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Gender Mainstreaming in Watershed Development Programmes in Karnataka State - A Critique

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ABSTRACT: The implementation of common guidelines on watershed development programs by Government of India is mainly intended to increase productivity of the land, bringing additional area under agriculture, employment generation and social upliftment of beneficiaries living in the rural areas. The guiding principle under the new common guidelines, which indicated clearly the equity and gender sensitization aspect so that the involvement of women and disadvantage section of society made mandatory in all stages of planning, implementation and post evaluation stages. The study was undertaken with the objective to understand the extent of gender mainstreaming component and inclusion of women in development of watershed areas of Karnataka state both at project and watershed levels. At project level, the official preparedness and action to integrate gender mainstreaming concerns was assessed. The study revealed adequate care was taken up by the officials to approach and involve women in planning, implementation and post project stages, a significant gender mainstreaming score was obtained at project level. At watershed level, the project implementation efforts of PIA showed women's participation work-wise was more significant from their involvement in manual work and running of Self-Help groups and less in management of watersheds programs which needs to be improved. Some of the reasons for low participation in management might be the poor socio-economic status, women's participation was restricted to consultative nature and livelihoods introduced in watershed programs were not reflecting their needs.

Key words: Gender mainstreaming, participation, decision making, watershed development programme

In India 120.4 m. ha land has been classified as degraded land and nearly three-fourth of which falls in undulating semi-arid areas where rainfed farming is practiced (ICAR, 2010). Rainfed areas currently constitute 85 m.ha accounting to 55% of the net sown area of the country. (NRAA, 2012). Even after realizing full irrigation potential, about 50% of the cultivable area will continue to remain rainfed. Rainfed regions are characterized by soil degradation, poverty ridden, water scarcity, rapid depletion of ground water table and fragile ecosystem. The watershed approach has been accepted as a major theme for development of rainfed areas with a view to conserving natural resources: water, soil and vegetation by mobilizing social capital.

During the 1970s and 1980s the evaluation of watershed initiatives was based primarily on biophysical criteria. The late 1980s saw a growing awareness that watershed development is about more than maintaining or improving the productivity of natural resources (Kaushik *et al.,* 2007). In recent years watershed management has become the focal point of agricultural and rural development in rainfed areas of land. Central and State governments, donors and NGOs have all been involved in implementing watershed programmes with varying degrees of success. It was intended that watershed development should integrate natural resource conservation and management, broadly following a ridge to valley approach. This was done through a variety of land based activities including protecting degraded common forest and pasture, water conservation and harvesting on common land with check dams, percolation tanks and trenches, soil and water conservation on private land with earthen/vegetative bunds and percolation tanks and developing minor irrigation works from open wells, tanks and borewells.

Prof. CH Hanumantha Rao committee reported in 1994 that community based watershed management necessary to bring holistic development of watershed which had led to emergence of common guidelines "The National policy Guidelines on Watershed Development" by the Ministry of Rural Areas and employment (MoRAE). The MoRAE guideline objectives include productive, social, and ecological and equity issues. To achieve equity it is imperative the watershed development efforts had to reach women and poor sections which is also one of the key guiding principles of new watershed guidelines. The GOI (2001) guidelines stated that project should start with general awareness building; followed with formation of village committees, user groups (UG) and self help groups (SHG) mainly with women. Later in 2003, 2008 and 2011 the revised common guidelines, also had laid more emphasis on equity and women participation. According to Seeley *et al.,* 2000, the major challenge in implementation of watershed development programme is promotion of economic development, restoration of ecological balance with 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. Watershed development programme, therefore, focused on interrelationship between soil and water appropriate conservation measures, land use vegetative cover and promotion of socio-economic conditions of people. One

of the outcomes of such endeavours was issuance of fresh guidelines from Ministry of Rural Development, promoting social and economic conditions of resource poor such as assetless and women.

Keeping this in view, the study was undertaken with the following objectives for understanding gender mainstreaming (GM) component, gender participation and decision making aspects both at project and watershed levels of state watershed development programmes.

Objectives of study:

1. To study the extent of gender mainstreaming as perceived by the project officials at project level.
2. To study the extent of participation and decision-making of men and women in watershed programme at watershed level.

Materials and Methods

The Study was carried out in Karnataka state watershed development programs at two levels: the project and watershed levels.

