



**GUJARAT STATE WATERSHED MANAGEMENT AGENCY (GSWMA)**

# **OPERATIONAL GUIDELINES**

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**INTEGRATED WATERSHED MANAGEMENT PROGRAMME  
(IWMP)**

**2011**

**(Approved in the 8<sup>th</sup> Governing Body Meeting of GSWMA by Agenda No.8/6  
on 19<sup>th</sup> May, 2011)**

**This is an official document of the GSWMA to govern the Gujarat specific policies for  
Integrated Watershed Management Programme (IWMP)**

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## **1. INTRODUCTION AND BACKGROUND:**

Watershed<sup>1</sup> Development Programme (WDP)<sup>2</sup> has come a long way in India from merely a set of soil moisture conservation measures to a livelihood oriented comprehensive rural development programme through Natural Resource Management. WDP started in India in 1962-63 with the launch of the “River Valley Project” of the Ministry of Agriculture, Government of India. Afterwards, a number of similar programmes were launched by the Ministry of rural Development like the “Drought Prone Area Programme (DPAP)” in 1973-74, “Desert Development Programme (DDP)” in 1977-78 and “Integrated Wasteland Development Programme (IWDP)” in 1988-89. These programmes were reviewed in 1994 by a Technical Committee headed by Prof. C.H. Hanumantha Rao; the suggestions of the report of the committee culminated in Ministry of Rural Development issuing a “Common Guidelines” in 1994-95 for implementation of these programmes on a watershed development approach. Similarly, the ministry of Agriculture issued its own Guidelines. Since then these Guidelines have been modified a number of times. The “Common Guidelines” of 1994 was revised in 2001 and in 2003. Again in 2005 (report submitted in 2006), a new Technical Committee under the Chairmanship of Shri S. Parthasarathy was constituted with the objective of reinvigorating the running Watershed Development Programmes. Their report was followed by a “New Common Guideline” issued by the Government of India in 2008 applicable to WDPs implemented by all Departments/ Ministries of the Government of India.

Through the years, there have been some clear shifts in approach of the Watershed Development Programme. The earlier physical structure focus has been replaced by a focus on overall development of the natural resource base, the top-to-bottom approach has given way to a participatory mechanism, the sectoral approach has been replaced by an integrated approach and involvement of village level institutions has replaced the departmental approach. Besides, application of technology has become people friendly. These subtle changes are in the right direction and needs to be strengthened. The “New Common Guidelines” includes all these and much more.

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<sup>1</sup> “A Watershed is a geo-hydrological unit for an area that drains at a common point”; Source: Watersheds Processes, Assessment & Management – Paul A. DeBarry, John Wiley Publications

<sup>2</sup> Watershed Development Programme (WDP) is an umbrella name given to various programmes based on natural resource management (especially through conservation and development of land, water and vegetation) and aimed at promotion of sustainable livelihood options for the resource poor in the rainfed areas

### 1.1. Importance of WDP in Gujarat:

Gujarat has a tropical monsoon climate; 90 to 95 per cent of the total annual rainfall is seen during the period from June to September, when the south-west monsoon prevails (FERGUSON, n.d.b). However, the level of rainfall varies from about 340 mm in the district of Kutch to about 1800 mm in southern hills of Dangs and Valsad. On an average, the main parts receive rainfall of about 800 mm. Nearly 20 per cent of the area in 19 districts of the state is considered as drought prone (APRU, 1998, p.39). About 52% of the total geographical area is used for agricultural purpose; more than 23% of the land is wasteland, of which 85% is located in Kutch district. Of the total waste land, 19% is affected by salt, 1.5% is water logged and 11% is barren and stony land. (IRMA, 1999, p.13). Water resources are mainly concentrated in south and central Gujarat; Saurashtra and Kutch have very high irrigation needs, but limited sources.

Some of the vital statistics about agriculture in Gujarat:

- Net sown area: 9425100 ha
- Per capita net sown area: 0.19 ha
- Net irrigated are: 3046100 ha
- Net irrigated area as percentage of net sown area: 32%
- Number of districts below 20% net irrigated area: 7

The average land holding size in Gujarat has been declining continuously over the years, from 3.15 ha in 1986 to 2.93 ha in 1991 and further declining due to population pressure. (NABARD, 2000a, p.2). About 50% of the farmers are small farmers (holding upto two ha); and approximately 33% of farmers hold land between two to five hectares. The farm holding being getting fragmented by the day, farm mechanization is becoming more and more difficult.

Nearly 70% of the agricultural land in Gujarat is rain-fed. (NABARD, 1998, p.4). Even where irrigation facility is available, only 60 to 70 per cent of the on-farm irrigation requirements are effectively provided in most cases. Thus water is an important limiting factor to achievement of potential yields (FERGUSON, n.d. b). The degradation and consequently, the poor fertility of the land over the years also contribute to the low productivity of the cultivated crops.

The facts presented here make a strong case for Watershed Development Programme in Gujarat. Accordingly, both the Government of India and Government of Gujarat have invested a lot of money in these programmes here.

## 1.2. Watershed Development Programme in Gujarat:

Watershed Development Programme in its present version started in Gujarat in 1994-95 with the coming into effect of the first Common Guidelines. The three main programmes under the WDP of the Ministry of Rural Development, viz. DPAP, DDP and IWDP are being implemented in different districts of Gujarat. The last batch of projects under these schemes was sanctioned for Gujarat in the year 2007-08; the abstract of these projects is given in table no.1. A total of 3806 number of projects were sanctioned during this period involving more than 34 lakh hectares of land and more than Rs. 1682 crores.

**Table no.1: Abstract of WDP in Gujarat sanctioned by MoRD prior to 2008**

Sr. No.	Scheme	Pre-Hariyali projects	Hariyali projects	Total projects	Area covered (Lakh Ha.)	Investment (Rs. Crore)
1	DPAP	1359	1085	2444	12.22	597.3
2	DDP	1676	1386	3062	15.31	751
3	IWDP	27	57	84	4.20	225
4	EAS	546	0	546	2.73	109.2
5	SW	198	0	198	0.99	39.6
6	<b>Total</b>	<b>3806</b>	<b>2528</b>	<b>6334</b>	<b>34.46</b>	<b>1682.5</b>

Apart from the MoRD projects, Ministry of Agriculture has also undertaken 842 projects (including 35 projects by NABARD) involving 9.05 lakh hectares of land under several schemes like NWDPRRA, RVP, RAS, IGWDP, etc.

However, after 2008, these programmes have been merged together to form a new major programme named Integrated Watershed Management Programme (IWMP). The first batch of projects under the IWMP has come to be implemented in Gujarat since 2009-10.

**Table no.2: Abstract of planning under IWMP**

S. No.	Area particulars	Details			
		No.	Area (Lakh ha.)		
1	Total micro-watersheds (MWs) in the State	13587	196.02		
2	Total untreatable MWs (Reserved Forest, Barren Rocky, assured irrigation, etc.)	1005	27.239		
3	Total treatable MWS in the State	12582	168.79		
4	Total MWs covered under pre-IWMP schemes of DoLR	3895	31.63		
b	Total MWs covered under schemes of other Ministries	645	6.0795		
c	Total MWs covered under IWMP 2009-10 of DoLR	705	7.0819		
d	Total of 4 a to d	5245	44.792		
5	Balance micro-watersheds not covered till date	7337	123.99		
6	Plan for covering balance micro- watersheds	11 <sup>th</sup> Plan	2010-11	802	7.1366
			2011-12	835	7.8572
			12 <sup>th</sup> Plan	2015	39
			13 <sup>th</sup> Plan	1940	37
			14 <sup>th</sup> Plan	1745	33
			Total	7337	123.99

Under IWMP, scientific prioritization and planning for covering the whole of Gujarat has been done. The abstract of the State Perspective and Strategic Plan is given in table no.2 above. In 2009-10, 7.08 lakh hectares of land have taken under IWMP and in 2010-11, a further 7.13 lakh hectares have been sanctioned by the Ministry of Rural Development.

### 1.3. Need for and Objectives of the Operational Guidelines in Gujarat:

The “New Common Guidelines”-2008 has provided a base for scientific, integrated and holistic development of the rainfed areas of Gujarat while taking care of the environment. To achieve the desired results, the implementation has to follow the spirit of the Guidelines. However, one of the most important factors for successful implementation is local specific adaptations. One state is different from another in its physiographic condition, socio-economic situation and administrative / institutional set up. Thus, it is imperative that state specific modifications be done to accommodate the peculiarities of the states. To achieve this objective, the Ministry of Rural Development has allowed for state specific minor modifications within the larger framework of the Guidelines.

The Governing Body of the Gujarat State Watershed management Agency (GSWMA) in its 7<sup>th</sup> meeting on 16<sup>th</sup> November, 2010 has approved the proposal to prepare the “Operational Guidelines for Watershed Development Programme in Gujarat under Integrated Watershed Management Programme (IWMP).”

**The Operational Guidelines will fulfil the following objectives:**

- Help all the stakeholders under IWMP in clarifying Gujarat specific systems, procedures and processes to be followed
- Clarify doubts/ confusions, if any, in the “Common Guidelines”
- It will define:
  - ✓ modalities to be followed at different stages of the project
  - ✓ time frame to complete different project components
- Explain the process of project selection and planning procedure at different levels- state, district and project/village (including Detail Project Report (DPR)preparation at project level)
- Reiterate the modalities of Capacity Building of different stakeholders (briefly, as the capacity Building Manual is already in place)
- It will prescribe Gujarat specific activities under Entry Point Activities (EPAs), Soil Moisture Conservation works as well as livelihood initiatives
- The Operational Guidelines will spell out unambiguous financial, accounts and audit procedures
- It will put in place the procedures for Monitoring, Evaluation and Impact Assessment of Projects

**1.4. The Approach and Applicability of the Operational Guideline, 2011:**

Before reading this Guideline, one must understand the approach to its writing. By the time this Guideline is prepared, one batch of projects (2009-10) has already completed its preliminary phase, another batch of projects (2010-11) has already been sanctioned by the government of India and a third batch of projects is under proposal stage. So, this Operational Guideline *is partly descriptive (explaining the systems and procedures already in place), partly directive (things which cannot be compromised with), and partly normative / prescriptive / suggestive (allowing for local/need specific variations).* Thus, the provisions defined or expressed explicitly in this Operational Guideline, 2011 of GSWMA, Government of Gujarat are binding on all the stakeholder of IWMP in Gujarat. A number of things do not need to be defined differently for Gujarat; in cases like these, refer the Common Guidelines, 2008 of the Government of India.



## 2. SALIENT FEATURES OF THE OPERATIONAL GUIDELINES, 2011:

The New Common Guideline, 2008 at the outset clearly mentions the elements of the new approach for the next generation of watershed projects and the non-negotiable guiding principles. The Government of Gujarat too believes in this new approach and intends to follow the guiding principles inscribed in the New Common Guidelines. Thus, it is imperative to reiterate these approaches and principles as followed in Gujarat to do away with any kind of confusion.

### 2.1. Key features of the new approach:

- **Delegation of power to the districts:** In consonance with the this approach, the Gujarat State Watershed Management Agency (GSWMA), the State Level Nodal Agency for implementation of WDPs in Gujarat has delegated a number of powers to the districts. The District Watershed Development Units (DWDUs) have been created in each of the districts and have been authorized to select projects on the basis of prioritization done at state level. They have been provided with ample human resources and other infrastructure to carry out their duties. The DWDUs have been given complete autonomy in project management subject to policies of the GSWMA/State Government/Government of India.
- **Dedicated Institutions:** The Department of Rural Development, Government of Gujarat has created dedicated institutions for implementation of the projects in the state. Right from the state level to the district and project level, there are institutions to carry out the watershed works full time. This is discussed in detail in a separate section.
- **Financial assistance to dedicated institutions:** The dedicated institutions are provided with the necessary financial assistance directly from the Government of India. There are two different kinds of fund at the moment. One, the Department of Land Resources (DoLR) provides Institutional Funds to the GSWMA and the DWDUs. Two, the PIAs and village level institutions as well as the GSWMA and DWDUs are provided with project administration funds as part of the sanctioned projects.
- **Duration of the Programme:** The duration of the programme will vary from 4 to 7 years; it will depend upon the local conditions, e.g., terrain, transport/communication facilities, socio-political situation, awareness level, etc. The respective DWDUs are authorized to decide for the project period for a certain

project. The decision regarding the project period will be taken on a case to case basis by the DWDU subject to approval from GSWMA.

- **Livelihood Orientation:** The principal objective of the Watershed Development Programme has been redefined as promoting sustainable livelihoods in the rainfed areas through conservation, development and management of local natural resources. GSWMA encourages livelihoods based upon the local resources and built upon the conservation measures taken up by the WDP, specifically, agriculture/forestry based activities, animal husbandry & dairy development, agro-based small and micro-enterprises, ancient specialized handicrafts, etc. The focus is on productivity enhancement, judicious use of natural resources and value addition.
- **Cluster Approach:** It is taken care at the time of project selection that the micro-watersheds and villages are in a cluster. It has been directed that projects have to be between 4000-5000 hectares each (exceptions are allowed by GSWMA on case to case basis after verification of the reasons thereof, especially in hilly/difficult terrains or bigger micro-watersheds). This helps in augmenting the natural resources in a scientific manner and in keeping the administrative costs of the projects minimum. One batch of projects is followed by another batch of projects in a contiguous manner.
- **Scientific Planning:** At the very beginning itself it was decided that the planning for selecting watersheds for treatment in the whole state has to be done in a scientific manner. Geographical Information System (GIS) and Remote Sensing (RS) were chosen as preferred options for the State Perspective and Strategic Planning (SPSP). All the watersheds of the state were then prioritized along criteria set by the Department of Land Resources (DoLR) and Priority Maps were prepared. These maps help the districts in selecting projects every year. This is discussed in a separate section in detail.
- **Capacity Building:** Enabling all the stakeholders achieve the desired results needs strong capacity building inputs. GSWMA has ensured this by adopting a consortium approach. A consortium of institutions of repute having various expertises have been selected for the purpose and the modus-operandi has been defined. A Capacity Building Manual has been prepared by the GSWMA and it is followed for the purpose.

