

## **Community participation in a tribal dominated micro-watershed development project in Eastern Ghats- a case study**

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### **Abstract**

The convenience of taking the natural boundary of watershed as an unit of development, has resulted in the Govt. of India formulating the 9<sup>th</sup> plan document laying its emphasis on this approach. The new concept of watershed development aims at alleviating habitat and inhabitants impoverishment through a holistic approach of conservation and sustainable exploitation of natural and human resources, considering both of them as a part of a system, where mutual responsibility and harmonious coexistence matter. In watershed development context, participation must consciously aim to promote equity and sustainability and primarily aims at involvement of the stake holder community in all stages of project Development of human capacity must go hand in hand with technical interventions in any watershed development programme. Under the Integrated Wastelands Development Programme (IWDP) of Govt. of India, the CSWCRTI Research Centre was assigned the task to develop a model watershed at Kokriguda in the Koraput district of Orissa state in the Eastern ghats of India. It is a tribal village inhabited by *Paraja* tribe., plagued with multiplicity of problems. To win the faith of the partner villagers and to ensure viability and sustainability of the programme, conventional approaches were reoriented and reinvented, considering the need and priority of the community and the ecosystem. Assessment of village situation by enabling the people was done through participatory rural appraisal (PRA) techniques. Community empowerment through capacity building and revitalization of community structures were emphasized along with strengthening of community resources. All of these, along with typical constraints faced and the approach to be adopted to achieve success under similar conditions else where are discussed in this paper.

### **INTRODUCTION**

India has only 2.4% of the world's land area to support over 15% of the world's human and about 16% of the world's cattle population. The uncontrolled population growth as well as the grid multiplication in view of the changed life style has lead to tremendous increase in the demands for food, fuel, fodder, fiber, shelter , communication, industry etc.. Catering to these demands through unsustainable resource use pattern has caused tremendous erosion of the natural resource base. As a result, our precious, fertile lands are fast degrading and the alter life water resources are rapidly dwindling. In a meager span of forty years, the sky rocketing human population has taken its toll by reducing the per capita availability of land 0.9 ha. in 1951 to 0.35 ha. in 1991. Now, we are left with a typical situation, when we have not only to feed an ever multiplying population, but also to forge ahead in the race of development. And meeting all these from a depleting resource base is nevertheless a daunting task.

Economic reforms (Liberalization), ushered in by the GOI from the early 1990s, in general, has benefited the middle and the upper strata of the society, largely neglecting the rural poor, which forms the majority of the population and reside in the villages-the heart of India. A wide diversity of approaches are being tried to develop these teeming millions and to manage their life support system (natural resources) in holistic and sustainable manner, so as to meet the desired ends out of the limitations and degenerating situation. Watershed development approach is one such developmental paradigm, which has created a niche for itself in the current situation, through its multi-pronged strategies, flexibility and above all due to its appropriateness in the Indian rural, socio-economical, ecological and land use context.

## **WATERSHED APPROACH**

Watershed is a geo-hydrological unit draining water to a common point. The watershed above any point on a drainage channel is, therefore, all of the land and water areas which drain through that point(Wetzel, 1957).

The history of the concept and adoption of watershed - based development programmes is traced back to the restoration of the Alps movement in Europe during the last quarter of 19th Century and the Conservation movement in USA during the 1930s. In India this approach had its beginning during 1950s with the starting of the Damodar Valley Corporation (DVC) in southern Bihar with the head quarters of the Soil Conservation Division being located at Hazaribagh. Indian Council of Agricultural Research (ICAR) through its Institutes, particularly through the Central Soil and Water Conservation Research and Training Institute(CSWCRTI), Dehradun and its Research Centers, spread across the country, had also taken up Operational Research Projects on Watersheds and contributed to these programmes in a big way. The convenience of taking the natural boundary of watershed as an unit of development, has also resulted in the Govt. of India formulating the 9th plan document laying its emphasis on watershed-based rural areas development programmes , for harmonizing the synergies of different planned resources to realize the livelihood aspirations of the agrarian communities. Different Ministries of Govt. of India are thus implementing various watershed development programmes under a variety of schemes with different own guidelines. A number of watershed development programmes are also being implemented by number of NGOs and International Donor Agencies.

