

COMMON GUIDELINES FOR WATERSHED DEVELOPMENT PROJECTS-2008  
(Revised Edition – 2011)

- i. PREFACE: - 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. Except in a few places, the achievements have been sub-optimal. Ecological degradation has been proceeding unabated in these areas with reduced forest cover, reducing water table and a shortage of drinking water, fuel and fodder” (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 Development Programme (IWDP) under a single umbrella. The watershed projects taken up by the Ministry of Rural Development (MoRD) from 1994 to 2001 followed these guidelines. In 2000, the Ministry of Agriculture revised its guidelines for its programme, the National Watershed Development Project for Rainfed Areas (NWDPA). These guidelines were intended to be common guidelines to make the programme more participatory, sustainable and equitable. However, the MoRD revised the 1994 Hanumantha Rao Committee guidelines in 2001 and yet again in 2003 under the nomenclature “Hariyali Guidelines”.

In the meanwhile, emerging issues of ground water recharging and convergence to create a critical mass of investments demanded innovative guidelines. At the advent of the Eleventh Plan period, our main challenge was to move the nation decisively in the direction of “inclusive growth”. Rainfed areas of 85 million hectares out of the 142 million hectares of net cultivated area, have suffered neglect in the past. High untapped productivity and income potential exists in these areas.

An insight into the rainfed regions reveals a grim picture of poverty, water scarcity, rapid depletion of ground water table and fragile ecosystems. Land degradation due to soil erosion by wind and water, low rainwater use efficiency,

high population pressure, acute fodder shortage, poor livestock productivity, underinvestment in water use efficiency, lack of assured and remunerative marketing opportunities and poor infrastructure are important concerns of enabling policies. The challenge in rainfed areas, therefore, is to improve rural livelihoods through participatory watershed development with focus on integrated farming systems for enhancing income, productivity and livelihood security in a sustainable manner.

In order to assess the performance of various ongoing projects / programmes of watershed development, a series of evaluation studies have been conducted by Indian Council of Agricultural Research (ICAR) Institutes, State Agriculture Universities (SAUs), National Remote Sensing Centre (NRSC) etc. Besides, impact assessment studies were carried out by the Ministry of Agriculture, Ministry of Rural Development, Planning Commission, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the Technical Committee constituted by the Department of Land Resources (DoLR). These studies support the observation that in several watersheds, the implementation of the programme has been effective for natural resource conservation by increasing the productivity of the land, bringing additional area under agriculture, employment generation and social upliftment of beneficiaries living in the rural areas. But these successes have been sporadic and intermittent. The overall impact at the state and national levels has generally been inadequate. Additional demand and supply driven socio-economic and risk managing paradigms are emerging.

Out of the total geographical area of the country of 329 million hectare (Mha), about 146 Mha is degraded and 85 Mha is rainfed arable land. This includes degraded land not only under private ownership, but also the one with the departments of panchayat, revenue and forest. All these lands are prioritized for development under various watershed development projects under these guidelines. During the 11th Five Year Plan, major thrust has been laid on developing the untreated areas. These Guidelines broadly indicate a fresh framework for the next generation watershed programmes. The key features of this new unified approach can be broadly outlined as follows:

- a) **DELEGATING POWERS TO STATES:** States will now be empowered to sanction and oversee the implementation of watershed projects within their areas of jurisdiction and within the parameters set out in these guidelines.

