

8. TAMIL NADU WATERSHED DEVELOPMENT AGENCY (TAWDEVA)

Our National economy depends on agriculture and agro based industries. Agriculture growth is mainly dependent on development of land and water resources. Presently, the agricultural lands have slowly been converted for non-agricultural purposes or turned into wastelands due to various reasons and scarcity of water is one among the reasons. Through various programmes of Tamil Nadu Watershed Development Agency (TAWDEVA), the main objectives - Land development through prevention of soil erosion, water conservation and plantation activities which are fundamental resources to agriculture development are realized.

Various watershed development programmes implemented by Tamil Nadu Watershed Development Agency (TAWDEVA) are as follows:

- Integrated Watershed Management Programme (IWMP)
- Drought Prone Areas Programme (DPAP)
- Integrated Wasteland Development Programme (IWDP)
- National Watershed Development Project for Rainfed Areas (NWDPPRA)
- Watershed Development Fund (WDF)
- Western Ghats Development Programme (WGDP)

In addition, TAWDEVA is the Nodal Agency to Agriculture Department in implementing the following schemes funded by Central Government.

- National Agriculture Development Programme (NADP)
- National Food Security Mission (NFSM)

- Agriculture Technology Management Agency (ATMA)
- Agriculture Resource Information Systems and Networking (AGRISNET)
- National Project on Management of Soil Health & Fertility

1. Integrated Watershed Management Programme (IWMP)

This scheme is being implemented for the past four years in 24 districts covering 1993 watersheds. The scheme expenditure is shared by the Central and State Governments in the ratio of 90:10.

Government of India have sanctioned the projects to treat an area of 10.137 lakh Ha with a total cost of ₹1,21,641 lakhs over a project period of 7 years.

Objectives:

- 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.

For the implementation of 50 projects of IWMP 2009-10, over a period of 4 -7 years, Government of India and State share amount of ₹10272 lakhs and ₹1141 lakhs respectively has been released so far under this project. The preparatory phase activities like Base Line Survey, Participatory Rural Appraisal, Entry Point Activities and detailed project report preparation were completed and the project development works are under progress.

Government of India have sanctioned 62 projects in 2010-11, for these projects Government of India and State share amount of ₹8247 lakhs and ₹916 lakhs were released respectively and Preparatory Phase works were completed and the project development works are under progress.

During 2011-12, Government of India have sanctioned 56 projects for which the Government of India and State share amount of ₹4076 lakhs and ₹453 lakhs were released respectively and Preparatory Phase works were completed and the project development works are under progress.

Government of India have sanctioned 32 projects in 2012-13 and Government of India share amount of ₹667 lakhs, ₹74 lakhs of State share has been released and Preparatory Phase works are under progress.

So far, an expenditure of ₹18533 lakhs has been incurred towards preliminary activities and an area of 0.827 lakh Ha has been treated.

List of blocks wherein this programme is under implementation is given in Table.

2. Drought Prone Areas Programme (DPAP)

To minimize the adverse effects of drought on the production of crops, productivity of land, water and human resources, this scheme is implemented from 1972-73 in 80 notified blocks of 17 districts identified in Tamil Nadu as drought prone areas by Government of India.

So far, 1222 watersheds in 7 batches sanctioned at a total project cost of ₹33670 lakhs for treating a total area of 6.141 lakh Ha. The Government of India and State Government have released ₹31565 lakhs of which ₹31087 lakhs have been spent by the District Rural Development Agency and District Watershed Development Agency of 17 districts and a total area of 5.693 lakh Ha have been treated.

During 2012-13, Government of India have released ₹116.00 lakhs and State Government have released its share of ₹106 lakhs under DPAP and the programme is being implemented. In 2012-13, ₹1776 lakhs has been spent from the funds available as opening balance and the release from Centre and State for treating an area of 0.262 lakh Ha. During 2013-14, the balance area of 0.470 lakh Ha. will be treated.

List of blocks wherein this programme is under implementation is given in Table.

3. Integrated Wasteland Development Programme (IWDP)

The main objective of Integrated Wasteland Development Programme is 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 is being implemented in 96 blocks of 24 districts.

Under this programme the watersheds are sanctioned by Government of India on project basis. For treating a total area of 4.576 lakh Ha, Government of India, so far, have sanctioned 910 watersheds in 80 projects at a total cost of ₹ 26220 lakhs.

The Government of India and State Government have released ₹23938 lakhs, of which ₹23427 lakhs have been spent by District Rural Development Agency and District Watershed Development Agency in 24 districts and a total area of 4.016 lakh Ha have been treated.

