



# Women Participation in the Governance of Watershed: A Sociological Appraisal of Odisha

Dr. Priyaranjan Behera  
Assistant Professor  
Deptt of Sociology  
Kalahandi University

## Abstract

*Among the different debates that development theory and practices especially with regard to natural resource governance have been since around 1990, an important one is centered on Community participation. Community based governance is progressively more being scrutinized as the most apposite understanding for advancing sustainable development of natural resources management. Advocates of locally based conservation argue that communities are the best place to vest authority over the management of natural resource governance.*

**KEY WORDS:** *Community, Women Participation, Watershed, Sustainable Development.*

A common postulation is that the values of community members, habitually assumed to be homogenous, foster successful results. Watershed programme is a holistic approach which focuses at maximizing the sustainable use of water, land and vegetation in an area to alleviate soil erosion, improve water availability, moderate floods, drought, and increase fodder and agricultural production on a sustainable basis (kerr, J. 2007). A Watershed is a geographic area that drains to a common point. Watershed development seeks to manage hydrological relation to: a) Maximize the use of natural resources for conservation, and productivity, b) Support rural livelihood and c) Eradicate poverty. The government of India policy document and state legislation invite women to participate in watershed, the research study on female participation is few & far between. More precisely user participation in the management of watershed like any other natural resource is premise on the assumption that it will enhance the effectiveness & efficiency of irrigation management in the watershed command non-these less the researcher through thorough literature has identify that there is a dearth of research studies on specifically focusing on exclusive women participation in the management of natural resource. Natural resource management literature pervasive the acknowledge significance of user participation for the sustainability of water resources.

The overall objective of this paper is to inquire in to the context and conditions of women participation in water user association in the management of watershed in Odisha. The specific objectives are: i) Explore into the socio-economic profile of women participating in the management of watershed and ii) Elucidate into the nature and extent of women participation in watershed management.

## Land Resources and Women

Sometimes Uncertain ownership of land tenure reduces women's interest to sustain natural resources, since they don't have permanent right over land. Even if the small plots arranged by a husband, inherited from a father or requested from male village elders, productivity of land is not very high. Whatever land given or owned by women are generally small in size, isolated, remote and non-fertile. In place having high divorce rate and separation where land remains in the will of men, women are not interested to invest time and resources into long term land improvements such as building irrigation or drainage systems, planting tree crops, terracing or other activities that maintain soil fertility. In several cases, water and land resource governance project have proven unfavorable to women's land and water rights which affects their sustainable management and use (Devi, S. 2010). Capitals are generally controlled by men and decisions regarding the scheduling of irrigation water tend to be made without women's consultation. Development involvements such as irrigation programmes often fail to take into reflection between men and women's ownership rights, division of labour and earning. Irrigation facilities raise the value of land, bringing about social change which generally favours men.

There must be women involvement in to ensure the most prolific and proficient exercise of land and water resources. The equal participation and equal share in ownership of available resources in indicator of balanced social system and better quality of life. Women farmers should be part of planning and implementation of land and water management programmes. Importance should be given to women participation in training and extension programmes, which deal with soil resources and land use planning, and in water resources conservation. However, women's participation if go down in local governance institutions, it is alarming to the whole human society.

## Watershed in Odisha

At the early stages, in Odisha major & medium irrigation project works were under public works Department & minor irrigation works under the control of Revenue Department. In the year 1962, a detach Department called Irrigation and power was set up to speed up the construction work of major and medium irrigation projects. A new department called Rural Development Department was created and Irrigation & power Department was split into Department of Irrigation and Department of Energy. Major and Medium Irrigation remained with the Department of Irrigation, power generation went to the Department of Energy. Minor Irrigation works were transferred to Rural Development Department. In the meantime, other sectorial demands of water such as domestic and urban agglomeration, industrial have been increased considerably which warranted an integrated water resources development and management approach. Minor irrigation works were transferred to Rural Engineering Organization formed under planning and Co-transferred to the Irrigation and power Department. The year witnessed major changes in Secretariat Administration, resulting in the reorganization of departments. To face the challenge, first National water policy was framed in 1987. Following the principles of National water policy, the state water policy was framed in 1994, which underscores the need of a coordinated approach to the state's water resources development.



