project, Gujarat

The Aga Khan Rural Support Program (India), working since 1985, believes in enhancing rural livelihoods by empowering village organisations to manage their natural resources. It adopted a watershed approach (ie, 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 Program, 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 groundwater availability. This has resulted in number of borewells 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 in the villages.
- In many cases with improved incomes and increased labour availability, 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 recharging borewells.
- 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 the '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 watershed development did not lead to empowerment of women. Women's involvement in the initial stages was limited to formation of three SHGs. However, two of these SHGs were already on the verge of being defunct. The only involvement of women has been in contributing labour in the construction of WHS and in the implementation of the drinking water supply scheme. In fact 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 lacking and the watershed committee has never shown confidence on the SHG for release of the revolving fund. In spite of this 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.

Cases of Watershed Treatment with Specific Efforts to Involve Women

Piprali Watershed Development Project, Gujarat

Piprali village of Chotila Taluka is in Surendranagar district of Gujarat. It is a predominantly agriculture based rain-fed village. 61 per cent of the households in the village own land and 72 per cent of the land is rain-fed. 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 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. 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 program were then started.

Discussions with the women in this village on the impact of watershed project have revealed the following:

- constructions of water harvesting structures has increased surface water availability and also lead to enhanced irrigations.
- crop production almost doubled for most crops particularly, cotton, groundnut, paddy, pigeonpea, 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. 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, 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.

Life has changed in many other ways – women have better clothes, men consult women on several issues within the household, women have an identity and are able to control more cash. New roles have come in, for eg., marketing of produce, women now also operate buttermilk churning machines, the flour mill and electrical gadgets on their own. Champaben, a 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.”

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 work as labour on wages. 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 rain-fed, 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, TVs 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, 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. Livestock per household has also increased as the SHG has been able to leverage the benefits of SGSY scheme. 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 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.

Analysis of the Case Studies

According to Marcella D'Souza (1999), 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.

Using the framework, 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 are more concerned about the lack of drinking water. Thus in most watershed projects, where women are not given an opportunity to raise their concerns, drinking water had 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. In fact 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.

Financial security in terms of credit is limited as is the case with most SHGs in India. Watershed projects 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, women have specifically mentioned their increased control over cash. In fact with women's milk cooperatives coming up in villages where women's groups are strong enough, women have direct access to the increased income from livestock. Increase 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, women leaders became increasingly confident and articulate, but they had little say in the 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, tremendous results could be achieved from this very program in terms of women's livelihood improvement and empowerment (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	<ul style="list-style-type: none"> • Increased food security • Increased availability of labour and reduced migration • Increased Income from agriculture • Increased access to credit • Increased access to fodder 		<ul style="list-style-type: none"> • Increased Agriculture Workload • At times increased groundwater irrigation may reduce availability of drinking water in the long run
Watershed projects with specific efforts to involve women (in addition to above)	<ul style="list-style-type: none"> • Reduced drudgery of drinking water • Increased Income from livestock • Increased access to alternative fuels 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Increased livestock management responsibility

These are the experiences from different initiatives which are successful in addressing many key issues relating to gender imbalances. They clearly indicate that with a specific focus on involving women in all stages of the program, not only can we address their practical needs better, but that's the only way to address their strategic concerns.

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. However, 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.

If the implementing agency has consciously introduced this gender component in the program implementation, there is a higher level of women's

empowerment. Watershed program, implemented with this perspective, lead to increase in awareness about government programs among women.

Conclusion and Recommendations

The traditional “watershed treatment” approach with its focus on physical treatment of land has quite neglected both the practical and strategic gender needs of women. 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. These demonstrated strategies though in different contexts are highly relevant and, the learnings be included into the mainstream watershed program. The learnings need to be incorporated at policy level, if the changes are desired at a wider level.

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 leads 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 output marketing. However such an integration of economic and physical infrastructure activities can be achieved by designing appropriate village organizations which may offer an alternative to the “only micro credit” or only watershed (physical) treatment.

This needs to be further cashed upon as an opportunity ensure greater involvement of women in watershed projects. Until now women’s participation in watershed has been limited to SHGs. These 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 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 SHGs. A special component of provision of specialized agriculture extension for women needs to be built into the watershed project. This however, should not again be biased for crop production but looking at the farming system's approach.

Women with their varied requirements from natural resources would thus also be able to articulate their needs better at common forums. This needs to be further supported by providing women more institutional space in the project management. The current token membership of 33% is inefficient and needs to be raised to 50%. Also instead of just having women's SHGs, a common forum for women at village level needs to be developed in the form of a women's development committee.

There is also need to promote a *mahila sabha* thus along with the gram sabha to plan separately for the project, which then can be incorporated in the main plan. Also watershed projects could have a separate women's component plan, with the authority to plan and execute works from this fund going to the *mahila sabha*.

The guidelines clearly envisage and emphasizes on institutional development at village level with focus on gender and equity. What is now essential is to bring it down to implementation level. There is need to re-orient 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.

Women and Water Sector Reform: Implications of Feminist Politics

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Abstract

This paper tries to understand the impacts on women vis-à-vis some of the broader feminist goals which strive for changing power relations between men and women and between different groups. It tries to look at concerns like voice, decision making, inner strength, confidence, access to a range of tangible and intangible resources and the potential it holds for challenging gender inequities. Methodologically this is not an easy issue given that women have largely been silent on the impacts of reform in domestic water sector and the irrigation sector. The paper analyses the Maharashtra government's domestic water and irrigation policies and its impact on women.

Introduction

Impacts of any program on women could be assessed in two ways; the first assessment is a simple one, which is measured against the mandate of the program, the other, is a more complex assessment, which is based on the broader feminist goals, set by the researcher or the change advocate. Much of the present research builds on synergies between feminist goals and what are the 'approved goals' by the establishment/donor agencies. Feminist vision of addressing inequities in the larger patriarchal context and measuring change vis a vis that subordination is rarely seen as a goal worth pursuing. Typically, therefore we see gender analysis undertaken using this broad framework of poverty, efficiency and welfare. Although, these are important indicators, which have a bearing on women's empowerment, in the long run the analysis usually does not proceed from there.

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1. This paper draws on some initial findings from the on going study titled 'Water rights as women's rights? Assessing the scope for women's empowerment through decentralised water governance in Maharashtra and Gujarat, supported by IDRC Canada. Sneha Bhat and Ashwini Bokade from SOPPECOM have assisted in collating some of the findings required for this paper.

Theoretical interest around the relationship between women and natural resources has been there since the early 1970's. Much of this theoretical discourse was informed by larger debates around the ecological critique, the limits to growth (SOPPECOM-Utthan 2005), and the structural critique of the process of modernization and the feminist critique of marginalization of the poor women, women as victims of resource degradation (SOPPECOM-Utthan 2005, Agarwal 1992). Rural women were seen as the victims of the deepening environmental crisis as they are responsible for the subsistence of the household through collection of fuel, fodder and water. Much of this thinking was shaped by eco-feminism, which argued for a connection between women's exploitation and the ecological crisis.

There has been a shift in the debate from women as being the victims to women as the solution to the problem as they are the privileged knowers of the natural resource base. Most development thinkers picked on this theorization and increasingly argued for greater participation of women in the regeneration of the natural resource base.

One of the important critiques of this thinking was the need to see such theorization and the programs woven around it as adding burden to women's responsibility and not alleviating it. Women's access to tangible and in tangible resources was not an area that was seen as important from women's empowerment point of view. The framework for the study is drawn largely from the work of feminist political ecology (SOPPECOM-Utthan Rocheleau et al. 1996) and feminist environmentalism (SOPPECOM-Utthan 2005 Agarwal 1992), which share a number of core concerns around a more dynamic conceptualization of women's relationship with the environment. They see the relationship as being located in larger social, political structures and cultural practices, and in the symbolic construction of power. Women's special relationship with the environment emerges from the work they do (the gender division of labour). Their incentive for water management is not just related to their resource dependence, but also to social and institutional structures, which do not allow them the same access to resource rights, economic opportunities or decision-making as it does for men.

The study is located in the sector reform era of the water sector in Maharashtra and covers reforms in drinking and domestic water as well as irrigation sectors in the state. The study area for the domestic water sector covers 18 villages across six districts of Pune, Chandrapur, Satara, Sindhudurg, Jalna and Jalgaon. These six districts are from six different agro-climatic and socio-

economic zones of Maharashtra representing different water and gender contexts. For the irrigation sector seven water users associations (WUAs) are being studied in largely those that fall in western and northern Maharashtra. Most of these WUAs have been newly created under the recently Irrigation Sector Improvement Project of Maharashtra.

The paper presents some of these initial findings.

Domestic Water for Women and Irrigation Water for Men – The Ideological Divide

The domestic water sector policy says a lot more about women than does the irrigation policy. In fact, domestic water falls within the welfare arena and irrigation falls in the productive sphere, so naturally women are seen as fulfilling the welfare needs of the household. Irrigation on the other hand does not acknowledge the presence/role of women as farmers, although, women are actively engaged in agriculture and in irrigation. Their participation in committees however, has not been recognised, as is evident from the legislation, which allows only landowners in the command areas to become members of water user associations and women as we know are the largest property-less group.

If we look at some of the legislative elements in both these programs we find that the domestic water sector provides women a greater space in its design through larger membership which is 50%; independent fora in the form of a women's development committee; financial allocation for setting up some income generation activities in the form of the Women's Empowerment Fund and also a capacity-building program. Here we see that the policy has introduced a number of positive elements for women's participation yet we find little progress in terms of their participation.

The irrigation policy and legislation on the other hand is largely male dominated. Introduction of the MWRAA, MMIFSA has in fact allowed for tradeability of water and says little about equity in access to water. Here we find very little space for women to participate. Although, due to efforts of different organisations the MMIFSA has introduced a quota for women on the managing committee, but the policy design has completely missed the inclusion of women as members to the WUAs. Women from land holding families are as much or more involved in agriculture as their men. But lack of a land title decides who could be a member. This is a flaw in the design itself and women who share a larger work

burden in agriculture and have knowledge in irrigation are completely left out of the ambit. The other problem in both these legislations is related to water charges being dependent on the number of children a household has. This in a way is demeaning for the women who are rarely able to exercise any control over their reproductive rights.

Maharashtra is one of the important states in the country that has introduced sector reform process in the water in a big way. It is expected to lead the way for the reform process in the entire country through the model laws and policies launched recently supported by the World Bank. This section gives a very quick overview of the salient features of the reform process in domestic water and irrigation sub sectors.

Domestic Water Sector

The sector reform process in the domestic water sector essentially moves away from the supply driven approach followed till the mid 90's to an approach which was demand responsive, based on 'devolving' of responsibility to the PRI, leaving technological choices to the community and importantly expecting 100% O&M from the users. The reform process also emphasised importance on protection of the source as an integral part of the scheme design. Its key features include involvement of the PRIs in water supply schemes; full ownership of drinking water assets; formation of village water and sanitation committees under the *panchayat* with a third of the members being women and proportionate representation of SCs and STs community, contribution of 10% of capital cost of the project with 50% of this amount to be paid in cash; full O&M costs to be borne by the communities and an integrated approach which includes water conservation and water harvesting schemes.

Sector reforms in the drinking water and sanitation sector in the state of Maharashtra, western India, have been a long drawn process since the mid-eighties. In the years that followed the World Bank launched the Maharashtra Rural Water Supply and Environmental Sanitation Project (1991 to 1998) covering about 560 villages in 10 districts. All these schemes were centralized schemes but focussed on community participation especially of women in management. This was followed by Aple Pani (our water) program which was initiated in 2001 on the lines of the Swajaldahara launched at the Central level. This was followed by the Jalswarjya (self governance in water program) with support from the World Bank (over \$200 million dollars). It follows more or less the same principles of Swajaldhara, but varies in some other ways for

eg. Maharashtra is the only state in India where the water committees are expected to have 50% elected women members as against the 33% in other states. There is also a separate committee formed for women's empowerment called the Women's Development Committee and a special fund is allocated for women's empowerment called, the Women's Empowerment Fund. *Mahila gram sabhas* (village women's assembly) are made mandatory and have to precede the general *gram sabhas*².

Overall, the restructuring is expected to a) involve people in decision making, b) bring in women's empowerment and c) bring in source sustainability.

Irrigation Sector

Of late, the issue of equity has received increased attention through the sector reform in irrigation as a national goal. The mid 90's has brought in the sector reform agenda with a whole new set of elements together popularly known as Irrigation Management Transfer (IMT) or Participatory Irrigation Management (PIM). These set of reforms are driven by the need to address the inefficient management of the irrigation systems. The thrust, unlike in the previous decades, is on organizational and institutional reform rather than seeking solutions in irrigation technology (Zwartveen, 1998).

The salient features of this reform are

1. Decentralized management of water through formation of water users associations (WUAs) at the lowest level referred to as the 'minor' level. Unlike the *pani samitis* of the drinking water sector these are autonomous bodies with no linkage to the PRIs. This is mainly because command areas of irrigation projects do not coincide with the administrative boundaries of the village.
2. Administrative allocation of water at the minor level now to be done by the users groups/associations themselves
3. Operation and maintenance (O&M) responsibilities also shifted from the Irrigation department to the decentralized water users associations (WUAs).

In Maharashtra these elements have now been formalized through the recent legislation titled 'Maharashtra Management of Irrigation Systems by Farmers

2. Village assembly to discuss development issues in the village.

Act 2005 (MMISFA). Prior to this legislation, the state had encouraged voluntary efforts to register WUAs under the Co-operative Societies Act. But this was not a mandatory requirement yet several WUAs got formed thanks to the efforts of a few NGOs and farmer groups in Maharashtra. The new legislation comes along with a loan package from the World Bank for irrigation sector reforms (2005) under the aegis Maharashtra Water Sector Improvement Project (MWSIP). In order to operationalise the sector reform state government has created a regulatory authority for water, which is called Maharashtra Water Resources Regulatory Authority Act (MWRRA). Apparently, both MMISFA and MWSIP talk about women. The MMISFA in its rules allows for three women members of WUAs to be appointed on the managing committees and one term in every two years would have a woman as the president of the WUA. According to the MWSIP specific gender strategy (which has not been outlined in the document) has to be prepared in order to ensure active participation of women and to ensure access to project benefits at par with others (World Bank 2005). The MWRRA states in the act that water charges for those beneficiaries having more than two children would be 1.5 times higher.