- b) **DEDICATED INSTITUTIONS:** There would be dedicated implementing agencies with multi-disciplinary professional teams at the national, state and district level for managing the watershed programmes.
  - c) **FINANCIAL ASSISTANCE TO DEDICATED INSTITUTIONS:** Additional financial assistance would be provided for strengthening of institutions at the district, state and national level to ensure professionalism in management of watershed projects.
  - d) **DURATION OF THE PROGRAMME:** With the expanded scope and expectations under this approach, the project duration has been enhanced in the range of 4 years to 7 years depending upon nature of activities spread over 3 distinct phases viz., preparatory phase, works phase and consolidation phase.
  - e) **LIVELIHOOD ORIENTATION:** Productivity enhancement and livelihoods shall be given priority along with conservation measures. Resource development and usage will be planned to promote farming and allied activities to promote local livelihoods while ensuring resource conservation and regeneration. The new approach would systematically integrate livestock and fisheries management as a central intervention and encourage dairying and marketing of dairy products. In the rainfed areas, the animal resources become a major source of income for the people. When effectively integrated with the Watershed Development Projects, a comprehensive animal husbandry component would contribute significantly to ensuring a better and sustainable livelihood for the people of the rainfed areas.
- ii. **GUIDING PRINCIPLES:** -The common guidelines for watershed development projects are based on the following principles:
- a) **EQUITY AND GENDER SENSITIVITY:** Watershed Development Projects should be considered as levers of inclusiveness. Project Implementing Agencies (PIAs), must facilitate the equity processes such as a) enhanced livelihood opportunities for the poor through investment in their assets and improvements in productivity and income, b) improving access of the poor, especially women to the benefits, c) enhancing role of women in decision making processes and their representation in the institutional arrangements and d) ensuring access to usufruct rights from the common property.
  - b) **DECENTRALIZATION:** Project management would improve with decentralization, delegation and professionalism. Establishing suitable institutional arrangements within the overall framework of the Panchayati Raj Institutions (PRIs), and the operational flexibility in norms to

suit varying local conditions will enhance decentralization. Empowered committees with delegation to rationalize the policies, continuity in administrative support and timely release of funds are the other instruments for effective decentralization.

- c) **FACILITATING AGENCIES:** Social mobilization, community organization, building capacities of communities in planning and implementation, ensuring equity arrangements, etc need intensive facilitation. Competent organizations including voluntary organizations with professional teams having necessary skills and expertise would be selected through a rigorous process and may be provided financial support to perform the above specific functions.
- d) **CENTRALITY OF COMMUNITY PARTICIPATION:** Involvement of primary stakeholders is at the centre of planning, budgeting, implementation, and management of watershed projects. Community organizations may be closely associated with and accountable to Gram Sabhas in project activities.
- e) **CAPACITY BUILDING AND TECHNOLOGY INPUTS:** Considerable stress would be given on capacity building as a crucial component for achieving the desired results. This would be a continuous process enabling functionaries to enhance their knowledge and skills and develop the correct orientation and perspectives thereby becoming more effective in performing their roles and responsibilities. With current trends and advances in information technology and remote sensing, it is possible to acquire detailed information about the various field level characteristics of any area or region. Thus, the endeavor would be to build in strong technology inputs into the new vision of watershed programmes.
- f) **MONITORING, EVALUATION AND LEARNING:** A participatory, outcome and impact-oriented and user-focused monitoring, evaluation and learning system would be put in place to obtain feedback and undertake improvements in planning, project design and implementation.
- g) **ORGANIZATIONAL RESTRUCTURING:** Establishing appropriate technical and professional support structures at national, state, district and project levels and developing effective functional partnerships among project authorities, implementing agencies and support organizations would play a vital role.

iii **.INSTITUTIONAL ARRANGEMENTS AT NATIONAL STATE AND DISTRICT LEVELS:** Following the spirit of the Guiding Principles, appropriate institutional arrangements would be made at various levels for effective and professional management of watershed development projects.

a) **ROLE OF NATIONAL RAINFED AREA AUTHORITY:** - National Rainfed Area Authority (NRAA) would, inter-alia, be responsible for:

1. Supporting the process of preparing strategic plans for watershed based development projects at the state and district level keeping in view specific agro-climatic and socio-economic conditions.
2. Assisting in the preparation of state specific technical manuals for the multi-disciplinary and integrated approach required for implementation of these projects together with the standards and specifications etc.
3. Supporting State Level Nodal Agencies (SLNAs), in identifying resource organizations and establishing capacity building arrangements.
4. Facilitating action research relevant to watershed development programme in different agro-climatic regions
5. Conducting studies, evaluation and impact assessment from time to time so that the benefits of these are available for improving the quality of watershed management projects

b) **INSTITUTIONAL ARRANGEMENTS AT THE MINISTRY LEVEL:** The Nodal Agency at the central level in the Department / Ministry, among others, will perform the following important functions:

1. Facilitate allocation of the budgetary outlay for the projects among the States keeping in view the criteria as specified in the Guidelines.
2. Actively support capacity building programmes at all levels.
3. Strongly support, augment and initiate Information, Education and Communication (IEC) activities with modern IT inputs.
4. Ensure close monitoring through on-line systems
5. Establish suitable systems for field visits, monitoring, social audits and impact assessment through interaction with state and district level agencies for effective implementation of the projects at ground level.

c) **WATERSHED CELL CUM DATA CENTRE (WCDC):**- The functions of WCDC will be as follows:

1. Identify potential Project Implementing Agencies (PIAs) in consultation with Zila Parishad/Zila Panchayat/ District Council as per the empanelment process to be decided by the respective State Governments.