The original concept of watershed management was to apply conservation measures on any land where the need and opportunity existed and imply a project type operation developed and applied to all the land and water in a watershed. Thus the earlier watershed development programmes were mostly land and water resource based and emphasis used to be laid mostly on technical aspects. But, in most of the projects, the anticipated success was elusive, in spite of well planned and technologically sound interventions backed with political will, committed bureaucracy and financial resources (Douglas, 1997). There used to be yawning gaps between the planners' perception, implementors' execution and target users' aspiration and most of the watershed programmes were supply driven. Probably, the necessary importance needed to be given to the 'Human Factor' was largely missing. Thus, of late, watershed programmes are being formulated with

adequate stress on human dimension. In these projects, thorough emphasis is being given to community participation, gender neutrality, equity, social justice and institution building.

Thus, the present watershed is lot more than a mere geo-hydrological unit, it also encompasses the human beings living inside it and their interaction with the other living and non-living entities inhabiting the watershed including that of themselves. And the recent Watershed Development programmes have the novelty of taking into consideration non-land based and human resource development activities in an integrated manner along with its old strategy of land and water husbandry. This new watershed development approach aims at alleviating habitat and inhabitants impoverishment through a holistic approach of conservation and sustainable exploitation of natural and human resources, considering both of them as a part of a system, where mutual responsibility and harmonious coexistence matter. (Choudhury and Patnaik, 1999).

## **COMMUNITY PARTICIPATION**

Participation connotes different things to different people. It means “ a dynamic group process in which all members of a (work) group contribute, share, or are influenced by the interchange of ideas and activities towards problem solving or decision making”. (Singh, 1990). It is a mechanism where people express themselves and act with mutual responsibility to promote a mutual set of interest. In watershed development context, participation must consciously aim to promote equity and sustainability, so as to achieve the desired goal.

Community participation in a project is a process, which primarily aims at the active participation of the stake holder community in all stages of project, right from development of concept to successful adoption culminating in achievement of the jointly set goals. It calls for participatory methods of learning from, with and by the farming community and emphasizes “farmers first” approach.. People can be helped, only when their problems, priorities, potential and social organization are clearly understood and their role prioritized. Ensuring community participation is not an easy task. It is a dynamic, interactive and iterative process needing patience on the part of the extension agent and foresight of the project planner. The degree, mode and kind of community involvement depends on the community, the programme and the programme implementing agency. As in most of the cases the later two factors remain constant, the community through its inherent structure, function, dynamics and past experience with development agencies influences to a great deal to the process. The communities in the great Indian diaspora are enormous with numerous caste, creed and tribes forming a formidable mosaic. Thus, to ensure community involvement, separate situation specific approaches are needed.

In community participation, there is a great need of participatory meeting procedure and methods for conducting situation analysis, goal setting and strategic planning. Development of human capacity must go hand in hand with technical interventions in any watershed development programme. The hitherto adopted planners’ perception about farmer as a problem need to be replaced with the farmer first approach which is described as “not

to transfer known technology, but to empower farmers to learn, adapt and do better; analysis is not by the outsiders – scientists, extensionists or NGO workers – on their own but by farmers assisted by outsiders”(Prior, 1997)

## **PROJECT BACKGROUND**

The eastern ghat region is predominantly inhabited by tribals mostly following subsistence agriculture, in spite of the nature's gift of bountiful bioclimate and rich biodiversity. The rolling upland topography, impoverished people and unsustainable land use together make this area ecologically vulnerable and economically weak. For boosting the production and productivity of the region in a sustainable manner and to protect the life of the reservoirs below, this sensitive and vulnerable catchment area of some major rivers like the Kolab, the Indravati etc. needs treatment on watershed basis.

Under the Integrated Wastelands Development Programme(IWDP) of Department of wasteland development, Ministry of Rural Areas and Employment, Govt. of India, the CSWCRTI Research Centre was assigned the task to develop a model watershed for the area. Thus a representative tribal hilly watershed plagued with multiple problems was selected at Kokriguda in Semiliguda Block of Koraput District.

## **KOKRIGUDA WATERSHED - THE AREA**

The micro watershed of 317 ha. comes under Agro Ecological Zone – 12 (as per National Bureau of Soil Survey and Land Use Planning) and located in the Semiliguda Block of Koraput district between longitude 80° 50' 0" E to 80° 51' 30" E and latitude 18° 39' 50" N to 18° 42' 30" N with an altitudinal range of 880 m to 1329 m from MSL. The annual average rainfall is around 1345 mm, of which 85% received between June to October with few showers during February to March. The annual mean temperature ranges between 10.1°C and 34.8°C.