- **Multi Tier Approach:** The Multi Tier Ridge to Valley approach entails the watershed developmental works to start at the ridge area and gradually come down to the middle and the valley portions. For the state as a whole, the ridges are where the forests are. So, in the initial years, the Forest Department has been involved in a big manner; they are the Project Implementing Agencies (PIAs) in most of the projects sanctioned in 2009-10. Similarly, in the years to come, wherever the forests areas come under the projects, the forest department will be given an important role. This basic principle is followed at the time of project management too.

## 2.2. Guiding Principles:

Gujarat State Watershed Management Agency (GSWMA) too believes in the principles stated in the “New Common Guidelines- 2008”. These are:

- **Equity and gender sensitivity:** To ensure equitable distribution of benefits among the primary stakeholders, the project management team must keep account of all the different sections of the village community and plan in such way that primacy is given to the most needy first. Special care has to be taken to involve women at different stages of the project period and extend equitable benefits to them as well. Gender sensitive planning and budgeting has to be done by the project team.
- **Decentralization:** Decision making power, authority and responsibilities have to be delegated appropriately to different levels. It will bring in efficiency and effectiveness in project management.
- **Facilitating Agencies:** No one agency can develop all the specializations required for a programme like WDP, which has social aspects, economic aspects, technical aspects and managerial aspects. Thus, the way forward is to involve institutions who have developed such specializations over the years.
- **Centrality of community participation:** It has been proved time and again that the developmental programmes which involve people/community in all aspects of project management have greater chances of success than which don't. Thus, the community, its problems, its needs and aspirations along with its wisdom should be central to the programme.
- **Capacity building and technical inputs:** Capacity building of different stakeholders is very important for project implementation. Knowledge, skills and attitude of all the stakeholders need to be oriented towards the needs of the

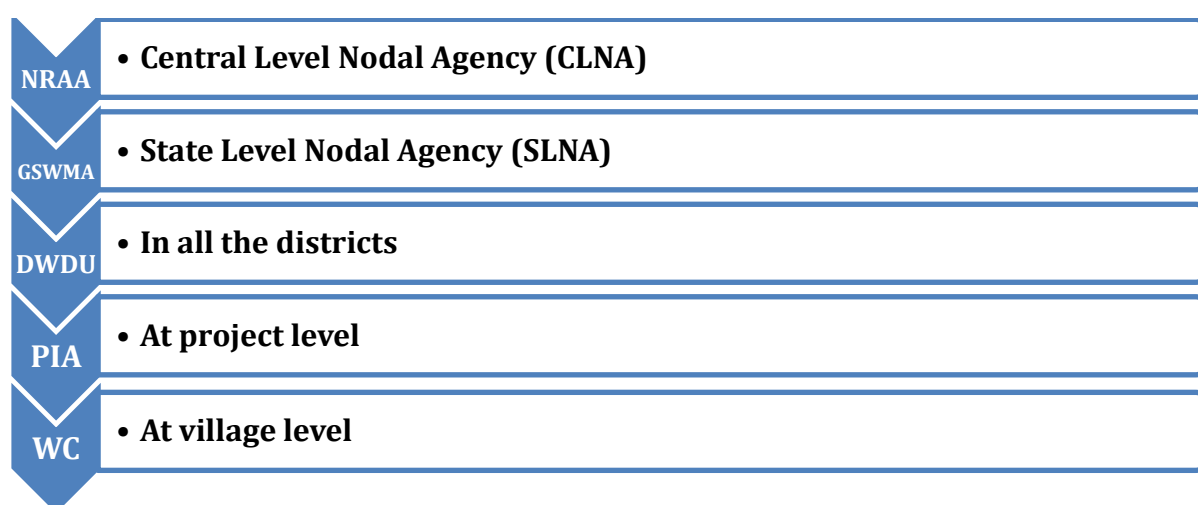
programme and sharpened from time to time to keep pace with dynamics of the real world.

- **Monitoring, Evaluation and Learning:** Once the projects are implemented, it is imperative that its course is observed all the while and corrective measures are taken. The purpose of monitoring and evaluation is to learn things from the experience.
- **Organizational restructuring:** Equally important is to set up organizations according to the internal and external environment. Systems, procedures, etc have to be modelled/ modified in line with the need of the programme and to suit the prevailing conditions.

(For further explanation, refer the “New Common Guidelines-2008” and the relevant sections in this document)

### 3. INSTITUTIONAL MECHANISM:

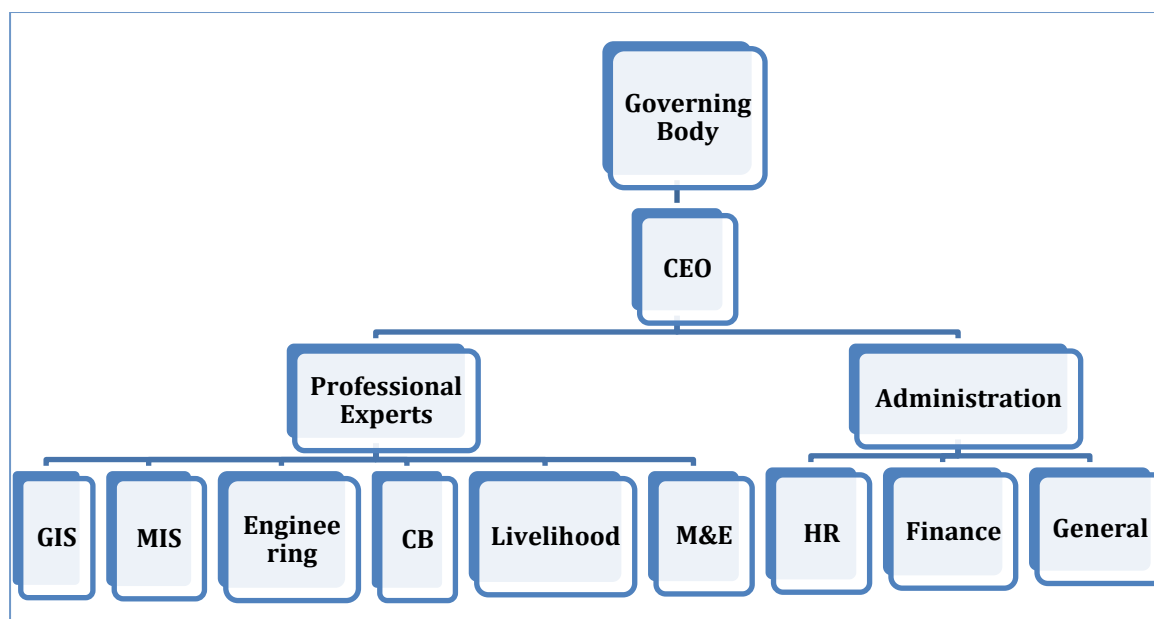
The new common guideline has provided for establishment of dedicated institutions for the purpose of implementation of IWMP. It includes a Central Level Nodal Agency (CLNA), i.e. National Rainfed Area Authority (NRAA); State Level Nodal Agencies (SLNAs) below it in all the states, in Gujarat, it is Gujarat State Watershed Management Agency (GSWMA); below it District Watershed Development Units (DWDUs) at the district level; Project Implementing Agencies (PIAs) at the project level and Watershed Committees (WCs) at village level. This is shown in the diagram below:



#### 3.1. State level:

Gujarat has modelled its institutions in line with the Common Guideline, 2008 with some innovations here and there. Gujarat State Watershed Management Agency

(GSWMA) is the nodal agency for implantation of IWMP at the state level. It is registered under the Societies Registration Act, 1860 on 20.7.2007, as per G.R No. GVK/ GSWMA/ 01/07/ SFS-42/KH.2 dated 12.07.2007 issued by Government of Gujarat. It has a Governing Body chaired by the Principal Secretary, Rural Development Department, a Chief Executive Officer, an IFS, below him works a professional team having various expertise like GIS application, MIS, water resource engineering, livelihoods, capacity building, and monitoring & evaluation. The structure of GSWMA is diagrammatically represented below:



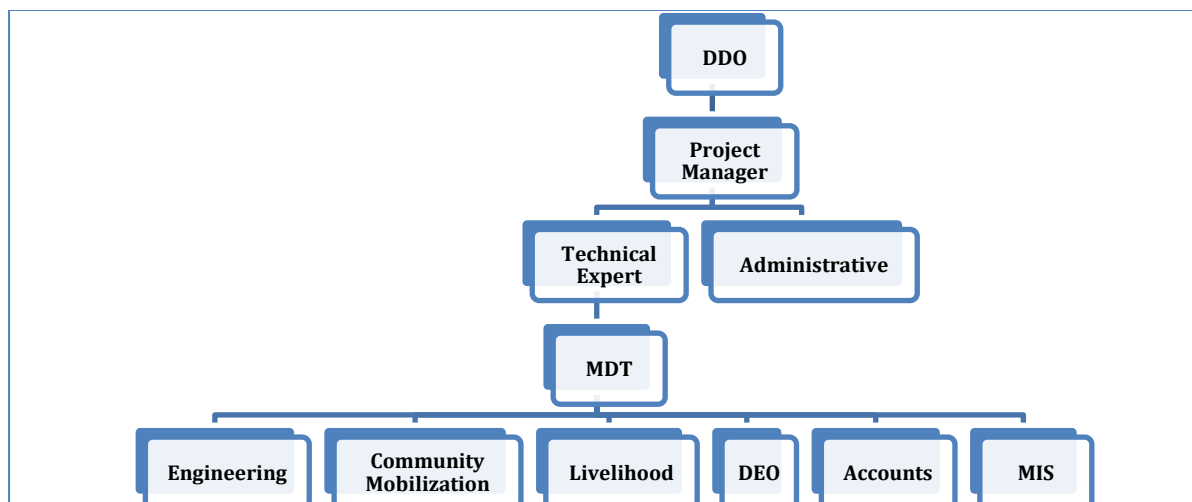
### 3.1.1. Main Functions of Gujarat State Watershed Management Agency:

- i. Prepare a perspective and strategic plan of watershed development for the state on the basis of plans prepared at the block and district level and indicate implementation strategy and expected outputs/outcomes, financial outlays and approach the Nodal Agency at the central level in the Department for appraisal and clearance.
- ii. Establish and maintain a state level data cell from the funds sanctioned to the States, and connect it online with the National Level Data Centre.
- iii. Provide technical support to District Watershed Development Units (DWDU) throughout the state.
- iv. Approve a list of independent institutions for capacity building of various stakeholders within the state and work out the overall capacity building strategy in consultation with NRAA/Nodal Ministry.
- v. Approve Project Implementing Agencies identified/selected by DWDU/ District Level Committee by adopting appropriate objective selection criteria and transparent systems.

- vi. Establish monitoring, evaluation and learning systems at various levels (Internal and external/ independent systems).
- vii. Ensure regular and quality on-line monitoring of watershed projects in the state in association with Nodal Agency at the central level and securing feedback by developing partnerships with independent and capable agencies.
- viii. Constitute a panel of Independent Institutional Evaluators for all watershed projects within the state, get this panel duly approved by the concerned Nodal Agencies at the central level and ensure that quality evaluations take place on a regular basis.
- ix. Prepare State Specific Process Guidelines, Technology Manuals etc in coordination with the Nodal Ministry/ NRAA and operationalize the same.

### 3.2. District level: District Watershed Development Units (DWDUs):

There is a DWDU in each of the districts of Gujarat. It is chaired by the District Development Officer (DDO) under whom a Project Manager is in charge of management of all the watershed projects of the district. The DWDU is a subsidiary of the GSWMA, and not an independent organization in itself. However, the DWDU will sign an MoU with the GSWMA for implementation of the projects. The Project Manager is supported by a Technical Expert, a Multi Disciplinary Team (MDT) and an administrative team. The multi-disciplinary team consists of members from different backgrounds like engineering, community mobilization, livelihood, data entry, accounts, etc. This structure is presented in the diagram below:



DWDU can hire an additional MDT (Agriculture/Soil Expert, Engineering and Community Mobilization) for every 25,000 hectare land under treatment. However, permission for the same has to be taken from the GSWMA.

