G.J.I.S.S.,Vol.5(5):1-6 (September-October,2016) ISSN: 2319-8834

GLOBAL JOURNAL OF INTERDISCIPLINARY SOCIAL SCIENCES
(**Published By**: Global Institute for Research & Education)

www.gifre.org

Performance of Integrated Watershed Management Programme (IWMP) in Tamil Nadu

Dr.R.Chinnadurai

Associate Professor, Centre for Decentralized Planning (CDP), NIRD&PR, Rajendranagar, Hyderabad

Abstract

This study been conducted to know the performance of the preparatory phase of the Integrated Watershed Management Program (IWMP) in the 24 districts of the state of Tamil Nadu. The IWMP made an attempt to bring together the ideals of natural resource management and rural development through a decentralized, people driven participatory approach. This has been implemented by conducting intensive ground level individual household surveys, village level meetings and using participatory techniques. An attempt is made an analysis of the performance of the programme in the preparatory phase in terms of no. of projects, area covered and funds released by the Government of India and the successful implementation of the programme. As concluding remarks, the findings of the study showed a positive link between watershed management and sustainable development in the project areas.

Key Words: Integrated Watershed Management Program (IWMP), capacity building, Participatory management, Sustainable development and Poverty Alleviation

1. Introduction

In 1994, a Technical Committee under the Chairmanship of Prof. C.H. Hanumantha Rao, was appointed to assess the Drought Prone Areas Programme (DPAP) and the Desert Development Programme (DDP) with the purpose of identifying weaknesses and suggesting improvements. The Committee, after careful appraisal, opined that the "programmes have been implemented in a fragmented manner by different departments through rigid guidelines without any well-designed plans prepared on watershed basis by involving the inhabitants. (Hanumantha Rao Committee, 1994, Preface). Against this backdrop, the Committee made a number of recommendations and formulated a set of guidelines that brought the DDP, the DPAP and the Integrated Wastelands Develop. The watershed approach has been accepted as a major theme for development of rainfed areas with a view to conserving natural resources of water, soil and vegetation by mobilizing social capital. In order to understand the status of implementation of IWMP for making corrections if any and make initiatives for strengthening the implementing mechanism, a mid-term evaluation is crucial for any scheme. The study has been conducted in 24 districts in Tamil Nadu to carry out in-depth analysis on performance of the Preparatory Phase of the programme namely "Integrated Watershed Management Programme" (IWMP) implemented in the state.

2. Objectives of the Study

1. To obtain essential benchmark data related to the project and incorporating the same in DPRs.
2. To identify phase wise tangible outputs and behavioral outcomes of the project.
3. To suggest improvement and initiate timely actions.

3. Sampling

Multi stage sampling was followed to narrow down to select the study units. In each district, all the watershed implementing blocks were selected. From identified blocks 30 percent of watersheds were randomly selected for in-depth field study through physical verification. The study was collected required data from 189 watersheds as sample units. The study teams interacted with the WDTs, WCs, UGs, SHGs who are directly involved in the project and also interacted with the groups of men and women formed under the programme and other people live in the watershed region. Data were also collected from the officials of programme implementing agency, elected representatives of the GP concerned, CBOs, etc. People's participation in planning, preparation, implementation stages was enquired. Beneficiary's satisfaction on schemes provisions also checked. All the indicators proposed for study were used for detailed data collection. Direct interview, focus group discussion and participatory observation techniques were used for collection of data. The pre-phase evaluation format given by the DoLR covering all aspects of scheme provisions and beneficiaries entitlements were administered with the stakeholders and suitable scores were given to each parameters.

4. Study Area

The study was conducted in 24 districts in which watershed development projects implemented in the year 2010-11 namely Salem, Namakkal, Ramanathapuram, Dindigul, Theni, TiruVelloree, Madurai, Pudukottai, Sivagangai, Coimbatore, Karur, Erode, Krishnagiri, Dharmapuri, Velloree, Tirunelveli, Thoothukudi, Virudhnagar, Kancheepuram, Tiruvannamalai, Villupuram, Tiruchirapalli, Perambalur and Cuddalore.

5. Brief profile of Tamil Nadu Watershed Development

5.1. Drought Prone Areas Programme (DPAP)

To minimize the adverse effects of drought on the production of crops, productivity of land, water and human resources, from 1972-73 this scheme is implemented in 80 notified blocks of 17 districts of Tamil Nadu, identified as drought prone areas by Government of India. From 1999-2000 to 2006-07, 1222 watersheds in 7 batches sanctioned at a total project cost of Rs. 33670 lakhs for treating a total area of 6.141 lakh Ha. The Government of India and State Government have released Rs. 31636 lakhs of which Rs. 31288 lakhs have been spent by the District Rural Development Agency and District Watershed Development Agency of 17 districts and a total area of 5.723 lakh Ha have been treated.