Unlike Jalswarajya, the MWSIP is silent on women's participation. The terms of women's participation are not clearly spelt, membership is restricted to landowning men and women and therefore representation to decision making committees too is restricted to them. For effective implementation of the sector reforms project, the government has also introduced a new set of policies and legislation.

To sum up, it may be noted that institutional and economic reform is at the centre of the sector reform agenda. Decentralisation, pricing and cost recovery and efficiency therefore become important measures for this reform.

The Impacts: Some Initial Observations

As noted in the previous section, reform in the water sector has been packaged along with economic reforms as well. We therefore need to analyse the combined effect of these on the gender question. The impacts will have to be assessed in two ways: a) those that are dis/empowering to women themselves as a result of participation in the water program (eg. membership to water related institutions, improved access to water) which may or may not benefit the water program as understood in its current paradigm and b) those with bearing on the larger inequities as a result of female subordination such as changing power relations between men and women at home and outside. The

second kind of impact is difficult to assess in short term studies, but the two are interrelated in a way that can either challenge the present patriarchal order or can remphasise it. This impact analysis will try to see what potential the policy and the program holds for challenging the patriarchal order although it may not be so explicit at this stage.

The impacts have been captured on the following aspects:

- organization of labour;
- control over resources;
- membership to water related institutions/presence in the public sphere;
- participation in decision-making processes;
- changing power relations in the different arenas like family, state, community and market;

Organization of Labour

The field observations indicated that whereas gender division of work in the water sector has remained unchanged, there has been some reduction in the time spent by women on the various water related activities. This was observed in 3 out of 18 villages where the two schemes viz; Jalswarajya and Aple Pani have been fully implemented, and tap water was available, though on an erratic basis. In these completed villages, women's access to water had considerably improved and water was at their doorstep. This seems to have generated positive impact on women's health owing a) reduced drudgery; and b) improved quality of water.

The reform process also introduced other forms of work for women. Women's participation is central to the effective functioning of the program. Their participation in leading the campaigns to collect capital contributions, operation and maintenance is seen as critical. Their voluntary labour is sought to lead campaigns for total sanitation work. Although this has opened up new spaces for women in public domain, their participation here is a mere extension of their work at home, which is again voluntary and unpaid. Women's voluntary spirit is invoked and the time spared from water collection is largely to be put in this kind of work at least for some women. This is to increase the efficiency of the scheme implementation.

As against this in the irrigation sector we see that women's participation is silenced out as it cannot lead to efficiency or improvement in the larger program. Whereas women are engaged in agricultural operations and also

in activities related to irrigation, we hardly come across women either owning land or being members of the WUAs. The experience of women in managing committees is too recent and hence we have not been able to understand the ramifications of this on women's time in the Maharashtra context. Examples show that improved productivity leads to increased work burden for women. Given that the domestic responsibilities, including caring and rearing roles, of women remain unchanged increased productivity through irrigation implies increased work burden without any substantial gains to them (SOPPECOM 2004, Vasavada 2005, Zwartveen 1998).

Control Over Resources

Women's access to water is restricted by their ownership and control over land. Of the 39 WUAs covered under the study women's land ownership was limited only to 10 per cent. In most cases passing on the ownership to women was mainly on account of preventing the family's land from being taken away under the Land Ceiling Act. Water rights that come along with the ownership of land has not really changed women's status within or outside the family. Access to markets, credit and social relationships are still very much controlled by the men of the household. A legal title to land nevertheless offers women economic security in the event of a breakdown of the marital relationship. Control over resources thus seem to hold the potential to challenge patriarchy if of course women's capacities can be built and their social political and economic networks can be expanded.

Membership in Water Institutions

WUA, which until recently was to be registered as a co-operative society with the new legislation, would be registered under a new Act. Like entitlements, membership continues to be with those who own land in the designated command areas. If women own land in these commands they become members or else they remain outside the WUA. This not only excludes landless women but also women who come from landowning families and who may hold a stake in lands that would be irrigated. In terms of the impact of membership to WUAs, the women we spoke to were not even aware that they were members. They were glad that we went to interview them because of which they became aware of their public roles. This also shows that quotas mean nothing unless a very favourable environment is created for women to participate meaningfully.

In domestic water, the situation is qualitatively different because of the proactive efforts for ensuring their involvement in management of drinking water. Hence, women were already aware of their membership in committees, etc., and also came out to occupy the space in the public domain. This indeed is a positive step. Mobility of women however, varied across different districts and across class and caste, and was also influenced by the prior experience. The new space created for women thus holds some transformatory potential that possibly, may lead to empowerment.

Decision-Making Processes

Decision-making can be broadly defined as who has access to the rule making process, defining goals and having the capacity to pursue the goals. Within this also we need to understand what are the different levels of decision making and how are they organized. For example, transfer of rights to management to WUAs by the government can be interpreted as a very democratic step. Nevertheless, in reality the key rules pertaining to allocations, entitlements and arbitration are set by the state and it is only the implementation that is handed over to the WUAs. This suggests a clear hierarchy between the state and the communities. A similar phenomenon is also observed in relations among different social groups and between men and women.

In the WUA we do not see women at all. Although they hold positions in the managing committee as per the new rule, they are not aware of their roles or have no knowledge of their membership either and therefore cannot participate in the decision making. In the domestic sphere these women are seen taking what can be called as the smaller decisions for e.g. what food to cook, how the money allocated for domestic expenses be spent on the agreed items, supervising women's work on the field, etc. However, the more important decisions of who would go to the market to sell the goods, who would decide how financial allocations have to be made in the house, or who would participate in the key meetings of the WUAs are all taken by the men. So in a sense the decisions of consequence are taken by men while women are to remain happy with other kinds of decisions which do not necessarily threaten the existing social order or for that matter effect change.

Women seem to be quite complacent about their subordinate status in decision making processes. Selection process of these committees is arbitrary. Women who have either been active in the past, and "who have proved their mettle" in a very conventional sense of being a good wife, mother and daughter and yet have been able to function in the public sphere is preferred and selected.

If such women are not available then the selection is made on the basis of the family links ie, wife or daughter- in-law of those who hold significant influence in the community.

Participation

Participation should be measured on the basis of where the women began from. Mere presence in public meetings can also be considered an empowering measure for those women who had not stepped out of their houses, but that cannot be an empowerment measure for those who have been there in the public sphere for long. In Pune district, coming for meetings cannot be considered as empowering as making a difference to decision making. There are of course differences across the districts. Only 2–3 per cent of the woman who were interviewed revealed that their participation made a significant change in the way the programs were being designed or implemented.

It was observed that women from different castes have been brought onto the committees but what has been ignored is that there is a class within a caste as well. Poor women within different caste categories are not able to participate in the meetings as there is a severe economic constraint to do so. An issue that needs further enquiry is whether women's participation in the meetings is at the cost of their health and time. In Jalwarajya for example, women said that they had traded their saved time from drawing water with increased time spent in meetings and campaigns. Not all women necessarily complained about this as they had also gained a public presence. As a result of this, they had got an opportunity to come together and discuss some new things. But women from poorer households and scheduled caste households said that this was draining them as they had to miss their daily wages and therefore preferred to stay out of these meetings.

Women's participation in WAUs was completely missing and were eager to know more from us. They also voiced their concerns in terms of the location, timing and the culture of the meetings. Some of them suggested that the meetings should be convened in schools or at someone's residence, and also that separate meetings for women should be organized so that they can participate effectively.

Women indicated formal structures as barriers to their participation (Agarwal 1994; Loes Schenk-Sandbergen 2004). Should this mean that the formal institutions be done away with or does the culture of those networks to be

changed? Recognizing the importance of women's informal channels of negotiating their claims in decision making and participation, it is imperative that the formal institutions should also start addressing the issues of gender inequity and gender division of work, both in domestic as well as public spheres. Perhaps the formal committees should also go beyond their role of managing of water and address issues of how and who spends time on collection and utilisation of domestic water.

Final Comments

The findings show that water policy and its gender component is shaped by the current roles that women engage in and does not tread out of that framework. In that sense the state has clearly laid out its framework of not questioning the existing system. However, while doing so it has also created some spaces which need to be used innovatively. For example representation of women, introduction of *mahila gram sabhas*, etc., which can be turned into opportunities for challenging inequities. The space to be found here is to actively get involved in building capacities of these women to question and challenge the dominant frameworks. They need the physical and mental space to think and reflect and ask a set of questions that are often taken as part of the traditional customs and beliefs, which go unquestioned. In the studies around women's participation in PRIs the role and influence of traditional authorities has seen to be a major constraining factor (Kripa Ananth Pur 2004 cited in Mukhopadhyay 2005).

Women's acceptance of their status and therefore their secondary claims on all the productive resources at the household level is well known. This voice often gets interpreted as reflecting women's choice of remaining secondary. It is also a reminder that choice is often restricted by the presence power relations. The gaining of a social sanction is an important area that women see as a space, which otherwise may imply patriarchy reasserting itself.

Women's voices varied across the different areas that we visited, some where women did make very overt protests and some where women negotiated and had their way but in others where women basically believed that unequal relationship has to be accepted and not to be seen as an injustice. Obviously interpretation of these voices is a complex process and there is a thin margin between what women really believe and what they say they believe. These perceptions would not change unless there are options that these women could be made to see as real possibilities within their lived experiences. It is here that one could see a critical role for the women's movements/groups/

NGOs, and water rights movements. With an enabling framework given by the state, it is the civil society actors that really need to take the lead in facilitating a transformative agenda. Wherever such movements are active, outcomes have been positive in terms of challenging gender relations. Thus, any approach that addresses the range of issues discussed above would be of significance from the view point of gender equity.

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Watershed Development in Madhya Pradesh: Implications for Women

Experiences of Action for Social Advancement

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Abstract

Women's empowerment is a larger goal, much beyond the ambit of watershed project. The challenge thus is to reflect on the dominant approaches for 'mainstreaming' gender into development. Interventions such as watershed development may then be seen as part of the larger vision where it operates in tandem with a number of such initiatives in a mutually reinforcing manner. Action for Social Advancement (ASA) has been working for over 10 years on rural livelihood security of the predominantly tribal communities living in western Madhya Pradesh and eastern Gujarat. ASA's response to the commonly observed yet extremely dire situations of poverty and exploitation was mainly to focus on the natural resources and the socio-economic in the region. It followed a "watershed plus" approach in tapping the potential within the realms of feasibility. ASA's experiences show that practical needs of women can be met and strategic space such as attendance in watershed development committees can be created directly within the processes of watershed development process. However, that does not guarantee that women will be able or apparently willing to utilise the space for larger goals of empowerment and development. Its experience shows that the most successful vehicle for promoting women's empowerment at the village level comes in the form of SHGs set up for micro-finance purposes.

Introduction

Action for Social Advancement (ASA) has been working for over 10 years on rural livelihood security of the predominantly tribal communities living in western Madhya Pradesh and eastern Gujarat (districts of Jhabua, Ratlam, Barwani, Khargone, Ujjain in MP. and Dahod and Godhra in Gujarat). The region is characterised by predominant tribal (Bhil and Bhilala) population whose livelihood depend on the degraded natural resource with subsistence

agriculture and low land productivity (5–8 times lower than state average). Food insecurity is a major problem despite high incidence of migration. The age old phenomenon of exploitation by moneylenders is rampant; low literacy rates among the tribals make create further impediments for exit from the vicious circle of low land productivity, market exploitation, and limited options for livelihood enhancement further leading to subsistence agriculture.

ASA's Interventions in Watershed Projects in Madhya Pradesh

ASA's response to the commonly observed yet extremely dire situations of poverty and exploitation was mainly to focus on the natural resources and the socio-economic in the region. Watershed Development Program, following a "watershed plus" approach, assumes a central place in this approach for enhancing people's livelihood. The watershed plus approach consisted of the main features mentioned below:

• <i>In-situ</i> soil and moisture conservation	• Agricultural extension and development
• Water resources development (construction of small and large harvesting structures, irrigation management)	• Common property resource management
• Strategic plantations	• Human and institutional resources development, together with
	• Micro-finance activities.

A key feature of ASA's approach is harping on value addition and income-generating measures through out the project implementation phases right from the project design to planning and execution. This not only helps in getting better results but, also in ensuring greater harmony within the community during implementation, thereby better sustainability in the post-project period. Similarly, women's empowerment is one of the key objectives of watershed development implemented by ASA. However, the objective of women's empowerment in watershed development have always been realistic, and based on the assumptions that it is a long term goal and that not all activities aimed at women will be successful.

Women in ASA's Project Area

The initial interactions with women in the project areas, once again reconfirmed the subordinate role of women both in the family as well as production spheres.

Women are seen mainly as supporters to the male head of the households though, their roles in child and health care and livestock rearing assume special significance. Women also play a vital part in managing the cropping pattern which takes care of maximising food and fodder availability while minimising production risks.

Some of the important features of gender inequality in the context of watershed development have been highlighted as follows;

- fewer women than men participate and their involvement in planning and decision-making is marginal;
- in most cases women are neither able exert control over implementation processes nor, over sharing of benefits
- managerial skills and decision-making authority remain “men’s prerogative”.

The major steps for addressing the issue of gender inequality include:

- collected sufficient, relevant and correct baseline data on women;
- decided what is feasible in the local context;
- created practical space for women to participate;
- created strategic space for women to participate;
- raised awareness amongst both men and women community on inclusion of women.

Gender Empowerment: A Pragmatic Approach

Adopting a somewhat pragmatic approach, ASA believes in tapping the potential within the realms of feasibility. This enables to decide what can realistically be achieved in terms of women’s empowerment, given the project resources, timeframe and local community dynamics. This decision must be based on a thorough assessment of the context specific situation within which women are located. This involves understanding the local dynamics influencing women’s participation in public spheres.

ASA set out the following as achievable objectives of empowerment in its watershed program:

- raise awareness amongst women of the role they can play in decision-making (including awareness on why their opinion is important);
- raise awareness amongst men as to the role of women and why their inclusion is important;

- create practical space for women to participate: ie, by reducing time spent in meeting practical needs (eg. collection of drinking water, firewood); by making a policy to encourage women's participation in training programs; by working on financial empowerment. This will also engender feelings of trust in women about the project;
- create strategic space for women to participate: (whether sustainable or not) – through mandatory inclusion of women on watershed development committees (WDCs), formation of women-only watershed development committees and self-help groups (SHGs) and prioritisation of those.