### 3.2.1. Main Functions of District Watershed Development Unit:

- i. The DWDU will abide by all the parameters/guidelines/regulations as stated in the “Common Guidelines, 2008, for Watershed Development Projects, Government of India” and the Operational Guidelines, 2011, GSWMA, Government of Gujarat.
- ii. The full responsibility of overseeing the watershed programme within the district will lie with the DWDU which will work in close collaboration with the District Level Co-ordination Committee.
- iii. The DLCCC will provide full governance support to the programme. The DLCCC will approve the perspective and annual action plans relating to watersheds projects in the district. DLCCC will integrate the watershed development plans with over all district plans and also oversee its implementation. DWDU will help the DLCCC in providing oversight and ensuring regular monitoring and evaluation of the programme.
- iv. DLCCC will have an important role of governance in matters relating to the co-ordination of various sectoral schemes with watershed development projects, review of progress, settling disputes etc.
- v. Similarly, DWDU will have an important role in planning the watershed development projects at the intermediate level. They can also provide valuable support to PIAs and Watershed Committees in technical guidance with the help of their subject matter specialists.
- vi. DWDU will be responsible to ensure that each project is implemented within 4 to 7 years according to the DPR.
- vii. To identify potential Project Implementing Agencies (PIAs) in consultation with GSWMA, as per the empanelment process as decided by GSWMA.
- viii. To take up the overall responsibility of facilitating the preparation of strategic and annual action plans for watershed development projects in the district.
- ix. To provide professional technical support to Project Implementing Agencies (PIAs) in planning and execution of watershed development projects.
- x. To develop action plan for capacity building, with close collaboration of resource organizations to execute the capacity building action plans.
- xi. To carry out regular monitoring, evaluation and learning.
- xii. To ensure smooth flow of funds to watershed development projects.
- xiii. To ensure timely submission of required documents to GSWMA / Department of Land Resources being the Nodal Agency of the Department at central level.
- xiv. To facilitate co-ordination with relevant programmes of agriculture, horticulture, rural development, animal husbandry, etc with watershed development projects for enhancement of productivity and livelihoods.
- xv. To integrate watershed development projects/ plans into District Plans of the district planning committees. All expenditure of watershed projects would be reflected in district plans.
- xvi. Consolidating all the plans and activities in capacity building and institutional development and ensuring that they are implemented on time.

- xvii. Ensuring proper consolidation of the action plans prepared by PIAs and Watershed Committees and other participatory institutions.
- xviii. Functioning as a platform of convergence of various development activities on watershed basis and foster local micro plans
- xix. To establish and maintain the District Level Data Cell and link it to the State Level and National Level Data Centre.
- xx. Any other functions as may be assigned by GSWMA from time to time for the purpose of implementation of watershed development projects.

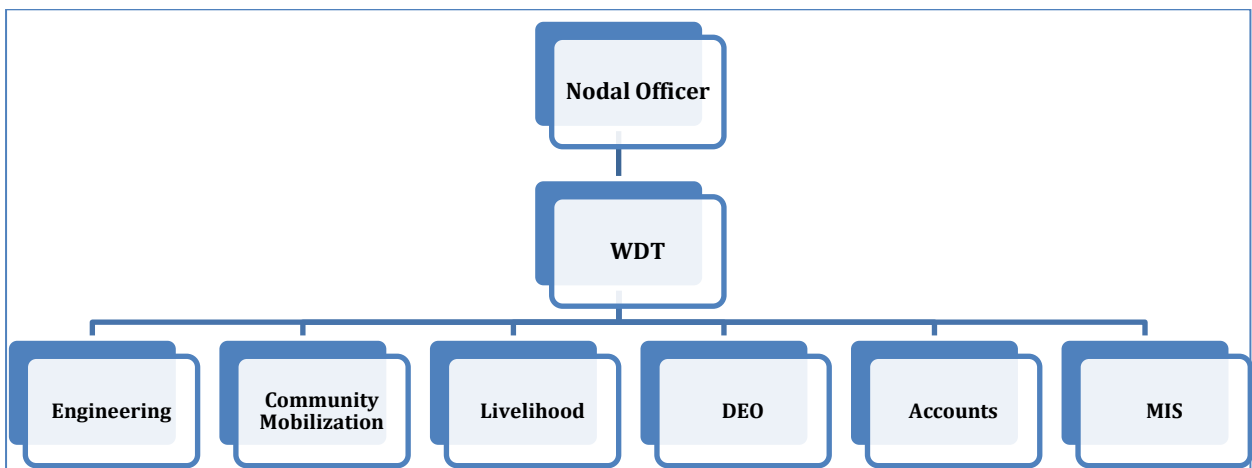
**3.3. Project level: Project Implementing Agency (PIA):**

The respective DWDUs may suggest PIAs for implementation of IWMP in their districts. However, the decision regarding the same will be taken by the GSWMA. The PIAs can be any of the institution/organization as suggested in the Common Guideline, 2008 (refer). The DWDU shall sign an MoU with each PIA for each of the projects to be implemented at the beginning of the project implementation.

In Gujarat, additionally, the DWDUs themselves are empowered to become PIA themselves. This will ensure a fully devoted agency and man power working towards achieving project goals. For the purpose, the DWDU may assign the Technical Expert, or members of MDT to act as Nodal Officers for the PIA.

The PIA will be responsible for ensuring timely achievement based on the three phases identified in the Common Guidelines for Watershed Development Projects, Government of India, 2008, i.e. Preparatory phase, Watershed Works Phase and Consolidation and Withdrawal Phase. A Regulatory Committee will assess the quality of implementation by the PIAs and if necessary, disciplinary action will be taken. If the PIA is a Line Department, Government Rules will be applicable and if the PIA is a Non Governmental Organization, CAPART Regulations and Clause (12)(c) of Government Resolution number: DAP-2005/SFS-14/Kh.2, dated 07/03/2005 by Panchayat, Housing and Rural Development Department will be applicable.

At the project level, there is a Nodal Officer for each of the project and below him works a dedicated Watershed Development Team, consisting of grass root level experts in the same subjects as the MDT at the district level.



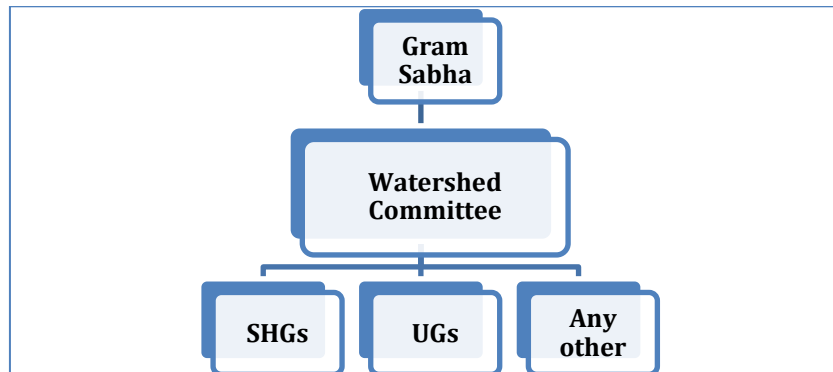


### 3.3.1. Responsibilities of Project Implementing Agency (PIA):

- i. The PIA would be responsible for implementation of watershed projects assigned to it as per in Common Guidelines, 2008, for Watershed Development Projects, Government of India and the Operational Guidelines, 2011, GSWMA, Government of Gujarat.
- ii. The PIA must put in position a dedicated Watershed Development Team (WDT) with the approval of DWDU as per instructions from GSWMA. The Watershed Development Team will extend technical and other support to the PIA for implementation of the project.
- iii. The PIA must open a separate office for the Project Implementation in the project area; the office must be equipped with adequate furniture, telephone, computer, internet facility, and any other equipment that is necessary for smooth functioning of the project.
- iv. The PIA will ensure that the formation and functions of the Self Help Groups (SHG), User Groups and Watershed Committee (WC) are according to the Common Guidelines 2008, for Watershed Development Projects, Government of India and Operational Guidelines, 2011, GSWMA, Government of Gujarat.
- v. 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.
- vi. PIA will be responsible to ensure that each project is implemented within 4 to 6 years according to the Detailed Project Report.
- vii. The PIA, after careful scrutiny, shall submit the Action Plan for watershed Development Project for approval of the DWDU.
- viii. The PIA shall submit the periodical progress report to DWDU in the required format.
- ix. The expenses towards the salaries of the WDT members shall be charged from the administrative support to the PIA.
- x. It will facilitate the mobilization of additional financial resources from other government programmes, such as NREGA, BRGF, SGRY, National Horticulture Mission, Tribal Welfare Schemes, Artificial Ground Water Recharging, Greening India, etc.
- xi. PIA will be responsible for total monitoring of physical works carried out by Village Watershed Committee.
- xii. Any other responsibility that may arise on the basis of watershed guidelines or assigned by DWDU/GSWMA from time to time.

### 3.4. Village level:

At the village level, there will be a Watershed Committee to take care of the project. It will work closely with the WDT to implement the project at the village level. Its structure will be like the following:



**3.4.1. Watershed Committee (WC):** WC is constituted by a President, a secretary or/and an accountant, and at least 8-10 other members with representation from various class and caste groups and women. This committee has to be registered under the Society registration Act, 1860. Please refer the Common Guidelines, 2008 for details regarding WC and its functionaries.

However, some of the specifications regarding the same in Gujarat are mentioned below:

- ✓ Depending on the wishes of the Gram Sabha, the WC can be separate from the Gram Sabha, or act as a sub-committee of the Gram Sabha, or the Sarpanch of the Gram Panchayat can be the President of the separate WC
- ✓ However, irrespective of the constitution mechanism of the WC, the Project Funds shall be transferred to the Account of the WC directly from the DWDU to maintain smooth functioning of the project and avoid delay in fund flow
- ✓ The WC will be elected/selected in the Gram Sabha
- ✓ The President, Secretary and any other functionary of the Committee will also be elected/selected in the Gram Sabha
- ✓ The WC must be provided with an independent office for its working; the office must have adequate furniture and telephone facility
- ✓ The Secretary of the Watershed Committee must be from the village, or appointed by the Gram Sabha
- ✓ The Secretary should not have any other full time job
- ✓ The Secretary of the WC will be paid an honorarium of Rs.2000 per month

#### 3.4.1. 1. Responsibilities of Watershed Committee:

- i. Evolve or improve the watershed development plan
- ii. Monitor and review the progress
- iii. Prepare the statement of accounts and get approved from Watershed Association
- iv. Formation of user groups/self helps groups

- v. Resolve differences/disputes between different user groups and self help groups
- vi. Make arrangements for collection of donations/ contributions

#### **3.4.1.2. Responsibilities of the Secretary, Watershed Committee:**

- Convening meetings of the Gram Sabha, Gram Panchyat, Watershed Committee for facilitating the decision making processes in the context of Watershed Development Project.
- Taking follow up action on all decisions.
- Maintaining all the records of project activities and proceedings of the meetings of Gram Panchayat, Watershed Committee (WC) and other institutions for Watershed Development Project.
- Ensuring payments and other financial transactions.
- Writing all the vouchers and necessary accouts books at village level

#### **3.4.2. Self Help Groups (SHGs):**

SHGs are homogeneous groups of men and/or women involved in saving and credit activities; they may engage in enterprise development initiatives as well. In the Watershed Development Programme, the objective of forming SHGs is to allocate some direct livelihood support to the land less and absolute poor.

- i. Wage employment and monitoring the works
- ii. Development of common property resources
- iii. Managing village corpus for meeting livelihood needs
- iv. Agriculture and allied activities
- v. Sustained Micro Enterprise with a strong NRM linkage

#### **3.4.3. User Groups (UGs):**

UGs consist of those who are likely to derive direct benefits from a particular watershed work or activity. Their main responsibilities include collection of user charges, supervision of works and taking care of the works after the project period.

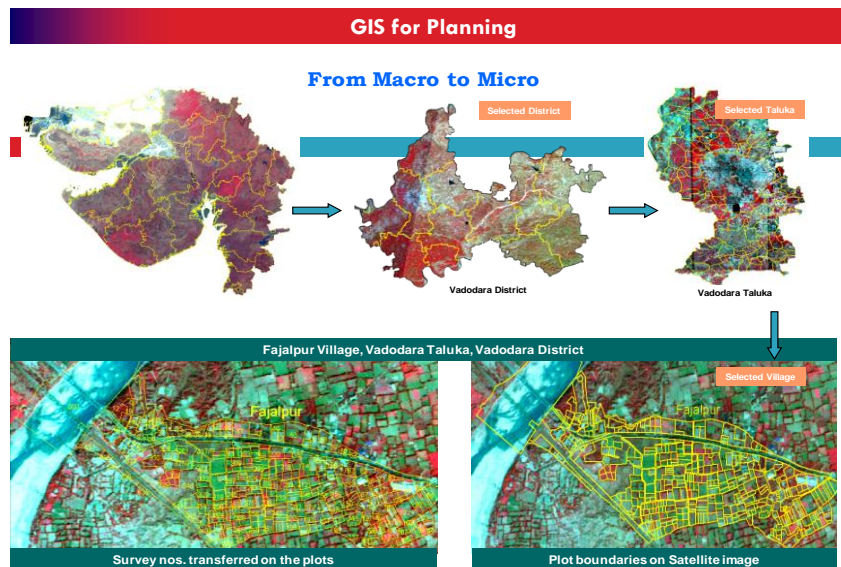
- i. Prepare plan for their specific area within micro watershed
- ii. Get it approved in the committee
- iii. Execute works
- iv. Arrange advance contribution
- v. Maintain structures
- vi. Implement water management plans for efficient cropping pattern
- vii. Continue further development of resources after the project period.