In Karnataka state, at project level, the watershed development program was implemented in 22 districts, each administered by a project director. All the 22 project directors were included in the study and each was subjected with a questionnaire to ascertain their preparedness of integrating gender concerns into the watershed programmes. A questionnaire consisting of gender related activities at four different stages of watershed development programme namely preparatory, planning, implementation and evaluation stages, based on guidelines, was prepared and subjected to each of the project directors. At project level the responses were obtained only from nine project officials out of the twenty two project officials and those responses had been compiled and analysed to understand the extent of preparedness on integration of gender mainstreaming component in accordance to the new watershed guidelines of GOI.

At watershed level, in the second phase of study, based on the mean level of gender mainstreaming (GM) scores obtained, one district with above mean GM scores was chosen for detailed analysis as it would might throw more light on the participation pattern of gender in areas of planning, implementation and evaluation stages and work- wise patterns present in the watersheds. Out of the four districts namely Bengaluru, Chitradurga, Shimoga, Bellary that has received high mean GM scores; Bengaluru district was selected randomly. Two villages in Bengaluru district watershed were included and studied for the analysis of gender differences in terms of participation and decision-making in watershed programme. Thirty each of men and women stakeholders in different capacities and holding membership in committees and also trainees were contacted to elicit information on participation and contribution in decision making aspects both for phase-wise and work- wise information.

Details of the demographic and physical characteristics of study location

The Kempalanatha micro watershed is situated south of Kanakpura Taluka with Grampanchayat headquarters at Hosadurga which is 28 kms from taluk headquarters. It covers 2 villages namely Kempalanatha and Guddeveerahosahalli. It has 897 ha. geographical area with 515 ha. as net area available for various treatments. The micro watershed has a total population of 1591 distributed among 2 villages with 450 males and 422 females and rest are children. The SC people constituted 6% and ST being one percent only. Farmers are very poor and are mainly dependent upon agriculture for their livelihood apart from sheep rearing. The arable area available for treatment comprised of both public and private lands to an extent of 58% of total geographical area. In the watershed, 29% of the area comes under marginal farmers, 31% with small farmers and rest 40% of area under big farmers. Average per family land holding in the project area is 2.35 ha. Most of the land is red loamy soils with maximum slope of 3-8%. Problems reported in these watersheds were uneven distribution and uncertain rainfall of 100-130 days with 2-3 prolonged long dry spells, low productivity, scarcity of water for both drinking and irrigation, less green cover and scarcity of fodder to the existing bovine population. The statistical tools used are mean, standard deviation, percentages and non-parametric test.

Results and Discussion

Gender mainstreaming at project level

Scores on gender mainstreaming (GM) were obtained in Karnataka state, at project level of study, from nine districts only out of the 22 project areas were contacted and are being presented in Table 1. It had indicated that women involvement at planning stage was high to medium in terms of watershed association membership (high), watershed committee membership (medium), in facilitating planning (medium), preparation of action plans (medium), in curriculum design for gender training (medium) and high participation in exposure visits and study tours. In preparatory phase women involvement at project level was high in terms of presence of women in watershed association and committee meetings as they were made compulsory, however, medium participation observed for participation in orientation workshops, identification of gender training institutions for training, and publication of resource materials. During implementation phase the project staff at district level have taken much care to provide equal wage rates which received high score followed by medium scores for gender activities namely organizing regular gender training, routing funds through women groups, representation of women from poor households, getting contributions from works in cash and labour and involving women in monitoring of activities based on action plans.

Table 1 : Gender mainstreaming in watershed development programs (n-9 districts) of Karnataka state at different stages

