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Convergence of Integrated Watershed Management Programme and Mahatma Gandhi National Rural Employment Guarantee scheme: A Successful Intervention in Andhra Pradesh for Natural resource Management

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ABSTRACT

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The primary goal is to increase wage employment while also strengthening natural resource management through projects that address chronic poverty causes such as drought in rainfed areas and thus encourage sustainable development. Furthermore, it promotes water harvesting, soil conservation, irrigation, flood protection, afforestation, and plantation, all of which help to insulate the local community from adverse effects of climate change. The process outcomes include strengthening democratic processes at the grass roots and instilling transparency and accountability in governance. As a result, Integrated Watershed Management Programs and the Mahatma Gandhi National Rural Employment Guarantee Scheme become important entry points for convergence with other development programmes.

Introduction

The Government of Andhra Pradesh has been implementing centrally sponsored watershed programme under various schemes with the basic objectives to minimize the adverse effect of drought and poverty. Also implementing works towards to control desertification through rejuvenation of natural resources especially in the identified desert/drought prone areas. Andhra Pradesh is one of the

states in India which has historically been most severely affected by drought. Eleven districts in Andhra Pradesh are classified as drought-prone and Anantapur district as desert-prone, by the Government of India. The Government of Andhra Pradesh has been realized the fact that is possible to increase the productivity of degraded lands with proper planning, scientific approach and an efficient management. Thus, creation of employment opportunities for landless poor provided

throughout the programme period. The State Government launched a ten-year action plan (1997- 2007) for development of 100 lakh hectares of wastelands and degraded lands at the rate of 10 lakh ha every year with financial outlay of about Rs.4000 crores by the Rural Development, Forest and Agriculture Departments, out of which 78.20 lakh ha target was set for the Rural development Department. Integrated Watershed Management Programme (IWMP) has been implemented throughout India since 2009-10 after the commencement of the new watershed guidelines, 2008. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was notified through the Gazette of India Notification dated September 7, 2005; it came into force on February 2, 2006 in 200 backward districts. MGNREGA has been implementing in all the rural districts to provide employment to the rural families.

The programme strives to achieve ecological balance in the long run as well as promote overall economic development and improve the socio-economic conditions of the resource poor and disadvantaged sections inhabiting the programme areas. Similarly, Watershed Programme, various treatment measures and interventions have been undertaken for protecting, conserving and developing natural resources and improving livelihoods of the rural poor. IWMP is one among them which is working as a force in order to bring ecological balance with sustainable development. This was promised with the initiative of convergence by IWMP and MGNREGS which are crucial for improving rural livelihoods in more sustained manner.

The IWMP programme convergence with various line departments in the rural development sector which MGNREGS played a key role on promoting employment guarantee to the rural community and implemented various works related to

watershed programme such as Natural Resource Management based projects for implementation by IWMP & MGNREGS in IWMP villages, sharing of funds & staff between both the programmes based on the type projects executed ground water recharge, drainage line treatment, afforestation, common property resources projects and others - flood control, roads, Land Development & fodder Development, dry land horticulture.

Objective of the convergence programme

The primary objective is to augment the wage employment and also strengthening natural resource management through works that address causes of chronic poverty like drought in rainfed areas and so encourage sustainable development.

Further, it encourages works on water harvesting, soil conservation, irrigation, flood protection, afforestation and plantation which helps to insulate local community from adverse effects of climate change. The process outcomes include strengthening grass root processes of democracy and infusing transparency and accountability in governance. Thus, IWMP and MGNREGS becomes a significant entry point for convergence with other development programmes. This inter sectoral convergence becomes instrumental in order to

Establishing synergy among different government programmes in planning and implementation to optimize use of public investments

Enhancing democratic processes

Mitigating the adverse effects of climate change

Creating conditions for sustainable development

Materials and Methods

The primary and secondary data collected from the district level at DWMA office and various activates

The collected data was tabulated and analyzed component wise and drawn conclusion

Need for Convergence

The Ministry of Rural Development has developed and disseminated Guidelines for Convergence of MGNREGS with different schemes and specific programmes viz. Indian Council of Agricultural Research, National Afforestation Programme and other schemes of the Ministry of Forest & Environment, Schemes of the Ministry of Water Resources, PMGSY (Department of Rural Development), SGSY (Department of Rural Development), Watershed Development Programmes (Department of Land Resources, Ministry of Rural Development). For this, 115 pilot districts in 22 states have been identified by the MoE&F, MoWR and ICAR (Ministry of Rural Development).