5.2. Integrated Wasteland Development Programme (IWDP)

Integrated Wasteland Development Programme's main objective was to harvest the rainwater and to bring the degraded lands into productive use under non-forest wasteland area. Unlike DPAP programme, opportunity is given for development of the non-forest wastelands on a project based approach. This programme was implemented in 96 blocks of 24 districts. Under this scheme, the watersheds were sanctioned by Government of India on projects. From 1999-2000 to 2006-07, Government of India sanctioned 910 watersheds in 80 projects at a total cost of Rs. 26220 lakhs for treating a total area of Rs. 4.576 lakh Ha. The state spent Rs. 23568 lakhs and a total area of 4.056 lakh Ha have been treated.

5.3 Integrated Watershed Management Programme (IWMP)

i. Objectives of IWMP:

- Balanced use of natural resources and livelihood by watershed approach and efficient watershed management by mobilizing social capital.
- Restoring ecological balance by harnessing, conserving and developing national resources.
- Resource development usage will be planned to promote farming and allied activities, to promote local livelihood, to ensure resource conservation and regeneration.
- Creating sustainable water resources and to have sustainable source of income for the rural community by conserving water in watershed areas by following multi tier approach.
- Utilizing the Information Technology and remote sensing inputs in planning, monitoring and evaluation of the programmes.
- Promoting overall development in rural areas.

ii. Guidelines for implementation of Schemes

The IWMP is implemented with participatory mode throughout the project period (5 - 7 years). The Action plan is being prepared by the Village Panchayat / Watershed Committee approved by the District Collector and implemented as per the Guidelines of Government of India and the directions of the State Government.

iii.Programme Implementation: The Watershed Committee is selecting the required Development works and after getting the approval of the Grama Sabha and Administrative sanction from the District Collector/Chairman, DWDA implements the works through the User Groups. The watershed committee consists of 10 members in whom 5 are nominated each from User Group, Self Help Group, SC/ST, Landless women, one Watershed Development Team Member. The Grama Shaba selects or elects the Committee Chairman and secretary is nominated by the committee. This committee has to be registered as per Tamil Nadu Registration Act 1975.

iv. Entry Point Activities : For getting the confidence of the villagers and participation in the implementation of the programme, the Entry Point Activities such as Augmentation of drinking water, maintaining natural resources, ground water recharge, drying yard and thrashing floor construction, small and minor bridges construction are taken up in the village.

v. Institutional and Capacity Building : Five percent of total project cost is allotted for the Institutional and capacity building and training for various levels of stake holders like State/ District level officers, Project Implementing Agency, Watershed Development Team Members, Watershed Committee Members, Self Help Group Members, User Group Members, Watershed Secretaries and Watershed Farmers.

vi. Development Activities: The following development activities are carried out in private land.

a. Land Development : Activities such as land leveling, contour bunding, silt application, stone bunding, retaining wall, summer ploughing, vegetative bunding and continuous trenching will be taken up.

b. Water Resources Development: Activities such as farm pond, desilting of tanks and percolation ponds will be done.

c. Plantation Activities: Agro-forestry, horticulture plantation, fodder development, crop demonstration and

homestead garden are taken up.

d. Common Property Development: The development activities carried out in common land are check dam, cattle pond, supply channels, desilting of ooranis, desilting of tanks and ponds, community nursery and agro forestry.

vii. Farm Production System and Micro Enterprises: Around 10% funds has been allocated and the grant is be provided to the individual or group to a maximum of Rs. 24,000/- for undertaking activities such as value addition in agriculture and horticulture produce, seed production and processing, vermi-compost, mushroom cultivation, dairy farming and poultry, brick making, custom hiring of farm implements, palm crafts, agarbathi making, mat weaving and event management.

viii. Self Help Group and Livelihood interventions for Landless Farmers: Landless farmers, Self Help Group and User Group are formed in the watershed area. Revolving funds are given to the Self Help Groups for taking income generating activities of their choice. The revolving fund has to be repaid without interest for making payment of revolving fund to other Groups in rotation. Government of India have sanctioned the projects from the year 2009-10 to 2012-13 to treat an area of 12.41 lakh Ha with a project cost of Rs. 121641 lakhs over a project period of 7 years. The Government of India and State Government have released Rs. 35083.31lakhs, of which Rs.19882.01lakhs have been spent by District Rural Development Agency and District Watershed Development Agency in 24 districts and a total area of 1.884 lakh Ha have been treated.