#### **3.4.4. Role of Panchayat Raj Institutions: Please refer Common Guidelines, 2008, GoI**

## 4. PLANNING PROCESS:

### 4.4. Planning at State Level:

The approach followed for planning involves: i) creation, development and management of geo-spatial data base depicting present conditions of land, water and vegetation with respect to watershed under different ownerships at village level, ii) compatible socio-economic aspects and their analysis, iii) historical perspective land-water treatment of the area. A simple watershed planning process through GIS is illustrated in the picture below:



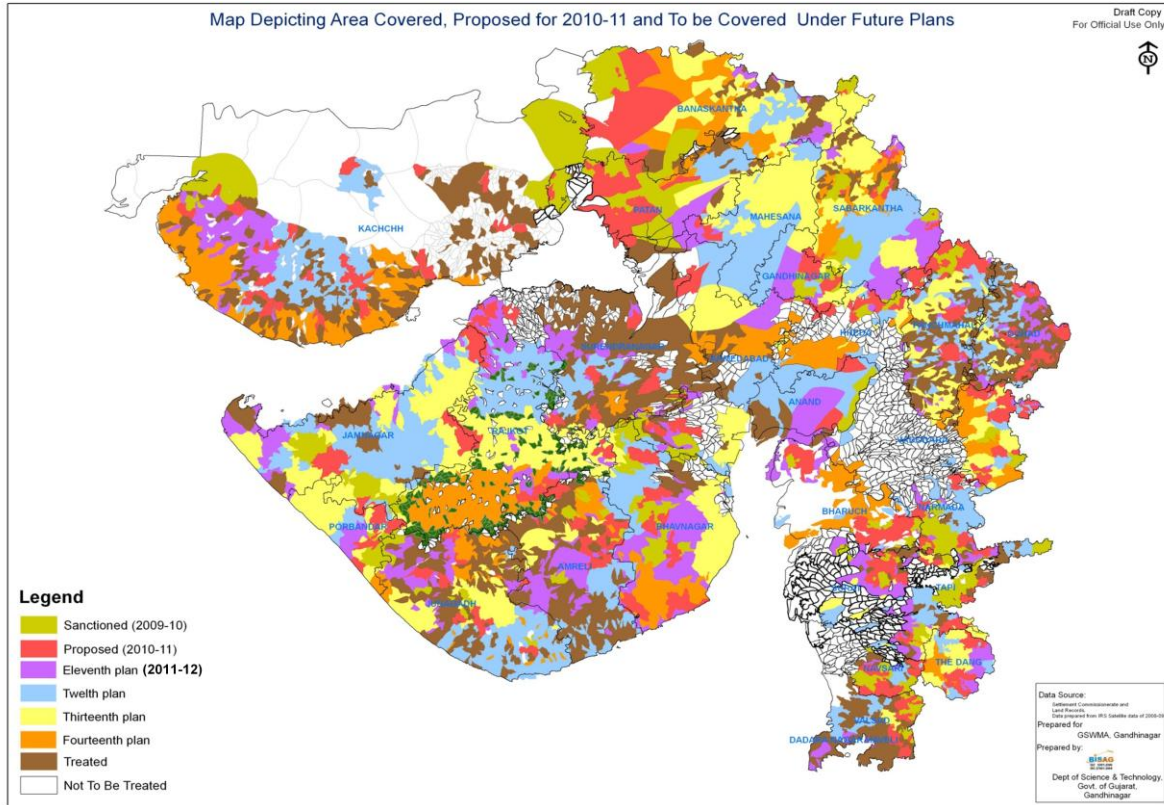
During the pre-IWMP programmes, project selection and developing a scientific action plan was a major concern. GIS has helped in solving this concern. The strategy is divided into two phases: 1) Prioritization of watersheds according to set criteria mentioned in the guideline, 2) Prepare the development plan (action plan).

While prioritizing the projects, different parameters (13 parameters as suggested by the DoLR- Annexure-1) are categorized into the natural resource base (including the historical data) of the area and the socio-economic aspects. Some of the important data sets and images include: Geo-morphology, Soil, Slope, Erosion, Aspects, Drainage, Contour, Geo-hydrology, concentration of BPL and SC/ST population, etc. The satellite image on the same parameters are collected in different sheets and then superimposed to get a composite picture of the priority areas.

This process is followed for all the watersheds, starting from the micro-level to the macro-level. The micro-watershed wise prioritization culminated in prioritizing the watersheds for the districts and the whole of the state. It has helped in the following ways:

- i. The projects could be equitably distributed among all the districts.
- ii. The most needy watershed areas could be identified

- iii. The Planning for convergence of IWMP with other developmental schemes of various Government Departments is prepared on the basis of the GIS based maps
- iv. The state was able to plan for the next 18 years; the GIS based plan for the 18 years is given in the map below:



#### 4.5. Planning at District Level:

GSWMA provides district wise GIS based priority maps (example map- Annexure-2) to the DWDUs for district planning. The prioritized maps helps them in identifying watersheds which are most vulnerable or/and villages which are socio-economically the most backward in the district. GSWMA further provides the State Perspective and Strategic Plan (SPSP) to the DWDUs; the SPSP shows the target for each district for a certain year. It is the responsibility of the DWDU to verify the prioritized maps on field and chose watersheds/villages as projects on a cluster approach. One cluster may include a number of watershed/villages totalling around 5000 hectares of land. This cluster is called a project. The DWDU has to select a number of such projects according to target given in the SPSP. These projects then have to be made into reports called Preliminary Project Reports (PPRs) in the format as supplied by the DoLR, MoRD and submitted to the GSWMA. These projects are then submitted and presented by GSWMA to the DoLR for approval. The summary of important steps for selecting projects for a particular year is:



- Choose the most vulnerable/neediest watersheds/villages from the GIS based prioritized maps prepared by BISAG and supplied by GSWMA. Less and less needy watersheds/villages shall be selected further down the years
- Verify (along the 13 parameters defined by the DoLR) and ensure that the condition of the watersheds/villages chosen are actually what they are shown in the maps to be
- Make clusters of watersheds/villages into projects of around 5000 hectares and prepare the Preliminary Project Reports
- If pre-IWMP projects come within the proposed cluster, the area already treated has to be excluded
- Besides, the following areas are to be excluded:
  - ✓ Assured irrigation (canal irrigation)
  - ✓ Built up area
  - ✓ Industrial area
  - ✓ Special Economic Zones
  - ✓ Mining area
  - ✓ Submergence under Irrigation dam projects
- The important approaches that must be adopted while selecting watersheds/villages are:
  - ✓ **Ridge to valley approach:** Ridge areas of a particular district, where forest areas are usually located and where most of the major drainage systems arise, have to be taken up under the projects in the first year. Second year onwards, projects have to be selected gradually down the slope/stream
  - ✓ **Contiguous approach:** In the first year of IWMP, projects are to be taken up beside the projects already taken up under pre-IWMP projects, if they come in the highest priority; second year onwards, projects are to be selected beside the already running/completed IWMP projects

#### **4.6. Planning at Project Level: DPR Preparation:**

The most crucial stage of planning comes at project level. It is a micro level planning that has to be done meticulously and accurately to maximise the chances of success of the project.

Once the PPR is approved and project area is sanctioned by the authority, the actual and elaborate planning starts. Project Implementation Agency has to be selected after the approval of the project. District Unit may identify potential Project Implementing Agencies (PIAs) in consultation with SLNA. PIA may be relevant line departments, autonomous organizations under State/ Central Governments, Government Institutes/ Research bodies, Intermediate Panchayats, Voluntary Organizations (VOs). Even DWDU itself can be PIA. Wherever project area includes more than 33% forest area, the Forest Department should be designated as PIA.

Since nothing can happen without manpower, the first responsibility comes in the form of the recruitment of a team. The Watershed team has to be recruited by the PIA with necessary facilitation from the district unit.

#### **4.6.1. Community Mobilisation**

The first logical stepping stone towards project execution should commence with community mobilisation. The community members have to be motivated to own the project if project aspires to be successful. The preliminary village meetings will be the first step in this direction followed by different kinds of PRA exercises, formation of village level institutions and carrying out relevant IEC activities.

#### **4.6.2. Institution Building**

Community participation and participatory planning is of utmost importance towards the implementation. One cannot call every time a Gramsabha to take everyday decisions and suggestions. Therefore a representative body should be elected by the villagers themselves in a Gramsabha which will undertake the everyday work of the project at village level and take decision on behalf of the community members. This body will be called Village Watershed Committee (VWC). The village watershed committee will be responsible for day to day functions of the project management at village level. There will be other institutions that need to be formed like the User Groups, Self Help Groups, etc. to carry out the watershed activities.

#### **4.6.3. DPR Preparation Process**

The overall responsibility for the preparation of a technically sound and high quality DPR lies with the Project Implementing Agency (PIA). The DPR has to be prepared by the WDT for integrated development of the watershed area with active participation of the Watershed Committee (WC). The technical inputs like resource maps and cadastral maps

can be found at local level and project specific GIS maps & indicative Action Plan generated by GSWMA will be made available from state level. The format for the DPR has been developed at state level and should be followed for the preparation of the same.

Detailed Project Report (DPR) requires baseline surveys for the assessment of existing situation, selection of sites and identification of beneficiaries. The data should be gender-disaggregated to make a gender sensitive planning that duly recognizes and addresses the priorities of women. There are three types of baseline surveys that need to be carried out:

- Household Survey
- Bio physical Survey
- Overall Village Survey

**For all the above surveys, formats developed by GSWMA have to be utilized by the PIA.**

**Comprehensive PRA exercise** is crucial for developing rapport with the community members, generating goodwill, collecting relevant information and validating the information gathered through other sources. Some of the necessary PRA exercises which may be undertaken include following:

- i. Historical Transect/Time Line
- ii. Resource Mapping
- iii. Social Mapping
- iv. Seasonal Diagram+ Daily Activity Schedule
- v. Venn Diagram/Chappati Diagram
- vi. Livelihood Analysis- Focus Group Discussions
- vii. Tree Matrix
- viii. Wealth Ranking
- ix. Transect walk

The information gathered through baseline surveys should be compiled and analysed. It should be complemented with the input generated through PRA activities. The conclusions and inferences made through this exercise will enable the WDT to propose the interventions. PRA will be followed by a Participatory Net Planning (PNP) at village level to prepare the physical-financial plans. PNP is all about the interventions proposed in the project area with technical viability and details, financial estimation and beneficiary identification. Net planning should not be bound by the budgetary constraints and must be based on the need assessment. The budgetary gaps may be bridged through convergence



with different schemes running in the area. The natural convergence scheme in Gujarat state will be MGNREGA where share of water conservation and harvesting activities outstrips all the other activities. The net planning has to be done in consultation with the community members so that indigenous knowledge is harnessed and ownership among the project area dwellers is imbibed from the inception itself. Various technical inputs like GPS handset, GIS based thematic maps consisting of various relevant layers and other such materials should be utilized for a proper and precise site selection, assessing the capacity and viability and recording the GPS coordinates. A complete beneficiary level database separately for private land and community land development should be prepared and provided with the Detail Project Report (DPR). It will facilitate spatial depiction of the action plan. The DPR must be documented in the format and the chapter scheme provided by GSWMA (chapter scheme: Annexure-3). The DPR should be summed up in a Logical Framework Approach (LFA).

#### **4.3.4. Convergence:**

IWMP gives utmost importance to convergence. This has been made mandatory by making convergence an integral part of every Detailed Project Report (DPR). Necessary circulars have been issued to the district levels regarding the same. While preparing the DPR, the project management team has to study the total fund requirement of the village or the project area. Then the gap between fund availability and fund requirement is found out. This gap is, thereafter filled up by different other schemes running in the same area. Some of the schemes with which majority of convergence is done are:

- i. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
- ii. Backward Region Grants Fund (BRGF)
- iii. Tribal Area Sub Plan (TASP)
- iv. SwarnaJayanti Gram Swarojgar Yojana (SGSY)
- v. National Horticulture Mission
- vi. Bamboo Mission
- vii. Drinking water security scheme by WASMO

## 5. IMPLEMENTATION AND MONITORING PROCEDURES:

The New Common Guidelines, 2008 divides the project period into three distinct phases:

- I. Preparatory Phase
- II. Works Phase
- III. Consolidation Phase

The Common Guidelines has given a time period of 4 to 7 years for completion of a project. GSWMA defines the period in which projects have to be completed by different districts (**within 4-6 years**) of Gujarat as below:

Sr. No.	District	Years to complete
1	<ul style="list-style-type: none"><li>• Projects containing more than 25% desert areas (earlier in DDP project areas)</li><li>• Projects in hilly areas where average slope is more than 25%</li><li>• projects containing more than 25% forest areas</li><li>• projects containing more than 25% tribal population</li><li>• projects containing more than 25% ravines</li></ul>	6 years
2	All other projects of more than 4000 hectare	5 years
3	All other projects of less than 4000 hectare	4 years

### 5.1. Preparatory Phase:

The New Common Guidelines have described in detail regarding the things to be carried out in different phases. GSWMA provides below a sequence of activities to be carried out in the preparatory phase, so that project management becomes unambiguous. (Please refer Common Guidelines, 2008 for details of the phases)



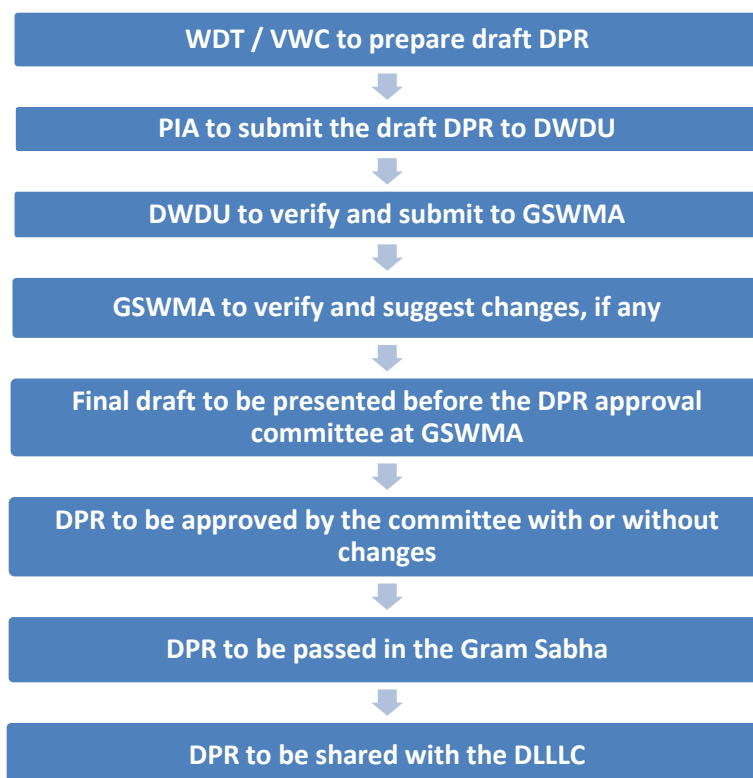
#### 5.1.1. Entry Point Activity (EPA):

The GSWMA has listed a number of activities (based on the Common Guidelines, 2008) that can be taken up under EPA. These are:

- Recharge / Repair of open wells
- Revival of natural water bodies with recharge activities
- Repair / development of artificial water bodies
- Drinking water facility
- Demonstration for Agricultural / Animal Husbandry Productivity Enhancement
- Fencing for protection from wild animals
- Wind energy development
- Rooftop Water Harvesting
- Sanitation facilities/Sewerage line
- Drainage line correction (To prevent flooding of *Gamtal*)
- Check / Protection wall
- Animal water trough (*Havada*)
- Use solar power for productive activities
- Causeway on connecting roads
- Improvised and energy efficient *smashan gruh* (Cemetery )
- Grassland/*Gauchar* Development

### 5.1.2. DPR Approval Procedure:

The authority to approve a DPR lies with the GSWMA; a high level Committee constituted by the Executive Committee of the GSWMA shall go through the DPR presented before it by the DWDUs. The DPRs will be approved by the committee with or without modifications to it; the modifications suggested by the committee have to be accommodated. Prior to the presentation of the DPR before the committee, the DWDU will verify the activities proposed by the PIA (WDT and VWC) on the field. The sequence of DPR approval process is explained in the diagram below.