Watershed development involves treatment of natural resource base as well as creating meaningful livelihood opportunities. There is a perceivable gap in the policy interventions which are aimed to solve or mitigate problems for the overall development of society. Many policies aimed to address the complete salvation of problems but these will not realize since the problems are matters of complex and dynamic. That is why policies have developed and introduced holistic approaches in order to address the complex natures of the problems to promote the development of rural areas in more comprehensive and sustainable manner. Convergence of different policies can be seen as part of these interventions which can address the problems from different ends and yield better results. The success of the

programmes also determines based on the funding pattern for the works especially in creating assets for asset less and its effective implementation with the active participation of the stakeholders. For instance, funds available with PRIs from other sources such as the National Finance Commission, State Finance Commission, State Departments and other Central or Centrally Sponsored Schemes comprised as SGSY, DPAP, DDP, IWDP and BRGF for the construction of durable community assets under the works permissible (Ministry of Rural Development).

Convergence between IWMP and MGNREGS is crucial and also mutually beneficial because much of the works taken up in MGNREGS relate to soil and water conservation. The focus of IWMP is on improving soil and water conservation in the area with the poorest soil and water regimes. It is primarily inhabitants in these areas that require support for securing additional employment as the agricultural operations are not adequate to meet the livelihood needs. It is precisely here that MGNREGS can provide the required support. Moreover, under MGNREGS almost all assets necessary for watershed development are permitted. IWMP also has a livelihood component. Thus, while funds for creation of durable and sustainable assets can come from both the programmes, the cost for training for livelihood can be undertaken from IWMP fund.

This gap was filled by convergence with the MGNREGS by issuing a joint convergence guideline by Department of Rural Development and Department of Land Resources No. J- II019/2/2008 dated 29th May, 2009 (Ministry of Rural Development 2013). After it became an Act huge amount of fund released depending upon the requirement of the communities in the micro-watersheds. MGNREGS was very much open for convergence purpose and the IWMP had the

opportunity to undertake in the overall development of the projects.

Institutional Arrangements

Convergence of IWMP with MGNREGS at operational level requires coordination between both the programmes at following stages of implementation:

Pre Planning Stage

Planning

Works (Management of works execution)

Management (Institutional Arrangement)

Importance of Convergence

Convergence with other development programmes helps not only to supplement funds for holistic treatment but will also complement each other in order to achieve objectives of the programme.

IWMP and MGNREGS programmes have aimed to promote sustainable development through productivity and also non-productivity based activities. IWMP activities are mostly emphasized on the soil and water conservation works and MGNREGS programme activities are about providing employment for asset less caste communities in the project areas.

Convergence programmes have aimed to reap the benefits through conservation of natural resources and its management in more sustained manner. It is also imperative for the non- agricultural works by synergizing with the other programmes.

This approach will help to play a key role in alleviating poverty and enhancing livelihood options, especially in the drought-prone areas. Various initiatives were taken up for

improving agriculture and allied activities. Also, micro enterprises were promoted to enhance the livelihoods of landless poor (Ministry of Rural Development).

Success of convergence programmes depends on the effectiveness of organizations involved, incentives provided for the functionaries, and legislative structure (Pulak Mishra and S K Mishra 2018).

This is possible when the holistic approach implemented well with all the line departments co- operation and stakeholders participation.

Community participation is imperative for the effective implementation of the watershed programme at every level. A clear role has been given to the people at various phases of project implementation i.e at planning, execution and monitoring phases for maximizing the benefits.

Local communities were formed as common interest user groups and watershed committees through various participatory approaches (Chandrappagari, Suvarna, D. Kalpana, and N. Polappa 2012).

The study emphasized on successful intervention of convergence of IWMP and MGNREGS in one of the IWMP district of Anantapur district and various works were carried under the convergence programme in batch –II, III, IV and Batch V projects of Anantapur where we can observe less average rain fall, constant drought and migration etc.,

These convergence have helped the watershed community to enhance their employment days for the family and helped to better income and livelihood. The following activities have been carried under convergence in Anantapur district.