During 2012-13, Government of India have released ₹455 lakhs and the State Government have released its share of ₹59 lakhs under IWDP and the programme is being implemented. In 2012-13, ₹1264 lakhs has been spent from the funds available as opening balance and the release from Centre and State for treating an area of 0.181 lakh Ha. During 2013-14, the balance area of 0.546 lakh Ha. will be treated.

This programme is under implementation in 96 blocks of 24 districts, the list of blocks is given in Table.

4. National Watershed Development Project for Rainfed Areas (NWDPR):

National Watershed Development Project for Rainfed Areas (NWDPR) is being implemented in Tamil Nadu from VIII Five Year Plan onwards. The expenditure is shared between Centre and State on 90:10 basis.

Under XI Five Year Plan, it was proposed to treat an area of 1.156 lakh Ha covering 200 watersheds in 18 districts at an estimated cost of ₹6936 lakhs. An amount of ₹4088 lakhs was released from 2007-08 to 2011-12 to develop an area of 0.681 lakh Ha. In 2012-13, ₹320.342 lakhs has been released and an area of 0.191 lakh Ha is being treated with an amount of ₹1148 lakhs. During 2013-14, it is proposed to treat an area of 0.035 lakh Ha at a cost of ₹223.528 lakhs.

List of blocks wherein this programme is under implementation is given in Table.

By integrating DPAP, IWDP & NWDPR schemes, the Integrated Watershed Management Programme (IWMP) is being implemented from 2009-10. The ongoing Drought Prone Areas Programme, Integrated Wasteland Development Programme and National Watershed Development Project for Rainfed Areas are nearing completion.

Details of various watershed programmes being implemented by TAWDEVA

SI. No	Details	DPAP	IWDP	NWDPRA	WDF	IWMP
1	Share between Centre and State (Ratio)	75:25	11:1	90:10	50 % State 50% NABARD	90:10
2	Districts covered (No)	17	24	18	24	24
3	Blocks covered (No)	80	96	45	78	147
4	Sanctioned projects (No)	7	80	200	162	200
5	Watersheds (No)	1222	910	200	162	1993
6	Area to be treated (in lakh Ha.)	6.141	4.576	1.156	2.074	10.137 (7 years)
7	Area actually treated (in lakh Ha.)	5.693	4.016	0.476	0.337	0.827
8	Project duration (Year)	5	5	5	5 – 7	5 -7
9	Per unit cost / Ha (₹)	6000	6000	6000	12000	12000
10	Contribution by beneficiary General (%)	10	10	10	16% Labour Contribution	10
	SC/ST & Common Land (%)	5	5	5		5

Guidelines for implementation of Schemes

Throughout the project period of 5-7 years, the above programmes are implemented with participatory mode. The District Collector approves the action plan being prepared by the Village Panchayat / Watershed Committee and implemented as per the Government of India Guidelines and State Government directions.

Programme Implementation

DWDA implements the works through the User Groups of the village. For that the Watershed Committee of that watershed should select the required Development works get the approval of the Grama Sabha and Administrative sanction from the District Collector / Chairman.

The watershed committee has to be registered as per Tamil Nadu Registration Act 1975. It consists of 10 members in which 5 numbers are nominated each from User Group, Self Help Group, SC / ST, Landless women, one Watershed Development Team Member. The Secretary will be nominated by the committee. The Grama Shaba can select or elect this Committee Chairman.

The activities under taken under the Integrated Watershed Management Programme, Drought Prone Areas Programme, Integrated Wasteland Development Programme and National Watershed Development Project for Rainfed Areas Programme are as follows:-

Entry Point Activities

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 will be taken up for getting the confidence of the villagers about the programme and participation in the implementation of the programme.

Institutional and Capacity Building

For the Institutional and capacity building and training, 5% of total project cost is allotted 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.

Development Activities:

The following development activities are carried out in private land.

a. Land Development

The Development activities such as Land leveling, Contour Bunding, Silt Application, Stone Bunding, Retaining Wall, Summer Ploughing, Vegetative Bunding and Continuous Trenching activities will be taken up.

b. Water Resources Development:

Under these activities construction of Percolation pond, Formation of New Tank / Oorani, Farm Pond and Desilting of Existing Tanks will be done.

c. Plantation Activities:

Horticulture Plantation, Socio-Agro Forestry, Fodder Development, Crop Demonstration and Homestead Garden will be taken up.

d. Common Property Development:

In the Government / Common Lands the water harvesting structures like Check dam, Cattle pond, Supply channels, Desilting of ooranis, Desilting of tanks and ponds, Community nursery formation and Agro forestry plantation are carried out in common land.