Fig: Odisha Map

## The Watershed Guidelines

Over the last decade the need to consider the social, financial and institutional aspects of rural development, as well as the technical and bodily works, have been renowned. In 1994 the Ministry of Rural Development of the Government of India formed a new set of guidelines for executing its watershed programmes. The Guidelines recommend the formation of a Watershed Development Team to provide technical support to the community, comprising four to five experts with skills in civil engineering, veterinary medicine, forestry, soil and water conservation, and community development. In addition, the Common Approach for Watershed Development states that “one of the Watershed Development Team members should be a women”. It is the responsibility of the community development expert to facilitate community participation and to ensure that women and Schedule Caste and Scheduled Tribes are involved in watershed activities. The community development person is seen as the “front-end” of the technical team, preparing the way for the technical specialists.

The Watershed approach is one of the best stratagems for drought alleviation. It is intended at amplification and stabilization of fabrication and productivity, curtail ecological degradation, reducing regional disparity and operating up prospects for employment of rural poor in the rain fed areas. This was a progressive part of official policy and integrated many of the good practices developed in NGO and government projects. These Guidelines responded to apprehensions that the full reimbursements of watershed work were not being accomplished because of different approaches and because of insufficient adaptation of technical and organizational approaches to local circumstances. The Guidelines state the goals of each watershed development project as supporting economic development, the reinstatement of ecological balance, and giving “special prominence to progress the economic and social condition of the resource poor and the disadvantaged sections of the watershed community such as the asset less and women”.

The Guidelines promote a bottom-up planning approach, working where possible through NGOs and with women participation as central principle. 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 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 community. Thus, a participatory approach through different common interest groups, including self-help groups, should be adopted as a tool for implementation.

This is the ideal, with the watershed plan prepared according to the needs and preferences of local people who are members of the Watershed Association that elects a watershed committee. The 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.

## Significance of Watershed

The first and foremost significance of this research is an important gap which it attempts to fill in the area of watershed about the perspective of the Women, their understanding and there upon factors influencing women participation. Hence this knowledge of factors coming from women' understands which influence the adoption of watershed program can go a long way in the scaling up of watershed program and more so ever, in a sustainable manner.

Watershed development is primary issue related to irrigation for the rain fed areas. About 70% Indian population dependent upon rain fed agro-ecosystem that comprises 51% (329 million hectare) of geographical areas. Watershed development yielded good results in productivity increase, growth of agriculture allied sectors, micro-enterprises, conserving groundwater and soil quality, reduced migration, reduced number of people below poverty line.

One among the different challenges to scaling up of watershed program is ensuring women' involvement in the adoption process and this study would contribute to the comprehensive understanding of the factors influencing women involvement and their interrelationships.

## Funding of Watershed

The multiple sources of funding reflects the kind of attention that watershed has attracted. There are four categories of funding sources:

- i) *Government of India:* Government of India sources are the Ministry of Agriculture, which supports the National Watershed Development for Rainfed Agriculture and the Ministry of Rural Development. The National Wasteland Development Board (NWDB), another government source, is also housed in the Ministry of Rural Development.
- ii) *Bilateral sources:* It includes Swiss Development Corporation, Danish International Agency, Swedish International Development Agency, German Agency for Technical Assistance and Indo-Canadian Environment Fund.
- iii) *Other Source:* Other Various NGOs and many National, International autonomous Organizations supporting the project.

Watershed projects have different objectives depending upon the natural resource governance in an area. The World Bank, for example, invested 1.73 billion dollars in watershed development from 1990-2004 and Government of India spent over 6 billion dollars from 2004-2012.

## Water Conservation Practice

Traditionally water was saved in pond, which is a historical structure of rain water storage. It is similar to wide wells with stairs and lot of carving on the stone. The pond water is used for taking bath. No one is allowed to take bath after playing with holi colors to maintain the cleanliness of the water. After attending a funeral, which is not considered auspicious, one cannot take bath in the pond. This is a well-known rule and is adhered by all. Now the pond water is also used to irrigate the nearby fields. During good rains the pond gets filled up to the top. However now it lies in ignorance and due to lack of maintenance, the water is very dirty.

There is a pond in the hamlet. Before monsoon every year all the villagers come together to repair the way with mud for water to come in a canal form, if the way has broken. This would allow the water



to come in through the canal up to the pond. This pond water serves as the source of drinking water for the animals. All the village members have been doing this repair work ever since the pond is there or the village is there.