Activities undertaken as part of the Convergence programme

Initially, to motivate the community and make the people in owning the programme, various entry point activities are undertaken viz;

Land based development works

Land based development works are comprised as boulder removal with machines, stone bunding, boulder removal works for SC/ST communities

Soil moisture conservation works

Soil moisture conservation works such as staggered trenches, loose boulder structures, rock fill dams, sunken pits, gabion structures, earthen bunding with plantation and seedlings

Water harvesting structures

Water harvesting structures are farm ponds, check dams, check walls, dug out ponds, percolation and mini percolation tanks, recharge pits, gabion structures, machine farm ponds, injection wells and bunds

Repairs of existing water harvesting structures

Repairs of existing water harvesting structures such as percolation tanks, check dams, and check walls

Afforestation works

Afforestation works consisted avenue plantation, block plantation, barren hills afforestation, trench cum bund plantation, seed dibblings, and greening of hillocks

Horticulture works

Horticulture works like dry land horticulture

Livestock related works

Livestock related works such as cattle troughs and fodder development, and

Worksite facilities

Worksite facilities such as shelter, shade, drinking water facility, first aid kit etc.,

Activities undertaken in the convergence programme of IWMP and MGNREGS

One of the major strategies of the programme was to converge with various line departments to bring in a holistic impact with effective implementation. An effective convergence arrangement is established with other programmes (MGNREGS – Mahatma Gandhi National Rural Employment Guarantee Scheme, a rural employment programme of the government) and various departments (Department of Agriculture, Animal Husbandry, Forestry, Horticulture etc.,) for undertaking interventions. As the funds available under watershed development project may be inadequate to saturate a watershed but convergence with MGNREGA programme helps not only to supplement funds for holistic treatment but will also complement other development programmes especially to provide space for create assets for asset less. This can be observed in the implanted various works assigned under different categories. These are comprised as land based development works, soil moisture conservation works, and water harvesting structures, repairs of existing water harvesting structures, afforestation works, horticulture works, and livestock related works.

Initially under the Land-based Development works category, the total physical works sanctioned for IWMP as well as MGNREGS as part of the convergence programme were 4008 for Rs. 726.26 (lakhs) and the total

expenditure of the physical works of 3720 for Rs. 590.26 (lakhs). In this, much of the funds provided for the works of NADEP Compost pit where the total sanctioned works were 1783 for Rs. 197.46 (lakhs) and the implemented works were 1783 for Rs. 182.63 (lakhs).

The total physical works sanctioned by Admin under IWMP as part of the convergence programme have been sanctioned 2566 for Rs. 566.88 (lakhs) and the total expenditure incurred for the physical works were 2278 were Rs. for 440.69 (lakhs). In this, the works allotted to SC/ST farmers as per the guidelines provided were 450 for Rs. 53.59 (lakhs) and the total expenditure spent for of the physical works of 354 for Rs. 32.39 (lakhs) carried out by IWMP for boulders removal with machinery towards the shrrre of SC/ST farmer categories

Like-wise NADEP compost pits were sanctioned under MGNREGS in addition to IWMP as part of the convergence programme to the time of 1442 for Rs. 159.38 (lakhs) and the total expenditure spent for the physical works of 1442 was Rs. 149.57 (lakhs) in the Anantapur district thus incurring a total of Rs. 182.63 lakhs for a total of 1783, NADEP compost.

Regarding Soil Moisture Conservation activities conducted during the period under report both by IWMP as well as MGNREGS as part of the convergence programme indicated that a total of 1229 for Rs. 1575.02 (lakhs) have been sanctioned but actually the total expenditure incurred was Rs. 1017 lakhs for 1175 physical works. In this, much of the funds were for rock fill dams and staggered trenches of 547 works for Rs. 374.18 (lakhs) and 307 for Rs. 846.99 (lakhs) and the implemented works were 527 for Rs. 218.39 (lakhs) and 307 for Rs. 604.91 (lakhs). The total physical activities pertaining to soil

moisture conservation works under IWMP as part of the convergence programme sanctioned were 963 for Rs. 973.87 (lakhs) and the total expenditure for the physical works of 909 incurred was Rs. 508.82 (lakhs). In this, major funds were allotted for rock fill dams and staggered trenches.

Like-wise the total physical soil conservation works sanctioned under MGNREGS as part of the convergence programme in the district were 266 for Rs. 601.15 (lakhs) but the total amount spent for the sanctioned physical works amounted for Rs. 508.18 (lakhs). In this, more than 90% of the funds provided to undertake staggered trench works as pe admin sanctionit was for Rs. 537.3 (lakhs) and the actual expenditure invested for the physical works of 245 was Rs. 460.94 (lakhs).

Similarly the activities under Water Harvesting Structures sanctioned for IWMP as well as MGNREGS as part of the convergence programme were 15184 for an amount of Rs. 21008.37 (lakhs) and the total expenditure spent for physical works accounting for 14644 was Rs. 11330.94 (lakhs).

