



Empowerment of SC/ST Communities Through Watershed Activities in Rayalaseema Region

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DOI: 10.31080/ASAG.2020.04.0891

Received: July 18, 2020

Published: August 24, 2020

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Abstract

Semi-arid regions like Rayalaseema of Andhra Pradesh were adopted by programmes like Integrated Watershed Management Program in order to improve productivity and livelihoods especially marginalized sections such as SC/STs. These are poor, asset less, socially depressed, and economically backward. With this aim, IWMP provided financial assistance to improve their lives by engaging them through farm-based and non-farm based activities under the components of Natural Resources Management, Productivity Support Improvements and Livelihoods for the period 2017-2020. To evaluate their performance and improvement, the study carried out a detailed field-based study with extensive field surveys; in-depth interviews focused group discussions, case studies and also collected secondary data for effective analysis. The results can be seen in the target-based activities of financial assistance and works provided to develop their land and livelihoods. This further led them to move towards sustainable development in all spheres of life especially, their self-esteem and social imagery.

Keywords: *Integrated Watershed Management Programme; Asset Less; Natural Resources Management; Productivity Support Improvements; Livelihoods; Rayalaseema Region*

Background

Initiation of Integrated Watershed Management Programme (IWMP) intended to restore ecological balance by conserving natural resources through preventing soil-run off, regeneration of vegetative cover, construction of water harvesting structures, and re-charge of ground water. This programme enabled communities that have depended upon not only at productivity-based activities but also livelihoods by generating the employment. This programme mainly focused on semi-arid regions in the country and some areas were selected as priority based where the programme saw potential in improving on-farm and non-farm activities. "The on-station research study conducted in the semi-arid tropics by ICRISAT which was paved the way to develop an integrated watershed management model in order to increase productivity by us-

ing natural resources efficiently in a more sustained manner" [1,2].

The programme also viewed as effective tool for food security and sustainable development of the communities. This is the demand-driven programme where targets were set and activities carried out to achieve them. It varies from context to context but the integrated model largely applied in order to meet the objectives set by IWMP. With this aim, IWMP implemented in one of the well known areas of drought-prone and semi-arid region called Rayalaseema of Andhra Pradesh with the common guidelines provided in 2008 which were revised again in 2011 [3,4]. So far, 432 projects were implemented under the programme which is spread over 9607 villages and 17.6 lakh hectares in 11 districts of Andhra Pradesh. The Department of Rural Development implemented watersheds through different programmes viz. Integrated Wastelands

Development Programmes, Drought Prone Areas based on the recommendations of Technical Committee under the Chairmanship of Prof. C.H. Hanumantha Rao, Department of Land resources, Government of India launched new integrated program on watershed development called Integrated Watershed Management Programme (IWMP) in 2008.

Introduction

The IWMP has been used extensively on various aspects of watershed development and now it has shifted focus on particular areas of development especially marginalized communities that have not covered so far under major components of the watershed activities. These are largely marginalized and asset less such as Scheduled Caste (SC) and Scheduled Tribe (ST) who are poor, socially deprived and economically backward.

The implementation of the watershed programme activities shows results at community level by providing financial assistance to curb all the soil and water related problems and personal level by supporting economic-based activities. This can be observed in the provided financial assistance for using and maintaining the physical works in watershed under the components of natural resource management activities, productivity support improvements and livelihoods for the period 2017-2020. Main outcomes are evident in prevention of soil run-off, regeneration of natural vegetation, rainwater harvesting and re-charging of ground water table etc.,. This enables multi-cropping, introduction of diverse agro-based and allied activities, which helps to provide sustainable livelihoods to the SC/ST community residing in the watershed area.