Table.1. Physical and Financial Achievements under IWMP in different years (Rs. in lakhs)

S. No.	Year	OB as of 1st April	Funds Received			Total Fund Availability	Expenditure	Area Treated (in ha.)
			GOI	GOTN	Interest			
1	2009-10	0.00	1616.92	0.00	4.06	1620.97	33.93	-
2	2010-11	1587.04	6015.55	848.05	66.54	8517.18	1919.96	-
3	2011-12	6597.22	1756.68	0.00	113.91	8467.82	4915.32	36527
4	2012-13	3552.50	22776.77	1736.64	148.19	28214.10	13012.80	87573
Total			**32165.92**	**2584.69**	**332.70**	**35083.31**	**19882.01**	**124100**

6. Major Findings and Recommendations

Based on the physical verifications, critical observations and data collected, the study presents following major findings and recommendations.

6.1. Entry Point Activities (E.P.A)

- In all the districts, EPA works (475 works) were timely completed as per the plan and targets (477 works) fixed in the DPR under Preparatory Phase of IWMP in the state. An average three EPA works were carried out in each watershed regions depends upon the funds received in proportionate to the total geographical area of watershed region by spending Rs. 515.2 lakhs as against the Target of Rs. 529.1 lakhs. Provision of drinking water i.e the works like extension and erection of drinking water pipes, drilling of new or old bore wells with electrical pumping motor, establishment of Syntax Tanks with platform and provision for water tap, construction of threshing floor, construction of retaining walls in the residential areas, digging or disiltation of drinking water pond or water structures storage, replacing of hand pumps with electrical pumping, etc. More than 80% of the assets created under EPA have high utility value. Since the assets are demand driven, type and location of the services are also decided by the people, they have better service coverage and more number of beneficiaries.
- As per the data collected from the sample watersheds, all the activities of EPAs in all the districts are decided through PRA exercises conducted in the project region and approved by the Watershed Committee and Gramsabha of the respective regions. Majority of the activities were selected within the purview of IWMP guidelines and not much deviation found in the watershed areas. Minor deviation, required if any are decided with formal concurrence of the Chairman's / District Collector's and administrative sanction, by providing appropriate justification.

6.2 Village Level Institution Building

- It is understood from the field data that, the majority of watersheds claiming as formed more number of UGs in their region, but the project Implementation units under the impression that, formation of User Groups (UGs) are not mandatory. It is the scenario in all over the state. It is understood that, Watershed Committee have less knowledge about UGs and their importance in maintaining the assets created under the scheme. No formal roles are demarcated to the UGs, therefore, only 50% districts have formed UGs formally. But, each

activity either under EPA and development works has users and they have been called for meeting and discussion during implementation of the project activities.

❖ Majority of the districts/watersheds in the state formed women SHGs, the total number of SHGs formed in the state is1892 towards the target of 2319. Only a very few Watersheds formed men SHGs. The data shows an average of 10 groups per watershed were formed. The number of members in each SHG also varies in each district i.e. the members' ranges from 7 to 12 members. Each SHG has given around Rs. 20,000 by the Watershed Committee as Revolving Fund (RF) to initiate economic activities. This money has been given as interest free loan and the repayment period is 12 months. The number of women exclusive groups formed at the state level is 3086 as against the target of 3744.

❖ In all Watersheds, Livelihood Action Plans are included in the DPR, but in the case of implementation, few districts have not started yet due to delay in release of funds in the second year of 'preparatory phase'. SHGs are very active in majority districts, they engaged in fruitful income generating activities like Goat Rearing, Tailoring, Candle making, Mushroom cultivation, Flower business, Rearing of milch animals, Petti Business, Coir making, Rabbit rearing, Vegetable vending, etc.

❖ Except very few watersheds, the SHGs are sharing the amount received from watershed, equally among all members which become meager share, not sufficient for initiating any better business or enterprise. Some districts namely Namakkal and Salem, the amount has been given to only few members subject to quantum of investment required for the business or to helping the poor among the group members.

6.3 Formation and functioning of Watershed Committees (WCs)

❖ Watershed Committees were formed 100% in all watersheds of project districts in Tamilnadu. The number of members in the committee differs from district to district ranging 7- 12 depends upon the size of the Gram Panchayat. There are three types of WCs are existing in the state

❖ In the first type Watershed Committee is formed as per the IWMP guidelines consists 11 members from among local habitants and one Watershed Team (WT) member represented from PIU. Second type consist only elected members of the Village Panchayat (GP). The number of members varies subject to the number of wards in the village panchayat. Third type consists of elected representatives of the village panchayat and additional members selected from local residents. Additional members are considered only if the number of ward representatives is less than 11 in the watershed region. Some major watersheds are having more than one WCs due to the larger area of watershed or area fall under more than one village panchayat.