S.No	Statements	High	Medium	low
I	**PLANNING STAGE**			
1	**Involvement of women groups in**			
a.	In demarcation of watersheds	2(22.2)	3(33.3)	4(44.4)
b	Social mapping of resource inventory in watersheds	2(22.2)	4(44.4)	2(22.2)
c	In facilitating planning	2(22.2)	6 (66.7)	1(11.1)
d	Preparation of watershed action plans	2(22.2)	6(66.7)	1(11.1)
e	Watershed development teams	3(33.3)	6(66.7)	-
f	Watershed association membership	4(44.4)	4(44.4)	1(11.1)
g	Watershed committee membership	4(44.4)	5(55.6)	-
h	In focussed group discussion	4(44.4)	4(44.4)	1(11.1)
i	In curriculum design for gender training	3(33.3)	5(55.6)	1(11.1)
j	Fixing of agenda in watershed associations and watershed committees	3(33.3)	6(66.7)	-
k	Exposure visits and study tours	5(55.6)	4(44.4)	-
2	Selection of PIAs is based on the previous experience of working with poor women	2(22.2)	6(66.7)	1(11.1)
II	**PREPARATORY ACTIVITIES**			
3	Identification of resource organizations to impart gender training ,monitoring and evaluation	3(33.3)	5(55.6)	1(11.1)
4	Publications of resource materials for gender training	3(33.3)	4(44.4)	2(22.2)
5	Orientation and workshops organized for women.	4(44.4	4(44.4)	1(11.1)
6	Creating awarenesss of user groups/SHG about budget allocation of watershed development.	4(44.4)	4(44.4)	1(11.1)
7	Attendance in watershed association and watershed committee meetings is made compulsory	6(66.6)	3(33.3)	-
III	**PROBATION PHASE**			
8	Counselling and orientation of watershed development team (WDT) members	3(33.3)	5(55.6)	1(11.1)
9	Orientation of women user groups about activities to be taken up in sub- watersheds	4(44.4)	5(55.6)	-
10	Providing title deeds of immovable properties and access to control over resources before ensuring their participation	1(11.1)	5(55.6)	3(33.3)
IV	**IMPLEMENTATION –WHETHER DWMA**	**High**	**Medium**	**Low**
11	Routing of funds for development of watershed through women groups.	-	6 (66.7)	3(33.3)
12	Regular gender trainings organsied for PIA's	-	6 (66.7)	3(33.3)
13	Involvement of SHG's in watersheds is majorily for wage employment, monitoring of work sand development of common pool resources	3(33.3)	6 (66.7)	-

14	Involvement of women in monitoring of activities on the basis of action plans	1(11.1)	7(77.8)	1(11.1)
15	Care exercised to look into equal work wage rates for both men and women.	7(77.8)	1(11.1)	1(11.1)
16	Representation of women from poor households in WDT and other key positions in watershed Institutions	4(44.4)	5(55.6)	-
17	Monitor WDT on capacity building training for women, organize field visits to resource poor families including women.	2(22.2)	6(66.7)	1(11.1)
18	To collect contributions from works in form of cash/labour/material even from poor families and women.	3(33.3)	4(44.4)	2(22.2)
19	Provision of usufructs rights over benefits gained from common property resources	2(22.2)	6(66.7)	1(11.1)
V	**POST PROJECT PHASE**			
20	Promotion of group action through SHG federated at mandal level for livelihood support activities.	1(11.1)	7(77.8)	1(11.1)

In Table 2 it is reported that Chitradurga district topped the gender mainstreaming score (87), followed by Shimoga, Bellary with scores ranging between 71 and 77 and districts with scores falling between 61 and 67 are Bhagalkot and Chikamagulur and Bangaluru. The lowest scores ranged between 54-58. However, the overall GM mean score reported was 63 in Karnataka state and has been indicated as good average score. Wilcoxinn - signed rank test indicated gender mainstreaming at project level to be significant at project level. This clearly explained that sufficient care was taken to mainstream the gender component from the project level, that is mostly from planning stage of the project.

Table 2 : District-wise gender mainstreaming (GM) in watersheds of Karnataka

District	Agro ecological zone	Gender mainstreaming (GM) score	Rank
Chitradurga	Hill agroclimatic zone	87	I
Shimoga	Southern transition agro climatic zone.	77	II
Bellary	Northern dry agroclimatic zone	71	III
Bengaluru	Eastern dry agroclimatic zone	67	IV
Bhagalkot	Northern dry agroclimatic zone	62	V
Chikamagalur	Hill agroclimatic zone	61	VI
Davangere	Northern dry agroclimatic zone & central dry agroclimatic zone	55	VII
Haveri	Northern transition agroclimatic zone	58	VIII
Tumkur	Central dry agroclimatic zone	54	IX
Mean		65. 77	
SD		10. 94	
	Wilcoxin signed rank test –	18.00* *p* value- 0.0156	