The major portion of the funds have been allocated for construction of farm ponds, machine farm ponds with farm bund, check dam, and check wall. Among these, collectively farm ponds sanctioned under IWMP and MGNREGS were 10149 for Rs. 12211.59 (lakhs) and all the works were completed for Rs. 5688.57 (lakhs). Another important activity sanctioned was machine farm pond with farm bund numbering 1324 for Rs. 1298.05 (lakhs) under IWMP and 1027 works for Rs. 637.34 (lakhs) under MGNREGS and the works implemented for the same from sanctioned works of 1324 for 1298.05 (lakhs) and 1027 for Rs. 637.34 (lakhs). Like-wise the total physical activities comprising dugout ponds, recharge pits etc. sanctioned under MGNREGS as part of the

convergence programme were 10033 for an amount of Rs. 11793.49 (lakhs) and all the works completed with an amount of Rs. 5723.5 (lakhs).

Check dams and percolation tanks formed most of the works under the repairs of existing water harvesting structures in the convergence programme. The total physical works sanctioned for IWMP as well as MGNREGS as part of the convergence programme were 568 for Rs. 996.44 (lakhs) and the total expenditure of the physical works of 559 for Rs. 687.53 (lakhs). Under IWMP, the total amount admin sanctioned for repair works were 409 for Rs. 780.98 (lakhs) and the total expenditure of the physical works for 400 was Rs. 539.72 (lakhs).

As a part of convergence, the total physical works sanctioned under MGNREGS were 159 for Rs. 215.46 (lakhs) and the total expenditure of the physical activities completed were 159 for Rs. 147.81 (lakhs). Among these, the physical activities sanctioned for check dam repairs under IWMP as part of the convergence programme were 312 for Rs. 543.65 (lakhs) and the total expenditure of the physical works of 306 for Rs. 389.86 (lakhs). In this, majority of the funds were allotted to the works of repairs of rock fill dams and staggered trenches. Further, the total physical works sanctioned for check dam repairs under MGNREGS were 138 for Rs.117.63 (lakhs) and the total expenditure of the physical works were accounted for Rs. 121.16 (lakhs) slightly more than the admin sanction.

Under Afforestation works, avenue plantation, seed dibbling and block plantation works have undertaken for repairs. Total physical works sanctioned for IWMP as well as MGNREGS as part of the convergence programme were 308 for Rs. 2602.1 (lakhs) and the total expenditure of the physical works

incurred were 866.91 (lakhs). However, the same under IWMP, the total amount sanctioned for afforestation works of 162 for Rs. 992.07 (lakhs) and the total amount involved in undertaking was Rs. 377.03 (lakhs). The total physical works sanctioned under MGNREGS were 146 for Rs. 1610.03 (lakhs) and the total expenditure as per the financial outlay was Rs. 489.88 (lakhs).

Among these, the physical activities admin sanctioned for avenue plantation repairs under IWMP as part of the convergence programme were 61 for 530.6 (lakhs) and the total expenditure spent toward the same physical works were Rs. 151.78 (lakhs). In the same way, repairs under MGNREGS for the same activity were 42 for Rs. 402.74 (lakhs) and the actual expenditure of the physical works was Rs. 154.06 (lakhs).

Under Horticulture activities, works sanctioned in MGNREGS component but not in IWMP where much of the activities considered were dry land horticulture. Total physical works sanctioned for IWMP as well as MGNREGS as part of the convergence programme were 308 for Rs. 2602.1 (lakhs) and the total expenditure of the physical works of 308 for Rs. 866.91 (lakhs). Under IWMP, the total sanctioned for afforestation in the district identified were 162 for Rs. 992.07 (lakhs) and the total expenditure of the same physical works worked out to Rs. 377.03 (lakhs). The total physical horticulture works sanctioned for IWMP as well as MGNREGS as part of the convergence programme are 2144 for 10962.85 (lakhs) and the total expenditure of the physical works were 2144 for Rs. 3533.83 (lakhs). Under MGNREGS, the total sanctioned amount for dry land horticulture was 2132 for Rs. 10922.83 (lakhs) and the total expenditure incurred towards dry land horticulture were Rs. 3521.37 (lakhs). Dry land horticulture works were not carried out under IWMP.