A project must enable women to participate. It must therefore address their most immediate practical needs, as the tasks required to fulfil them are often quite time consuming hence, at times, a barrier to regular and sustained participation. The goals pertaining to meeting the practical needs of women include:

- ensuring that watershed development activities provided solutions to women's critical needs/duties related to water, fuel wood and fodder;
- making it mandatory for 50% of participants on all training courses and exposure visits under watershed development to be women;
- providing for financial needs of women through establishment of SHGs, and enabling women to access and avail of low interest credit.

The experiences suggest that without addressing these needs, it is very difficult for women to participate. Addressing such needs not only creates spare time among women, but more importantly, convinces them the project is relevant and sensitive to their needs. This forms a solid basis for a relationship of mutual trust. Of course in achieving these goals there are numerous challenges.

Creating strategic space for women is even more complex. This is to be attained in a manner that is acceptable both to women and the wider community. Past experience of ASA suggest that participation in planning and decision-making is achieved through working in small hamlet-based groups. The question that arises in this context is that of selecting the right kind of community based organisation (CBOs) that are more acceptable to women and to wider society, and to which women more readily will be part of. Also it has been recognised that the space created for women in CBOs may not sustain beyond the project period. Nevertheless there is still merit in creating such spaces as part of the project implementation as these may set examples of breaking the stereotyped images of women and their involvement in the public spheres.

ASA worked to create institutional space by:

- ensuring that each Watershed Development Committee (WDC) had a minimum of 35-40% women members (the women themselves being members of SHGs);
- organising women into women-only SHGs, to gradually but steadily capacitate them so that ultimately, they can participate in the development process. Similarly by giving priority to the formation of women-only groups;
- in villages where women-only groups exist, discouraging men's groups from forming, since experience shows that male groups tend to dominate and give little scope for women's groups to surface as decision-making fora;
- making provision for grooming of female village-level workers (10th Standard pass) within the project team.

In reality, participation of women on WDCs has not been successful, primarily due to a lack of sustained effort and follow-up on the part of ASA due the paucity of funds for capacity building. NRM remains very much the male domain in this society. It must be remembered that creation of institutional space is a long term activity, and will not become a sustainable space over night. Yet as previously mentioned, the process of creating this space and its short-lived existence is also important.

On the other hand, SHGs have proven to be a successful institution for mobilising women in the project area and creating a formal women-led community organization. It has been observed that women members have been availing of an average amount of Rs. 5000 from the SHGs, primarily for purchasing agricultural inputs and implements. This has helped elevating women's role in the production spheres within the households. Most of SHGs are now federated. The federation provides funds for credit and takes strategic decisions on behalf of the member-SHGs. A critical issue facing the organization is how to align these strong, SHGs to natural resource management within watershed projects. The issue has bothered many of the practitioners working towards women's empowerment through such projects. Often it is the small activities that can have a significant impact. ASA's policy of grooming 10th standard pass local village girls as project workers was a great success, firstly in terms of quality of work completed and secondly, acceptance of their new role within the local communities themselves. Often, they were found to be inspirational characters amongst the local female communities.

Social norms and opinions of male family members often restrict a woman from participating in development activities. There is occasion to discuss with the male community why women need to be included, and at times, prioritised.

This involved continued engagement with women and men to convince them on the importance of women's participation and in various stages of watershed project, especially formation of SHGs and other local institutions.

Impact on Women's Empowerment

Some of the important impacts on women in the project villages have been listed below.

Practical Needs

Water resources development has provided women access to a permanent source of water that they can use to bath, clean clothes and wash. However, drought has affected the effectiveness of this program.

- Regeneration of common and forest land in some villages has led to an increase in fodder availability, tree species and non-timber forest products – the collection of which continues to remain as woman's responsibility.
- Women are now able to access credit and save through the SHGs – both these are significant advancements in terms of women's empowerment. This also reduces their exploitation by private moneylenders. However, their ability to capitalize on this opportunity depends on other issues such as changing social/cultural norms.

Strategic Needs

- Training and capacity building has built women's confidence and increased women's ability to participate. However women in the project area are generally have limited skills and capacities for dealing with the new tasks related to the project. The issue of low literacy has not been tackled hence, emerges as an important limiting factor for their participation.
- Using SHGs as a new platform for formal community organisation amongst women has generally been successful. Their links with WDCs by representation in the committee has not effectively paved way for creating space for their participation on a sustainable basis. It is therefore imperative to explore how to go beyond the micro-finance functions and widen the scope of SHGs as institutional entities to participate in the larger developmental initiatives at least within the village.
- Social and cultural norms still very much influence participation of women in watershed development decisions. However, the steps taken for ensuring

mandatory participation and representation of women seem to have opened up new grounds. Further efforts with respect to increasing awareness about the panchayat institutions and women's rights thereof may help attaining better outcomes though, this may take longer than the project implementation period.

Lessons Learnt

ASA's experience of promoting women's participation in watershed development is mixed. The experiences show that practical needs can be met and strategic space such as attendance in watershed development committees can be created directly within the processes of watershed development process. However, that does not guarantee that women will be able or apparently willing to utilise the space for larger goals of empowerment and development. The most successful vehicle for promoting women's empowerment at the village level comes in the form of SHGs set up for micro-finance purposes. The challenge now is how to take these strong institutions outside their micro-finance remit so as to be able to influence the process of village development. In what follows a summary of the key learning from ASA's interventions towards women's empowerment through watershed development have been recapitulated.

- Flexibility in project design and patience in implementation are vital for encouraging women to participate. This may involve undertaking certain activities that are not considered as the core functions of watershed project. Evidentially the activities such as micro-finance through SHGs have, time and again, proved to be the most successful vehicle for promoting women's participation in the larger processes of development within the village.
- Creating space for women to participate is the first step; getting women to utilise this space is more difficult. This often takes much longer than time frame of the project.
- Expected outcomes and impacts related to women's empowerment must be clearly defined right from the outset. This should be developed based on a thorough understanding of what is achievable within the micro settings and within a given timeframe.
- Often small activities can have a significant impact on empowerment.

It is clear that women's empowerment is a larger goal, much beyond the ambit of watershed project. The challenge thus is to reflect on the dominant approaches for 'mainstreaming' gender into development. Interventions such as watershed development may then be seen as part of the larger vision where it operates in tandem with a number of such initiatives in a mutually reinforcing manner.

Addressing Equity Issues in Watershed Development Projects in Bhil *Adivasi* areas of Western Madhya Pradesh

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Abstract

The western Madhya Pradesh region of India, which is largely populated by Bhil *adivasi* (indigenous people) peasants, is typical of other such *adivasi* regions of the country. The fragmentation of landholdings coupled with the neglect of dryland agriculture has severely jeopardised the livelihoods of the people and forced them to further mine their immediate environment for subsistence needs in such regions. In such a scenario systematic work to bring about equitable and sustainable development is hindered by the fact that common property resources are most often privatised and people who are in control do not want to let go of them. This paper details how two NGOs, SAMPARK and Samaj Pragati Sahayog have creatively overcome this through communitarian problem solving.

Introduction

The western Madhya Pradesh region in which the Bhil *adivasis* reside stretches across the seven districts of Jhabua, Dhar, Barwani, West Nimar, East Nimar, Dewas, Indore and Ratlam. About 43 per cent of population in the three regions consists of scheduled tribes. Although most of these people hold title to agricultural land, the holding are invariably very small, without irrigation, and situated in the upper watersheds, and in hilly terrain in the case of Vindhya Hills.

Tribals in these regions have been subject to skewed resource access and economic opportunities in the wake of the lopsided policies that focused more on fertile lands belonging to non-tribal farmers leading to the neglect of large tracts of drylands owned by these communities in the upper watersheds in the regions. Much of the benefits of agricultural growth in the regions therefore, have been cornered by traders through exploitative terms in inputs-output markets. The common property resources (CPRs) too have become so scarce that there is tremendous competition to privatise and denude them. Thus in the western Madhya Pradesh region some of the land under the Forest department

and most of the other cultivable common lands, have been encroached upon by tribals for cultivation.

Largely bypassed by the mainstream agricultural development, Madhya Pradesh (MP) took major strides in terms of initiating large number of micro watershed projects, which potentially holds significant scope for enhancing productivity of land, especially in large tracts of dryland areas in western parts of the state. The special thrust on watershed development emanated from the realisation that since the state is situated across a drainage divide involving as many as six river basins, the terrain is undulating and water storage in the natural system is low. Moreover the state has only a limited share in the river waters since the state lies on the upper catchment. Thus conventional dam centred water resources development adopted thus far had proved costly and inefficient (RGWM/TARU 2001). For tribals located in the upper catchments of watersheds in the western regions may tend to benefit a lot through various measures of soil-water conservation being undertaken through the projects by adopting ridge to valley approach. Also the emphasis on participatory processes and institutions for project implementation may help the tribal communities overcome some of the systemic disadvantages they have faced till now in the wake of the market and/or bureaucracy driven developmental initiatives.

A critical challenge however, lies in establishing stakes of the tribals and the poor, often having land in the upper catchments, in the benefits of watershed projects in the region. This, essentially, calls for strengthening bargaining power of the poor, in absence of which their stakes may be overlooked inspite of the participatory processes and institutions involved in project implementation. Non-governmental organisations (NGOs), having clear mandate of working for the poor's empowerment may have special contribution to make in this context. Given this backdrop, this paper documents the efforts made by two eminent NGOs namely SAMPARK situated on the intersection of the Malwa Plateau and Jhabua Hills agro-ecological region and the other Samaj Pragati Sahayog (SPS) situated in the Nimar Plains for addressing the issue of inequalities faced by tribal communities while implementing watershed projects in the respective regions.

Empowering the Marginalized: Approach of SAMPARK

SAMPARK, a leading NGO, works for tribal empowerment by first addressing the issue of freedom from the bondage of the local money lenders (SAMPARK 1995). Developmental intervention like watershed project follows these processes of social mobilization and empowerment of the local community. The starting point therefore was to activate gram sabhas for creating a platform for collective actions. This helped in undertaking initiatives like micro-finance, resolution of disputes, revival of traditional labour pooling customs, etc. Successful community based micro-finance services were seen as one of the important desiderata for attaining broad-based development in rural areas (NABARD 1999). The strategy adopted by SAMPARK when it first entered the village in 1996 was to form a self-help group with twenty Bhil families. The successful running of this SHG resulted in 29 more Bhil families deciding to form another SHG in 1997. All these families then began reviving their traditional customs of labour pooling and community dispute resolution. There are at present two women's and one men's SHGs with a combined membership of 72 and savings of Rs 1,74,783 and freedom from the debt of money lenders. Only after these efforts began to bear fruit in the form of greater social cohesion, main activities for implementing watershed project were launched. In what follows we present a case study of Roopapada village where watershed project was launched during 1998.

Roopapada Watershed

The village consists of 67 families with a population of 402 – 207 males and 195 females. Of these 15 households belong to Patelia tribe and the rest are Bhil tribe. While the Patelias are economically somewhat better off than the Bhils, poverty is widespread across all the households within the village. The largest land holding, owned by the headman, is only about 3 ha.

The land use pattern in Roopapada watershed is presented in Table 1. It is evident that the village has only 45 ha of common land available for protection and development under watershed project. There are of course privately owned land under crops and also the forests that ideally should be treated under the project. There are two tanks already built by the government, which are used mainly for recharging purposes and sometimes for occasional protective irrigation.

Table 1. Landuse pattern in Roopapada watershed (ha)

Total area	Forest area	Irrigated area	Unirrigated area	Uncultivable wasteland	Wasteland
239.08	19.10	20.16	129.23	26.05	44.54

Source: Sampark Records

Given the severe shortage of agricultural land, privatization of common property land resources (CPLRs) is found to be a common practice in the region. Tribals in Roopapada are no exceptions to this widely prevalent phenomenon. It is observed that a part of the upper most CPLR was already encroached and used for cultivation as well as for grazing by some of the families in the nearby hamlet and also those within the village. Grazing on the nearby forest land was also widely prevalent. The encroachers were by and large among the relatively more powerful in the village. Tackling the encroachment was therefore complex as found in most situations all over the country. This, as noted in several cases, not only became detrimental to ecology but, also to feasibility of watershed development in the village (Kerr 2002). Thus, treatment under the watershed project could not be started despite the initial efforts for empowerment and freedom from the clutches of the money lenders.

A group of people from the SHGs exerted pressure on the encroacher, Patel and his kinsmen to stop grazing the CPLR on the ridgeline so that it could be treated with plantation. Seeing that the Patel was not amenable, the rest of the villagers decided to go ahead without his consent and protect the land from free grazing. Despite tough resistance from Patel, finally good sense prevailed and a compromise was reached that the seven families on the ridgeline would stop free grazing on the wasteland but they would retain their small plots of agricultural land within it.

Thereafter watershed treatments such as contour trenching, gully plugging and pasture development work was started on public land as also field bunding on some of the private agricultural land started during 1998. Fodder on the protected plot was cut and shared equally among all the households, irrespective of whether they were members of the SHGs or not, at a nominal price of Rs 2 per bundle of grass. In addition to this as many as 30,000 saplings have been planted over the years with significantly high survival rate. The villagers have also revived their traditional custom of “adji-padji” under which they pool their labour together for labour intensive agricultural operations such as weeding. As many as 600 person days of community labour were generated during 2003. The traditional gram sabha was also revived, which in turn gained its strength

from the successful battle against money lenders by successful functioning of the SHGs. The tangible benefits motivated communities in nearby hamlets, lower down in the watershed, to clear encroachment on the plot of 10 ha. This paved way for starting watershed development and plantation activities in the extended part of the village. The 15 ha patch in the middle has also been treated but plantation work has not been carried out in it.

Scaling Up

The *gram sabha* in Roopapada also has health and education committees that take care of primary health and night school education with the help of SAMPARK and also try and ensure that government services in these spheres improve. By now there are 90 other all purpose *gram sabhas* in proximity of the village. These gram sabhas are organised in clusters of five each and then federated together in the form of a mass organisation – Lok Jagriti Manch. This has prepared the ground for successful implementation of watershed programs in these villages and also ensured post-project viability and cohesion by solving the social problem.

Addressing Inequality: Approach of Samaj Pragati Sahayog

Despite integrated and broad based approach, watershed projects have often brought selective and limited benefits covering only a sub-set of the households within the project villages. To a large extent this is due to the inherent inequities not only in ownership of land and water, but also due to the iniquitous power relations between tribal and non-tribal communities in otherwise tribal dominated regions.