Perception of gender differences based on socio-economic status

Women respondents were younger in age than male respondents as indicated in Table 3. Majority of women belong to 25-35 years of age category whereas majority (66.6%) of male members were above 45 years. However, both groups had primary school education. 40 percent of women respondents belonged to scheduled caste, 36.7% to backward caste and 23% belonged to other caste. Whereas 50% men belong to other caste and very few belong to backward and scheduled castes. From the above finding it was clearly indicated that women belonged to marginal class by their social status more than men which might lead to their marginalization

more than the men in watershed areas. According to Agarwal 2001, women with marginal status are less likely to participate in development works. Besides possessing marginal status however women of this region perceived watershed works as too easy to handle and not a difficult task but a few of them felt (3.33%) that some training was required before starting watershed works. Therefore, women deserve to be encouraged looking at the work related attitude. Majority (90%) of men and women stakeholders were trained by the project officials in watershed activities in different capacities as committee members, members of Self-Help groups, members of VMC and user groups etc., Majority of the women stakeholders (70%) held ownership of land of only 1-2 ha. while men stakeholders possessed land of 2-5 ha, and it was considered high when compared to that of women.

Table 3 : Gender differences in socio-economic status of male and female respondents of Karnataka

Variable	Category	Female		Male	
		Frequency	Percent	Frequency	Percent
Age (years)	25-35	12	40	-	-
	35-45	11	36.67	10	33.33
	>46	7	23.33	20	66.67
Education	Illiterate	-	-	1	3.33
	Primary	19	63.37	16	53.33
	High school	11	36.66	13	43.33
	Graduate	-	-	-	-
Social group	SC	12	40.00	9	30
	BC	11	36.67	3	10
	OC	7	23.33	15	50
Perception of job	Too easy to handle	19	63.33	30	100
	Training not necessary	10	33.33	-	-
	Training required	01	3.33	-	-
Occupation	Sericulture	9	30	-	-
	Dairy	15	50	-	-
	Ag + Diary	2	6.67	10	33.37
	Agriculture	4	13.33	20	66.63
Training received	Trained	27	90	30	100
	Untrained	3	10	-	-
Farmers' category	Marginal	21	70	-	-
	Small	7	23.33	23	76.67
	Medium	2	6.67	7	23.33
	Large	-	-	-	-
Social participation	SHG	14	46.67	Member	18 (60)
	USG	1	3.33	USG	6 (20)
	VMC	4	13.33	Committee member	3 (10)
	Trainee	5	16.67	Trainee	3 (10)

Figures in parenthesis are percentage

Gender differences in participation and decision-making in watershed development programmes of Karnataka State

In Figure 1 it is indicated that women participation in the area of works (SHG, manual and management) was found to be more significant than participation in planning, implementation and post project phases as these phases were not clear and distinct as much as works: manual and management. Both the men and women groups have identified themselves from works point of view rather from participation in planning, implementation point of view and therefore results found to be less significant from phase-wise participation category.

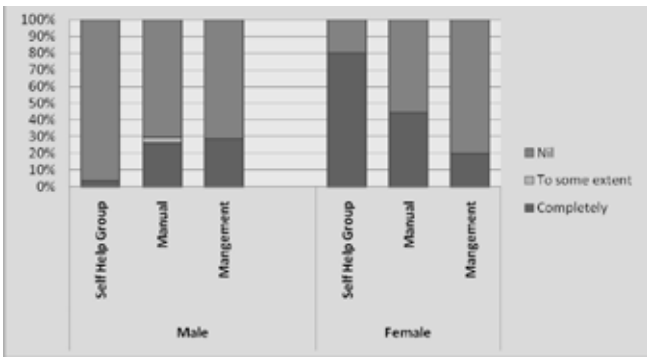

Fig. 1 : Gender participation (work wise) in watershed program

From Table 5 it is indicated that participation was significant at implementation stage of watershed level (village level) particularly for men group which was more than women. This might be due to factors of institutionalized family structure and norms existing at watershed level. Participation in program that is in implementation phase men had more space and time to participate in *gramsabha* meetings, meetings on land use and crop planning, selection of plantation species and raising nurseries and participation in committee meetings which were mostly perceived as male oriented activities by women groups. In order to bridge gap between project and watershed levels more awareness programmes have to be intensified at watershed level for the impact to be felt on beneficiaries. It would be job of project officials to motivate men and women on that front. Satishkumar *et al.* (2013) opined that participation of benificiaries in watershed development activities is highly specific with the intervention and motivation play important role. Alston (2009) reiterated that to achieve gender equity, gender sensitization efforts have to be intensified so to reach grassroot level. And also a strong collaboration and consortia of gender specialists, women orgainsations and units at the national and international level have to work together and highlight culture specific gender issues and discrimantory outcomes.