Table.1 The necessary institutional arrangements were placed to execute the programme as it was intended

S. No.	Level	Institution Platform
1	At project/village level	For IWMP: Watershed Committee, Gram Sabha, Gram Panchayat and Project Implementing Agency (PIA) For MGNREGA: Gram Sabha, Gram Panchayat
2	At Block level	IWMP: watershed functionaries For MGNREGA: Block Resource Group (BRG) and Intermediate Panchayat (LP)
3	At District level	For IWMP: Watershed Cell cum Data Centre (WCDC) and DWMA For MGNREGA: District Resource Group (DRG) and Zila Parishad
4	At State level	For IWMP: State level Nodal Agency (SLNA) For MGNREGA: Nodal Department for MGNREGA
5	At Central level	Combined monitoring body of DoRD & DoLR

Table.2 Activities under convergence of IWMP and MGNREGS programme in Anantapur district (Number and Rs. in Lakhs)

Name of the Activity	IWMP				MGNREGS				Total			
	Admin Sanction		Expenditure		Admin Sanction		Expenditure		Admin Sanction		Expenditure	
	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
LAND DEVELOPMENT WORKS												
Boulder removal using Machine and stone bunding	134	15.91	134	9.84	0	0	0	0	134	15.91	134	9.84
Boulder removal with machinery (for other farmers)	1431	170.71	1243	101.41	0	0	0	0	1431	170.71	1243	101.41
Boulder removal with machinery (for SC/ST farmers)	450	53.59	354	32.39	0	0	0	0	450	53.59	354	32.39
NADEP Compost pit	341	38.08	341	33.06	1442	159.38	1442	149.57	1783	197.46	1783	182.63
Compost pit Generation	23	2.03	23	0.49	0	0	0	0	23	2.03	23	0.49

Threshing Floor in community lands	187	286.56	183	263.5	0	0	0	0	187	286.56	183	263.5
Sub total	2566	566.88	2278	440.69	1442	159.38	1442	149.57	4008	726.26	3720	590.26
Soil moisture conservation works												
Staggered Trenches	62	309.69	62	143.97	245	537.3	245	460.94	307	846.99	307	604.91
Staggered Trenches (Hillock Areas)	2	7.14	2	1.42	0	0	0	0	2	7.14	2	1.42
Water Absorption Trench at Foot Hills	90	154.14	85	81.64	0	0	0	0	90	154.14	85	81.64
Loose Boulder Structure	174	41.53	167	26.27	0	0	0	0	174	41.53	167	26.27
Loose Boulder Structure with wire mesh (For Other Than Agriculture Field)	2	0.58	2	0.14	0	0	0	0	2	0.58	2	0.14
Rock Fill Dam	547	374.18	527	218.39	0	0	0	0	547	374.18	527	218.39
Sunken Pit	11	0.76	11	0.42	1	0.07	1	0.04	12	0.83	12	0.46
Gabion SMC	69	67.38	47	29.08	0	0	0	0	69	67.38	47	29.08
Earthen Bunding With	2	1.14	2	0.5	0	0	0	0.02	2	1.14	2	0.52

Plantation												
Earthen Bunding With Seed Dibbling	0	0	0	0	15	7.1	15	2.93	15	7.1	15	2.93
Staggered Trenches (Hillock)	4	17.33	4	6.99	5	56.68	5	44.25	9	74.01	9	51.24

Areas) 2018-19												
Sub total	963	973.87	909	508.82	266	601.15	266	508.18	1229	1575.02	1175	1017
WATER HARVESTING STRUCTURES												
Farm Pond	566	929.18	566	195.65	9583	11282.41	9583	5492.92	10149	12211.59	10149	5688.57
Mini Percolation Tank	229	223.47	196	141.51	3	4.97	3	3.89	232	228.44	199	145.4
Dugout Pond	619	790.35	619	232.51	332	496.47	332	218.38	951	1286.82	951	450.89
Percolation Tank	122	459.18	118	295.41	0	0	0	0	122	459.18	118	295.41
Check Wall	645	919.67	575	659.27	0	0	0	0	645	919.67	575	659.27
Check Dam	1294	4349.59	1220	3301.61	0	0	0	0	1294	4349.59	1220	3301.61
Percolation Pond	7	6.48	7	2.72	4	5.31	4	4.81	11	11.79	11	7.53
Recharge of dried up Bore wells	2	0.34	0	0	0	0	0	0	2	0.34	0	0
Recharge Pit	0	0	0	0	111	4.33	111	3.5	111	4.33	111	3.5
Gabion WHS	77	87.96	53	42.97	0	0	0	0	77	87.96	53	42.97
Surface Storage Pond	246	130.22	213	87.07	0	0	0	0	246	130.22	213	87.07
Canal Drop	1	0.55	1	0.53	0	0	0	0	1	0.55	1	0.53
Construction of Check	3	0.26	0	0	0	0	0	0	3	0.26	0	0