### **The Inhabitants**

The village is a tribal hamlet with 72 households, all belonging to *Paraja* tribe and 90% of the population comes below poverty level(BPL). They pay least attention to hygiene and live under very poor sanitary conditions, thus malaria and other infectious diseases are frequent visitors making heavy toll each time. The sex ratio is quite even(1:1.06). Only one out of every four villager is literate and a matriculate(10<sup>th</sup> Pass) is yet to come from the village. The main occupation is subsistence agriculture and around 40% of the work force earn living through migrant labour in nearby towns, with no villager engaged in service or business.

The tribal villagers are very casual at life and believe in one day living attitude and without bothering for tomorrow. They believe in short term gains and are reluctant to invest on long gestation period enterprises. Mostly they are honest, simple, but never easily accept outsiders or their advises/suggestions.

### **Glimpses on the Paraja tribe**

In India there is an amalgamation of 437 tribes constituting about 7.76% of Indian population. Orissa is having around 62 tribes forming 22.43% of its population. The Paraja tribe is found in the undivided Koraput and Kalahandi districts of Orissa, with a total population of about 0.15 million as per 1991 census. They are also found in Andhra Pradesh and in *bastar* region of Madhya Pradesh. It is basically a Dravidian tribe having similarity with the Kandhas and the Gondas. The Parajas are inhabiting this country from second century A.D.. A tradition runs through the whole tribe says that formerly the Kings and the subjects were brothers, but the King took to riding the horses and the subjects became the carriers of the burden, thus the nomenclature- 'paraja' comes from the Sanskrit word '*Praja*' means 'subject' or 'carriers of burden'.

The parajas are festival loving people and celebrate various agricultural and social events with sacrifices, feast, liquor, music and dancing. Witch craft and sorcery is part of Paraja society. The Disary (village magician) knows astronomy, astrology, medicine, witchery and sorcery. He fixes the day of marriages, performs and ties the nuptial knot. He uses the ethno-botanical wisdom to treat diseases.

"Biva" the paraja term of marriage, are of five types such as by negotiation, by service, by capture, by mutual consent and elopement or love marriage, by purchase. Polygamy is a recognized institution. Child marriage and widow remarriage are also practiced.

Each paraja village functions as a political unit with the "Naik" as the village chief. He has political, administrative and judicial authority within the village territory and acts as a linkman for outside. He is assisted by the "Challan" and "Barik". Challan acts as the secretary to the village council and helps Naik in legal and political affairs. Barik acts as an informer and organises the villagers in religious and political occasions and serves as night watchman and get remuneration in cash or kind. Naik and Challan are always the Parajas, but Barik is generally from "Dom" community (a low caste Hindu). "Jani" is the priest who presides over religious functions.

The Parajas are basically agriculturists. They practice shifting as well as settled cultivation depending on the place of their habitation. Most of the land owned by the Parajas are upland type (Dangar), usually unsuitable for agriculture. The principal crop of Parajas is Paddy. They also cultivate alsiniger, mandia (ragi) and suan (small millet). Due to subsistence rainfed agriculture, they get very low output and spend majority of it on liquor.

## **PROGRAMME IMPLEMENTATION**

### **Envisaged Strategies**

- Building confidence, capacity and rural institutions.
- Plugging deficiencies and encouraging involvement
- Participatory planning, collaborative effort through linkages and collective implementations
- Empowerment of people, Decentralisation of decision making process and fixing responsibility

Six inherent principles of this Watershed Programme  
Capacity and Society (building)  
Equity  
Gender neutrality  
Responsibility/Accountability (of the people)  
Productivity (Increasing both land and non-land based)  
Sustainability (Conservation and production)

## **INDUCING COMMUNITY PARTICIPATION**

Participation emerges with the existence of common problem and it forces the people to come together to take decisions regarding common action (Rajora, 1998). Both the people as well as the project implementing team have perceived the common problem as abject impoverishment of the ecosystem and its dwellers and the need of common action to combat the same. But, participation was not forthcoming, as the community was not prepared to accept the project partner, the implementing team. Upon continuous probing, the reasons for this initial inhibition were found to be