2. Take up the overall responsibility of facilitating the preparation of strategic and annual action plans for watershed development projects in respective districts.
3. Providing professional technical support to Project Implementing Agencies (PIAs) in planning and execution of watershed development projects.
4. Develop action plans for capacity building, with close involvement of resource organizations to execute the capacity building action plans.
5. Carry out regular monitoring, evaluation and learning.

iv. INSTITUTIONAL ARRANGEMENTS AT PROJECT LEVEL: -

a) PROJECT IMPLEMENTING AGENCY (PIA): -

1. They should preferably have prior experience in watershed related aspects or management of watershed development projects.
2. They should be prepared to constitute dedicated Watershed Development Teams.

b) ROLES AND RESPONSIBILITIES OF THE PIA: -The Project Implementing Agency (PIA) will provide necessary technical guidance to the Gram Panchayat for preparation of development plans for the watershed through Participatory Rural Appraisal (PRA) exercise, undertake community organization and training for the village communities, supervise watershed development activities, inspect and authenticate project accounts, encourage adoption of low cost technologies and build upon indigenous technical knowledge, monitor and review the overall project implementation and set up institutional arrangements for post-project operation and maintenance and further development of the assets created during the project period.

The PIA, after careful scrutiny, shall submit the Action Plan for Watershed Development Project for approval of the WCDC/DRDA and other arrangements. The PIA shall submit the periodical progress report to WCDC. The PIA shall also arrange physical, financial and social audit of the work undertaken. It will facilitate the mobilization of additional financial resources from other government programmes, such as MGNREGA, BRGF, SGRY, National Horticulture Mission, Tribal Welfare Schemes, Artificial Ground Water Recharging, Greening India, etc.

c) WATERSHED DEVELOPMENT TEAM: -The WDT will guide the Watershed Committee (WC) in the formulation of the watershed action plan. An indicative list of the roles and responsibilities of the WDT would include among others, the following.

1. Assist Gram Panchayat / Gram Sabha in constitution of the Watershed Committee and their functioning.
  2. Organizing and nurturing User Groups and Self-Help Groups.
  3. Mobilizing women to ensure that the perspectives and interests of women are adequately reflected in the watershed action plan.
  4. Conducting the participatory base-line surveys, training and capacity building.
  5. Preparing detailed resource development plans including water and soil conservation or reclamation etc. to promote sustainable livelihoods at household level.
- v. CRITERIA FOR SELECTION OF WATERSHED PROJECTS; - The following criteria may broadly be used in selection and prioritization of watershed development projects:
- a) Acuteness of drinking water scarcity.
  - b) Extent of over exploitation of ground water resources.
  - c) Preponderance of wastelands/degraded lands.
  - d) Contiguity to another watershed that has already been developed/ treated.
  - e) Willingness of village community to make voluntary contributions, enforce equitable social regulations for sharing of common property resources, make equitable distribution of benefits, create arrangements for the operation and maintenance of the assets created.
  - f) Proportion of scheduled castes/scheduled tribes.
  - g) Area of the project should not be covered under assured irrigation, with relaxation for over exploited blocks.
  - h) Productivity potential of the land.
- vi IMPLEMENTATION OF WATERSHED DEVELOPMENT PROJECTS IN INDIA:- In order to check soil erosion, soils and water conservation programmes were launched both under state as well as central sectors during the FIVE YEAR PLANS. These are discussed as:-
- a) SOIL CONSERVATION IN CATCHMENT OF RIVER VALLEY PROJECT:- This programme was initiated during the Third Five Year Plan. The objective was to treat the catmint area for reducing silt production rate and subsequent siltation of reservoir. It also assisted to improve the productivity of the catmint by checking soil erosion. The programme is being implemented in 27 watersheds coving 17 states including Damodar Valley Corporation area.