Wall (Witho ut apron)												
Injecti on well to harvest the runoff from field catchm ent in Water Bodies (in New Dugout Ponds) Type II	4	3.46	4	1.57	0	0	0	0	4	3.46	4	1.57
Injecti on well to harvest the runoff from rain water drain for Rechar ging Drinki ng Water Source (Type- I)	7	12.07	7	6.84	0	0	0	0	7	12.07	7	6.84
Dugout Pond for Injecti on well	2	2.47	2	1.56	0	0	0	0	2	2.47	2	1.56
WHS	3	1.65	3	0.88	0	0	0	0	3	1.65	3	0.88

Others												
Machin e Farm Pond with Farm Bund	132 4	1298. 05	102 7	637.3 4	0	0	0	0	132 4	1298. 05	102 7	637.3 4
Sub total	515 1	9214. 88	461 1	5607. 44	100 33	11793 .49	100 33	572 3.5	151 84	21008 .37	146 44	11330 .94
REPAIRS TO EXISTING WHS												
Repair s to Existin g Percola tion Tank	88	225.4 7	85	141.1	11	28.98	11	20.2 5	99	254.4 5	96	161.3 5
Repair s to Existin g Check Dam	312	543.6 5	306	389.8 6	138	177.6 3	138	121. 16	450	721.2 8	444	511.0 2
Repair s to Existin g Check Wall	7	10.42	7	7.9	10	8.85	10	6.4	17	19.27	17	14.3
Repair s to Existin g Mini Percola tion Tank	2	1.44	2	0.86	0	0	0	0	2	1.44	2	0.86
Sub total	409	780.9 8	400	539.7 2	159	215.4 6	159	147. 81	568	996.4 4	559	687.5 3
AFFORESTATION WORKS												
Avenue Plantat ion	61	530.6	61	151.7 8	42	402.7 4	42	154. 06	103	933.3 4	103	305.8 4
Barren												

Hill Afforestation	7	55.24	7	4.94	0	0	0	0	7	55.24	7	4.94
Block Plantation in CPR Lands	24	269.19	24	110.42	39	573.74	39	188.04	63	842.93	63	298.46
Seed Dibbling	30	9.35	30	5.36	0	0	0	0	30	9.35	30	5.36
Block Plantation In Private Lands	0	0	0	0	6	12.93	6	5.61	6	12.93	6	5.61
Primary Bed and Bag Culture Nurseries	4	19.21	4	16.09	0	0	0	0	4	19.21	4	16.09
Trench bund cum Plantation	1	2.45	1	0.09	0	0	0	0	1	2.45	1	0.09
Raising of 5x9 size bag plants at farmer (or) dwma nursery	13	42.7	13	23.47	0	0	0	0	13	42.7	13	23.47
Raising of 6x12 size bag plants at farmer (or) dwma nursery	1	4.18	1	2.57	0	0	0	0	1	4.18	1	2.57

Mainten ance of 6*12 bag plants for left over seedling s at DWMA Nursery	10	14.4 1	10	7.19	0	0	0	0	10	14.41	10	7.19
Raising DWMA Nursery in 6 * 12 bags during 2013-14	10	40.8 8	10	37.44	0	0	0	0	10	40.88	10	37.4 4
Greenin g of Hillocks	1	3.86	1	10.68	35	336.7 1	35	93.17	36	340.5 7	36	103. 85
Greenin g of Hillocks 2018-19	0	0	0	7	24	283.9 1	24	49	24	283.9 1	24	56
Sub total	162	992. 07	16 2	377.0 3	146	1610. 03	146	489.88	308	2602. 1	308	866. 91
HORTICULTURE WORKS												
Dry Land Horticul ture (Under MGNR EGS)	0	0	0	0	213 2	10922 .83	213 2	3521.3 7	213 2	10922 .83	213 2	3521 .37
Horticul ture With MIP (Under MGNR EGS)	0	0	0	0	12	40.02	12	12.46	12	40.02	12	12.4 6
Sub total	0	0	0	0	214 4	10962 .85	214 4	3533.8 3	214 4	10962 .85	214 4	3533 .83
LIVE STOCK RELATED WORKS												

Raising of Perinnia 1 Fodder	1	0.14	1	0.03	0	0	0	0.01	1	0.14	1	0.04
Cattle Troughs	54	26.08	52	16.15	0	0	0	0	54	26.08	52	16.15
Sub total	55	26.22	53	16.18	0	0	0	0.01	55	26.22	53	16.19
WORKSITE FACILITIES												
Worksite Facilities	0	0	0	0	21	123	21	4.88	21	123	21	4.88
Sub total	0	0	0	0	21	123	21	4.88	21	123	21	4.88
GRAND TOTAL	9306	12554.9	8413	7489.88	14211	25465.36	14211	10557.66	23517	38020.26	22624	18047.54