Samaj Pragati Sahayog, an NGO based in Bagli *tehsil* of Dewas district in MP has been undertaking a range of activities, including implementation of watershed projects in the tribal dominated regions in the state. This case study illustrates the complexities involved in dealing with the political dynamics operating at micro-level. The two main inequalities preventing the implementation of a successful development program in the watershed are the extra-economic powers among the non-tribals and the government bureaucracy. The problems created by these two sets of powerful groups in the initial of watershed project have been described below.

Opposition by the Powerful: A Case of Neemkheri

One of the important apprehensions among the powerful landed community in around Neemkheri village was that creation of employment opportunities by paying the statutory minimum wage rates would divert the local labour force from agriculture and also jack up the wage rates in the region. Though fairly familiar, these fears prompted vehement opposition by the non-tribal groups for the SPS to launch watershed project in the region. This of course, necessitated the usual tactics of co-opting some of the tribal leaders, including the elected members of various Panchayat institutions, to join the opposition and prevent SPS from striking roots among the tribals. However, tribals who had land holdings in the lower reach, joined hand with the SPS for getting the project started which led to successful launch of the project.

Attitude of the State Bureaucracy

The local opposition got further strengthened by support from the local bureaucracy (in revenue and forest departments), which was also averse to the awareness and empowerment of the tribals that potentially could be a threat to the extra-legal powers assumed by these groups. Strangely, the website of the Government of Madhya Pradesh states that tribals are the single largest destroyers of forest wealth and their organisation into mass movements by activists has led to problems for the Forest department (www.mp.nic.in). This in fact sums up the attitude of the bureaucracy not only in the Forest department but generally in the state administration towards mobilisation of tribals for demanding their rights.

Resolving the Existing Inequalities

Although the nexus between the powerful non-tribals and the government officials proved to be so frustrating, since SPS has been implementing watershed projects with financial support from the Council for Advancement of People's Action and Rural Technology (CAPART) over a decade, it succeeded in getting a favourable recommendation to the district collector for initiating the project. The receipt of wages under the project provided further impetus to the tribal community to withstand the financial exploitation by the rich and the powerful in the village. More importantly, the women's groups have become more vocal in the community-affairs and also challenged traditional patriarchal structures in the society.

All these small yet difficult and important steps of collective action and resistance by the tribals culminated into the critical mass of community power that eventually made it possible to arrive at an agreement for permitting protection and treatment of the forest land within the watershed. The villagers from Bhikupura too were convinced not to graze their animals in the forest in Neemkhera. Thus began protection and treatment of the forest land within the watershed.

Post-Project Inequality and their Resolution

However, the post-project inequality arose over the use and management of the water flows regenerated by the watershed development work.

The recharge of water due to soil and water conservation works carried out in the ridge line forest area had led to the augmentation of the flow in the main *nala* flowing through the watershed from north to south and it had water in it throughout the *rabi* season. The non-tribal farmers who had their lands in the north on both sides of the *nala* began to use this excess water to bring more land under *rabi* cultivation. To do this they dug the bed of the *nala* and inserted concrete pipes to divert water into their wells on the side of the *nala*. These were called “*naardas*”.

Tribal farmers on the other hand opted for a more equitable distribution. They argued with the help of the NGO that since the farmers in the southern part of the watershed were much poorer economically and had less access to groundwater due to the peculiar rock formation underneath, they should be given priority in the use of surface water from the *nala*, whereas farmers in the north should depend on the groundwater that they could tap through their wells. Sustained efforts at reversing this inequality and bringing about a more equitable use of the augmented water flow in the *nala* eventually led to the desired arrangement in the form of a formal agreement signed during October 1995. This involved ninety nine per cent of coriparians. The details of the agreement are as follows:

- all farmers would shut their *naardas* drawing water from the main *nala*;
- all farmers who own wells would not use motorised pumps to draw water from the *nala*;
- only those farmers who did not have wells could take water from the *nala* for irrigation and these drawals would be by turns in limited quantities according to commonly decided rules;

- once the flow in the *nala* stopped no drawal of water would be allowed and the remaining water would be exclusively for the livestock of the village.

Following this all six *naardas* in the *nala* were packed with concrete and twenty farmers in the upstream area withdrew their pumps and diesel engines from the *nala*. As a result for the first time fifteen downstream coriparians were able to grow wheat and *gram* using irrigation.

Conclusions

The above case studies highlight the crucial parameters of successful implementation of watershed programs that are invariably faced with structural inequities-economic, bio-physical, and socio-political. These essentially help addressing some of the well recognized limitations of the project implementation processes in the state. These are: a) lack of an initially agreed maintenance strategy; b) inadequate and inappropriate efforts for community mobilisation that reaches out only to select individuals and ignores the silent majority and risks perpetuating traditional power structures along with their less desirable traits; and does not upfront lay out the responsibilities and obligations among various groups.

Against this, the case studies clearly reveal how important it is for equitable and sustainable distribution of benefits to organise the communities prior to undertaking the project activities in the micro watershed. The approach adopted by SAMPARK and SPS thus show the ways for overcoming inequalities that prevent watershed implementation or reversal of that in the post-project period.

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The Approach and Processes Followed – Seva Mandir

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Abstract

Common lands over the decades have become severely limited in their ability to support rural livelihoods comprehensively, yet these are important for the ecological services they render in upland areas like Udaipur. Seva Mandir initiated work on natural resource development and as part of it focused on common land development. Development of common lands is central to any strategy aimed at reviving the ecological and institutional context of the region. But there are several structural constraints to develop these lands through community initiative. First is the unwillingness of the state agencies to avail NGOs/CBOs of the opportunity to regenerate these through community participation. Another constraint to the development of these commons emanates at the ground level, in the form of illicit encroachments of these by a few people in the village. Besides analyzing the profile of encroachers, reasons for encroachments, it also identified the ways to evacuate the encroachments. The major lessons that emerge from the action research carried out focus around the theme of extending institutional support to land governance at the village level, to efforts at policy advocacy on the anomaly of land governance programs, to conditions under which release of encroached land is easy and the kind of incentive structure that can be invoked to deal with encroachers.

Introduction

Seva Mandir, a non-government organization has been involved in community development activities in six tribal blocks of Udaipur and Rajsamand districts, Rajasthan, since 1969. The work of the organization centers around programs focusing on enhancement of rural livelihoods, improvement of human capabilities in terms of basic health, primary education and gender-just development, and creation of autonomous village level institutions capable of managing their own development.

Udaipur and Rajsamand districts are characterized by Aravalli mountain system. The topography of the district features hills and undulating plains, which were

once well stocked with vegetation. A vast majority of the land in these districts is under state control in the form of forest, pasture and revenue bilanam lands. These lands vested with the state have traditionally been the commons, upon which a significant proportion of the population depends for meeting their livelihood requirements. The region is inhabited by tribal community- Bhils, who constitute 37% of the total population of the district. Traditionally, the tribals have had an integral relationship with the forests and village common lands and depend on them for meeting the needs of fuel, fodder and timber. During the colonial period, these forests were owned by the feudal state but the management was vested with the local communities. The population at that time was low, dependence on agriculture was limited, as a result the biotic pressure on these lands was limited. During the post independence period and with the initiation of the Revenue and Forest settlement operations, most of the forests areas were demarcated and put under the possession of government. The forests were put under the control of Forest department and the revenue lands came to be vested with the Revenue department. The state imposed restrictions on the access to these areas by local communities. The forests were mainly managed for the purpose of revenue generation for the state. Thus, the needs of the locals took a backseat and the local communities became alienated from these commons. Commercial felling along with the increase in human and cattle population and failure of the forest to regenerate, coupled with breakdown of community management resulted into the degradation of forests. During this period, agriculture became the main source of livelihood along with wage labour. The ever-increasing demand of agriculture land made people encroach forestland. The forest continued to be depleted both in terms of quality and quantity.

The common pastures of the village also met the same fate. During revenue settlement, each village was allotted pastureland for grazing their cattle depending on the number of cattle. These lands are in the possession of *panchayats* now but most of them exist in paper only and have been encroached upon. This has adversely affected the rural poor who have traditionally depended upon these pastures.

Although, these common lands over the decades have become severely limited in their ability to support rural livelihoods comprehensively, yet these are important for the ecological services they render in upland areas like Udaipur. Further, these commons still contribute towards subsistence goods such as fodder, grass, thatching material, fuel wood etc. If one considers the land utilization pattern of the district, it is evident that more than 50% of the total

geographical area is under common lands and only 18% of the land is under agriculture, which is mainly rain fed. The farming is thus subsistence oriented and the continuous process of upland degradation has affected the soil and water regime of agriculture fields situated downstream. The subsistence farming in the wake of frequent droughts forces people to migrate in search of work to cities so as to offset food and income shortages. The extremely fragile natural resource base and little availability of alternatives locally to supplement household incomes merely reinforce the vicious cycle of degradation – with communities losing stake in the management of commons, and succumbing to the temptation of encroaching upon these. This loss of commons undermines the social fabric of the village.

Seva Mandir’s Work on Common Land Development

Given this context, wherein the well being of poor is closely linked to the enhancement of the productivity of natural resources, Seva Mandir initiated work on natural resource development. These interventions date back to 1986 when work was initiated through development of private wastelands, where access was relatively easy in comparison to public lands. Soil and water conservation activities and small lift irrigation schemes were also taken up to increase the agricultural productivity of private lands.

Table 1. Landownership profile in Seva Mandir’s area of operation (five blocks of old Udaipur district)

Common land	As per centage of total land
Forest land	42.7
Pasture	5.6
Other	25.1
Total public land or land under state control	72.7
Private land	27.3

(Source: District census 1991).

In the ensuing years, the work was extended to cover village commons such as *panchayat* pastures. In the meantime, a beginning was made towards integrating other categories of lands viz. forests in the purview of wasteland development efforts. The widening of the program became possible due to a paradigm shift in the forest policy, which allowed for participation of communities in forest protection; under Joint Forest Management Program (JFM). The JFM guidelines are of great significance in Seva Mandir’s area of operation as about

42% of the land is under forest. During this time, the organization also initiated work on entire village lands on a watershed approach under directives of the National Watershed Guidelines.

The majority of lands in this area are public lands, there is a need to look more closely at issues of these lands and communal tenure. From 1986 to 2005, Seva Mandir has been able to afforest 13255 ha of area. However, of this coverage, work on common lands extends to only 2509 ha (about 19% of the total afforested area). This is anomalous given the fact that at least 72% of the land in organization's operational area is under commons, which are thoroughly degraded, and that there exist facilitative guidelines providing for participatory development of these public lands.

Constraints to Common Land Development

Development of common lands is central to any strategy aimed at reviving the ecological and institutional context of the region. But there are several structural constraints to develop these lands through community initiative. First and foremost being the limited access to these lands by virtue of their ownership with various departments of the state. The unwillingness of the state agencies such as the Forest department, the Watershed department or *panchayats* to avail NGOs/CBOs of the opportunity to regenerate these through community participation is still a common feature despite the presence of state policies advocating for community forestry and participatory watershed development. Another constraint to the development of these commons emanates at the ground level, in the form of illicit encroachments of these by a few people in the village. A snapshot picture of the encroachment status of lands in the ten villages studied as part of the GTZ project, 2001–03 “Decolorizing the Commons” Empowering and Economically Benefiting the Poor’, is depicted in the table below:

Table 2. Status of extent of privatization of common lands

Village	Forest area (ha.)	Area encroached (%)	Pasture area (ha.)	Area encroached (%)	Revenue area (ha.)	Area encroached (%)	Total	Area encroached (%)
Ranpur	237	45.57	24	47.83	41	100	472	34
Sankhla	1	Nil	6	10.67	11	100	67	17.37
Gadla	160	Nil	20	10.00	81	100	363	22.59
Kitawatankawas								
Shyampura	154	14.02	8	76.00	9	100	267	13.74
Turgarh	96	100	0	0.00	291	100	597	64.82
Adol	157	3.057	23	60.17	87	100	356	28.17
Madla	57	25.44	0	0.00	617	100	890	70.95
Kaliwali	0	Nil	28	100.00	325	100	553	63.83
Bichiwada	143	16.45	75	12.80	183	100	636	33.98
Gametiphala (Kheda Ghati)	0	0	61	100.00	134	100	349	55.87
Total	1,005	26.71	245	54.13	1,779	100	4,550	47.90

Source: Bhise-Land Community and Governance, 2004.

Table 3. An enquiry (Year-2001) into the actual encroached areas in select forest blocks of Udaipur district

Range	Forest block	Area of forest block (ha)	No. of encroacher families	Total area encroached
Jhadol	Sonkula	486	263	486 ha (100%)
Jhadol	Som II	5,500	520	1,095 ha (20%)
Kherwada	Ketawas	3,101	788	1,483 ha (48%)

Source: Workshop report- Land Community and Governance, 2003

Seva Mandir is part of the Ecological and Economics Research Network (EERN), under which forest protection committees in all of Rajasthan are being studied. A survey (May 2002) of the encroachment status of community pasturelands shows that only 31 per cent of land was without any encroachment, while 69 per cent is either heavily encroached or partially encroached.

Table 4. Status of encroachment on village pasturelands across seven districts of Rajasthan

Division	Total pastures studied	No encroachment	Partially encroached	Heavily encroached
Banswara	4	0	2 (50.0%)	2 (50.0%)
Bundi	9	0	3 (33.3%)	6 (66.7%)
Dausa	16	3 (18.8%)	10 (62.5%)	3 (18.8%)
Jaisalmer	1	1 (100.0%)	0	0
Pratapgarh	10	2 (20.0%)	3 (30.0%)	5 (50.0%)
Sikar	16	10 (62.5%)	5 (31.3%)	1 (6.3%)
Udaipur	15	6 (40.0%)	4 (26.7%)	5 (33.3%)
Overall	71	22 (31.0%)	27 (38.0%)	22 (31.0%)

Source: EERN study, Status of JFM in Rajasthan, Seva Mandir, 2002

Thus, the problems concerning common lands in the district are not merely physical in terms of degradation or sub-optimal productivity, which can be addressed with relative ease through technological options, but also socio-political in nature, often requiring long drawn attempts at reconciliation of stakes of various sections of the community and advocating for accommodation of these interests.