Role of SC/ST community in watershed program

The Gram Sabha constituted the Watershed Committee (WC) to implement the watershed project and also constituted with the various stakeholders in the village especially participation of all the categories such as Self Help Groups and User Groups, SC/ST communities, women and landless persons in the village. In this regard, SC/ST communities got the opportunity to participate not only in the watershed activities but also in decision-making for watershed development activities. One of the key important aspects of watershed developments is selection criterion which is based on proportion of all the communities in the village where SC/STs are also part of it. This is also mandatory for selection of watershed projects and contribution towards the Watershed Development Fund (WDF). The contributions to WDF shall be a minimum

10 per cent of the cost of Natural Resource Management works executed on private lands only. However, in the case of SC/ST, small and marginal farmers, the minimum contribution shall be 5 per cent of the cost of natural resource management works executed on their lands. However, for other cost intensive farming system activities such as horticulture, agro-forestry, and animal husbandry and so on. Private land directly benefiting the individual farmers and the contribution of farmers 40 per cent for general category and 20 percent for SC/ST beneficiaries and the remaining cost of the activities i.e. 60 percent for the general and 80 percent for SC/ST category from the project funds subject to a maximum limit of an amount equal to double of the standard unit cost norm for watershed development project.

Status of SC/ST community in the watershed villages of Rayalaseema

Majority of the SC/ST families are landless poor, mostly depends on daily-wage labour, vulnerable, disadvantaged and their backwardness is lagging behind which are linked to their overall development. Though there are progressive efforts in order to uplift them through various policy interventions, very little has been done for their overall development. These reasons are cause of concern and the need of the hour is to make efforts to bring them on the development front. Given this, some of the policies are promising for their upliftment by getting access to resources and its use, ownership rights, equal opportunities, social status and quality life. One of such project is done for SC/ST watershed development plan by the Integrated Watershed Management Program (IWMP) and allotted funds to develop their lands and support livelihood activities.

Objectives

The main two objectives of the studies are to understand the outcomes and impact of various works, which are meant for the SC/STs and to analyze the number of different physical works under different components and financial targets and their achievements during the period of 2017-2020.

Methodology

The selected methodology involved primary data collected from the SC/ST beneficiaries and secondary data collected from the State Level Nodal Agency (SLNA), District Watershed Management Authority (DWMA) offices and referred available literature. Also the study considered case studies from the field evidences. Data

analyzed by taking beneficiaries from SC/ST communities under three components year-wise (2017 - 2020) such as Natural Resource Management, Productive Support Improvement and Livelihood activities in the four districts. Data evaluated by taking each component separately under target and achievements through year-wise from 2017 - 2020.

Distribution of funds for SC/ST communities under the IWMP watershed was carried out during the period 2017 - 2020. The following tables describe the physical and financial achievements of the four Rayalaseema districts in the period 2017 - 2020 for the SC/ST beneficiaries.

Results and Discussion

Improvement of SC/ST communities' has been showed through the activities undertaken by watershed. "In general improvement of rural livelihoods in the watershed villages depends on asset-base creation" [5]. IWMP is one such programme which promises overall development of diverse communities with its integrated approach.

Enhancing productivity and effective use of resources through water harvesting structures and livelihood activities among the SC/ST beneficiaries

Improvement of SC/ST lands, soil fertility, agriculture, irrigation facilities, and production of the crops has been increased through the various watershed interventions. The activities under Natural Resource Management indicates that construction of various water harvesting structures such as sunken pits, rock fill dams, gabion structures, percolation tanks, check dams, farm ponds, injection bore wells, NADEP compost pits and also vegetation activities like horticulture, agro-forestry and so on were carried for them. The watershed programme provided primary and secondary tillage tractor drawn equipments like cultivators, MB ploughs, seed drills, rotovators, water carrying pipes, oil engines, inter culture equipments like weeders plant protection equipments like sprayers, drip and sprinkler irrigation systems, tarpaulins, plastic crates under Productive Support improvement. The animal husbandry activities like fodder plots, chaff cutters, fertility camps, breeding rams were carried out. Dairy, small ruminants and petty businesses were encouraged under the livelihood activities. These are all the activities have been done through effective participation and co-ordination in between the institutional systems and stakehold-

ers of SC/ST communities. Therefore, community participation is important source for success of any activity. Joshi., *et al.* work talked about "people's participation in planning, developing, and executing is a critical factor for the watershed programmes success which demands community participation and collective action" [6].