Farm Production System and Micro Enterprises

The value added activities are being carried out in agriculture and horticulture produce, seed production and processing, vermi compost, mushroom cultivation, dairy farming and poultry, brick making, terracotta and pottery making, custom hiring of farm implements, palm crafts, agarbathi making, mat weaving and event management, 10% funds has been allocated and the grant will be provided for the activity to the individual or group to the maximum of ₹24, 000/-

Self Help Group and Livelihood interventions for Landless Farmers

Various groups viz., Landless Farmers Group, Self Help Group and User Group are formed in the watershed area. The revolving funds are given to the groups for taking up the activities like planting, watering, watch & ward of plantations and other assets, community nurseries, fodder development, fodder banking, storage godown, seed processing, groundnut shelling unit, custom hiring of harvester, draught animals, dairy farming management, live stock and backyard poultry and Emu & Japan Quails or other activities carried out by the Groups in the watershed areas. The revolving fund has to be repaid without interest for making payment of revolving fund to other Groups in rotation.

5. Watershed Development Fund (WDF) assisted by NABARD:

From the year 2004-05 with the assistance of the NABARD funds, Watershed Development Fund project has been planned to treat 100 watershed projects at a cost of ₹6000 lakhs.

Objectives:

- To treat the watersheds where Water scarcity, Soil erosion and Rainfed Agriculture is maximum.
- Implementing by NGOs as a Project Facilitating Agency.
- Spread the message of importance of the Watershed Development Fund Project.
- To develop the watersheds, the selection of works through Participatory Rural Appraisal by the Constitution of Village Watershed committee, User Groups and Self-helps Groups.

Components of Watershed Development Fund

As per new Guidelines being made operational since 21.11.2007

- First Phase - Capacity Building Phase of Watershed Development Fund is granted by National Bank for Agriculture and Rural Development (NABARD).
- Second Phase – Preparation of Feasible Study Report is granted by the NABARD.
- Third Phase – In Fully Implementation Phase, the first 50% Development Works is funded by State Government on loan basis from NABARD and the remaining 50% Development Works is granted by NABARD.
- The rate of interest is 4.5% for the loan amount received from NABARD.
- Repayment period 9 years (3 years after availing Loan)

Project period:

1. Capacity Building Phase (CBP) (50 to 100 Ha. to be covered)	18 months
2. Preparation of Feasibility Study Report (FSR)	6 months.
3. Full Implementation Phase (FIP)	4 years
Total period	6 years

Allotment of fund for different component which would be effective for new full implementation projects:

Unit cost per Ha.		₹ 12,000.00
Physical treatment	70%	₹ 8,400.00
Administrative overheads	10%	₹ 1,200.00
Livelihood support for landless farmer & women	7.5%	₹ 900.00
Community Organisation & Training programme	12.5%	₹ 1,500.00

List of blocks wherein this programme is under implementation is given in Table.

Project Implementation

In the first two years, involving Non-Government organization (NGO) and Village Watershed Committee, capacity building is being done during the first 18 months and feasibility study is being done in the next 6 months with the full grant of NABARD.

After the getting approval of the Project Sanctioning Committee for Full Implementation Phase, the first 50% of the works will be done by the Tamil Nadu Watershed Development Agency and the rest 50% works will be done on grant basis by NABARD.

Presently, 10 watersheds under full grant by NABARD and 152 watersheds under NABARD loan assistance is being implemented. In these 85 projects are in full implementation funded through TAWDEVA. During 2012-13, an area of 0.077 lakh ha. treated at a cost of ₹401 lakhs.

6. National Agriculture Development Programme (NADP)

To achieve 4% annual growth rate in agricultural sector, the National Agriculture Development Programme has been launched. The scheme is implemented in the State as Additional Central Assistance from Government of India, since 2007.

For National Agriculture Development Programme, Tamil Nadu Watershed Development Agency acts as the Nodal Agency.

Objectives:

- Promoting participation of farmers in cluster mode in agriculture.
- Providing flexibility in the process of planning.
- Ensuring local needs / crops / priorities are reflected in the agricultural plan.
- Reducing yield gap in key crops through focused interventions.
- Maximizing returns to the farmers.
- Bringing quantifiable changes in the production and productivity of agriculture and allied sectors.

Agriculture oriented schemes of Agriculture, Horticulture, Agricultural Engineering, Tamil Nadu Agricultural University, Seed Certification, Agricultural Marketing, Animal Husbandry, Dairy Development & Milk Production, Fisheries, Tamil Nadu Veterinary & Animal Sciences University, Tamil Nadu Civil Supplies Corporation, Co-operatives and Public Works Department, are being implemented under this programme.