- Past bad experience with developmental agencies
- The typical tribal xenophobic psyche
- Improper transmission of the Project objectives
- Implementors were non-cognizant of the tribal institutions, social systems and tribal dialect
- Fear of loss of land to the project, basing upon the experience of nearby villages acquired under PSU projects like NALCO, HAL etc.
- Fear of loss of right and control on Common Property Resources (CPRs), traditionally enjoyed by the villagers

Thus in order to gain acceptance and win the confidence of the villagers, repeated visits were undertaken to the village and participatory surveys were conducted to understand their problems, potential, priorities. Participatory Rural Appraisal (PRA) methods were followed to jointly assess the village situation and enable the villagers to share, enhance and analyze their knowledge of life and conditions to plan and act. The PRA exercise carried out in the village revealed the following problems as per the perception of the people

- Water scarcity during off seasons and flooding during monsoon affect crop
- Unhygienic and insufficient availability of potable water
- No electricity supply
- Land degradation coupled with poor fertility and low productivity of crop lands
- Wild animals cause damage to crops
- Scarcity of fuel wood and grazing lands

Some entry point activities (EPA) and confidence building measures (CBM) were taken up to build rapport and win the confidence of the villagers before going for any interventions. The EPAs/CBMs were planned as per the pressing felt needs of the community and the village. Maximum attention was paid to extend basic amenities to equalize with the

average minimum living conditions elsewhere. Building up of formal people's institutions were emphasized to put forth the real needs of the people, to take up the responsibility of effective and transparent implementation and to maintain assets beyond the project period. The inculcation of leadership quality among the villagers were also encouraged for its underlying inherent benefits.

The steps taken under community organisation initiative were taken up with collaborations with various Govt. Departments/NGOs by forging linkages to

- Exploit the existing facilities and local expertise

- Reduce the cost

- Expose the villagers to the different local development agencies

- Streamline different programmes of other departments for watershed development

## **COMMUNITY ORGANISATION INITIATIVES**

### **Entry Point Activities/ Confidence Building Measures**

- Health camps(Human and Livestock)

- Community place construction

- Installation of biogas plants

- Stopping of stone quarry

- Electrification

- Construction of sanitary well

- Liquor prohibition

- Distribution Camps: Cloths and Mosquito nets

### **Building People's Institutions**

- Watershed Association

- Watershed Committee

- Self Help Groups

- User Groups.

Community organization is a continuous process, where rules and regulations get defined and redefined along the transect of time and changing hierarchy of needs of people as the process of interaction among both intra- and inter- community passes through phases of evolution. Thus, most of the initiatives were not restricted only to the initial phase of the projects, instead implemented across the phases as per the demand of the situation.

## **EMPOWERING COMMUNITY**

A community gets empowered when it becomes self dependent through the process of increased level of awareness, exposure to avenues of income generation, acquisition of skills of enterprises appropriately oriented to market conditions and be able to carry on the task on its own with minimum external inputs. The starting point is a cohesive, viable, resilient group to which the necessary empowerment can be extended in forms of exposure, training, credit and initial follow up support. This process should also follow

the principle of gender neutrality and equity to achieve its inherent objective of community empowerment as a whole. To achieve this the following interventions were made in the Kokriguda watershed

Exposure visits to progressive villages/Krishi Vigyan Kendra(KVK)

Fruit farming

Mushroom cultivation

Vegetable cultivation

Training Camps at KVK, CSWCRTI Research Center and in the Village on

Mushroom Cultivation

Improved Vegetable Cultivation

Honey bee keeping

Vegetable processing

Nursery Raising

Participation in District Development Exhibitions by the Community members

Ensuring increased participation through regular group meetings

Expanding their knowledge horizon through inculcation of habit of news paper reading

Enabling people to effectively ventilate their grievances and aspirations before the authority

## **STRENGTHENING COMMUNITY RESOURCES**

The watershed community in Kokriguda relies primarily on subsistence agriculture for its sustenance. The land resource of the village as well as the region, primarily consists of a topo sequence of lands from the hills to the valley known in the order as *Dongar*(slopy land), *Beda*(flatter land), *Jhola* land (submerged to partially submerged flat gully beds). Villagers take up only kharif crops in these lands except few *beda* lands where vegetable cultivation is done during *Rabi* season. They maintain large livestock herds mainly for the purpose of draught and meat purpose which causes havoc to the field crops, already degraded hills and near by forests in absence of practice of stall feeding and any marked permanent grazing land. The untamed water resources in form of two perennial streams mostly go waste in lean seasons and during rains the heavy runoff from the barren hills and ill maintained *dongar* lands cause heavy soil loss and cuts the lands into pieces through rills and gullies.