During the course of Seva Mandir's association with common land development, there have many instances where encroachments have been evicted under pressure from the community. Sometimes, threats of taking up legal action or actually going in for legal action by community members have been fruitful. There are a few cases where community members have negotiated with the encroacher to have the land evicted suitably compensating the encroacher, after ascertaining his socio-economic condition. In the forest areas, the Forest protection committees have got the encroachments vacated after persuasion and lobbying with the Forest department to initiate legal action against encroachers. These cases of success, however isolated give a reason to believe that when the community is united and wants to develop its land, it is eager to get the encroachment from common lands vacated. In the last eighteen years of Seva Mandir's association with common land development, out of the total around 150 common land sites, which have been developed with Seva Mandir's assistance, encroachments on more than 50 sites have been vacated. It is thus evident that all such negotiations and persuasion take a long time in mobilizing the community and often involve costs to the community

in form of legal recourse, time, investments, etc. Till such time, the dispute is resolved, the development process loses pace and the village people suffer loss in terms of forgoing of benefits from these lands.

Drivers of Success and Impediments

Decolorizing the Commons- Some Experiences of GTZ Supported Project implemented by Seva Mandir

To initiate development of common lands in the village, it is imperative that the encroachments are vacated. Left to itself, this vacation might take a long time and may often result into conflicts within the encroachers and the rest of the community. There is a need for an outside agency to facilitate the process of negotiations between the community and encroachers, and resolve any conflicts that may arise as a result. Seva Mandir has been working with the village communities to vacate the encroachments from the commons and felt need to expedite the process of negotiations in villages over eviction of encroachments and hasten the process of common land development, which otherwise may stretch over years. To pilot this idea, Seva Mandir initiated an action in a three-year (2001–02 to 2003–04) research project in 10 villages with financial support from GTZ, Germany in. In these villages, there were encroachments on forests/pasture lands and the community was willing to restore these commons. The research components included process documentation of the causes of encroachments, socio-economic profile of encroachers, process of initiating common land development and the dynamics of negotiations carried out in the village to vacate the encroachments. The innovative aspect of the research project was the provision of an “Environment Fund” which could be used to disburse incentives to the encroachers or to the community. The incentive could be in the form of cash to individuals for the loss suffered due to giving up of the encroachment, or in the form of incentive to village institution as contribution to their common fund, or developing any asset, which would benefit the entire village for the efforts made in resolving the conflict.

Description of sites of the ten villages selected for the study, eight were homogeneous tribal villages, while the rest were mixed caste villages. Six villages had encroachments on *panchayat* pasture lands, while four had encroachment on forestlands. The time period of encroachments ranged from being thirty years old to as recent as four years old. The number of encroachers ranges from one to sixty in various villages. Further, the encroachers are

resident of the villages in most cases, except in the villages of Gadla, Bichiwara, Madla and Turgarh where outsiders had encroached. All the encroachers are economically backward, marginal or small farmers. The incentives were used only in five cases, and of that only in two villages individual encroachers were offered any cash incentives, while in the rest incentives were offered to the village group as a whole in the form of development of the asset. Successful negotiations were made in four *panchayat* sites and one forest area. The period of negotiations was limited to one year. The narrative of some of the villages where encroachments were successfully vacated points out those common lands can be used as an agenda to foster an institution. Moreover, the community members initiated dialogue on removal of encroachments from the common lands once they witnessed the benefits of common land development in parts of the common land reclaimed in their village. The discussion in cases such as Turgarh and Adol also points out to the cost of eviction being borne by the powerless encroachers, while some encroachers who have access to power corridors continue to squat on the common lands, remaining above law and norms.

Table 5. Summary of study villages

Village	Type of common land	No. of encroachers	Negotiations – success - failure	Incentive
Madla	Forest	12	Success	Water harvesting structure, development of 56 ha. forest land
Turgarh	Forest	66	Failure	-
Shyampura	Forest	28	Failure	-
Bichiwara	Forest	3	Success	-
Adol	<i>Panchayat</i> pasture	10	Success	Development of pastureland
Kaliwali	<i>Panchayat</i> pasture	18	Failure	-
Ranpur	<i>Panchayat</i> pasture	26	Failure	-
Sankhla	<i>Panchayat</i> pasture	1	Success	Development of pastureland.
Gametiphala	<i>Panchayat</i> pasture	11	Success	Cash to individual & development of pastureland
Gadla	<i>Panchayat</i> pasture	2	Success	Development of pastureland & cash

Source: Bhise-Land Community and Governance, 2004

Trends in Negotiations and Outcomes

Facilitation by an Outside Agency

An important and noteworthy feature of the initiation of the dialogue process within a community and subsequent negotiations over removal of encroachments is the presence of Seva Mandir in all cases. In none of the cases, the community on its own has initiated the steps towards development of the commons by dislodging the encroachers, although they were aware of the presence of encroachment. This points out to the need to have agencies such as NGOs, which can exercise a role in the process of mediation and mobilization of the community around the issue. Left to the state, there could not have been any success in removal of encroachments with community support.

This apathy also brings forth the prevailing disempowerment of formal institutions such as panchayats to take any initiative on restoration of these lands, despite being their legal custodians. In case of village Turgarh, where a substantial portion of the forestland is encroached upon by as many as 60 encroachers, the inefficacy of the Forest department in apprehending these powerful encroachers is revealed. This ineffectiveness appears pronounced in the wake of massive community mobilization and involvement of community federations such as Van Utthan Sangh, NGOs in building up pressure on the encroachers.

Reasons for Encroachments

The encroachers in most villages cite increase in population as a major reason behind encroachment. In a few cases the encroachment is an extension of the agriculture fields situated adjacent to the common land. Even if many encroachers are not deriving substantial benefits from their encroachments, they are willing to continue squatting on it, by paying fines/bribes to the local officials, in the hope of securing a title to the land.

The urge to own land is so central to the socio-cultural ethos of the region, that people are willing to buy even encroached pieces of land where the certainty of tenure is highly dubious. The encroachments in Shyampura, Turgarh, Madla all fall in the category of “bought” encroachments.

Extent of encroachments

In all the ten cases, there emerges a relation between the extent of encroachments and the ownership of the land. While in all study villages around 26% of the total forest area available is encroached, the proportion on pastures and revenue *bilanam* is 54%, and 100%, respectively. This points out to the ease with which various categories of land can be encroached upon. While it is easiest to settle on revenue bilanam lands, it is relatively difficult to establish illicit claims to other categories of land.

A related feature is that while the actual per centage of encroachment is important, what is more important is the fact that these encroachments tend to be scattered and hence foreclose public investment over a much larger area as illustrated by the cases of village Turgarh and Shyampura, where the encroachers have encroached pockets of an entire forest block.

Implications of Encroachments

These encroachments not only have implications for the ecological and physical status of the land in question, but they have wider implications in terms of community solidarity as well. As illustrated by cases of village Adol and Kaliwali, the encroachments have led to a schism in the village, which runs deep and endangers the possibility of any community initiative in the village around common resource management.

The process of encroachments throws some light on the nature of illicit obligation towards a powerful patron outside the village and how it leads to disempowerment of the village community. In most of the ten study villages as illustrated in Adol, Turgarh, the encroachments are firstly and mostly by powerful in the village. Further, the encroacher enters into an illicit obligation towards a powerful patron outside the village leading to disempowerment. This patron – client relationship is well illustrated by the examples of villages Turgarh, Shyampura, Adol and Sankhla. The extent of disempowerment of the community group in the wake of encroachments by the powerful is pointed out by the fact that those members of the village who are most dependent on the commons and are likely to benefit from its development, prefer to remain mute on the issue of eviction. This shows that the ties between people in a village are not one-way but reciprocal and a dissonance in one sphere might translate into loss of support of the patron in other forums. This fact emerges most strikingly in the example of village Adol, where the community members stopped participating in the meetings around common land development.

Eviction of Encroachments

The overriding concern that forced people to opt for development of land after eviction of encroachments is the fear of take over of the land by the state, as in case of Adol, to rehabilitate displaced groups of Mansi Wakal dam or the encroachment by powerful outsiders.

The eviction process itself required concerted efforts at negotiations with the encroachers and extended over time. Sometimes, the gains made in the beginning were lost in the subsequent round of discussions. This is well illustrated by the case of village Adol and Gadla, where the flavor of the dialogue changed from positive to being hostile. It is imperative for the facilitating agency to keep its hold during the entire process of negotiations and post-negotiations as sometimes the process snaps if left to community initiative. This breakdown in dialogue within the community was observed in the case of village Kaliwali, where the negotiations with encroachers attained a stalemate, when Seva Mandir took a back seat.

The process of eviction also brought to light some interesting facts. The provision of attractive incentives to vacate encroachments, tempted people in Kaliwali to disclose their encroachments, an information generally not divulged by the villagers.

In some cases such as Adol, the spin off of the group energy mobilized around eviction of encroachments transcended to bringing other development issues to the forefront. The continued absence of schoolteacher in Adol, and the resolve of the village group to deal with the issue did not happen before the launch of the process of community mobilization around encroachments. This points out that the momentum generated on one issue can be transformed to other spheres of development. *Gram Vikas Committee (GVC)*, *samuh*, etc., in *panchayats* have positively transformed. Trends contrary to this emerged from the case of village Kaliwali, where people have kept their political preferences apart from their development leanings. The people in this village opposed the powerful encroacher “maharaj” who along with his sons had encroached their pasture and kept him out of the development process, but voted his son in the *panchayat* election.

The flexibility adopted by Seva Mandir in giving space to people to decide what is best possible incentive for the encroachments paid off. In the village Gametiphala, Gadla the village group successfully evolved incentive norms and got the encroachers to vacate the land without much delay. In Gadla,

this flexibility allowed for an innovative approach to resolving the problem, by offering the encroacher to close the door of his house facing the pasture.

The cases of success in eviction of encroachments point out to the fact that it is easy to dislodge a small number of encroachers as in Gadla and Sankhla rather than a big group as in village Turgarh, Ranpur. This points out to the ease with which pressure on a small group can be built and sustained because of the limited lateral ties of a small group in a village rather than a big group. The eviction of recent encroachments is easy than old ones, as pointed out in village Gadla. This illustrates that if the problem of encroachments is tackled at initial stages, the chances of successful eviction are high. The trend observed in eviction of encroachments is that once the powerful encroachers decide to vacate, the others also follow suit. This has been illustrated in the case of village Adol.

Profile of Encroachers

In cases of encroachments on forest and pasture lands the encroachers were either themselves powerful people of the village, or derived their power from an influential local person – such as a *sarpanch*. In the villages of Adol, Sankhla, Turgarh, Kaliwali the encroachers are aligned with the *panchayat* members and are not dissuaded under peer pressure to vacate the encroachments.

The encroachers who have made the maximum investments on lands were also the ones who had no other alternatives within the village as highlighted in village Adol. The powerful encroachers in other villages did not use the land for agriculture and had not made any substantial investments to develop the land. It is the poor encroachers who bear the cost of conservation of common land, while the powerful encroachers continue to occupy public land illicitly, as illustrated by the case of village Adol.

Pre-Conditions for Maintaining the *Status quo* Over Reclaimed Commons

It is absolutely important to establish group norms for the management and usufruct sharing of the common assets developed, as in their absence all efforts at rehabilitating the land and community mobilization are in vain. This observation gains ground in the light of the fact that in almost all study villages with pastureland, the village *panchayat* had initiated its development several years ago, but the investment could not be sustained as no norms were established for the management of the asset.

The establishment of norms for the management of common land is not a guarantee in itself that the proposed land will now be put to common use. The facilitating agency has to monitor closely whether these norms are being practiced. This is a challenge for agencies such as Seva Mandir and Panchayats as it requires their long drawn presence and intervention in the functioning of the group. However, this presence is essential to ensure that the norms do not break down and the common land is not encroached upon again. This is illustrated in the case of village Sankhla where one farmer Dhula, who gave up his encroachment in the group meeting, encroached again afterwards.

There are alternatives to this continued presence by an outside agency as developed and experimented by Seva Mandir in the form of its GVC, which oversees the enforcement of group norms and has the authority to deal with aberrations.

Ambiguity in Land Records

Problem of land records and the status on ground not being clear to the villagers (or even the departments) also prompts people to encroach and the makes the community as a whole mute to the process as they are unaware of the boundary. This has been most strikingly illustrated by the example of village Bichiwada, where this ambiguity led to developing a forestland as pasture and subsequent prolonged negotiations over sanctions for JFM with the forest department. This ultimately jeopardized the whole effort and the encroachers meanwhile continued to benefit from the chaos.

Ambivalent State Policies

The contradictory orders from the government about regularization of encroachments over common lands on one hand and encouraging community forestry on other disrupts even well established common property regime systems. As illustrated in the case of village Shyampura, people who had given up their encroachments on forest lands in 1991 after Seva Mandir gave them incentives in the form of an irrigation project, have still kept the option of reclaiming their encroachments if an order for their regularization is issued. Thus, if these people decide to reclaim their erstwhile encroachments, the present JFM on this patch of forest might be threatened.

Another related issue is the lack of adequate compensation offered to people whose land is taken away by the state for any purpose. These people then

resort to encroaching upon common lands. This observation emanates from the story of village Shyampura, where the Devsthan department has taken up private land of most of the encroachers. Thus, any amount of incentive offered to these people to vacate encroachments on forest dissuades them from accepting it as once they accept it they are rendered landless.

Lessons and Future Action

The major lessons that emerge from the action research carried out across ten sites focus around the theme of extending institutional support to land governance at the village level, to efforts at policy advocacy on the anomaly of land governance programs, to conditions under which release of encroached land is easy and the kind of incentive structure that can be invoked to deal with encroachers.

The institutional support to deal with the problem can be extended at two levels in the village- firstly by way of creating and strengthening local leaders and associations of villagers to effectively negotiate concerns. This is an important lesson as in almost all cases the village institutions with appropriate support from the organization have been successful in vacating the encroachments. At another level, the organization needs to lay continuous emphasis on this issue and extend support to village leaders and federations in bringing forth these issues to the notice of authorities. More importantly, the organization needs to closely monitor each stage of the process so as ensure sustainable management of common lands. Related to this is also the issue of investing in the capacity of village institutions, which can effectively address public land governance.

The efforts at policy advocacy too can be done at a micro and a macro level. At the micro level, the village federations need to be educated and supported to resolve conflicts of land and boundary conflict locally, often by involving the local patwari or forest guard. At a more macro level, the cases of successful eviction as well as the failures of the process need to be discussed with the concerned government department, to lobby for coherence in all land related policies. It is also imperative to make the policy planners view land as a social category and recognize distortions around it, and accordingly provide for space to deal with these in a land development project.