## Women And Watershed

BasantaManjori Jena, the popular figure of Women User Association (WUA) of around 50 years old said, “ from people we got to know that people from outside have come into our village. This aroused fear in our mind that how come people who have come from outside is giving money to work on our own land, whereby the field would be ours; the grass would be ours, all the benefit would be ours. Till now no one like this had come. We went to Khurdha district, saw the work thatt the organization was doing. They were making anicuts and were doing good work. Means we got inspiration from there only. ” At this time, the people of village observed that the grazing land on the hill , where they used to take their cattle, goats and sheep, animals from the other village were also coming. Neighbor district had started doing watershed work by doing fencing on the forest. Due to this all their animals were coming to the grazing land. The animals had uprooted everything. When the samit started working on the hill, they faced a lot of problems. Basanta told “when we were making the wall, every day the forest department people would come and ask many question. The work wasn’t without hurdles. We had a lot of problem in taking No objection certificate. A proposal was presented in a meeting and then agreement and decision was taken. Finally the panchayat gave the No objection certificate. We also had to go to the forest department”. After a lot of effort, now the land has been given on lease.

## Watershed Impact

### i) Drinking water

Before the watershed work, the water was coming to the houses from a government tube well which is near the temple. Due to the long distance between the tube well and the village houses, the water does not reach to their houses. SulachanaPradhan told “We used to go to the well which is 1 km from here to fetch the water. There was so much of problem earlier”. Another farmer said “our women had to go so far to the well to fetch the water. All the people went to the panchayat and said that we have so much of problem. Then a government officer came here. They asked us that where do we want the hand-pump. We said that we want the tube well here. So another tube well was dug in front of the temple which is in the middle of the village. Now water comes from that tube well to all the houses over here”. In the summers there is water problem so the tube well motor runs for longer hours.

### ii) Irrigation

Many farmers told that after the watershed work was done, it made a difference in the water levels in the well. Due to the anicut, trenches and check dam, that were built on the hill, the water came in the wells. The water level in the earth rises “in this summer, this time our well did not get dry up. Otherwise earlier every year in the summers our well used to get dry up but now we have water in our wells. Agreeing to this many other farmers said that, yes, they have water. The construction of the structures like anicut made a lot of difference in the water availability in wells.



Figure : water is supplied to field through canal

Table 1.1: Size of land owner and participation of women in decision making of Water User Associations

Sl. No.	Size of land owner participation	Extent of women Participation in decision making		Total
		Low	High	
01.	Below 1 acre	1(12.50%)	7(87.50%)	8(100%)
02.	1-2 acre	3(16.67%)	15(83.33%)	18(100%)
03.	2-4 acre	2(20%)	8(80%)	10(100%)
04.	4 acre and above	2(50%)	2(50%)	4(100%)
Total		8(20%)	32(80%)	40(100%)

The table in 1.1 diagnose the relationship between sizes of land owner in relation to the extent of participation of women in decision making. The data amplifies that vast majority (80%) women have high participation in decision making in the category 1-2 acre land. It is apparent from the table that irrespective of size of land all women members of the All Women Water User Association tend to participates in decision making of Water User Associations. It is perceived from this finding that an association of water users unequally formed by women facilitates participation of women in watershed management irrespective of size of land variations.

Table 1.2: Caste-wise participation of women in operation and maintenance of Watershed

Sl. No.	Caste	Extent of women Participation in operating and maintenance		Total
		Low	High	
01.	FC	1 (33.33%)	2 (66.67%)	3 (100%)
02.	SCBC	4 (28.58%)	10 (71.42%)	14 (100%)
03.	OBC	3 (16.67%)	15 (83.33%)	18 (100%)
04.	SC	1 (33.33%)	2 (66.67%)	3 (100%)
05.	ST	1 (50%)	1 (50%)	2 (100%)
Total		10(25%)	30(75%)	40(100%)

The table in 1.2 diagnose the relationship between caste of women member in relation to the extent of participation of women in operating and maintenance. The data amplifies that vast majority (75%) women have high participation in operating and maintenance in the category to caste group

OBC. On the contrary, lowest percentage of participation in the category SC & ST. Since they are having less ownership over land.

It is clear from the table that irrespective of caste all women members of the Women Water User Association tend to participate in operating and maintenance of Water User Associations. It is perceived from this finding that an association of water users unequally formed by women facilitates participation of women in watershed management irrespective of caste variations.