❖ The bank account also opened in the same year, immediately after formation of WC's. The Bank account has been operated jointly by two persons namely President of WC and one of the WDT member of the Watershed Committee specially appointed for the purpose. But, in the case of GP members operated WC, the president of GP and one of the members of WDT operate the cheque and other banking transactions.

❖ It is observed that, the WCs appointed separately for the purpose have followed the IWMP guideline in composition of WC, by representing farmers, landless labourers, weaker sections and women but other types of WCs were not followed the guidelines for composition but formal permission for exemption has sought from the District Watershed Chairman District Collector. WCs meet regularly once in a month, they also meet more based on the need. Each WC has Minutes Book, Cash Book, Cheque Book, Bank Pass Book, Receipt and Payment Book, Ledger, Asset Register, Voucher Book and Stock Register. More than 90% of the WCs are making entries timely and properly without any discrepancies. The documents are also cross checked and verified by the WDT member, DD and Engineer of the District Watershed Development Agency.

6.4 Formation and efficiency of Project Implementing Agency

❖ Watershed Development Teams were formed in all the districts promptly and according to the scheme guidelines. There are only three members, in the team consists of one Civil or Agriculture Engineer, one Agriculture specialist and one Sociologist. Each WDT looks after around 8 to 12 watershed area or one block. The engineer is responsible for the earth works and construction of civil structures; agricultural specialist takes care of plantations and sociologist works on mobilization of people, organization of meetings and formation and nurturing of women SHGs, User Groups for rapport building. WDTs who had earlier experience in watershed works deliver better performances than the fresh candidates. In general, majority of the team members perform well with high involvement.

6.5 Capacity Building

❖ Building of required capacity to all stakeholders is an important area for the successful implementation of any scheme. Under IWMP in Tamilandu, many districts spent more than 50% of the funds earmarked for capacity building. Most of the Watersheds/districts have prepared plan for capacity building and conducted awareness camps, exposure visits, trainings, etc.

❖ Awareness camps 412 were conducted as against the target of 483 by majority of the watersheds at the beginning of the scheme, village people were oriented on the importance of IWMP and its future contribution to increase the ground water level. The potential of the scheme in conserving natural resources through which

possibility of increasing agricultural and allied sectors production over a period time also emphasized through various types of awareness programmes and exposure visits.

❖ Majority of the districts have conducted field visits to farmers and landless labourers by taking them to different places with in the state for the purpose of understanding the importance of watershed development through exposure. It helped to gain the acceptability of people to initiate the scheme in their regions. SHG members were given training on various income generating activities to support their livelihoods. Local reputed NGOs, KVKs, Universities and other technical institutions were involved to impart short duration training for SHGs.

❖ Even though, majority of the districts recruited more experienced and qualified candidates as WDT members, it is essential to impart in-depth professional, functional and attitudinal trainings to improve functional efficiency of the team members. Many districts have trained their personnel under IWMP. Further, It is essential to take necessary initiatives by the SLNA and DWDA to train all stakeholders especially WDTs on the functional mode.

6.6 Status of Detailed Project Report (DPRs)

❖ Preparation of Detailed Project Report (DPR) is mandatory for initiation of other works under the scheme. It is evident to say that, all the watersheds in the state prepared DPRs in an excellent manner. It is prepared as per the format given by the DoLR Govt. of India.

❖ Available documents prove that, all the districts in the state have taken at most care to ensure conduct of PRA exercises with the help of local NGOs and qualified resource persons.

❖ Documentary evidences show that, majority watersheds used major PRA Techniques like Transact Walk, Social Mapping Resource Mapping, Wealth Ranking, Wenn Diagram, Formal and Informal Dialogue, Group Discussion and other relevant methods for collection of required data and information for better understanding of the watershed region. Livelihood Action Plan with timeline is a component of DPR which was prepared by each watershed in a very good way but adhering time line has been delayed due to delay in fund release.

❖ Production System Enhancement Plan was prepared by the majority of the watersheds but clarity is lagging for the WDTs and WCs to make efforts to achieve with time line. As per data available, all the watersheds prepared Consolidated Action Plan with the split Annual Action Plans. Almost all watersheds in the State have not prepared convergence plan.