To sanction the project proposals, to monitor and to review the implementation of NADP in the State, a State Level Sanctioning Committee (SLSC) has been constituted. The State Level Sanctioning Committee (SLSC) is headed by the Chief Secretary to Government as Chairman, Agricultural Production Commissioner and Secretary to

Government as Vice Chairman & Member Secretary. Various department Secretaries to Government, Commissioner's of Agriculture & Horticulture, Director's of Animal Husbandry & Fisheries, Vice Chancellor's of Tamil Nadu Agricultural University & Tamil Nadu Veterinary & Animal Sciences University, Member Secretary, State Planning Commission are the members of State Level Sanctioning Committee (SLSC) with Government of India representatives from Department of Agriculture & Co-operation, Department of Animal Husbandry, Dairying & Fisheries.

Based on Government of India allocation, every year, the project proposals received from agriculture and allied Departments are placed before State Level Sanctioning Committee (SLSC), for discussion and approval. Government orders are issued for the projects approved by SLSC and the funds are released to the implementing departments by the State Government. During 2012-13, the State received the highest allocation of ₹66,968 lakhs from Government of India.

Western Ghats Development Programme

Western Ghats Development Programme is being implemented through Tamil Nadu Watershed Development Agency from 2009-10 onwards in Dindigul, Madurai and Theni districts and subsequently from 2012-13 onwards in Virudhunagar and Tirunelveli districts.

The funds will be received from the Union Planning Commission, Government of India by the State Planning, Development and Special Initiative Department and is being implemented on participatory mode with the Line Departments like Forest and Environment, Agricultural Engineering, Agriculture, Horticulture, Tribal and Adi

Dravidar Welfare Department, Animal Husbandry, DRDA, Sericulture, Fisheries, Tourism and Town Panchayat.

Objectives:

- Maintenance of the ecological balance
- Preservation of genetic diversity
- Restoration of ecological system damaged by human interaction
- Creation of awareness among the people and educating them on the far-reaching implications of ecological degradation and securing their active participation in the eco-development schemes.
- Preservation, Restoration and Stabilization of the Natural Resources
- Protection of Soil Erosion and Improvement of Rain Water Harvesting
- Elevation of the Livelihood standards of the Tribal and Adi Dravidar people
- Creation of Capacity Building and Infrastructure activities to the Watershed people

Implementation

In 2012-13, ₹1240 lakhs has been sanctioned for the implementation of Development Works. In the district level, the scheme is being implemented through District Watershed Development Agency. The District Collector as the Chairman of the DWDA is closely monitoring the programme.

8. Revised Comprehensive Wasteland Development Programme (RCWP)

The scheme is implemented in all districts except Chennai and Nilgiris. As and when the Revenue Department

assigns the lands to the landless poor, reclamation work for those lands will be taken up under this programme.

So far 2,12,965 acres of Government wastelands have been distributed to 1,78,994 farmers and a sum of ₹2717 lakhs has been incurred as expenditure towards reclamation of wasteland, development of cluster and creation of farm pond covering an extent of 53818 acres which needed reclamation under this scheme.

Watershed Greening Project

To uplift and Integrate the village level economy with reference to the soil and water conservation structures is being created through watershed programme is called as Watershed Greening Project. In 2012-13, the activities from seed to sale by involving clusters on need basis in the watershed areas and integrating all schemes implemented by Agriculture and allied departments were taken up. At present the project is being launched by dovetailing the NADP funds at Natarpatti Watershed in Trichy district and Thumberi Watershed in Vellore district only. From 2013-14 this project will be extended to minimum one watershed per district in 5 watershed districts.

XII Five Year Plan objective

Totally 18,568 micro watersheds has been demarcated in Tamil Nadu covering an area of 130.27 lakh ha, of which the treatable micro watersheds are 11,116 Nos. covering an area of 60.85 lakh ha. Out of the treatable micro watersheds, so far, 7216 Nos. of watersheds with an area of 38.73 lakh ha have been covered under various programmes shared both by Government of India and State Government. It is proposed to include the remaining watersheds to be treated in the XII Five Year Plan period.

Geo Informatics System

A State Level Data Centre (SLDC) with core GIS facilities with spatial and non-spatial data have been established at TAWDEVA and augmented with satellite imagery data and Global Positioning System, which is an important step towards efficient management and scientific planning of watersheds. The key areas of GIS functionality at SLDC includes:

- Avoiding overlapping of watersheds through polygon marking of watershed boundaries.
- Monitoring: the execution of developmental works in the watersheds consistently to evaluate through satellite remote sensing images and Global Positioning System.
- Sharing of web based information for watershed planning: Various important thematic maps vital for watershed planning and archived systematically at SLDC are made available through Internet for the benefit of District Watershed Development Agencies, other line departments and common public.