### 5.1.3. Annual Action Plan:

DPR approval will be followed by preparation of a detailed Annual Action Plan (AAP) in the format supplied by the DoLR, GoI. While preparing the Annual Action Plan, the following points must be taken care of:

- ✓ Ridge to valley approach
- ✓ Activities have to be divided in the following manner:

Sr. No.	Time line	Phase/Activity
1	6-8 months	Preliminary phase- Base Line Survey, PRA, EPA, PNP, DPR & Annual Action Plan preparation
2	Up to end of the second year	Treatment of upper catchment area, i.e. ridge of the watershed- Contour Trenches, Gully Plugs, Nala Plugs, Earthen Bunds, Wasteland development, pasture development, Plantation, Farm bunding / terracing of farmers lying in the upper catchment
		Minor activities (maximum 10% of livelihood activities) for asset-less, Local Handicraft based on local resources
		Any other activity needing long gestation period
3	Up to the end of third year	Agricultural land development like farm bunding, fencing-live or otherwise, etc., Water harvesting measures like check dams, percolation tanks, farm ponds, etc., Promotion of efficient water use practices like Drip/Sprinkler irrigation, Alternate cropping systems, Vermi compost technique and organic farming practices
4	Up to the end of fourth year	Livelihood works based on agriculture, forestry, horticulture and animal husbandry or allied activities- crop demonstration, agro-forestry, etc
		Micro-enterprises based on agriculture, horticulture and animal husbandry or allied activities: Agro-processing, Dairy Development
5	Up to end of fifth/sixth year	Scaling up of successful enterprise activities; establishing bigger collective institutions
		Plan for post-project Management, Training the community regarding Post-Project Management
		Documentation of various successful activities
		Project Completion Report
		Handing over the project to the Gram Sabha

**\* Note: Flexibility in time line of activities will be allowed if appropriately justified in a logical order**

## 5.2. Works Phase:

After approval of the DPR and the Annual Action Plan, the Village Watershed Committee with technical guidance from the Watershed Development Team (WDT), must start the watershed development works immediately within 15 days of receiving the approval letter. The concerned WDT member shall prepare the design/estimates of the activities and seek Technical Sanction (TS) from the appropriate authority as below:

<b>Sr. No.</b>	<b>Technical Sanction Authority</b>	<b>Limit of sanction</b>
1	WDT- Engineer	Up to Rs.1,00,000
2	MDT- Engineer	Above Rs.1,00,000 up to Rs.3,00,000
3	Technical Expert	Above Rs.3,00,000 up to Rs.4,00,000
4	Engineer from any other Government department doing similar work	Above Rs.4,00,000

In case the Technical Expert is not a qualified Engineer (above Bachelor's degree), TS can be taken from a competent Engineer from any other Government department doing similar work.

The Schedule of Rates (SoR) of the following departments is to be followed for the estimates:

<b>Sr. No.</b>	<b>Type of work</b>	<b>SoR of the department</b>
1	Forestry and related works	Forest Department
2	Civil engineering structures	Irrigation Department
3	Buildings	R&B Department

In case of agriculture and allied activities like crop demonstration, horticulture, fodder development, technical sanctions should be taken from agriculture universities, KVKs, officials from department of Agriculture, Horticulture or other such concerned departments. Plantation works will be technically sanctioned by forest officials above the rank of ACF.

After receiving Technical Sanction, the WDT shall seek Administrative Sanction (AS) from the DWDU. The Competent Authority at DWDU (as given below) level shall issue the AS after satisfying himself/herself that the work proposed is in accordance with the DPR and the Annual Action Plan and appropriate mechanism has been followed for getting the technical sanction. Once AS is issued by the DWDU, the VWC and the WDT shall start the work. Where TS is not required, only AS has to be sought and work has to be executed thereafter.

<b>Sr. No.</b>	<b>Administrative Sanction Authority</b>	<b>Limit of sanction</b>
1	MDT- Accountant	Up to 1,00,000
2	Technical Expert	Above 1,00,000 up to 2,00,000
3	Project Manager	Above 2,00,000 up to 5,00,000
4	Chairperson, DWDU	Above 5,00,000

After receiving the AS, the WC will execute the works under the technical guidance of the WDT. The WC will appoint a number of sub-committees for procurement, supervision of expenditure of the materials as required, quality control, and conflict resolution, etc.

### 5.2.1. Livelihood Activities:

GSWMA gives emphasis on promoting sustainable livelihoods for the rural poor based on agriculture, forestry and other allied activities. The works under this segment are categorized below:

Sr. No.	Category of livelihood activity	Activity (Indicative list)
1	Agriculture and allied activities	Crop demonstration, Providing agricultural implements, Agriculture Inputs Supply, Nursery raising, Promoting Micro-Irrigation Systems like drip and Sprinkler Irrigation, Vermi-composting technique, Organic farming technique, Non-Pest Management, Medicinal & Aromatic Plantation, Horticulture, Olericulture (vegetable farming), Gum producing, etc.
2	Animal Husbandry, Dairy Development and related works	Dairy cooperative promotion, Artificial insemination, Animal Health camps, Pasture development, Sericulture, Apiculture (Bee keeping), Back-yard poultry, Small ruminants, Fisheries, etc.
3	Agro-processing and related micro-enterprises	Grading and packaging of agricultural produces, Pulp making, Oil extraction mill, Jam-jelly making, Microenterprises based on Minor Forest Produce (MFP), Rice mill, Package Food Products, Value added products from milk, etc.
4	Non-conventional Energy Sources	Bio gas plant, Wind energy production, Solar energy promotion, Bio-fuel plantation, energy conservation measures, etc.
5	Establishing linkages to sustain the resources thus developed	Credit linkages, Raw material supply channel, Market linkages, Linkages with Future Markets, etc.
6	Local traditional handicraft	<i>Kutchi Bandhini, Bamboo based products, Pottery, etc.</i>
7	Innovative initiative (to be justified)	<i>Any idea based on local realities</i>
8	Other minor non-farm activities	<i>Not more than 10% of the total livelihood funds(23%), i.e. 2.3% of total project funds</i>

#### 5.2.1.1. Modus operandi of carrying out Livelihood Activities:

- The livelihood activities would be of three categories: (i) activities that are especially targeted towards asset-less families including land less, small and marginal farmers

based on agriculture, animal husbandry and related works (ii) micro-enterprises based on the same, and (iii) improvement in production systems

- These activities should benefit the asset less families in a big way; their existing income levels should be improved to a significant level by the time the project gets over.
- All activities except improvement in production systems have to be targeted at asset less households. However, activities related to improvement in production systems can include both asset less and medium & large farmers
- It has to be ensured that at least 10% of the total project funds (however, allocation of more funds for the purpose is encouraged) are utilized for the benefit of the asset-less, especially, land-less and small & marginal farmers. The annexure regarding the same in the DPR has to be properly maintained and monitored regularly.
- The PIA has to prepare a Livelihood Action Plan before applying for the second instalment of project funds. This Livelihood Action Plan may be prepared with the help of a competent agency having experience in livelihood promotion. This Plan, after approval of the GSWMA has to be incorporated in the DPR.
- For carrying out activities related to improvement in production systems, individuals and/or Groups can be engaged. In this case, contribution from the beneficiaries is a must; the contribution amount will be according to the Common Guidelines, 2008
- For carrying out activities other than improvement in production systems, SHGs/UGs have to be formed
- All the asset less families have to be covered under SHGs consisting 10-20 members; not more than one member from the same family can be part of the SHG
- In case of SHGs, Revolving Funds (depending on the strength of the SHG) will be allocated in instalments with a clear cut agenda. The concerned SHG may carry out the activity as a whole unit or may partly engage some of the members in the different activities
- The WC has to sign an MoU with the SHGs regarding the fund allocation and the activities to be carried out by the SHGs, mentioning the roles and responsibilities as well as rules and regulations to adhere to
- The competence/strength of the SHGs should be assessed on the following parameters:
  - ✓ Frequency of meetings



- ✓ Books and Records keeping
  - ✓ Savings
  - ✓ Internal Lending
  - ✓ Repayment Rate
- An SHG has to conduct regular meetings, keep records diligently, save regularly at least for six months, start internal lending activities and the repayment rate has to be more than 90% before it is transferred the first Revolving Fund
  - The SHGs will apply to the WC showing the needs of the group. The WC will release Funds to the SHGs on priority/need basis; All households have to be categorized and the most needy families should be identified to be given the funds first, followed by lesser needy ones
  - There will be no cash transaction in the same; funds will be transferred directly to the individual / Group's Bank Account
  - When the project is over, the SHGs have to return the Revolving Fund to the WC; the WC will keep this fund in the Watershed Development Fund. The SHGs can apply to the WC for these funds later on for further requirements
  - Capacity Building of the SHGs have to be carried out by the PIA

#### **5.2.2. Payments:**

All payments have to be made by cheques by the Watershed Committee. The cheques shall be signed by three functionaries: the President of the Watershed Committee, one member of the WDT and the nodal officer of the PIA.

#### **5.2.3. Watershed Development Fund (WDF):**

People's contribution to the project is a very important factor of project sustainability. Their contribution in different forms leads to their taking ownership of the project in general and of the infrastructures created therein in specific. Apart from creating ownership, the funds thus accumulated can be utilized in the post-project period for repair maintenance and livelihood works. The contribution from the beneficiaries has to be directly deposited in a separate account of the Watershed Committee, named as Watershed Development Fund (WDF). Though initially, people may be reluctant to contribute, the WDT should educate them about the importance of their contribution. The contribution amount would be as follows:

<b>Sr. No.</b>	<b>Type of work</b>	<b>Beneficiary category</b>	<b>Contribution</b>
<b>1</b>	NRM works (land development, water harvesting, etc.) on private land; NRM works on public land/drainage line directly benefiting private individuals	General	10%
		SC/ST/BPL/Asset-less/ Small & Marginal Farmers of General category	5%
<b>2</b>	Improvement in production systems on private land or for individuals/HHs	General	40%
		SC/ST/BPL/Asset-less/ Small & Marginal Farmers of General category	20%

The user charges from beneficiaries as decided by the Watershed committee shall also go to the WDF. The WDF should be enriched by raising funds from different other sources like rich households in the village, developmental organizations working in the area, other schemes running in the area, etc.

These contributions would be acceptable either in cash at the time of execution of works or voluntary labour. A sum equivalent to the monetary value of the voluntary labour would be transferred from the watershed project account to the WDF bank account that will be distinct from the Watershed Committee (WC) bank account. User charges, sales proceeds and disposal amounts of intermediate usufruct rights shall also be deposited in the WDF bank account. Income earned from assets created under the project on common property resources shall also be credited to WDF.

The Secretary, Watershed Committee (WC) shall maintain a completely separate account of the income and expenditure of the WDF. Rules for operation of the fund should be prepared by the Watershed Committee (WC) and ratified by the Gram Sabha. The WDF bank account should be operated by the President of the Gram Panchayat and any member from the SHG nominated by the Gram Sabha.

#### 5.2.4. User Charges:

The Gram Sabha through the Watershed Committee (WC) shall put in place mechanism for collecting user charges. No charge will be taken from landless, destitute or disabled / widow headed households for work done on private or public land. The user charges collected shall be credited to the WDF for maintenance of assets created during the project.

#### 5.3. Consolidation phase:

In the consolidation phase, the PIA would initiate works which lead to furtherance of the benefits and to sustainability of impacts. Please refer the Common Guidelines, 2008 for detailed explanation.