In Table 4, it is clearly indicated that gender differences in decision-making were significant in watershed development program. Women showed equal participation in decision-making as much as men. Surprisingly the mean averages found to be slightly higher with women and likely to decrease if not properly taken care of Mohanty (2002) suggested that strong strategies are required to enable women exercise their decision-making abilities at committee level which can increase their confidence and awareness of their rights for them to be more assertive in meetings.

Table 4 : Gender differentials in participation and decision-making in Karnataka watershed

Variable	Male	Female	t value
Participation (phase-wise)	25.5 (4.58)	24.23 (2.06)	- 1. 382
			p=0.0873
Participation (work-wise)	6.07 (1.337)	7.5 (1.526)	3.879*
			p=0001
Decision-making	18.1 (2.67)	18.57 (1.52)	0.835*
			p=0001

Table 5 : Gender participation (phase-wise) in watershed development programme

Phase	Male		Female			
	Mean	SD	Mean	SD	t value	*p*
Planning	7.8	1.77	6.37	0.49	0.841	0.79
Preparatory	3.23	0.43	3.2	0.61	0.859	0.80
Implementation	7.6	1.38	6.3	1.42	- 3.50 *	0.004
Post project	25.5	1.0	5.9	0.80	5.05	1.0
Total	25.5	4.58	24.23	2.06	- 1.382	.0.087

*significant at 1% level

The major gender issues identified in watershed program of Karnataka State

Some of the gender issues identified in Karnataka watersheds are in the areas of roles and responsibilities, where women were mostly involved in manual and SHG works, whereas men were engaged in management works as committee members and manual works. In general, these manual works are mostly traditional roles like digging ponds, carrying mud and making bunds. Second, gender issue that is identified in Karnataka watershed programmes was access to land, labor and capital. Mostly women beneficiaries opted for diary and sericulture units as they were traditional livelihood practices of the region but in reality watershed gave little importance to development of sericulture units while men gained benefits from horticulture units through creation of assets viz., establishment mango orchards. The new livelihood activities that have been introduced in watershed programs might hinder participation due to mismatching with existing livelihoods of the region. Amita shah (1980) argues women's livelihood concerns accorded priority in promoting watershed development programmes by a few selected activities as mentioned in watershed guidelines. This is one of the factors for low participation of women. Nuggehalli and Prokopy (2009) gave similar opinion that women participation has strong and direct relationship with potential benefits accrued to stakeholders through project. There is need to incorporate stakeholders regional specific needs for evolving good participation of stakeholders, in this case, it was training in sericulture activity. This finding is in conformity with Singh *et al.* (2011) study on training needs of farmers in a watershed of Madhya Pradesh State; where majority of beneficiaries expressed need for training on bunding, water harvesting, seed treatment fisheries, dairy management and sericulture management.

Unequal wages prevailed in these watersheds even though gender equity with equal wage rates had been proposed in the GOI guidelines for WDP. Some of the social perceptions, symbols and statements gathered during interviews have opened up inherent gender issues prevalent in the area. Women's low wage rate was chiefly attributed to general perception of women strengths. Some of the perceptions are : 'Women are weak', 'Women cannot do and not necessary for outside works' statements which has opened up new doubts about women participation and had indicated gender issue as majorily a psychological issue which need immediate redressal through awareness building and effective educational program so as to bridge the gender gap. Nuggehalli and Prokopy (2009) have rightly pointed out that gender issue as a 'multidimensional construct'. The fourth gender issue that was identified during the study was limitations to decision-making and control: Women view themselves as only trainees rather than members of committee and are forced to participate. They are involved in their own indoor activities such as dairy and sericulture activities.

Conclusions

The major strategic needs met through watershed are in the order of work, food and creation of asset base for women. Watershed programs which have developed dairy and horticulture sectors that could promote livelihoods for women, who formed a major workforce in these areas. However, employment generated from watershed programs through manual works are reaching women but are not made strong partners in watershed management activities due to issues as indicated, even though committee representation was seen but were yet to participate willingly. Officials at project level need to have more sensitization in order to intensify their activities for to further percolation of benefits' to grassroot levels. An affirmative action and a gender sensitive approach are required to bridge gender gap in watershed program (Arya. 2007).

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