Fig.1

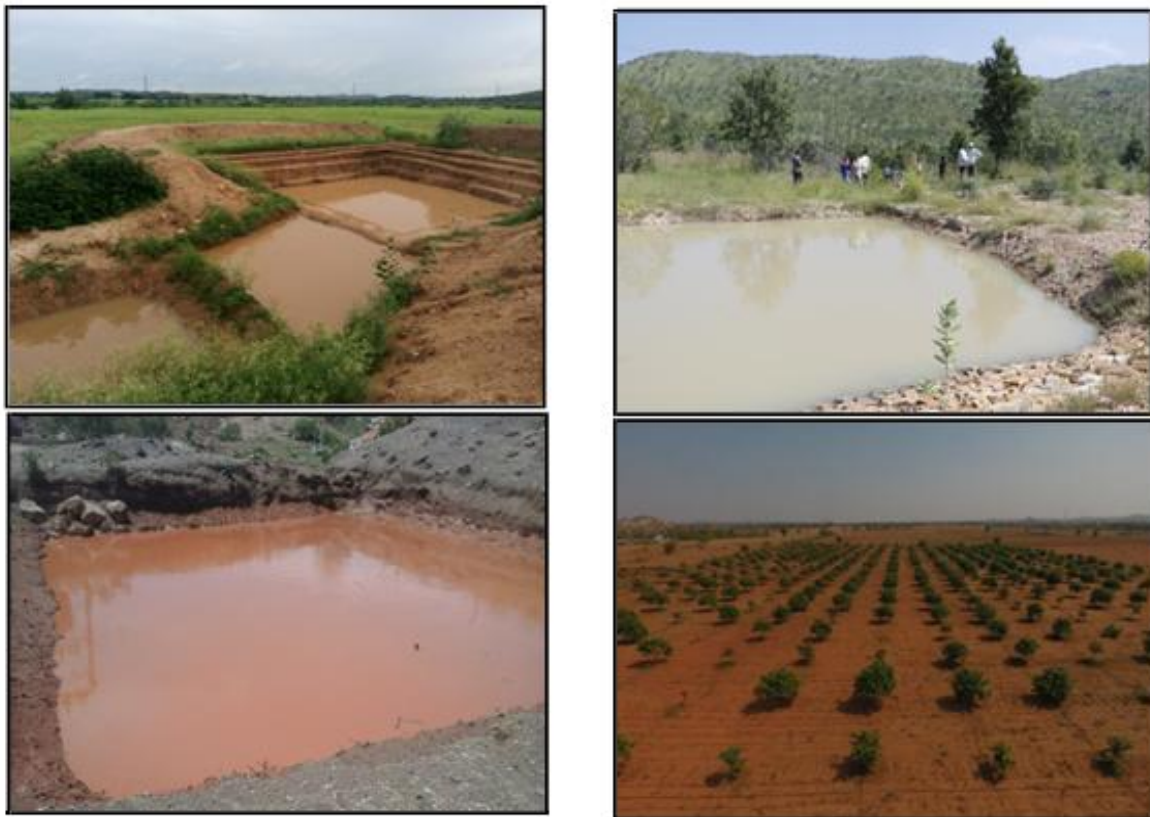


Table.3 Percentage of achievement of convergence activities in Anantapur district

S. No	IWMP				MGNREGS				Total				% of achievement	
	Admin Sanction		Expenditure		Admin Sanction		Expenditure		Admin Sanction		Expenditure		Phy	Fin
	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin		
LAND DEVELOPMENT WORKS														
1	2566	566.88	2278	440.69	1442	159.38	1442	149.57	4008	726.26	3720	590.26	93	81
SOIL MOISTURE CONSERVATION WORKS														
2	963	973.87	909	508.82	266	601.15	266	508.18	1229	1575.02	1175	1017	96	65
WATER HARVESTING STRUCTURES														
3	5151	9214.88	4611	5607.44	10033	11793.49	10033	5723.5	15184	21008.37	14644	11330.94	96	54
REPAIRS TO EXISTING WHS														
4	409	780.98	400	539.72	159	215.46	159	147.81	568	996.44	559	687.53	98	69
AFFORESTATION WORKS														
5	162	992.07	162	377.03	146	1610.03	146	489.88	308	2602.1	308	866.91	100	33
HORTICULTURE WORKS														
6	0	0	0	0	2144	10962.85	2144	3533.83	2144	10962.85	2144	3533.83	100	32
LIVE STOCK RELATED WORKS														
7	55	26.22	53	16.18	0	0	0	0.01	55	26.22	53	16.19	96	62
WORKSITE FACILITIES														
8	0	0	0	0	21	123	21	4.88	21	123	21	4.88	100	4
GRAND TOTAL	9306	12554.9	8413	7489.88	14211	254636	14211	10557.66	2357	380226	2264	18047.54	96	47