- b) **INTEGRATED WATERSHED MANAGEMENT IN THE CATCHMENT OF FLOOD PRONE RIVERS:** - This programme was launched during Fourth Five Year plan in eight flood prone rivers of Gangetic basin namely, Ajoy, Gomti, Punpun, Roop Narain, Sahibi, Upper Ganga and Upper Yamuna. The total area of eight watershed is 16.7 m ha and covers parts of Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal and Union territory of Delhi.
- c) **DROUGHT PRONE AREA PROGRAMME:-** Drought prone area programme (DPAP) was started in 1973 as an integrated area development programme. This programme was considered as a long term measure for restoration of ecological balance by conserving, developing and harnessing land, water, livestock and human resources. The drought prone areas programme operates in 615 blocks of 95 districts in 13 states. The total area covered by the scheme is 53.6 m ha.
- d) **DESERT DEVELOPMENT PROGRAMME:** - The desert development programme (DDP) was initiated in 1977-78 with the objective of controlling desertification of the desert area through integrating and dovetailing other related state/ Central programmes and to conserve, develop and harness land, water and other natural resources including rainfall for restoration of ecological balance in long run. This programme covers 131 blocks of 21 districts in five states namely Rajasthan, Haryana, Gujarat, Jammu and Kashmir and Himachal Pradesh. The total area covered by the DDP is about 36.2m ha.
- e) **HIMALAYAN WATERSHED MANAGEMENT PROJECT IN UTTAR PRADESH:** - Himalayan watershed management project in Uttar Pradesh was initiated in 1983 with the financial assistance of the World Bank. The aims of the project were to minimize further deterioration of the Himalayan eco-system caused by depletion of forest cover, over grazing, bad land use and careless road construction. Two watershed namely Grahwal and Panar Kumaon regions covered total area of 2.47 lakh ha.
- f) **OPERATIONAL RESEARCH PROJECTS ON INTEGRATED WATERSHED MANAGEMENT:** - These projects were initiated in 1983-84 with the financial assistance of Agriculture and Rural Development, Government of India and under the technical guidance of Indian Council of Agriculture Research (ICAR). The objectives of the projects were to develop a programme with people's participation fir arresting the deterioration of environment and building up permanent assets in the form of water,

sustainable vegetation and improved productivity of cropped land. The projects cover as many as 47 watersheds. These projects were spread over 16 states namely, Andhra Pradesh(4), Bihar(2), Gujarat(3), Haryana(6), Madhya Pradesh(5), Maharashtra(5), Orissa(2), Punjab(1), Himachal Pradesh(1), Jammu and Kashmir(1), Karnataka(5), Kerala(1), Rajasthan(3), Tamil Nadu(2), Uttar Pradesh(9) and West Bengal(2).

- g) NATIONAL WATERSHED DEVELOPMENT PROJECT FOR RAINFED AREAS: -  
The National Watershed Development Project for Rainfed Areas (NWDPA) was initiated in 1986-87. This programme is being implemented in the unirrigated arable lands mostly falling in the rainfall range 500 to 1125 mm and also above. The programme covers 25 states. The districts having more than 30 percent area under irrigation are usually excluded.

In the Eight Year Plan the NWDPA was reconstructed to achieve the twin objectives of sustainable production of bio-mass and restoration of ecological balance in the vast rainfed areas of the country. It has main focus on: conservation, up gradation and utilization of natural endowments such as land, water, plant, animal and human resources in a harmonious integrated manner with low- cost simple, effective and replicable technology, generation of massive employment and reduction of inequalities between irrigated and rainfed areas.

The main components of the project are: -

1. Land and moisture management
2. Contingency seed and planting material stocking
3. Training, seminars, study tours for staff and farmers
4. Adoption research trails on different crops in small and marginal farmers land
5. Procurement, fabrication and supply of survey equipment and prototype implements
6. Preparation of field manuals and publicity material.

- h) INTEGRATED WATERSHED DEVELOPMENT PROJECTS (HILLS):- Integrated watershed development project hills is being implemented with the assistance of the world bank. It is operating in Himachal Pradesh, Jammu and Kashmir, Punjab and Haryana. It covers total area of 1.24 lakh ha. The aim of the project is to slow and reverse degradation of the natural environment through the use of appropriate soil and water conservation practices.

- i) INTEGRATED WATERSHED DEVELOPMENT PROJECT (PLAINS): - The integrated watershed development project is being implemented with the assistance of the World Bank in Gujarat, Orissa and Rajasthan. It covers an area of 4.33 lakh ha. The aims of the project are to slow down and possibly reverse the degradation of agro ecological zones.

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