**Table 1.3: Education status and participation of women in operation and maintenance of Watershed**

Sl. No.	Education Qualification	Extent of women Participation in operating and maintenance		Total
		Low	High	
01.	Illiterate	4 (57.15%)	3 (42.85%)	7 (100%)
02.	Only can sign	3 (25%)	9 (75%)	12 (100%)
03.	Primary	2 (12.50%)	14 (87.50%)	16 (100%)
04.	Secondary	1 (25%)	3 (75%)	4 (100%)
05.	Higher Secondary	0 (0%)	1 (100%)	1 (100%)
06.	Under Graduate	0(0%)	0 (0%)	0 (0%)
Total		10(25%)	30(75%)	40(100%)

The field work data is presented in table 1.3 examines the relationship between education and extent of participation of women in operating and maintenance of water user association managing watershed. The data amplifies that vast majority (75%) women have high participation in operating and maintenance in the category to education qualification is primary.

It is evident from the table that irrespective of education status all women members of the Women Water User Association tend to participate in operating and maintenance of Water user associations. It is perceived from this finding that an association of water users unequally formed by all women facilitates participation of women in watershed management irrespective of education status variations.

The table 1.4 present data with regards to examine the relationship between occupation and extent of participation of women in operating and maintenance of water user association managing watershed. The data amplifies that vast majority (70%) women have high participation in operating and maintenance in the category of house wives.

**Table 1.4: Occupation of women and participation of women in operation and maintenance of Watershed**

Sl. No	Occupation of Women	Extent of women Participation in operating and maintenance		Total
		Low	High	
01.	House wives	2(15.39%)	11(84.61%)	13(100%)
02.	Small business	2(50%)	2(50%)	4(100%)
03.	Daily laborers	2(20%)	8(80%)	10(100%)
04.	Government Job	1(50%)	1(50%)	2(100%)
05.	Social Service	1(25%)	3(75%)	4(100%)
06.	Others	2(27.58)	5(71.42%)	7(100%)
Total		10(25%)	30(75%)	40(100%)

It is apparent from the table that irrespective of occupation status all women members of the Women Water User Association tend to participate in meetings of Water user associations. It is perceived from this finding that an association of water users unequally formed by women facilitates participation of women in watershed management irrespective of occupation variations.

## Conclusion

It is believed watershed management is gendered institution in which the hegemony of patriarchy prevails in women participation in the management of water and maintenance of conveying structures. Study in Nayagarh district shows that female participation is more in watershed management. Consequently, women farmers preponderant and thereby constitute a majority in the membership of water user associations. Accordingly, their attendance in meetings and participation in decision making of water user associations is deemed more significant. It is perceived from this finding that an association of water users unequally formed by women facilitates participation of women in watershed management irrespective of age, caste, occupation, family and income variations. Women participation in watershed management is being implemented in all the districts of Odisha and scattering all over the India.

This study has unambiguously established the fact that women-farmers are to a greater extent included in the watershed. Indeed, women are getting opportunity of their empowerment in decision making and representation in management affairs.

## REFERENCE

- Arya, S. L., J. S. Samra, and S. P. Mittal, (1998): *Women and Conservation of Natural Resources: Traps and Opportunities*, Journal of Gender, Technology and Development, Sage Publication, 2(2):167-185.
- Athukorala, Kusum., (2002): *Gender Gaps, Governance Gaps – A View of Sri Lankan Water Management*, In, Imbulana., Peter Droogers and Ian W. Makin (eds). *World Water Assessment Programme Sri Lanka Case Study- Ruhuna Basins*, Proceedings of a Workshop, 6-7 April 2002, Sri Lanka.
- Creese, Gillian., (1995): *Gender Equity or Masculine Privilege? Union Strategies and Economic Restructuring in a White Collar Union*, The Canadian Journal of Sociology, Vol. 20, No. 2, Spring, pp. 143-166
- Government of India (GOI), (2002): *National Water Policy*. New Delhi: Ministry of Water Resources.
- Hooja, Rakesh., (2006): *Management of water for Agriculture*, Jaipur, Rawat Publications.
- Kerr, J.M, G. Pangare, V. Lokur- Pangare, P.J. George, and S. Kollavalli. (1998): *The Role of Watershed Projects in Developing India's Rainfed Agriculture*, Report submitted to the World Bank, IFPRI, Washington.
- Kulkarni, S., (2007): 'Women and Water Policy: Issues and Alternatives'. In: Sumi Krishna (eds.). *Women's Livelihood Rights: Recasting Citizenship for Development*. New Delhi: Sage Publications. pp. 243-262.
- Meinzen-Dick, Ruth., and Margreet Zwarteveen., (1998): 'Gendered Participation in Water Management: Issues and Illustrations from water user associations in South Asia', In: Douglas Merrey and Shirish Baviskar (eds). *Gender Analysis and Reform of Irrigation Management: Concepts, Cases and Gaps in Knowledge*, Colombo, Sri Lanka.'