However, GSWMA gives emphasis to the following activities and recommends strongly:

- Promoting **judicious use of water** by scaling up of Micro Irrigation Systems; encouraging more and more farmers to use such techniques
- Scaling up of successful interventions in the project
- Scaling up forward and backward **linkages** established during the works phase, especially, credit and marketing linkages
- Scaling up of people's collectives, like making the WCs/SHGs/UGs into **Federations** at project level or district level
- Documentation of successful interventions and farmer-cases focusing on the learning there-from
- Prepare the **Project Completion Report (PCR); the PIA shall submit the PCR to the DWDU in the format provided for the purpose**
- Prepare a **withdrawal strategy** in such a way that the project is smoothly handed over to the Gram Sabha and the Gram Sabha delegates the responsibilities to the Watershed Committee for future management
- Prepare a strategy for **Post-Project Management**, like
  - ✓ distributing roles and responsibilities to different stakeholders including village level institutions
  - ✓ delegating authority to various individuals/institutions in relation to maintenance and up keep of the physical structures created during the works phase

- ✓ Training of village level institutions regarding how to carry forward the benefits, how to carry out responsibilities thus given and how to use the Watershed development fund (WDF)
- Prepare a **Natural Resource Management (especially, water) Plan** for the village/project
- Preparation of a detailed strategy for **management future cropping pattern**, e.g, promoting less water intensive crops, striking a balance between food crops and cash crops, avoiding mono-cropping

### 5.3.1. Use of WDF:

- 5.3.1.1. **Procedure:** The Village Watershed Committee would every year in the month of April invite applications from the beneficiaries for availing fund from the Watershed Development Fund (WDF) for repair maintenance or further development purpose. The concerned User Groups/ SHGs/ Individuals have to apply in writing to the Village Watershed Committee mentioning the need for repair maintenance and the cost estimates. The VWC will then verify the facts (estimates, etc.) and sanction the amount it deems feasible. The VWC would consider all applications on merit basis and primacy would be given to the SC/ST, BPL/land less, women, marginal and small farmers. The VWC should devise a formula to allocate available funds among different categories of beneficiaries.
- The VWC will first try to get the funds from Mahatma Gandhi National Rural Employment Scheme (MGNREGS) or any other running scheme in the village; if it is not feasible/possible, the WDF funds will be extended as a soft loan at not more than 5% interest rate, or as the Village Watershed Committee deems feasible
  - The amount of loan that can be extended will be maximum up to 75% of the estimated amount for the purpose; the remaining amount must come from the beneficiaries themselves
  - Works on private land will not be eligible for such loan; the individual himself/herself should carry out the work from own funds
- 5.3.1.2. **Purpose:** Funds will be sanctioned mainly for the following purposes and with the following specifications:

S. no	Beneficiary	Purpose	% of WDF allotted	Interest rate
1	User Groups	(i) Minor Repair and maintenance of constructed structures up to 10000 Rs. (ii) For the activities which encourages judicious use of water resources*	50%	5% per annum
2	SHGs	Further livelihood activities and micro-enterprises	25%	4% per annum
3	Reserve	Reserve	25%	

\* Resulting in enhanced production and productivity like Organic Farming, Micro Irrigation Systems (Drip, Sprinkler etc.), better seed varieties etc.

5.3.1.3. **Replenishment:** The beneficiaries availing funds from the WDF have to repay the loan in mutually agreeable time period at the above interest rates. The VWC must devise an easy repay mechanism for different categories of beneficiaries in consultation with the beneficiaries. Principal as well as the interest from these loans must go to back to the WDF.

#### 5.4. MONITORING:

Monitoring is a continuous process and will start immediately with project implementation and will continue till the project is handed over to the Gram Sabha. The WC has to appoint a separate Monitoring Committee for monitoring works in progress. The sub-committee will have representation of different class/caste groups and women in it. Apart from regular monitoring, the sub-committee will also look after social audit and process audit for the WC. While work is in progress, regular monitoring has to be carried out by the following functionaries:

Sr. No.	Institution / level	Functionaries	Report to
1	Village level	Monitoring Committee of the VWC	President, VWC
2	PIA	WDT	Nodal Officer, PIA
3	DWDU	MDT, Technical Expert	Project Manager, DWDU
4	GSWMA	Professional Expert	CEO, GSWMA

The WC shall meet at least once in a month to discuss the progress, issues relating to quality and conflict resolution.

In addition, the GSWMA will appoint an independent third party **Technical Monitoring Team** at state level which will carry out **concurrent monitoring of the works** as the works are in progress from time to time.

Use of GIS has been planned for the purpose of monitoring and evaluation of IWMP projects. Customized mobile based software is being developed in collaboration with BISAG which will enable updating maps through mobile text messages received from WDTs & incorporating GPS coordination. Each WDT member of PIA will be allotted a unique code for their respective districts. Timely updating of the data regarding the project implementation on GIS maps will help in generating regular summarized and specialized reports for the decision makers. Data will be translated at State level onto GIS maps through which monitoring before, during & post implementation will become possible.

The centralized Management Information System (MIS) will also help in regular monitoring the physical-financial progress of the projects. The integrated Mobile based MIS will send regular real time data/information to concerned monitoring officers at different levels.

## **6. CAPACITY BUILDING:**

The New Watershed Guideline lays great importance on capacity building support in achieving the desired goal of watershed programme. It has been explicitly stated in the Para's 9(VIII), 11(V) and 80 to 84 of the Guidelines. (Please refer the same)

Following are the key elements of capacity building strategy:

- Dedicated and decentralised institutional support and delivery mechanism
- Annual Action Plan for Capacity Building
- Pool of resource persons
- Well prepared training modules and reading materials
- Mechanism for effective monitoring and follow-up.

GSWMA follows a consortium approach to carryout capacity building of various stakeholders under IWMP. There are 34 institutions belonging to various specializations in the consortium (Annexure-4). A detailed plan with cost norms has been prepared in a participatory way. This has been formalized in a Capacity Building Manual and has been

circulated to all the districts. All the DWDUs have to follow the Capacity Building Manual for carrying out the capacity building programmes.

The phase wise training needs for different stakeholders have been identified in the following table:

Sr. No.	Phase	Stakeholder/Trainee	Training Need
1	Preparatory Phase	MDT/WDT	Watershed Concept, Institution Building, PRA/PNP techniques, DPR & AAP preparation, Micro-Finance and SHG concept, Training of Trainers (ToT), Agriculture Need Assessment
		Watershed Committee (WC)	Watershed Concept, Leadership, Records & Accounts Keeping
		Self Help Groups (SHGs)	Watershed concept, Micro Finance and SHG concept, Records & Accounts keeping
2	Works Phase	MDT/WDT	SMC and Engineering works, Livelihoods (theme based, e.g. agriculture, horticulture, Post-Harvest Technology, animal husbandry, dairy development, etc.), Micro- Enterprise Development, Demonstration methods
		Watershed Committee (WC) and User Groups (UGs)	SMC and Engineering works, Livelihoods (theme based, e.g. agriculture, horticulture, Post-Harvest Technology, animal husbandry, dairy development, etc.), Micro- Enterprise Development
		Self Help Groups (SHGs)	Micro Enterprise Development (theme based)
3	Consolidation Phase	MDT/WDT	ToT on Post-Project Management, Documentation
		Watershed Committee (WC) and User Groups (UGs)	Post-Project Management, e.g. water management, crop management, etc
		Self Help Groups (SHGs)	Post-Project Management, e.g. managing linkages

### 6.1. Process of Capacity Building:

A structured and well organized capacity building programme must follow the following process (as defined in the Capacity building manual of GSWMA):

- Identifying stakeholders for CB

- Need assessment
- Deciding the agency (in-house / outsource)
- Designing a training module
  - Selection of components for training
  - Choosing resource persons
- Conducting the programme
- Feedback
- Follow up

## 7. FINANCIAL MANAGEMENT AND ACCOUNTING PROCEDURES:

### 7.1. Budgetary provision in the Common Guidelines, 2008:

Sr. No.	Budget component	% of the Budget
1	Administrative costs	10
2	Monitoring	1
3	Evaluation	1
4	Preparatory phase, including: -entry point activities, -institution and capacity building, -Detailed Project Report (DPR).	4 5 1
5	Implementation (Watershed Works) Phase:	
	-Watershed development works,	50
	-Livelihood activities for the asset less persons,	10
	-Production system and micro enterprises.	13
6	Consolidation phase	5
	<b>Total</b>	<b>100</b>

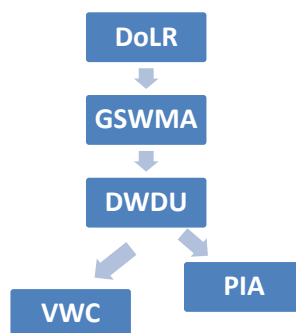
Note: \* Any saving in any of the component can be used for Watershed Activities only

\* Salary of the WDT and WC-Secretary shall be paid from the Administrative Costs only

### 7.2. Fund Flow:

A sound and transparent financial and accounting system is backbone to make the project up and going. The system needs to be put in place before the fund starts flowing in.

The fund flow will occur in the way shown in the diagram below:





Project fund relating to watershed works, Livelihood and Production system and Microenterprises of IWMP will flow from DoLR to GSWMA to DWDU to Village Watershed Committee. Institutional fund for Administrative, Capacity Building, EPA, DPR, and Monitoring will flow from DoLR to GSWMA to DWDU to PIA. Funds under different heads (excluding costs for works phase and consolidation phase) will be allocated among different levels as per norms given in table below:

Sr. No.	Budget Component	% of total budget	% at GSWMA	% at DWDU	% at PIA	% at village
1	Administrative Cost	10	0.5	0.5	4.5	4.5
2	Monitoring & Evaluation	2	0.75	1.25	-	-
3	Preparatory phase cost:					
	i. EPA	1	-	-	4	-
	ii. Institution & CB	5	2	2	1	-
	iii. DPR	1	0.25	0.25	0.5	-
	Total	22	3.5	4	10	4.5

### 7.3. Release of funds:

On approval of projects by the DoLR, Government of India, GSWMA will issue orders to the respective DWDUs. The DWDU then will sign MoU with the PIA as approved by the GSWMA. Thereafter, the DWDU will release project funds to the DWDU. Simultaneously, GSWMA will also release institutional Funds to the DWDUs from time to time as it receives the same from the DoLR. The DWDU will then release part of the Administrative Funds to the PIA to start work at project level.

Subsequent fund flows from one to the other level will depend upon work progress and other requirements. GSWMA will time to time issue milestones with dates; the DWDUs have to fulfil these norms. Funds for different phases will be released to the DWDU and PIAs when they achieve the milestones in time. **GSWMA may also issue separate guidelines/criteria for release of funds.** Every year by end of January, the PIA has to submit the Annual Action Plan for the next financial year according to the DPR. ***If at any stage, the PIA realizes a need for minor adjustments/modifications in the DPR, it may propose the modification with sufficient justifications to the DPR Approval Committee of the GSWMA. The Committee after close verification of the need for such a change, will/will not approve the proposed changes.***

#### **7.4. Procurement procedures at DWDU and PIA level:**

Procedures laid down by the Government of Gujarat should be followed by DWDU and PIAs for procuring material and services for carrying our activities.

#### **7.5. Completion Certificate:**

The Nodal Officer of the PIA has to ensure that the works are completed in time according to the Annual Action Plan. The Nodal Officer shall ensure that Completion Certificate is acquired from the same authority who had issued the Technical Sanction.

#### **7.6. Financial Limits at DWDU Level:**

Once proposal are approved in file by competent authority and relevant sanction orders have been issued, cheques signing powers will be exercised in following manner:

- a. Cheque up to Rs 2.5 Lacs will be jointly signed by Project Manager and Technical Expert/MDT (Account).
- b. Cheques more than 2.5 Lacs will be jointly signed by Chairperson DWDU and Project Manager.

#### **7.7. Foreclosure:**

As per the Common Guidelines, 2008, a project can be foreclosed at any stage of the project (refer para 78). The process for the same in Gujarat will be as follows: the PIA will apply to the DWDU with all evidences to why the project needs to be foreclosed. The DWDU, after satisfying itself that the project is no longer feasible, will apply to the GSWMA to foreclose the project. The GSWMA will appoint a team to visit the project village(s) and verify the facts. If it is satisfied with the facts stated in the application, it may foreclose the project partly (in some villages) or fully. Thereafter, GSWMA will recommend the DoLR to wind up the project, partly or fully.

The DWDU or the GSWMA can start proceedings for foreclosure of a project suo-moto too. The reasons for the same have been defined in the Common Guidelines, 2008. There can be other unforeseen reasons too for the suo-moto action.

#### **7.8. Accounting procedures at DWDU and PIA level:**

The standard Accounts procedure established by the government of Gujarat must be followed by the DWDU and PIA. They must maintain a number of registers as mentioned in Annexure-5. The DWDU must open two Accounts: (i) Institutional Funds Account, (ii) Project Funds Account. The PIA must open a Project Administrative Fund Account.

### **7.9. Fund management at WC level:**

(i) The Watershed Committee, after its registration under Society Registration Act, 1860, will open two separate Accounts, (i) Project Funds Account, (ii) Watershed Development Fund (WDF) Account. They have to maintain the registers mentioned in annexure-5.

(ii) At the village level, Annual Action Plan prepared on the basis of DPR will be resolved in Gram Sabha and approved in DLCCC and then will be functional and work will start there-after.

(iii) The Watershed Committee will constitute an Executive Committee consisting of following six members: (a) Nodal Officer, PIA, (b) President, WC, (c) One WDT member, (d) Secretary, WC, (e) One woman member, WC and (f) One member from SC/ST community. The Executive Committee will carry out all the day to day works of the Watershed Committee.

(iv) The Executive Committee shall inform the Watershed Committee every month regarding the works done and the expenses thereof.

(v) Executive committee of the WC will resolve for purchase of materials and invite quotations accordingly and will approve the lowest bid with permissible quality standards. Purchase of materials worth up to Rs 40,000 has to be made through quotation. Above Rs 40,000 worth purchases have to be made from approved government agencies to the extent possible. Crossed cheques will be released in favour of the concerned party or labourers engaged under watershed activities jointly signed by three functionaries: the president of the Watershed Committee, one member of WDT and nodal officer of PIA.