The below given table explains about the physical and financial targets and achievements for the SC communities for the Rayalaseema region during the period of 2017 - 2020.

The overall picture provides details as the total target physical activities are 33860 and its achieved status is 16758 which is 49 per cent and the total target financial allocation is Rs. 9283 (lakh) and its achieved status is Rs. 4309 (lakh) which is 46 per cent. Like-wise, under NRM, the total achievement status of SC farmers under NRM is 16758 works done with Rs. 1773 (lakh). For PSI, 8307 works done with Rs. 1115 (lakh) and Under Livelihoods, the achieved status is 5602 works for Rs. 1400 (lakh).

The below given table explains about the physical and financial targets and achievements for the ST communities for the Rayalaseema region during the period of 2017 - 2020.

The total target physical activities are 6266, the achieved status is 3414 which is 54 per cent and total target of financial allocation is Rs. 1296 (lakh) and its achieved status is Rs. 928 (lakh) which is 72 per cent. Like-wise, under NRM, the total works provided is 776 with Rs. 455 (lakh). For PSI, 1344 works done with Rs. 147 (lakh) and under Livelihoods, the achieved status of works done is 1293 for Rs. 323 (lakh).

Results and benefits of the watershed programme for SC /ST communities

The overall results denotes that 49 per cent in physical works and 46 per cent in financial aspects were recorded for three consequent years from 2017 - 2020. For the activities under watershed components a total of 2835 for Natural Resource Management activities, 8307 for Productive Support Improvement activities, and 5602 for Livelihood activities were carried out and resulted in improvement of agriculture and non agriculture based activities of the SC community in the four districts of Rayalaseema.

Similarly for the ST community, a total of 54 per cent in physical and 72 per cent in financial aspects have been reported to cover

S. No	Name of the District	Total Physical Works and Financial allotment of Target and achievement for ST from 2017-20							
		Target							
		Physical				Financial (Rs. in Lakhs)			
		2017-18	2018-19	2019-20	Total	2017-18	2018-19	2019-20	Total
1	Anantapur	3060	10663	1609	15332	1038.03	1957.9	752.28	3748.21
2	Chittoor	4973	3110	908	8991	809.61	1238.6	418.53	2466.74
3	Kurnool	1734	3483	744	5961	479.37	1297.87	333.51	2110.75
4	YSR-Kadapa	1193	1953	430	3576	224.43	558.49	175	957.92
	Total	10960	19209	3691	33860	2551.44	5052.86	1679.32	9283.62
		Achievement							
1	Anantapur	3122	1898	333	5353	747.05	393.05	109.38	1249.48
2	Chittoor	2709	2586	379	5674	589.46	444.74	112.02	1146.22
3	Kurnool	2257	1383	326	3966	663.14	579.11	163.31	1405.56
4	YSR-Kadapa	979	659	127	1765	273.29	190.49	44.76	508.54
	Total	9067	6526	1165	16758	2272.94	1607.39	429.47	4309.8
		Total achievement under natural resource management (nrm) from 2017-2020							
1	Anantapur	223	414	182	819	119	217	88	423.97
2	Chittoor	378	301	75	754	125	203	81	408.13
3	Kurnool	374	485	150	1009	236	350	121	707.43
4	YSR-Kadapa	134	100	19	253	93	114	28	234.37
	Total	1109	1300	426	2835	573	883	319	1773.9
		Total achievement of productive support improvements (psi) from 2017-2020							
1	Anantapur	604	1478	151	2233	54.4	166.33	21.01	241.74
2	Chittoor	961	2285	304	3550	122.11	242.22	31.14	395.47
3	Kurnool	558	891	176	1625	95.75	220.69	41.92	358.36
4	YSR-Kadapa	233	558	108	899	27.31	75.86	16.89	120.06
	Total	2356	5212	739	8307	299.57	705.1	110.96	1115.63
		Total achievement of livelihood activities from 2017-2020							
1	Anantapur	2295	0	0	2295	573.83	0	0	573.83
2	Chittoor	1370	0	0	1370	342.62	0	0	342.62
3	Kurnool	1325	0	0	1325	331.21	0	0	331.21
4	YSR-Kadapa	612	0	0	612	153.11	0	0	153.11
	Total	5602	0	0	5602	1400.77	0	0	1400.77