The enquiry into the reasons behind encroachment of land and its vacation as revealed from the research needs to be shared widely with policy planners as

well as village groups, so that appropriate compensation norms can be evolved for the genuine cases, rather than issuing ad-hoc orders for regularization of all kinds of encroachments.

There is an urgent need to educate the community members about the status of common lands and corroborate the same with official land records. As pointed out by some cases this ambiguity disrupts community management of common lands.

Given the scenario where majority of land in the area is public, the project has given varying insights into the nature of land relations and tenure arrangements at a village level, and the ways forward to initiate development of these resources.

Conclusion

The case studies give a clear understanding of problems of encroachments as faced in common *panchayat charagahs* and forest lands and the possibility of dealing with this problem from a different angle instead of issuing, periodic orders for regularization of encroachments. The study brings about small effort towards creating institutions and social process that can help resolve disputes over lands. However, this approach may not be always successful, but whether such efforts on part of civil society are needed and can some alternate approaches be thought of is a question open to debate.

Observed Impact of Seva Mandir`s work on commons on socially marginalized /vulnerable communities

- Due to encroachments, access to the poor to community lands was denied. After altering the property relations the common lands are collectively developed and put under a participatory management system. In most of the protected pasturelands and JFM sites, the farmers are able to harvest grass and distribute among themselves equitably. A sample survey conducted in 2005–06 on 16 sites covering poor 691 households (mostly tribals) revealed that each household received 464 kg of grass. The monetary value of which (@ Rs.3.00 per kg) would come to Rs.1392 (SISIN Implementation Report, Seva Mandir, 2005–06). It comes to around 8% of the total average annual household income (which is nearly Rs.16, 000).
- In selected pasturelands which are eight years or older, the benefits from the lopping of planted trees have also started flowing. At village Barawa, where a village pastureland was developed in 1991, following are the accrued

benefits of lopping. The benefits of lopping usually go to small ruminant rears, which are poor invariably.

Table 6. Plant species wise preference, frequency and productivity of lopping

S. No.	Species	Ranking	Frequency of lopping in a year	Month of lopping	Average production of green leaves (kg/plant)
1.	Neem	1	Once	Feb-Mar	276
2.	Babool	2	Once	Mar-May	242
3.	Roonjh	3	Once	Mar-Apr	134
4.	Khakra	4	Once	Dec	35
5.	Ber	5	Once	Feb-Mar	20

Source: A Study of the Feeding Practices Through lopping in Barawa, 2006

Apart from aforementioned direct economical benefits, wherever Seva Mandir has been able to alter the property arrangements in favour of commons, there have been enormous social and institutional gains, both in terms of livelihood and governance and collective action. Altered land relations have not only enhanced land productivity but have also encouraged the emergence of stronger village level institutions with greater social cohesion. Both villagers and villages have displayed a high level of collective leadership.

Issues to be Addressed at Policy Level

Forestland

1. There is provision of treating forestland under joint forest management by the project. implementing agency through constitution of forest protection committees. However, the process of sanction of joint forest management is tedious – it takes a year or two to get sanction from the forest department. The implementing agency should have legal access to treat the forestland falling under the watershed. The sanction to treat such forestland in the watershed should be granted in a time-bound manner on priority basis.
2. A few months back, Indian Parliament has passed the Forest Rights Bill, which aims at regularization of encroachments on forestland. The process to formulate rules and by laws is on the way. Under the bill, encroachments up to 4 ha till 13th December 2005 would be regularized. It is believed that enactment of the bill will govern the future shape of forests in India. It will also have deep economic, political and social implications, which are literally being ignored by the larger discourse of our society. Nevertheless, we should

try to prevent the possible distortions, which are expected to arise out of the bill. Regularization of possessions in a scattered manner should be avoided. Stress should be given on making the settlements move out from core, biodiversity rich area, to fringes. Also one should try to have the allotments concentrating only in a few blocks. In addition to above, no claim should be entertained on the already developed site under JFM or any other such initiative where community, civil society or state has successfully removed the encroachments. It is important to maintain the sanctity of such forests lands where the property relations have been altered in favour of common forestlands.

From the ecological point of view, the forests are considered as reservoirs of water. Moreover, since the location of forests is on uplands, leaving forestland untreated would reduce the longevity of watershed treatment benefits downstream. It is suggested that priority should be given to treat forestlands for the larger interest of the tribal and respecting the notion of watershed concept.

Revenue Wasteland

1. There is a provision under which by digging of trenches and construction of check dams, revenue wastelands can be treated under watershed programs. However, if the community or project-implementing agency wants to enclose these lands, it is not permitted to do so. Such lands cannot be made productive by planting of trees or other sort of vegetation, since they cannot be enclosed.
2. There is a legal provision under which the revenue land can be converted into village pasture. However, this process of conversion is very tedious and time consuming. This process can be made simple so that investments can be made to make revenue lands more productive.

Village Pastures

1. The authority on these lands is the gram panchayat, which generally is reluctant in giving sanction for their development. Sharing of benefits from pastures is a bone of contention between the village and the gram panchayat. It is recommended that the legal authority of village pasture be transferred to the *gram sabha* to avoid these complications.
2. The jurisdiction of a *gram panchayat* is spread over several hamlets and several pieces of pasturelands. Different hamlets in a village have traditional

rights over these pieces of pasturelands. It would indeed be better if authority over these pastures is delegated to the concerned *gram sabha* rather than the *panchayat*.

Critical Messages

- Common lands are essential to the livelihood of the poor. However their collective use by the poor is contested and restricted. Developing sustainable pro-poor CPR regime is critical for poverty reduction and maintaining environmental quality.
- A proper understanding of socioeconomic-political and institutional conditions governing the current ownership, use and management of CPRs is prerequisite.
- The problem of encroachment on commons cannot be dealt with by enacting a law against trespassing. The bureaucracy is too remote and is much disinterested in removing the encroachments. Community mobilization through civil society organizations and local village level institutions is important to alter the property relations in favour of commons.
- It is necessary to understand conflicting stakeholder perspectives and incentives in order to develop effective strategy, which is based on persuasion and negotiation.
- Village level institutions and civil society organizations having experience in altering property relations through resolving conflicts, need to be strengthened to ensure effective and equitable engagement with national level policy makers, and to ensure implementation of pro-poor policy.

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Integrating Equity Concerns in Watershed Development Projects - Policy Provisions, Processes Followed and Lessons Learned

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Abstract

The concern about watershed development projects (WDPs) leading iniquitous outcomes has received increasing attention in the recent past. This, in fact, is a clichéd argument that comes up during discussions in several forums. This paper tries to examine the potential and possibilities of attaining equity in watershed development projects, which of late have assumed significant role in the context of promoting rural economies and poor's livelihood in India. Based on the field work conducted in 55 watershed projects in seven states in the country the paper argues that equity related expectations from watershed development projects need to be realistically placed in the light of current structural issues in the society, available policy space within watershed development projects and abilities/sensitivities of facilitating agencies. The analysis also presents a set of good practices and directions for improving equity in the project outcomes.

Introduction

Watershed development projects are not designed to address certain fundamental structural issues of the society hence, WDPs may not be strong enough instruments for addressing the issues of equity, unless of course synchronized with a number of other policy initiatives in the field of rural development. There are substantial possibilities for addressing the equity issue though do not attain that completely, within the scope of watershed projects.

Equity Issues in Watershed: Spectrum of Potential and Possibilities

Before exploring the equity issues in watershed development projects, it is important to understand the process of attaining equity in the context of natural

resource development and see what roles WDPs could play in this process. In a country like India where land reforms have achieved limited success and, where large proportion of the people are deprived of productive assets including credit, basic education, health services and employment, it is important to take at least first few steps to create a framework for inclusive development based on natural resource management. Given this context, an ideal scenario for equitable natural resource development could be envisaged as described in Box 1. It may be noted that first step in this scenario is to revive and accomplish the unfinished agenda land reforms (accessing/controlling/owning/having entitlement by poor, *dalit*, disadvantaged members of society) and go on to next steps, namely development of natural resources, making them more productive. This process should ideally generate more wealth/ income, which needs to be distributed equitably in the society. This process needs to find its roots in democratic functioning and facilitate social change in the society. Establishing democratic institutions for sustainable use and management of the resource is an important requirement of this process. It is essential that gender justice should be made an integral part of this transition.

Box No 1: Spectrum of Equitable Natural Resource Development

Step 1	Step 2	Step 3	Step 4
Accessing, controlling and establishing entitlements/ ownership over natural resources (land, water bodies, trees, animals and so on)	Develop the resource and institution development	Higher incomes and enhanced productivity	Distributed growth and social change democratic functioning
Establishment and capacity building of democratic institutions with gender justice for sustainable use and management of natural resources Empowering <i>dalit</i> , women, marginalized and <i>adivasis</i>			

Neither the states nor non-government organizations (NGOs) have got the requisite political commitment to work for the larger processes of reforms. The most important fall out is the neglect of gender considerations while rethinking on the processes of development. Accordingly the watershed guidelines/ policies do not upfront deal with the issue of property rights and re-distribution of land and other natural resources. This obviously limits the scope of addressing the equity issues within the policy framework of watershed development. At the most what the WDPs could achieve is further worsening of equity and/ or marginal improvement in resource-sharing within what could be termed as

`project-based' as against `absolute equity'. To make this a reality it is important that equity considerations are adequately addressed in the implementation process. It is important to realize that the watershed project also have certain instruments/ components, which have considerable potential to address equity considerations in the project context. It is however, likely that the project-based-equity may fail sustain in the absence of structural changes and long term support to the resource poor families.

The next section presents a summary of the policy space in various project guidelines for watershed development till 2001.

Policy Spaces in Watershed Development

The following Box 2 presents a synoptic view of the policy statements on equity aspects in different guidelines for watershed projects in India.

In addition to these guidelines, the process Guidelines prepared by the Government of Andhra Pradesh (GoAP) also offer useful insights in terms policy spaces for addressing equity in watershed projects. These have been listed below.

Objectives: Process Guidelines of GoAP have broadly followed the objectives statements and spirit of Guidelines (1994, 2001 and 2003). However, the lessons from AP Rural Livelihoods Project on gender, equity, institutions and capacity building are integrated in the processes of watershed projects. Appropriate provisions are made in institutional arrangements and budgets to ensure that these lessons are up-scaled.

Institutions: Process Guidelines (2002 and 2005) have broadly followed spirit of 1994 guidelines and provided institutional space to apex bodies of SHGs/ village organization as project managers. The institutions of women SHGs are given the responsibility of managing the entire project (2002) and management of productivity enhancement funds (2005). This policy support could be interpreted as very supportive to equity and gender considerations.

Project Interventions: Process Guidelines (2002 and 2005) have specially mentioned the need for developing fallow and waste lands in ridge areas, lands belonging to small and marginal farmers, CPRs and livestock related interventions. Apart from the above natural resource related interventions, special emphasis was given to productivity enhancement of assets of poor

families/ farmers. Enterprise promotion was also supported as part of watershed activities.

Budget Allocation: Process Guidelines (2002 and 2005) have followed the pattern of the WARASA guidelines and allocated funds for natural resource development; productivity enhancement and livelihoods promotion. The fund for productivity enhancement and enterprise development are especially reserved for resource-poor families.

Box 2

Main stages	Watershed guidelines			
	1994	WARASA	2001	Haryali
Objectives	Clearly mentioned about “more equitable distribution of benefits”. There is also “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 the women”.	Clear emphasis on “reduction in regional disparity between irrigated and rain-fed areas and creation of sustained employment opportunities for the rural poor”.	Emphasized on “ <i>Promoting the overall economic development and improving the socio-economic condition of the resource poor & disadvantaged sections inhabiting the programs areas</i> ”	(Hariyali Guidelines (2003) did not mention any equity related concern in objective statements of the guidelines).
Institutional	Proposed institutions of direct users (user groups) and indirect users (self help groups) and their apex bodies for management of watershed projects (watershed committees and watershed association). The members in these institutions need not be “owners” of the natural resources such as land. This provision created opportunity to resource poor and asset less families to become members of institutions of watershed projects.	Broadly followed similar institutional arrangement	Converted the user groups into groups of land owners/ land holders.	Broadly followed the same pattern as far as user groups are concerned. This articulation snatches the institutional space of asset (land) less members and against equity considerations

Contd...

Contd...

Box 2

Main stages	Watershed guidelines			
	1994	WARASA	2001	Haryali
Project interventions	<p>Clear emphasis on activities that benefit poor (users must be real poor). However, further emphasis on nature of activities that especially benefit poor are not adequately mentioned. Since there is no special emphasis, there is a danger of ignoring all the common provisions.</p>	<p>mentioned several interventions and provisions (Eg: Fallow lands to be given on lease to SHGs) with a clear focus on equity and resource poor families. Productivity enhancement of assets of small farmers and livelihoods promotion of resource poor received special attention.</p>	<p>Emphasized the need for creating employment opportunities as part of program. Apart from this, there is no special mention/ reference to equity related concerns in watershed projects.</p>	<p>Emphasized the need for targeting small and marginal farmers and SC/ ST farmers in the context of plantations and employment generation. Apart from this, there is no special mention about the activities that benefit resource poor families.</p>
Budget allocation	<p>Did not have any special allocation to equity related interventions. Available budgets are expected to be used by watershed committees as per the action plans. The integration of equity related concerns in budgets is subjected to the ingenuity of the facilitating agency. A nominal amount is provided to SHGs as revolving fund, which could be interpreted as fund for ensuring "equity". But this nominal provision is critiqued.</p>	<p>Clearly allocated substantial budgets for productivity enhancement and livelihoods promotion of resource poor families.</p>	<p>Broadly followed the same pattern of budget allocation as Guidelines (1994). However, Haryali Guidelines (2003) increased the budget allocation to works from 80% to 85%.</p>	<p>As in 2001</p>

Equity in Processes, Institutions, and Investment: Observations from a Survey

This section tries recapitulates major observations emerging from a recent study undertaken at WASSAN on equity aspects covering a sample of 55 watershed projects in eight states in the country. These include watershed projects implemented through the government agencies (GOs), non-government agencies and international-NGOs. The observations are drawn from three parameters viz;

- 1 equity focused processes (at critical stages/key events);
- 2 equity in institutional space;
- 3 equity in project investments.

In what follows we present a summary of the findings on each of the three parameters.