(vi) Secretary of the Watershed Committee will write all the vouchers and necessary Books of Accounts and other registers at village level.

(vii) All the muster rolls will be issued by the concerned DWDU with signature, issuing data and stamp on them. Similarly, the WC will maintain a Register for the receipt of muster rolls with date.

(viii) All the relevant documents, records, vouchers, account books, DPR and Annual Action Plan should be kept at Watershed Committee office for scrutiny, verification and audit matters.

(ix) The Watershed Committee will present regarding the funds received, list of works performed, expenses incurred, etc. before the Gram Sabha at least two times in a financial year.

#### **7.9.1. Procedure for Accounts and Payments at WC level:**

(i) The Secretary of the WC, on completion of the works at different stages, would prepare the vouchers for the works which are done, on monthly basis/otherwise, and will submit them to the Executive Committee along with cheque requisition. The form for cheque requisition is standardized and is at **Annexure-6**.

(ii) The Executive Committee will give a certificate on muster rolls that “payment due is commensurate to the works done”. The activities done through labour, the muster roll in Form no.1 **(Annexure-7)** will be maintained, while for any purchase, the payment will be done on Form no.2 **(Annexure-8)**.

(iii) Nodal Officer, with the help of WDT, will scrutinize the works, verify the measurements on the spot and will check the entries of the same in the Measurement Book. After scrutiny, the Nodal Officer will submit the vouchers for payment with a report and annotation as “checked and found in order”. The Nodal Officer after scrutinizing the vouchers would prepare an abstract statement of vouchers and purchases showing the amount of work, payable amount and would record a certificate that “scrutinized and found commensurate with the work done”.

(iv) Thereafter, the authorized signatories would issue a cheque for the vouchers which are admitted. The vouchers which are not admitted would be returned with recording of reasons of non acceptance to the Executive Committee.

(v) The disbursement of each payment would be done by the Executive Committee of the WC for the same purpose.

(vi) The Executive Committee would maintain a cash book and all the transactions of expenditure and credits would be written in the cash book by the Secretary, WC. The custody of cash book and vouchers will be with the secretary, WC.

(vii) The Executive Committee would prepare a statement of expenditure and income in Form-3 and along with the bank statement; it would be submitted to Nodal

Officer, PIA. This statement of previous month may be submitted along with cheque requisition every month.

(viii) The measurement of each work would be recorded in Measurement Book by President, WC and the concerned WDT member jointly, while the Nodal Officer would check the quality of work. Physical checking of the work will also be done by GSWMA/DWDU staff of the rank of not less than the MDT.

(ix) Pre-audit of vouchers of purchases and payments will be done by authorized auditors or Procedures of the Line Department.

(x) The WC accounts will be audited by specially contracted Chartered Accountant by GSWMA. Audit of accounts and records would be done as follows:

- a. Project Manager or his representative would do it whenever necessary.
- b. GSWMA will appoint a Chartered Accountant (CA) and fix his audit fees for the purpose of audit of the committee's accounts. The Committee accounts and records would be audited on yearly basis by the Auditors.

(xi) All the vouchers will be prepared in a light blue colour paper which makes these vouchers identifiable among so many other vouchers.

(xii) The monitoring will be arranged from time to time for checking and ensuring quality of physical works as per the existing rules by the GSWMA.

## **7.10. Auditing**

Statutory audit will be carried out by the Chartered Accountancy Firms appointed by GSWMA. If PIA happens to be Line Department, the procedure of the pre-audit will be same as that of the Department. In case, PIA is DWDU or other than Line Department, the procedure of pre-auditing will be carried out by the auditors approved by GSWMA or Commissionerate of Rural Development.

## **7.11. Social Audit and Process Audit:**

Along with the economic objectives, social objectives are equally important. Equitable distribution of project funds and benefits is of utmost importance. The Watershed Committee will facilitate the Social Audit and Process Audit in the Gram Sabha. Thus, apart from the regular Financial Audit, GSWMA will engage some agencies/

institutions/ organizations in building up the capacities of the village community in conducting Social Audits and Process Audits to verify whether the social objectives of the project are being fulfilled or not.

## **8. EVALUATION AND IMPACT ASSESSMENT**

Evaluation of the watershed development projects holds significant importance as it provides feedback on a project that has been implemented with a lot of inputs over a period of time. Findings from the evaluation of these projects will help in improving the watershed development programmes in future.

### **8.1. Types of Evaluation:**

There will be two types of evaluation- a Mid Term Evaluation and a Final Evaluation. The Mid Term Evaluation will be aimed at finding out whether the Mid Term Objectives are achieved in a project as defined by the project Log Frame. It will be conducted after 33% of the works phase fund is spent. It will provide clues to observe whether the said project is going in the right direction or not, and whether any mid-term correction is needed. The Final Evaluation will aim at finding out whether the project resulted in achieving its stated medium term objectives.

### **8.2. Evaluating Agency:**

The evaluations will be conducted by a panel competent agencies/institutions chosen by the GSWMA through due procedure. The GSWMA will enter into formal MoUs with the evaluating agencies. The evaluating agency can not belong to the same area of which it will be evaluating.

### **8.3. Evaluation Methods:**

Observations on the appropriateness and relevance of the water harvesting structures and the present condition of the structures should be documented. Environmental and social impacts resulting from watershed development activities should be studied and documented. The evaluators can also find out initiatives and mechanisms that have been evolved locally with respect to maintenance or continuing watershed development and also the conflicts arising thereof along with conflict resolution methods that have proven to be successful. The evaluator should interact with SHG members to understand whether the livelihood interventions had been effective to increase income and develop market linkages. Such findings can contribute significantly to future watershed development programmes.

The methods will include a mix of quantitative analysis, participatory methods and physical verification. The three main components of the evaluation would be: Procedural appropriateness, physical-financial appropriateness, Impact Assessment and Social Audit. Impact Assessment would be done on a pre and post watershed situational analysis. **The data from the Base Line Survey conducted at the preliminary phase of the watershed project will be used for determining pre-project situation.** Suitable formats and tools of data collection will be designed in a participatory way for determining post-project situation. For Impact Assessment, the indicators/parameters are:

- Status of ground water table
- Quality and quantity of drinking water
- Increase in irrigation potential
- Change in cropping/ land use pattern
- Area under agricultural crop (single/double/multiple)
- Net increase in crop production / productivity
- Increase in livelihood opportunities
- Availability of fodder and fuel
- Increase in milk production
- Long and short term employment generation
- Income of the villagers- farmers/land-less labourers

#### **8.3.1. Participatory Methods:**

Various participatory and monitoring techniques should be employed to gather data directly from the stakeholders. Such data will be useful to verify data from Gram Panchayat and Watershed Committee records and will be useful for qualitative evaluations.

- **Focus Group Discussion:** Focus Group Discussions with various groups consisting of different economic classes, castes, SC/ST groups, women, landless, small and marginal farmers and medium or large farmers groups. Discussions should focus on the effectiveness of various activities taken up under the watershed development projects such as capacity building, construction of water harvesting structures, vegetative measures, livelihood development through SHGs, community participation, functioning of Gram Panchayat and Watershed Committee, inclusiveness (women and vulnerable sections of society), problems and solutions for soil and moisture conservation.

- **Transect walk:** Transect walk across the village will help in verifying the status of natural resources, agriculture and also socio-economic development to some extent. During the transect walk in the main village residential area one should observe the village societal structure, housing pattern and structure, amenities available, unused structures and awareness regarding sanitation. On the periphery of the village, availability of natural resources that are in use, over exploited and potential resources lying unexplored can be studied. Cropping pattern, horticulture and farm forestry species, the extent of modernization in agriculture and connectivity to market place should be observed.

#### 8.4. Evaluation Criteria:

<b>Evaluation Criteria</b>	<b>Evaluation Questions</b>
<b>Relevance</b>	<ol style="list-style-type: none"> <li>1. Did the overall goal of reducing poverty in rural areas through soil and moisture conservation and livelihood enhancement activities match development policies and objectives?</li> <li>2. Did the overall goal match the needs of the project area?</li> </ol>
<b>Efficiency</b>	<ol style="list-style-type: none"> <li>1. What outputs were achieved and whether they were according to the plan?</li> <li>2. Was the implementation schedule as planned?</li> <li>3. Was the project cost as planned?</li> </ol>
<b>Effectiveness</b>	<ol style="list-style-type: none"> <li>1. Did the outputs help achieve the goal?</li> <li>2. Was the project purpose of livelihood enhancement and soil and moisture conservation achieved?</li> <li>3. Comparing the inputs to the extent of goals achieved, can project implementation be considered to be effective?</li> </ol>
<b>Impact</b>	<ol style="list-style-type: none"> <li>1. Did the achievement of purpose (Institution building, SMC and livelihood enhancement) contribute to the overall goal of reducing poverty?</li> <li>2. What were the other positive and negative impacts? (environment, policy, technology, socio-economic)</li> </ol>
<b>Sustainability</b>	<ol style="list-style-type: none"> <li>1. Are the WC, UG and SHG stable enough to function for a long time?</li> <li>2. Are there enough skilled human resources for operation and maintenance?</li> <li>3. Are the organization/institutional arrangements in place for proper operation and maintenance of the outputs?</li> <li>4. Are the outputs in good condition and in use? Are village institutions maintaining them?</li> <li>5. Is the usufruct sharing mechanism and conflict resolution mechanism functional?</li> </ol>



## **8.5. IMPACT ASSESSMENT:**

GSWMA will undertake Impact Assessment studies from time to time on a random basis to ascertain the long term impacts of the projects on environment, income and livelihoods (in line with the indicators stated above) of the people living in the project areas. These studies will be taken up at least 3 years after the project is reported to be complete. It will show true sustainability of benefits and the trend for long term benefits.

GSWMA will engage reputed Research Institutions in the field of Natural Resource Management in Gujarat or India.

Further, GIS will be used to map the environmental as well as social impact resulting from implementation of IWMP. Natural parameters such as ground water recharge, forest cover, salinity ingress, soil erosion and biodiversity will be studied through remote sensing and GIS. Also parameters such as crop pattern and irrigated area which have a direct impact on society can be studied. Analysis of data available from satellite images at regular intervals will help in generating an idea of the changes occurring in the baseline data due to implementation of IWMP. Detection of changes in forest cover may be possible only after a certain duration but IWMP is to continue over a long period.

Collection and analysis of data at regular intervals along with the mapping of project activities before, during and after implementation will create a very useful database which is at the core of any impact assessment process.

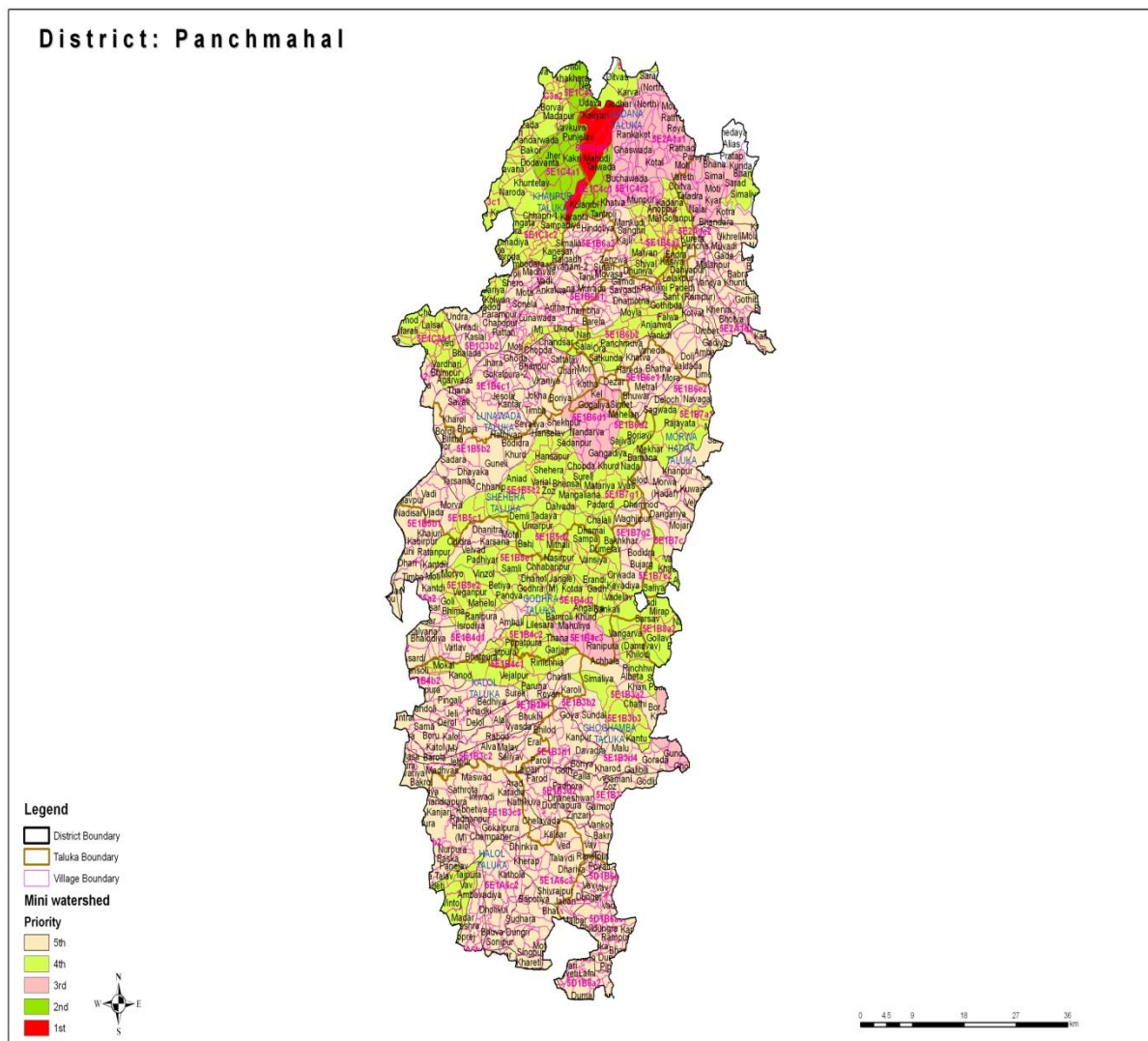
Based on the impact of IWMP on environmental and social factors input for future planning of the projects will be generated. This will help in continual improvement in the scientific planning process that is essential to the successful implementation of IWMP.