Table 1: Target and achievement of physical works and financial allotment under NRM, PSI and Livelihoods for SC during 2017-2020.

all three financial years. Totally, 776 Natural Resource Management activities, 1344 Productive Support Improvement activities, and 1293 Livelihood activities have been carried out and benefited. Their improvement can be seen through improved status in;

enhanced their irrigation facilities in their agriculture and horticulture, increased livelihood lead to increased household income, improved milch animals and got benefitted through assured dairy activities, increased vegetable cultivation resulted which is also

S. No	Name of the District	Total physical works and financial allotment of target and achievement for st from 2017-2020							
		Target							
		Physical Works				Financial (Rs in Lakhs)			
		2017-18	2018-19	2019-20	Total	2017-18	2018-19	2019-20	Total
1	Anantapur	2314	471	685	3470	372.91	215	94.02	681.93
2	Chittoor	589	365	388	1342	94.15	127.97	52.36	274.48
3	Kurnool	261	334	321	916	42.3	116.83	42.01	201.14
4	YSR-Kadapa	137	211	190	538	21.66	95.25	22.51	139.42
	Total	3301	1381	1584	6266	531.02	555.05	210.9	1296.97
		Achievement							
1	Anantapur	954	701	170	1825	257.72	170.59	54.33	482.64
2	Chittoor	444	243	77	764	129.7	62.17	30.49	222.36
3	Kurnool	447	103	17	567	113.83	32.43	5.79	152.05
4	YSR-Kadapa	187	56	15	258	48.11	20.41	2.59	71.11
	Total	2032	1103	279	3414	549.36	285.6	93.2	928.16
		Total achievement under natural resource management (nrm) from 2017-2020							
1	Anantapur	172	216	76	464	103	117	45	264.42
2	Chittoor	60	35	15	110	41	39	22	101.75
3	Kurnool	87	70	17	174	33	26	6	65.44
4	YSR-Kadapa	15	13	0	28	10	13	0	23.49
	Total	334	334	108	776	187	195	73	455
		Total achievement of productive support improvements (psi) from 2017-2020							
1	Anantapur	252	484	94	830	22.54	51.65	9.41	83.6
2	Chittoor	68	208	62	338	9.7	23.19	8.65	41.54
3	Kurnool	54	33	0	87	4.05	6.13	0	10.18
4	YSR-Kadapa	31	43	15	89	2.45	7.25	2.59	12.29
	Total	405	768	171	1344	38.74	88.22	20.65	147.61
		Total achievement of livelihood activities from 2017-2020							
1	Anantapur	530	0	0	530	132.42	0	0	132.42
2	Chittoor	316	0	0	316	79.07	0	0	79.07
3	Kurnool	306	0	0	306	76.43	0	0	76.43
4	YSR-Kadapa	141	0	0	141	35.33	0	0	35.33
	Total	1293	0	0	1293	323.25	0	0	323.25

Table 2: Target and achievement of physical works and financial allotment under NRM, PSI and Livelihoods for ST during 2017-2020.

helped in consuming nutritional food. Decreased debts and reduced migration. Increased self esteem to have farm equipments like tractors, blade rotavator and so on. With all the mentioned activities above, watershed development programmes like Integrat-

ed Watershed Management Programme (IWMP) can be viewed as a tool to eradicate poverty in rural areas by generating employment days (Joshi., *et al.* 2005). This will lead for their full participation to reap the benefits that were promised under the proposed programmes.