As part of PMKSY-watershed programme Worksite Facilities are also provided especially under MGNREGS which would give scope for asset less population in order to generate an additional income through the implemented activities. Under MGNREGS, the total worksite sanctioned were 21 for Rs. 123 (lakhs) and the total expenditure incurred for the works of 21 was Rs. 4.88 (lakhs) in order to provide employment to the landless category households in the district.

Achievements of Convergence Activities

The overall progress of the activities undertaken as part of convergence programme with IWMP and MGNREGS in Anantapur district denotes the effective management of policy in bringing the gaps to be narrowed or filled. This can be observed in terms of providing employment as well as ecological balance with soil and water conservation works and the improvement can be seen in the overall achievement of activities. In a nutshell, employment generation has taken place under the land development works where bunding and boulder removal works provided especially to marginalized sections of the society such as SC /ST communities. An observed in tale-2 the total target of achievement both in physical activities and in financial terms were to the extent of 93% and 81% respectively which is a good sign.

The overall performance of the communities have benefited with the way fund utilization through works implemented. Like-wise other activities also showed encouraging results in utilization of funds provided such as soil conservation works marked 96% with 65% financial allocation of funds, water harvesting structures with 96% works for 54% of funding, 98% of physical works for 69% financial allocation of funds in repairs of existing water harvesting structures, and livestock related works 96% with 62% of

financial assistance. As a whole the number of works and financial assistance sanctioned for different activities have been implemented properly for the development of drought prone district.

Impact of convergence programme

Overall analysis of the works undertaken as part of the convergence programme denoting some of the important changes in the way it played out in providing work for asset less population in the project areas. With the fund allocation and provision for socially marginalized communities, there is a promise of the works given to the expected populations in order to provide them employment through various water and soil conservation works in order to improve their livelihoods and create assets to sustain.

This can be observed especially in the land based development works directly and other activities have also included them indirectly in soil moisture, water harvesting structures and horticulture works.

The revised guidelines of 2014 had allowed a provision where watershed management works can be taken up independently under MGNREGA (Ministry of Rural Development 2014). The revised guidelines have provided a provision for the non-IWMP project areas also to implement works through convergence programme. The guidelines have also provided space for socially and economically marginalized communities like SC/STs in the project areas which have helped them in acquiring the skills as well as income through the watershed activities.

In implementation of these activities, guidelines of the convergence programme helped a lot to organize the population for assigned works in order to meet the objectives of the programme. Like-wise all the necessary institutional mechanism in the programme

also paved the way to yield better results with its effectiveness through the functionality of democratic structures in execution from the top to bottom level. This was possible with the active participation of all the stake holders in the given programme area. Prioritization of works allocation is also paves the way.

Convergence has to be made based on the status of project areas where the imbalance at certain aspects needs to be corrected that is where converge with other programme plays crucial role. This also indicates that the impact of holistic approach with effective implementation of the programme is essential for the success of any development rural programmes.

Outcomes and results of the convergence of IWMP and MGNREGS

Increased in Social Capital

Collective planning and implementation among different stakeholders helped in enhance social capital. This improved management and work output.

Increase in Physical Capital

The processes helped in creating durable assets and also improve land productivity.

Facilitation of Ecological Synergies

Natural resource base regeneration through different Activities such as afforestation, drought proofing, flood proofing, and watershed were lead to effective use of Resources.

Mitigating Effects of Climate Change

NREGA helped in addressing issues such as CO emissions and industrial pollution and stemming.

Enhancing Economic Opportunities

Income opportunities, savings and investments have been generated through activities such as horticulture

Strengthening Democratic Processes

Convergence awareness and planning at the grass root level lead to greater ownership of projects.

Facilitating Sustainable Development

Convergence efforts through creation of durable assets, rural connectivity, productivity enhancement and capacity development have lead to sustainable development

The overall funds have been utilized under various activities for convergence of IWMP and MGNREGS and also increased income levels of the small, marginal & land less families and regenerated more employment days and resource productivity have been increased. This has immense impact on the management of natural resources as well as the population dependent on in the respective watershed project areas of Anantapur district. These watershed projects can be a model to aim and achieve better results in grey areas of development by converging programmes like IWMP and MGNREGS especially in the drought hit regions like Anantapur district.

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