### Annexure-1: Criteria for prioritization

<b>Criteria &amp; Weightage for Prioritization set by DoLR</b>						
<b>S. N o.</b>	<b>Criteria</b>	<b>Maximum score</b>	<b>Ranges &amp; scores</b>			
i	Poverty index (% of poor to population)	10	Above 80 % (10)	80 to 50 % (7.5)	50 to 20 % (5)	Below 20 % (2.5)
ii	% of SC/ ST population	10	More than 40 % (10)	20 to 40 % (5)	Less than 20 % (3)	
iii	Actual wages	5	Actual wages are significantly lower than minimum wages (5)	Actual wages are equal to or higher than minimum wages (0)		
iv	% of small and marginal farmers	10	More than 80 % (10)	50 to 80 % (5)	Less than 50 % (3)	
v	Ground water status	5	Over exploited (5)	Critical (3)	Sub critical (2)	Safe (0)
vi	Moisture index/ DPAP/ DDP Block	15	-66.7 & below (15) DDP Block	-33.3 to -66.6 (10) DPAP Block	0 to -33.2 (0) Non DPAP/ DDP Block	
vii	Area under rain-fed agriculture	15	More than 90 % (15)	80 to 90 % (10)	70 to 80% (5)	Above 70 % (Reject)
viii	Drinking water	10	No source (10)	Problematic village (7.5)	Partially covered (5)	Fully covered (0)
ix	Degraded land	15	High - above 20 % (15)	Medium - 10 to 20 % (10)	Low- less than 10 % of TGA (5)	
x	Productivity potential of the land	15	Lands with low production & where productivity can be significantly enhanced with reasonable efforts (15)	Lands with moderate production & where productivity can be enhanced with reasonable efforts (10)	Lands with high production & where productivity can be marginally enhanced with reasonable efforts (5)	
xi	Contiguity to another watershed that has already been developed/ treated	10	Contiguous to previously treated watershed & contiguity within the microwatersheds in the project (10)	Contiguity within the microwatersheds in the project but non contiguous to previously treated watershed (5)	Neither contiguous to previously treated watershed nor contiguity within the microwatersheds in the project (0)	

xi i	Cluster approach in the plains (more than one contiguous micro-watersheds in the project)	15	Above 6 micro-watersheds in cluster (15)	4 to 6 microwatersheds in cluster (10)	2 to 4 microwatersheds in cluster (5)	
xi ii	Cluster approach in the hills (more than one contiguous micro-watersheds in the project)	15	Above 5 micro-watersheds in cluster (15)	3 to 5 microwatersheds in cluster (10)	2 to 3 microwatersheds in cluster (5)	
	<b>Total</b>	<b>150</b>	<b>150</b>	<b>90</b>	<b>41</b>	<b>2.5</b>

### Annexure-2: A priority map of Panchmahal



### Annexure-3: DPR Chapter Scheme

#### **Chapter 1: Project Background**

- ✓ Project area identity and location:
  - Longitude and latitude of the project area/taluka
  - Borders- Neighbouring districts / states / national boundaries
  - Nearby important places and cities
  - Project information
- ✓ Need for WDP (in light of the 13 parameters used in selecting the project)
  - A note on the importance of watershed programme for the area specifying points from the 13 parameters used in the selection of the project
  - The composite score as in the PPR (PPR-6)
- ✓ Other Developmental Programmes running in the area
  - Old watershed projects in the area (if any)
  - Programmes of the Government running in the project villages
  - Programmes of the Multi-National Aid Agencies / NGOs / CSRs

#### **Chapter 2: The Project Implementing Agency (PIA)**

- ✓ Brief of the PIA (including its programmes):
  - The organization and its objectives/vision
  - Historical perspective
  - Programmes/projects of the organization
  - Programmes/projects running in the project area
  - Experience of the organization in watershed related works
- ✓ Strength / Weakness / Limitations of the PIA in managing the project
  - SWOT analysis

#### **Chapter 3: Basic information of the project area along with GIS based maps**

- ✓ Geography / Geo-hydrology:
  - Land use pattern
  - Agro-climatic condition
  - Flood and drought information
  - Soil erosion and soil salinity details
  - Land and agriculture
  - Crop details
  - Livestock details
  - Ground water and drinking water
- ✓ Socio-economic
  - Demography
  - Literacy
  - Infrastructure

- Assets and facilities
- Poverty
- Migration status
- Income details
- ✓ Livelihood patterns of the area
  - Occupation pattern
  - Dependence on CPR
- ✓ Comparative data of the crop productivity of the area: project area vs. District vs. State vs. Country vs. World
- ✓ Identify gaps in every aspect

#### **Chapter 4: Watershed Activities Planned**

- ✓ Scientific planning / strategy
- ✓ Institutions at village level
  - Watershed committee detail
  - SHG detail
  - UG detail
- ✓ Physical activities
  - Entry Point Activity (EPA)
  - Preparatory phase
  - Watershed works phase
  - Consolidation phase
- ✓ Specific Livelihood interventions
- ✓ Special provisions for the weaker sections like women, SC/ST population, etc
- ✓ Capacity Building Plans

#### **Chapter 5: Integrated Budgeting (with convergence)**

- ✓ Activity specific budgeting with explanations (including HR)
- ✓ Plans for convergence with different programmes, especially NREGS
- ✓ Convergence with private sector, if any
- ✓ GIS based Convergence maps of activities

#### **Chapter 6: Expected Outcomes**

- ✓ Employment
- ✓ Migration
- ✓ Ground water table
- ✓ Drinking water
- ✓ Crops
- ✓ Horticulture
- ✓ Vegetative cover
- ✓ Livestock
- ✓ Linkages

## **Chapter 7: Quality and Sustainability Issues**

- ✓ Plans for Monitoring and Evaluation
- ✓ Plans for Post-Project Management
- ✓ Research and Documentation

### **List of maps to be included: (All maps to be provided Survey Number Wise)**

- Location of the project area with coordinates in District and Taluka Maps
- Project Cluster Map
- Past Activities carried out
- Geo-Hydrology map
- Drainage and water bodies
- Land Use Maps (Irrigation, Forest, Wasteland, Agriculture, Built-up)
- Contour Map
- Aspect Map
- Topography Map
- Final Action Plan Map

### Annexure-4: List of Capacity Building Institutions

Sr. No.	Name of institutions	Specialization	Address
1	Institute of Rural Management Anand (IRMA)	Academic	Anand
2	Bhaskaracharya Institute of Space Applications and Geo-informatics	Technology service provider	Gandhinagar
3	State Institute of Rural Development, Gujarat	Training Institute	Ahmedabad
4	Development Support Center, Ahmedabad	NGO	Ahmedabad
5	Dantiwada Agriculture University, Banaskantha	Agril.University	Dantiwada
6	National Institute of Rural Development	Training and Academic Institute	Hyderabad
7	Anand Agricultural University	Academic and Research	Anand
8	Junagadh Agricultural University, Junagadh	Academic and Research	Junagadh
9	Krishi Vigyan Kendras of all districts	Technology service provider	Respective districts
10	Sadguru Foundation, Dahod	NGO	Dahod
11	BAIF Foundation, Vadodara	NGO	Vadodara
12	VRTI, Kutch	NGO	Mandvi, Kutch
13	Gujarat Institute of Desert Ecology	Training and Academic Institute	Kutch
14	Research Foundation, Department of Forest, Gandhi Nagar	Academic and Research in Forestry Activities	Gandhinagar
15	Central Soil and Water Conservation Training Institute	Research & Training	Vasad
16	GEER Foundation	Ecological Research & Education	Gandhinagar
17	Centre for Environment Education- Ahmedabad	NGO	Ahmedabad
18	Research Centers of Forest Department	Research and Extension	
19	Entrepreneurship Development Institute of India, Gandhinagar	Academic	Gandhinagar
20	National Institute of Design, Gandhiangar	Academic	Ahmedabad
21	International Water Management Institute	Research	Anand
22	National Soil & Land Use Survey of India,	Survey	Ahmedabad
23	Aga Khan Rural Support Programme (I)	NGO	Ahmedabad
24	Mudra Institute of Communication Ahmedabad	Academic Institute	Ahmedabad
25	Foundation for Ecological Security (FES)	NGO	Anand
26	Geological Survey of India	Survey	Gandhinagar
27	SRISTI (Honey Bee Network)	NGO	Ahmedabad
28	Survey of India	Survey	Gandhinagar
29	Navsari Agricultural University	Academic Institute	Navsari
30	Central Ground Water Board (CGWB)	Ground water management	Ahmedabad
31	National Institute of Fashion Technology (NIFT)	Fashion Designing	Gandhinagar
32	Gramin Vikas Trust	NGO	Dahod
33	AnARDe Foundation	NGO	Navsari
34	GRISERV- BAIF	NGO	Navsari

## Annexure-5: List of Registers to be maintained at different levels

### **DWDU:**

1. Cheque book register
2. Grants received from Centre/State
3. Grants Distribution Register
4. UCs register for UCs received from PIA/watershed committees
5. Activities wise Physical and Financial Progress Details
6. Technical Sanction Register
7. Administrative Sanction Register
8. Bank Reconciliation statement register
9. Asset Register- Dead-stock Register
10. Meeting Register
11. Training Register
12. Ledger
13. Payments Book
14. Visitor's Book

### **PIA Level**

1. Register for grants received from states
2. UCs register for UCs to be sent to DWDUs
3. Bank pass book/ cheque Book Register
4. Bank Reconciliation statement register
5. UCs register for UCs received from different watershed committees
6. Physical and financial progress report
7. Asset Register- Dead Stock Register
8. Training Register
9. Material Book (EPA)
10. Ledger
11. Payment Book

### **Watershed Committee Level**

1. Cash book
2. Contingency bill register
3. Voucher register
4. Bank Pass Book Register
5. Bank Reconciliation statement- register
6. Advances/Adjustment register
7. Bank cheque book register
8. Asset Register- dead stock Register
9. Assets Created Register
10. Income register (from watershed assets)
11. WDF Account Register
12. Revolving Fund Register
13. Register showing physical and financial progress
14. Training Register
15. Technical Sanction Register
16. Administrative Sanction Register



17. Meeting Register (Resolution Book)
18. Material Book Register
19. Stock Register
20. Receipt Book
21. Voucher Book
22. Ledger
23. Account Ledger
24. Bill Book
25. Members' Pass Book Register
26. Attendance Register (for Labour)
27. Payments Register
28. Works wise Expenditure Register
29. Visitor's Book

**SHGs:**

1. Meeting Register
2. Fund received Register
3. Bank Pass Book Register
4. Loan Register
5. Savings Book Register
6. Revolving fund Register
7. Training Register

## Annexure- 7: Form-1

### ઇન્ડીએટેડ વોટરશેડ મેનેજમેન્ટ પ્રોગ્રામ દહાડિયાનું હાજરી પગાર પત્રક

જળસ્ત્રાવ સમિતિ.....

મુ.....તા.....

વાઉચર નંબર : .....

તારીખ : .....

કાર્યયોજના/અંદાજ મંજૂરી ક્રમાંક :.....

રકમ રૂ.....

તા.....થી કામે લગાડવામાં આવેલ મજુરોનો

તા.....થી તા.....સુધીના સમયનું

### હાજરી તથા પગાર પત્રક

રકમ.....અંકે રૂપિયા.....

### પ્રમાણપત્ર

કામે લગાડવામાં આવેલ મજુરોનો અંદર જણાવેલ તારીખોએ જળસ્ત્રાવ વિકાસના કામે લગાડવામાં આવ્યા હતા. અને છેલ્લા પાનામાં જણાવ્યા પ્રમાણે થયેલા કામના પ્રમાણમાં હાજરી પત્રકમાં જણાવેલ દર મુજબ પગાર મારી હાજરીમાં આપવામાં આવ્યો છે. ઉપરાંત પ્રમાણિત કરવામાં આવે છે કે તમામ મજુરો પેકીમાં કોઈ બાળ મજુર નથી. અને થયેલ કામના માપોની નોંધણી માપપોથી પાનાનું..... થી..... સુધી નોંધાયેલ છે.

મંત્રી

ચેરમેન

વોટરશેડ સમિતિ

વોટરશેડ સમિતિ

.....

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ઉપર મુજબની ખર્ચ રકમ રૂ.....ચુકવણી માટે સમિતિના ઠરાવ નં.....

તા.....થી મંજૂર કરવામાં આવ્યું.

મંત્રી/ચેરમેન/WDT

ઉપર મુજબની વિગતોના મંજૂર કરેલ ખર્ચના નાંણા રૂ.....અંકે રૂપિયા.....નું ચુકવણું કરવામાં આવ્યું.

મંત્રી/ચેરમેન/WDT

## તારીજ

	સંખ્યા	માનવદિન	એસ.સી.	એસ.ટી	ઓ.બી.	અન્ય	લઘુમતિ	કુલ
પુરુષ								
સ્ત્રી								
કુલ...								

મંત્રી

.....જળસ્રાવ સમિતિ