6.7 Status of Watershed Work

❖ Except a few districts, majority have initiated and completed the watershed works to be carried under preparatory phase. Second year works are ongoing in certain districts. The evaluation teams observed that, the quality of works are very good and excellent. The major type of works varies in each district based on the priority, needs and nature of soil, terrain, drought condition.

❖ Types of works carried out under land development are; land leveling, land bund strengthening, etc. Major works under water harvesting structures are digging of new ponds, desiltation and bund rising of existing percolation tanks, digging of sunken ponds, farm ponds, etc.

❖ Drainage line treatment consists of desiltation of canals, construction of check dam, gully checks, construction of retaining wall, sunken ponds, etc. Supply of fodder seeds, horticulture plantations like mango saplings, vegetable hybrid seeds are the important activities under plantations scheme of IWMP carried in the state. Around 50% of watersheds only initiated the plantations work; remaining districts are waiting for the onset of seasonal monsoon.

6.8 Fund Utilization

❖ Majority of the watersheds have spent more than 70% of the funds received. Only training fund is kept unspent at the District Watershed Development Agency level.

6.9. Recommendations

Based on the field observations, the following few major recommendations are given

a. EPA works

❖ Regarding EPA works, it is advisable to select the most needed and optimum benefitable works, it is better to avoid repetition and duplication of assets. In some of the watersheds, it is noted that establishment of drinking water pipe and erection of syntax tanks seems to be in duplication, provided in addition to the already existing water supply system in the village.

❖ Even though very good structures and quality equipments installed under EPA, it is essential to develop a suitable mechanism among the users to maintain the assets created even after the withdrawal of project.

❖ It is highly appreciable that in all 24 districts majority of the watersheds have created village institutions in better under IWMP for successful implementation of the scheme through participatory mode. But, furthermore focus is required to strengthen the groups like SHGs, WCs and WDTs. More coverage and livelihood support for landless families through SHGs of both men and women to be considered for support.

❖ It is also essential to form User Groups (UGs) formally and some form of responsibilities to be given to them for proper maintenance of the assets created for them.

❖ Appropriate Livelihood Plan have to be prepared with the consultation of SHG members and financial and technical support to be extended for making SHG units more viable and vibrant.

❖ Precaution and promotional measures to be taken to protect undisruptive functioning of the WCs even after the change of elected body at village panchayat level after 5 years tenure where GP members act as Watershed Committee.

❖ Uniform decision has to be taken and method to be followed in formation of Watershed Committee and selection of its members.

❖ Only few districts appointed 'Secretary' to the watersheds, in other districts village Panchayat Secretary looks after the maintenance of records and documents, which will be an additional burden to the person who is already have heavy work load in the GP.

❖ It may be considered on rethinking of cheque signatory power given to the 'Secretary' of the WC. The Secretary's appointed under the scheme are educationally less qualified, less experienced and ignorant. Exploitation possibility may arise in money transaction by the local leaders or dominants.

❖ It is very good that all the Watershed Committee maintain records, minute's books, cash and bank book entries. Periodical continues checking and verifying by the DWDA is essential in the future, because of more funds inflow and implementation of more activities in the next phase.

b. Project Implementing agencies (PIA)

❖ Vacant positions of WDTs have to be filled quickly before on-start of the second phase for further strengthening. Motivational aspects can be included for drawing better performance and to avoid dropouts of WDTs.

c. Capacity building (CB)

❖ The SLNA has to ensure training of its caders at the district and watershed level. Significant numbers of districts have not even trained its WDTs and WCs. Serious view is necessary to enable the DWDA to train their members. SHGs can be trained with the help of able local NGOs. Further nurturing and other supports in any form could be drawn from NGOs and Technical Institutions. More training for farmers and landless labourers will yield better results in strengthening agricultural production by incorporating watershed development.

❖ Serious attempt can be made for preparation of Livelihood Action Plan and Production System Enhancement Plan with timeline to take timely action and to understand the benefits of IWMP on the production system.

❖ Possibility of exploring convergence with line department schemes and Rural Development Programmes may yield concentrated efforts on drought proofing and increasing ground water potential.

❖ Development works carried under the scheme in all the districts are excellent, in terms of quality, worthiness and optimal benefits, same efforts to be continued. More coverage and spatially justifiable locations will yield better results and fulfill the vision and mission of the IWMP in Tamil Nadu.

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Alka Singhb and Girish Kumar Jhab a Central Soil and Water Conservation Research and Training Institute, Research Centre, Bellary - 583 104, Karnataka b Division of Agricultural Economics, Indian Agricultural Research Institute (IARI), New Delhi - 110 012