Equity Related Processes under Different Categories of Projects:

- The initial attempts on awareness generation are not sustained till the last phase of the project (execution) in majority of the GoI funded and GO facilitated projects. The focus of institutions on poor is relatively low in this category of projects.
- Higher levels of efforts are made by the NGO PIAs under GoI funded projects on identification and institution development of poor. Subsequently planning was a weak process. However, the efforts to ensure equity got intensified at the execution of activities level.
- Similar trend is observed in case of bilateral projects also. Equity focused action planning is relatively weak when compared to the process of institution development and execution level efforts. The over all values of bilateral projects is relatively very low, compared to GoI projects (NGO and GO PIAs).
- INGO funded projects have very high levels of efforts in institution development and planning, relatively low efforts on execution phase. The values of process index in this case are much higher than the corresponding values of GoI funded projects (GO and NGO PIAs).

Institutions of Watersheds:

- The institutional processes in mainstream projects are dominated by the powerful” communities in the village. The institutional space and role of vulnerable groups (women, *dalits* and tribal) is small and almost non-existent.
- Institutions of watershed development projects are meant for making decisions around issues related to watershed management. Provisions of watershed guidelines make the representation of resource poor families mandatory. This reflects the equity concerns of the policy framework.
- Equity in institutional space begins with formal membership in institutions of decision making. When representatives of poor and vulnerable get an opportunity to be members of such institutions, they will have an “opportunity” to influence the decision-making process. However, the study indicates that facilitating agencies paid little attention to equity issues in establishing the institutions of watershed (mainly watershed committee).
- Creating formal membership of women and vulnerable communities is considered as an administrative process and was completed without much process. Such members of watershed committee were passive in most of the cases.
- Analysis of functioning of members of watershed committee indicates that limited number of committee members is active. These active members are generally male and belong to upper caste and rich families. In the absence of any facilitation support, this “dominance” of elite continued in most of the watersheds.
- Apart from gender, caste and class barriers, physical proximity (main village and hamlets) is also a factor that influenced the functioning/participation of members from weaker sections/ vulnerable communities (in a negative manner).
- In limited number of watersheds, the leadership and membership of the watershed committee are with the vulnerable groups (mainly women). Similarly, there are also experiences in which a reasonable representation of poor and vulnerable groups is ensured in the watershed committees. The membership profile of such committees is a result of commitment of the facilitating agencies towards equity issues in institutional space.

Equity in Investments

- The GoI GO projects have allocated relatively higher % of budgets to rich families and also covered higher share of rich families. On the other hand, the INGO NGO projects have allocated lowest budgets to rich families.

- INGO NGO projects ensured that all categories of families get almost equal average investments.
- Higher average investment (Rs/family) indicates low coverage of the families. This trend could be observed in case of Gol GO projects, where poor families have the highest investment (Rs/family) and the lowest coverage of poor families.
- Unless the facilitating agency is very conscious of this budget allocations to various categories of families under different types of interventions, equity could not be ensured.
- The investments profile indicates that the coverage of 'rich' families in the village is better. There is a need to sharpen the tools and processes to include 'poorer' families in the village.

Examples of Good Practices

This section presents three examples of good practices that emerged during the detailed field enquiry of the sample watersheds. These experiences are results of persistent efforts of facilitating agencies and their commitment to equity and gender considerations. Influence of donors is also one of the important reasons behind these processes.

Women Leadership as Non-Negotiable – Experiences of PARAMARTH, UP.

Gender and equity considerations are the core values of PARAMARTH, an NGO working in UP. These concerns reflected in the institutional arrangements of the watershed projects. The institutions of watershed projects have strong presence of women. Collaborative spaces for women and men are designed as part of institutional arrangements. Women SHGs did not become stereotypes of thrift and credit groups. They also looked at NRM issues, violence against women and livelihoods options. They also contributed and participated in the governance issues of villages, apart from managing watershed project. Several institutions of men and women (separately and common) were established to ensure over all development of the village.

Establishing Land Rights and Entitlements – Experiences of AAK, UP.

In 1994, DRDA, Mirzapur, sanctioned a watershed project to Koshiera village and Artik Anusandhan Kendra (AAK) was recognized as PIA. AAK is already

familiar with the village situation as they are already working in the village. Kols, the tribal families in the Kushiera were an oppressed by landlords of the village and suffered absolute penury for ages. The common land, which was used by Kols, was also encroached by the landlords. AAK recognized that the watershed activities could not be planned in the village as the land records are not clear and ownership of lands of land is skewed. They also recognized that the land ownership is the fundamental requirement for addressing the poverty and equity related issues in the village. AAK organized these landless families together to gain strength from each other. The process of getting formal land pattas was facilitated by them in a systematic manner, by organizing several events such as dharnas, meetings and interactions with district officers to garner necessary administrative support for getting the lands surveyed by revenue department. The District Magistrate was finally forced to issue land pattas (61 women and 365 joint pattas). Conferring land rights as a result of people's pressure was the first experience of the entire region. This entire process took about three years.

While this process was going on, AAK also constituted watershed committee in the village, which took active role in the land struggle. However, DRDA, Mirzapur, did not release the second installment to the watershed committee and clearly violated the guidelines. By March 1995, it was clear that DRDA, Mirzapur, was not willing to release the project funds. Even after approaching the DRDA and senior officers at Gol level, there was no progress. The DRDA clearly demanded 10% of the project fund as "commission", which was not agreeable to the watershed committee and AAK. Though the land rights were issued, there is no way to make them productive and useful to the communities. Action Aid, which was supporting AAK for several other activities including land rights related agenda, expressed its willingness to support the watershed activities in this village to take the land struggle to a logical conclusion. Thus this village continued to implement watershed activities with the support of Action Aid. Thus, this village is a rare example in which the "structural-inequities" are combined with 'project-based-equity'.

Rights over Forest Products – Experiences of Lok Drusti, Orissa.

Efforts are made by Lok Drusti (Bhasandani Watershed, Orissa) to ensure that forest lands that are traditionally "used" by the villagers are developed and improved (agroforestry, food crops, biomass and so on) as part of watershed project. There is an informal agreement on the "rights" of the communities to

use and benefit from these lands. Similar efforts were made to get entitlements for land *pattas* of landless families for building houses.

All these three organizations initiated network processes around issues that concern the local villagers. This networking also gave birth to federations of local institutions on issues like micro credit/ food security. The villages are now members of large networks cross the country/state/district on issues like rights over forest lands, food security, violence against women, micro credit, NTFP marketing support and so on. This engagement is helping them to deepen the equitable institutional processes in the village and address the structural issues at local and global levels.

Insights

The foregoing analysis brought out some important insights. It is clear that the policy provisions of watershed projects do not necessarily address the structural issues of society in terms of equity. The provisions related project-based-equity also changed from guideline to guideline. The articulation in these policy documents could be further enhanced to ensure that the provisions are interpreted and used in the right spirit in various parts of the country. In the absence of such clarity, the experiences on the ground vacillate widely from one side of the spectrum to another.

Some of the important observations pertaining to the three aspects viz; processes, institutions, and investment from actual experiences of the sample watersheds could be summarized as follows:

- project-based-equity is achieved, when the facilitating agency was sensitive to the issues related to equity;
- there are limited numbers of examples in which the facilitating agencies could ensure a combination of processes that addressed structural-inequities and combined project-based-equity. This was observed mainly in the projects implemented by INGO-NGO projects;
- the main stream watershed development projects are yet to pick up threads to incorporate equity-based processes and instruments. The project cycle needs to identify several events that are sensitive to the equity issues and coherent with each other;
- it is important to move from a project to mode to a development approach mode. Watershed approach may essentially incorporate the issue of property rights while implementing watershed project. There is a need to identify all

such supplementary and complementary interventions that are necessary to convert the watershed `projects' into watershed `approach'.

There are few examples of good practices in different stages of project implementation. These elements need to be identified, contextualized and shared among a larger body of policy makers and practitioners to be able to take at least the next few steps towards inclusiveness in watershed projects in the country. The recently announced Common Guidelines does incorporate some the useful learning on equity aspects in the project. Operationalisation of these lessons remains an important task in future.

Developing Watersheds to Maximise Livelihoods

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Abstract

This paper analyses the Parthasarathy Committee Report, which attempts to correct the biases on watershed development. The case for watershed development as a strategy for poverty alleviation, food and livelihood security for millions of citizens would gain the strength and direction it deserves if one was able to “illuminate these faces”, bring out the prevalence of food insecurity and hunger and poverty among practitioners of rain-fed farming. Perhaps this could be the first task of the National Authority proposed by the committee. The report also suggests a whole new paradigm and a great deal of creativity and innovation. Multiple plans can be made for a given watershed within the bounds of ecological sustainability, each with different implications for local livelihoods. The report suggests the entire investment in a watershed need not come out of government coffers, much less out of the programs as presently fashioned but by tapping financial institutions and private-public partnerships.

Introduction

“Watershed thinking” in public policies and programs has been muddled by two flawed conceptual biases. Firstly, as the Tenth Five Year Plan (Planning Commission (2002), Tenth Five Year Plan, pg. 529) points out, watershed development has been preoccupied with “the conventional soil conservation approach of safe disposal of runoff”. Secondly, in its more recent *avatar*, watershed development has been equated to “rainwater harvesting and conservation” and ironically suggested as the alternative by the same plan (*ibid*).

The soil conservation bias comes from the long-standing concern about silting of dams built at great cost and the more recent one about loss of topsoil, leading to expansion of wastelands and desertification. The water bias, too, has twin roots. One, the old idea, greatly boosted by the successes of the green revolution, that one must “apply” water as an “input” to produce plants, therefore one must first harvest and store it, and two, the “water crisis” that we have recently become conscious that impels us to conserve it.

While both these dimensions – husbandry and conservation of soil, and conservation and careful use of water – are important, these cannot be the objectives of development and management of natural resources. These can only set the boundaries for policies and action. The objective must be to maximise present and future wellbeing of the largest number of people, especially poor people, who depend on these resources.

Correcting Biases

By positing the idea of watershed development in the context of the looming crisis in Indian agriculture, the Parthasarathy Committee Report has attempted to correct these biases. This is a major contribution of the report. It clearly brings out the need to think beyond the green revolution, beyond dam-canal irrigation, beyond “irrigation-plus-wonder seeds-plus-fertiliser-equals-food security” kind of formulations and makes a strong case for an alternative strategy of large-scale investment in watershed development. Sixty per cent of the country’s net sown area (about 85 million ha) is rain-fed.

Unfortunately, the terms “rain-fed” and “dryland” have been used interchangeably in the report. The term “dryland” is normally used for arid and semi-arid regions whereas “rain-fed” would include all land where “plants get water only when and as it rains”, and encompasses large parts that are wet, humid or sub-humid besides the drylands. Substituting “dryland” for “rain-fed” has led to a good deal of myopia in government policies and programs. While watershed development would be the overarching strategy for all rain-fed regions, it would plan out differently depending on the dryness or wetness of a specific region.

As a production system and as a system of managing natural resources, rain-fed farming has suffered great neglect in public policies and programs and has performed very poorly on every count – in terms of factor usage, factor productivity, capital formation, employment generation, penetration of technology, innovation, stability, sustainability, etc. To a large extent, the crisis of India’s agriculture is the crisis of India’s rain-fed agriculture.

The Faces before the Figures

The true crisis, indeed a great tragedy, of course is that this production system is the only “assured” source of food and livelihoods for millions of families in our villages – “the faces before the figures”, to use a hackneyed phrase. It is the primary occupation for an overwhelming majority of the STs. Not surprisingly,

about half of the ST population remains below the poverty line and chronically and perilously food insecure. About 60 per cent of the families below the poverty line are farmers – presumably a majority of them practitioners of rain-fed farming.

Development – or the lack of it – of rain-fed agriculture undoubtedly has a huge bearing on aggregate food security for the country as the report eloquently brings out. But first and foremost, it has a great bearing on mass poverty. The case for watershed development as a strategy for poverty alleviation and food and livelihood security for millions of citizens would gain the strength and direction it deserves if one was able to “illuminate these faces”, bring out the prevalence of food insecurity and hunger and poverty among practitioners of rain-fed farming. Perhaps this could be the first task of the National Authority proposed by the committee.

Sustainable Livelihoods and Growth with Equity

The second major contribution the report makes is to introduce the word livelihoods into the watershed lexicon, to give watershed development a larger social perspective and purpose. By focusing on livelihoods watershed development can (and should) be the main poverty alleviation program given the geographic and agro-ecological contours of poverty in India. It would then also become the driver of decentralised growth, growth with distribution.

Unfortunately, livelihoods come out in the report as an add-on, a kind of “watershed plus”. The use of the word “plus” as a reminder that watershed development does not end with completion of physical activities or increase in program duration from five to eight years. This, however, is unlikely to result in a change in perspective about the purpose of watershed development, which is what is required. We might get three more years, yet no basic shift in thinking.

Rather, livelihoods are the core objective of watershed development programs. The strongest statement about livelihoods in the report (page 87) is, “The watershed program ... comprises a major investment ... for the benefit of the people ... and ... to realise the potential of these areas ...”

But then it goes on to recommend, “development of sustainable livelihoods on the basis of augmentation of the resource base (emphasis mine).” In our view, resource augmentation itself ought to be planned to maximise livelihoods. By and large, that is not the perspective and practice today. To that extent, contemporary programs and practices have shackled the report. To be fair, the committee was set up to review a set of existing programs.

Making the Most of the Elements

Watershed development, in the abstract, is only a way of developing, managing and husbanding natural resources to make the most of the elements – particularly, to get the most out of the land-based portion of the water cycle, sustainably. The early watershed developers were our ancestors who terraced hill slopes, levelled and embanked rolling landscapes, and made dikes and diversions to protect their farms the world over through generations of hard work long before “soil and water conservation” became a subject of study and professional practice.

Terracing a hill slope requires a great deal of physical effort and one would do so only if one wanted to till the land to produce seasonal crops. It is the same with levelling and embanking. Presumably, our ancestors indulged in these labour-devouring activities because they wanted to grow crops. It is most unlikely that growing crops was an “add on”, an afterthought or some kind of a “plus” activity after they had “treated” the landscape.

In other words, the detail of what one does to a landscape, the so-called watershed “treatment”, is determined by what one wants from it and what can be obtained sustainably. Livelihoods are the objective function to be maximised through watershed development and sustainability is the constraint that sets the boundaries.

