

Watershed Management: Issues and Concerns of Drought Prone Areas

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Watershed Management programmes are implemented in drought prone areas to tackle the special problems faced by those areas constantly affected by severe drought conditions. The main objective of the watershed approach is to minimize adverse effects of drought on the production of crops, livestock and productivity of land, to promote overall economic development and improve the socio-economic condition of the resource-poor and disadvantaged sections of inhabitants.¹

The Drought Prone Area Programme (DPAP) which is a centrally sponsored scheme of the Ministry of Rural Development, Government of India launched in the year 1972-73 also adopts watershed approach for increasing agricultural productivity, restoring ecological balance and generating sustainable employment in drought prone areas on sustainable basis. The scheme is being implemented in eight districts of

Orissa namely, Kalahandi, Nuapara, Bolangir, Sonepur, Baragarh, Boudh, Kandhamal and Dhenkanal covering 47 identified DPAP blocks. There are 5200 micro watershed projects delineated in these 47 identified DPAP blocks.²

Till the end of 10th five year plan, 84830 hectares (82.5 per cent) of land have been treated under DPAP in these eight districts (Table-1). When district wise status of watershed projects is analyzed, it can be seen that Kalahandi district has been sanctioned with maximum number of micro watersheds (307) followed by Kandhamal (289) and Bolangir (244) districts. Though Kalahandi has been sanctioned with highest number of watershed projects under DPAP scheme in the state but Kandhamal has achieved the distinction of treating maximum area (65873 hectares) followed by Kalahandi (48796 hectares) and Bolangir (29837 hectares) districts.

Table-1 Watersheds Completed under DPAP(MORD) in Orissa

Sl. No	District	No. of Micro Watersheds	Treatable Area(Ha)	Area Treated(Ha)	% of Total Treatable Area
1	Baragarh	26	10890	6684	61.38
2	Bolangir	24	11819	11540	97.64
3	Boudh	12	6794	2937	43.23
4	Dhenkanal	10	5000	4630	92.2

5	Kalahandi	36	18000	14126	78.48
6	Kandhamal	60	38156	34381	90.11
7	Nuapara	18	9279	7532	81.17
8	Sonepur	6	3000	3000	100
Total:	192	102938	84830	82.41	

Source: Report, Orissa Watershed Development Mission, 2000-2007

A review of performance of Watershed Projects:

A review of the performance of watershed projects during the last 20 years reveals their potential for drought-proofing, agricultural growth, environment protection and employment generation. Kerr and Chung (2001)³

According to the study on natural resource management strategies for poverty alleviation in hilly areas of South Orissa has been conducted by R.C. Srivastava *et al*(2004), despite high rainfall drought is a common occurrence in Orissa, with almost every third year being a drought year. Due to this, incidence of poverty is very high in the state. Within the state, poorest rural area is South Orissa named as KBK (Kalahandi, Bolangir and Koraput) districts. To alleviate poverty of this area, it is necessary that rich natural resources of this region are managed with an aim of retarding the erosion process by retiring marginal lands from cultivation and increasing as well as stabilizing the productivity of suitable lands to meet food requirement of the people and improving employment opportunities. For this, the study which was undertaken in two Panchayats to develop a strategy for natural resource planning. It was found that development of micro watersheds could provide irrigation to a significant area at the rate of about Rs10,000/- per hectare. Providing irrigation along with crop planning has the scope for increasing employment potential by 200 per cent with retirement of

marginal lands accounting for 58 per cent of cultivated land. Net return has shown an increase of 400 per cent even at the present state of marketing infrastructure.⁴

Watershed Management in drought prone areas: issues and concern

Although Watershed Management Projects have the potential for increasing agricultural productivity, restoring ecological balance and generating sustainable employment in drought prone areas, experience in implementation of watershed projects raises a number of issues which have bearing on community participation, institution building, and sustainability and livelihood aspects under the project.

The critical issues and concern relating to management of watershed projects based on different studies conducted by various scholars and expert groups are presented below.

a) People's Participation and Institution Building:

- Watershed projects have not been succeeded to generate sustainability because of failure of implementing agencies to involve the people. For watershed projects to be sustainable community management systems are needed and they can succeed only with farmers contribution and their commitment to time and resources (Mid-Term Appraisal

of the Ninth Plan, Government of India, 2001)⁵.

- It has been noticed in many cases that the stakeholders were neither involved in selection of project ingredients nor encouraged to participate in various project activities. The entire process of watershed development involved participation by Government Departments and local contractors with a clear top down approach with least involvement of the watershed communities. Consequently, there has been a supply demand mismatch leading to inadequate attention to local needs and aspiration of the watershed communities resulting inefficient implementation and inadequate sustainability. (Sudhishri *et al* 2006)⁶

b) Livelihood:

- Since watershed is a land based activity, the benefits of watershed management accrued mainly to farming community where as the livelihood security of the landless families have not been taken care of through the project intervention. (Kanan, 2006)⁷
- The portfolio of alternate livelihood opportunities created for the beneficiaries due to intervention through watershed management could not cope with stress and shock and the primary stakeholders could not maintain those activities after the completion of project period (Kar *et al* 2006)⁸

c) Sustainability:

- In majority of the cases sustainability had been causality mainly due to absence of primary stakeholders in project planning and implementation stages. (Mishra & Dash, 2005)⁹
- Withdrawal mechanism has not been properly spelt out by the project implementing agencies for which local community level

institutions did not come up to own the project. Due to lack of capacity and involvement of the community at project completion stage, the assets created under the project could not be maintained with the involvement of local community which ultimately affected long run sustainability of the project. (Sethi, *et al* 2008)¹⁰

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