All these activities aimed at their overall development where integrated approach provided room by engaging them through on-farm based and non-farm farm based activities and exposed them to other economic generated activities like dairy and petty businesses. For instance, SC/ST communities' social status is linked with their economic status in the rural areas. This was also expressed by Narkhede, *et al.* as the "Overall development of resource poor depends on the generation of employment that available to them which is linked to their socio-economic status" [7]. This shows an deliberate attempt with conviction for achieving true meaning of success of the watershed management programme which touches upon overall community development by inclusive approaches. Performance of the SC/ST farming communities in the watershed activities appears as only at 50 per cent but the real means of benefits that the communities acquired was never been the case. In this view, the empowerment and sustenance of SC/ST can see the improved status with their achievement by whatever means provided through watershed activities. Sustainability in all means through watershed activities in the project area proposes its regular and proper maintenance without fail. Then only, any activity or action can give long term results. The work of Vishnudas, *et al.* provides "a conceptual framework for successful watershed activities with the effective coordination and participation of all the stakeholders that were part of it" [8].

Empowerment of SC/ST through watershed activities

Initially, the concept of empowerment was associated with the feminist movement in the gender and development perspective. Later it shifted from gender to rights, and social movements, gaining control, power over, collective organization, relational, power and structure (power structures - place and space), decision-making, culture and histories of context, and multidimensional. "Implications at operational level emphasis on process that leads to a focus on organizational capacity building or an increase in participation of previously excluded groups in the design, management and evaluation of development activities. An emphasis on outcomes leads to a focus on economic enhancement and increasing access to economic resources" [9].

The definition of empowerment for the study can be considered as the process and also an outcome which does not end in itself. The state of empowerment has fluidity with its dynamism based on context, partner, power, and so on. These are all well connected elements and changes their form based on the approach applied.

So, the current study can be seen from the lens of multidimensional approach which accounts capacities at individual as well as collective to address inequities and achieve empowerment through watershed activities [10-12].

Conclusion

The study of SC and ST community in the IWMP activities shows us that their sustainable development with the degree that they have achieved through the financial as well as activity-based support. Though the anticipated targets and achievements of funds allocation and physical works appears as nearly 49 per cent and up to 70 per cent, the change occurred at community and individual level is something that they ever been in the case. This degree of change can be called as their empowerment level from asset less to generation of assets through watershed activities.

A Way Forward

The SC and ST communities would have benefited from a pool of watershed resources if the Government had spent 100 of the achievement of physical and financial aspects that were intended for them. Future programs may be looking for a way forward.

In this regard, the success or improved sustenance in their lives can be celebrate at their empowerment in the given activity and view it in the long term perspective to improve/develop more. For this there should be more financial and technical support in the all undertaken activities by the IWMP. This would promise their overall development all spheres of life.

Bibliography

1. Singh P, *et al.* "Integrated watershed management for increasing productivity and water-use efficiency in semi-arid tropical India". *Journal of Crop Improvement* 23.4 (2009): 402-429.
2. Kumar M and Sharma PK. "Watershed Management Approach for Conserving Water Resource in Rainfed Areas". *International Journal of Agriculture Innovations and Research* 2.3 (2013): 351-356.
3. GoI. Common guidelines for watershed development projects (2008).
4. National Rainfed Area Authority. Common Guidelines for Watershed Development Projects-2008 Revised Edition-2011 (2001).

5. Turton C. Enhancing livelihoods through participatory watershed development in India. London: Overseas Development Institute (2000).
6. Joshi PK. "Meta-analysis to assess impact of watershed program and people's participation". IWMI 8 (2008).
7. Narkhede MB, *et al.* "Impact of watershed project on socio-economic status and agricultural development of respondents in Sangamner tahsil". Agriculture Update 3 (2008): 175-177.
8. Vishnudas, S., *et al.* "A conceptual framework for sustainable watershed management". In ICID 21st European Regional Conference, Frankfurt/Oder, Germany, and Slubice, Poland (2005): 15-19.
9. Luttrell C., *et al.* Understanding and operationalising empowerment, 1-16. London: Overseas Development Institute (2013).
10. Butler C and Adamowski J. "Empowering marginalized communities in water resources management: Addressing inequitable practices in Participatory Model Building". *Journal of Environmental Management* 153 (2015)153-162.
11. Census of India. Demography: Andhra Pradesh (2011): 46-48.
12. National Rainfed Area Authority. Common Guidelines for Watershed Development Projects-2008 Revised Edition-2011 (2011).

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