A livelihoods perspective would, of course, take us beyond watershed development and rain-fed farming, into the larger issue of integrated natural resource management, including the management of forests, that the committee too has largely left alone. After all, the land classified as government forests measures almost half as much as the land devoted to farming (the net sown area). How many livelihoods does it create? The specific interventions or “treatment” in the watershed are dictated by the objective function, and not vice versa.

Paradigm Shift

Is this splitting hair? In our view, no. This seemingly little flip or shift in emphasis has major implications for the kind of agency required, the processes to be followed, the mix of capabilities required, level and mix of investments, duration of engagement (dealt with by the committee), equity, potential for social conflict and cooperation, etc.

This is a whole new paradigm and calls for a great deal of creativity and innovation. Multiple plans can be made for a given watershed within the bounds of ecological sustainability, each with different implications for local livelihoods. One may build a check dam to harvest rainwater and then begin to worry about fisheries as a livelihood (if one is lucky to find someone willing to take it up!), or one may conceive of fisheries as a livelihood on the basis of objective analysis carried out jointly with the watershed inhabitants and then plan appropriate water storage structures to rear fish. Clearly, the two are fundamentally different approaches.

Similarly, one would not take up livestock development in the proposed phase III because grasses begin to grow in the watershed as a result of treatment. Rather, one would plan for grasses and fodder trees to grow because livestock development emerged as a sound livelihood idea (it may be taken up only in phase III but planned in phase I itself). Without an unambiguous focus on livelihoods, watershed development practice would continue to be defined by the known tricks of the trade, the various ‘treatments’ – check dams, gully plugs, contour trenches, etc.

NASDORA

The recommendation to set up an independent National Authority for Sustainable Development of Rain-fed Areas (NASDORA) is a truly landmark contribution the report makes. In a way, this is at the heart of the Report. That the idea had been mooted and announced by the Prime Minister himself at his Independence Day address to the Nation on August 1, 2005, lending it an added weight.

The rain-fed regions in India are typically in undulating, hilly or mountainous terrain. Such landscapes are characterised by great agro-ecological diversity as soil conditions and water availability may vary markedly even within a village. The great variation in rainfall across the country is the other source of ecological diversity in the rain-fed regions. Such landscapes also tend to be ecologically “connected” – what happens upstream affects the downstream and isolated actions bear no results, which is half the logic for a watershed (whole to part and back) approach.

The development of these regions, therefore, calls for highly decentralised, site-specific actions to develop and promote sustainable farming systems that combine different farm sub-sectors – and not just agriculture – to build on the

agro-ecological diversity to maximise returns and minimise risks. It requires collaboration among “ecologically connected” groups, as isolated actions would often be fruitless.

A combination of public and private investments would be required on a massive scale to suitably develop the resource base, create productive assets, build human capabilities and nurture local institutions to sustain the gains. Finally, as the families dependent on rain-fed farming often are socio-economically marginalized, they need empathetic engagement to gain confidence and to begin taking risks.

In other words, the agency for the development of rain-fed regions must inter alia be endowed with flexibility, creativity, ability to think on one’s feet, ability to engage empathetically with marginalized groups, ability to harness and synthesise different knowledge and technical inputs and an outcome and impact focus. It needs to be capable of nuanced application.

Search for Alternative Structures

That government line departments are typically not so endowed is the main rationale for creating alternative structures. The frequent transfers and multiple responsibilities of agency personnel are subsidiary reasons. Only if we admit what line departments can and cannot do – for basic structural reasons rather than due to the failings of individuals – we can begin a serious search for alternatives. That is how the economic reforms were born during the 1990s. Alternatives may not be in sight today but if we do not believe we need them and begin to look for them, they will never appear. That is what kept economic reforms at bay for so long!

While the recommendation for an independent authority is path breaking, the detailed design takes away much of the promise. Flexibility is the first casualty when a proposed organisation is told “how to organise itself”! That is one reason why state agencies in India seem to end up becoming replicas of each other in spite of seemingly “innovative” and “different” forms. You incorporate them as societies, trusts, companies, anything, they all become like each other. This is not accidental.

Judging from past experience, the proposed State Boards will kill the whole idea, even if unwittingly. The DWDA, with three masters – the *zilla parishad*, the state board and NASDORA – will trip over itself and trip everyone else. There seems no reason to believe that DWDA would be any different from the current DRDAs.

Let us not forget that DRDAs were born out of the district agencies created for the development of landless labourers and marginal farmers during the 1970s when Babu Jagjivan Ram was the Agriculture Minister. The logic was similar but things are far worse today than during the 1970s and 1980s (when DRDAs were born). Notwithstanding the provisions made about professional selection, etc., one can imagine what would happen in the weakest states, which need such an agency the most!

Allow NASDORA Flexibility

It serves little purpose to design anything beyond NASDORA as an all-India, autonomous body with a governance structure as recommended by the committee, a clear mandate and a clear policy commitment regarding resources. The proposed council is the forum to ensure that the states would have a say about coverage, priorities, resource allocation, etc.

Let NASDORA have the flexibility to decide whether it wants to organise operations state-wise or large basin-wise or agro-ecological region-wise, etc., and whether it should have districts as boundaries, etc. Let designing the organisation be the first task before the chief executive and his senior team.

Why can we not think of India outside the framework of states, districts, blocks, etc? Sure, districts and states might be the channels for government funds (and NASDORA would have to negotiate with them and get them on-board to finance its plans), but that does not require administrative control at these levels.

Objectivity and rationality rather than the exercise of statutory power and authority is the whole idea behind professionalism. Why fetter it with statutory over-design? Temporary structures can be created around missions, programs and projects for governance and coordination as and when needed.

Inadequate Cost Norms

The report painstakingly makes a case for increasing unit costs from the present Rs 6,000 per ha to the proposed Rs 12,000 per ha. This may be adequate if one remains confined to the prevailing paradigms of “safe disposal of rainwater” and “harvesting and conservation of rainwater”. But if we want to usher a new paradigm, of creating livelihoods, spurring growth, advancing the production frontiers in rain-fed regions and ensuring long-term food security, the proposed limit is far too inadequate.

The anticipated paucity of government funds might have been a consideration in setting the proposed cost norms. Rationing of public resources is presumably done on the basis of priorities assigned to various public goods? In that case one might ask, what public good does dam-canal irrigation produce to deserve public investments of Rs 1.5 lakh per ha, and in what way does watershed development produce so little in terms of public good that it deserves only Rs 6,000 (or the proposed Rs 12,000) per ha? Another comparison might be with the Gram Sadak Yojana where the per capita investment limit is Rs 4,000 (up to Rs 40 lakh to connect villages with a population of 1,000 or more).

A more rational approach would be to think in terms of (classes of) purposes for which investments are required and the criteria for deciding the level of investment rather than cost limits. In our view, the level of investment ought to be determined by expected returns – economic, social or both.

Nuanced Financing Strategies Required

How these might be financed is another matter. Regardless of land tenure within its boundaries – government, common or private – the development of a watershed always produces all three kinds of goods – public, common and private. While we need to unravel this phenomena further to develop more nuanced financing strategies for watershed development, it is clear that the entire investment in a watershed need not come out of government coffers, much less out of the programs as presently fashioned.

Firstly, we need to tap institutional finance on a large scale. After all, a major proportion of land in watersheds where rain-fed farming is practiced is privately owned. Excluding Pakistan occupied Kashmir, land under Chinese occupation, snow covered areas, deserts, etc., the area that can be put to productive use is about 260 million ha. Of this, about 72 million ha is classified as government forests and 145 m ha is the net sown area.

If one takes net sown area as a proxy for private land (private land would actually be more) and assumes that land not classified as government forests or private as village common land, ownership ratio roughly works out to 6:3:2 between private, government forests and village commons. This is a very crude analysis but serves to demonstrate the preponderance of private land.

In many parts there are no commons thanks to land distribution by government. In some places even grasslands and grazing lands are privately owned. And of

course, the commons have been encroached widely where they do exist in the records. Even otherwise, livelihood focused watershed development strategy would aid private production systems. Hence, institutional finance could play a major role. In the same vein, investments from private companies might be mobilised around specific sectoral activities in a diversified farming system.

Secondly, much larger government resources would become available if we integrate and rationalise various government programs. Besides drawing on NREGA allocations as the report recommends, there is great scope for combining various poverty alleviation programs, sectoral programs, programs for special groups and programs of state governments (especially the current favourite, externally-aided projects). Indeed, a wider review of all government programs by the committee (as mandated by the Terms of Reference) might have opened up greater opportunities.

PRIs and NGOs – Multiple Domains, Multiple Capabilities

Considering all that the central and state governments could have but were not done to empower PRIs – such as transferring more financial powers¹, handing over the administration of certain public services, etc., – it is hard to believe, as the report suggests, that the change to the Hariyali regime was inspired by a commitment to empower PRIs! The Hanumantha Rao Committee Report that inspired the watershed development program in the Ministry of Rural Development had recommended extensive participation of NGOs, with a view to eventually hand over one-fourth of the program to NGOs. This was perhaps based on considerations similar to we have cited above for setting up an independent national authority. The Hariyali Guidelines reversed this. The committee might have commented on this major policy change a bit more.

As pointed out earlier, watershed development always encompasses public, common and private domains. Though the inclusion of watershed development in the PRI's list of subjects might have been inspired by the common misconception that watershed development deals mainly with common property resources, there can be no doubt that they have a significant role in watershed development because public and common domains are involved.

1. Besides taxation, PRIs could, for instance, be enabled to mobilise finances from the market given their real and potential control over a variety of productive resources and the fact that the proximity between the citizens and their representatives makes it potentially much easier for PRIs to create and enforce contracts.

The report brings this out well. Following the same logic, there is a role for other formations of the watershed inhabitants, such as user/producer groups, SHGs, etc. What is important, as the Report rightly states is not to hand over to PRIs tasks outside their domain and tasks they are not equipped for – that would neither deepen democracy, nor lead to watershed development. What role do the PRIs have in raising loans for the development of private land, or in creating orchards on private land, and so on?

The report brings out well the need and rationale for the involvement of NGOs as was the case before Hariyali. NGOs are needed because they bear certain capabilities PRIs and state agencies lack. They have demonstrated far more than any other agency the abilities needed for livelihood focused watershed development. The state in our view remains quite ambivalent about NGOs and that is reflected in the oft-repeated plea about absence of criteria to select “good NGOs” and the uneven distribution of such NGOs. The state is quite competent to develop criteria, improve its regulatory mechanisms and create new ones if it wanted to engage with NGOs widely, meaningfully and systematically. It deals with myriad institutions in society and would come to a standstill if it did not do so. How does it cope with that? In what fundamental way are NGOs different? Is it possible that NGOs are seen (rightly or wrongly) as competitors for the same space? Might it be that no one cares about outcomes and impact?

The “NGO sector” has changed significantly during the past quarter century. If corruption has increased, so have capability, outreach and effectiveness. This has happened in spite of an environment of suspicion and cynicism in our society and the growing fatigue about poverty and all other causes NGOs take up. The oases would surely grow into grand vistas if there were a supportive environment, enabling policies and a well-administered regulatory mechanism. The state can play a significant role in this.

Need for Scale Demonstration

There is a paucity of large-scale success stories of watershed development projects with a livelihood promotion/poverty alleviation focus. There are tiny oases as the Report points out. The committee might have recommended setting up a few such projects in different agro-ecological regions with an investment of a few hundred crore rupees even as the proposed national authority ramps up. That would build experience and know-how, set benchmarks and create sites for training and demonstration.

Too Much Detail, Too Many Prescriptions

The report often veers into too much technical/programmatic detail, especially in chapter 2. It is often prescriptive at the level of programmatic/schematic detail. While the detail brings on board practical insights gained from grassroots work, much of it in our view might have been placed in suitable annexures.

Human Resources and a Long Haul

Development of rain-fed regions to their potential to alleviate mass poverty and spur distributed growth is a huge challenge. It would require major transformation. It would require huge financial resources, new paradigms and new institutions. Most of all, it would require a large number of qualified people who can guide the planning process in thousands of watersheds, foster and nurture institutions; in brief, catalyse the transformation. The report hints at several places that there would be experts/ professionals who would work shoulder to shoulder with the watershed inhabitants. Where are such professionals/ experts being trained? The report might have brought out this big hole in our preparations for the future. That would also have helped explain the “long-haul” that this transformation is.

To summarize, three major recommendations the report has made would serve as a milestone in the field of watershed development. It has brought out sharply the crisis we face in agriculture; it makes a strong case for a coherent strategy for the development of rain-fed regions to ensure food security; and it argues forcefully that watershed development needs to grow out of its conservation cocoon and focus on sustainable livelihoods. If heeded and acted upon by our policy apparatus, these in our view are adequate to usher in a new green revolution, one that would hopefully be more inclusive, especially of the poor and marginalized. Comprehensive Assessment of Watershed Programs in India

Workshop on Impact of Watershed Management on Women and Vulnerable Groups

25 July 2007

*CF Bentley Conference Centre (212 Bldg.)
ICRISAT, Patancheru, India*

PROGRAM

0900–0925	Presenting on concept note on “Impact of Watershed on women and vulnerable groups	Amita Shah
0925–0950	Women and watershed: Case of Vadgaon Lakh	Chhaya Datar
0950–1015	Harnessing gender power for improving livelihoods	TK Sreedevi
1015–1030	Tea/Coffee	
1030–1055	Understanding gender inclusiveness in watershed development through reduction in drudgery of women: A case study from Doon valley watershed management project, Uttarakhand, India	Jyotsna Sitling
1055–1120	Losers and Gainers in a Watershed: Seva Mandir’s Approach to bring Equity through Understanding Power Relations and Development of Common lands	Shailendra Tiwari
1120–1145	Promoting inclusiveness in watershed program	Marcella D’Souza
1145–1210	Women in Watershed- the intended client? Experiences from AKRSP(I)”	Dharmistha Chauhan
1210–1235	Share the experiences of PRADAN	Saroj Mahapatra
1235–1300	Watershed development projects –Are they a panacea for development of Dryland agrarian communities? – Evidence from Karnataka	Anand Vadivelu
1300–1400	Lunch	

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The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a non-profit, non-political organization that does innovative agricultural research and capacity building for sustainable development with a wide array of partners across the globe. ICRISAT's mission is to help empower 600 million poor people to overcome hunger, poverty and a degraded environment in the dry tropics through better agriculture. ICRISAT is supported by the Consultative Group on International Agricultural Research (CGIAR).

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