To conserve the precious land resources and forests and to improve the productivity, interventions were planned jointly by the watershed community and the PIA. User groups were identified to take up the works and maintain the created assets. The group members were encouraged to contribute a part of their wages from the watershed work for the group and keep those savings in the bank to meet their emergency needs as well as for future upkeep of the group's asset. The approach behind the implementation of the interventions was flexible and transparent. The philosophy of participatory execution was strictly adhered to with provision for necessary modifications as per the demands of time and field situation.

### **Interventions made along the ridge to valley**

#### **1. Development of Common lands**



- a. Hill and Slopes
  - Combination of Horticulture, Silviculture and Pasture production systems with soil and moisture conservation measures for in-situ water harvesting
  - Fuel wood lot & Silvi-pasture blocks
- b. Flat land
  - Farm pond
- c. Drainage line
  - Renovation of grassed waterways
  - Gully plugging with loose boulders and vegetative reinforcement
  - Gully bank/side slope plantations

## 2. Development of Private land

- a. Slopes
  - Tree plantation & Agroforestry
  - Live fencing
  - Vegetative barriers and Hedge row plantations
- b. Flat land
  - Organic farming with vermi-compost and mulching
  - Backyard nutrition garden and Banana plantation
  - Vegetable area expansion
  - Women nursery
  - Demonstration of improved varieties and fertilizer in field crops
  - Vegetative barriers and field bund strengthening

Enhancing the community resource base has got a propounding impact on the psyche of the watershed community, as they see the physical realization of their aspirations and thus come forward with greater involvement for participatory development. Most of these targets were achieved by ensuring collaboration of different line departments.

## CONSTRAINTS

### A. Socio-cultural and economic constraints

People are illiterate (25% literate), less exposed, usually misinformed by outsiders and communicating with or motivating them is not easy

Poor economic status of the people does not allow them to invest in long-term gains like fruit plantations and soil conservation measures in their fields.

Social habits and their nature like being introvert and withdrawn and high addiction to liquor make them lag behind in exploitative and competitive society

Fear of loss of authority by the traditional village leader over the people due to the equity oriented approach of the project.

Farm size fragmentation and no up to date upkeep of land ownership pattern/tenancy.

Generational conflict – Differential habit and attitude of different generations.

Nature of merry making during numerous festivals strip them off hard earned cash and also interfere in farm operations.

## **B. Institutional-Cum-Political Constraints**

Deficiency in Govt. of India Watershed Development Guideline

Ceiling rate of the 4000/- per ha towards development cost and the maximum project duration of only 4 years is not adequate.

Mandatory contribution system by the participants for work

Others

Lack of collaborative efforts and linkages among the development govt. departments

Dependency syndrome of the rural communities developed due to Govt.'s approach of spoon feeding

Deterioration of Community structure and community management of common property resources

Conflict in Priorities of project and people

Lack of infrastructural facility in Credit-instruments and marketing-institutions

## **CONCLUSION**

Water as a basic natural resource can provide great motivation for community participation. Community Participation in integrated watershed development project helps in acceptance, adoption and sustenance of technological solutions arrived by scientists. It also extends room for exposure and refinement of rural wisdoms and indigenous technical knowledge. As the need and perception of the community are given priority and community is involved from concept to adoption, this developmental process is viable and sustainable.

This project identified several key points that led to the successful implementation of the watershed development programme in the tribal village of Kokriguda. These factors could also be considered while implementing such programmes in similar tribal watersheds.

Winning the confidence of the village community through PRA and the EPAs  
Equipping the community with appropriate empowerment

Involving the village community in decision making, planning and implementation  
 Prioritizing the interventions as per the community's need and aspiration  
 Exercising equitable rights on the village common property resources  
 Promoting principles of justice, equity, gender neutrality and sustainability  
 Sponsoring low cost, appropriate technologies for higher adoption  
 Encouraging & refining indigenous technical knowledge  
 Exploit collaborative joint ventures through linkages with other departments

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