Capacity Building Manual

For Integrated Watershed Management Programme
(IWMP)

GSWMA

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Gujarat State Watershed Management Agency (GSWMA)

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Commissionerate of Rural Development,
Block No.16, 3rd Floor, Dr. Jivraj Mehta Bhavan,
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Block No.16, 3rd Floor, Dr. Jivraj Mehta Bhavan,
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Principal Secretary, RDD
&
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FOREWORD

Integrated Watershed Management Programme (IWMP) is a scientifically planned and designed programme, and implemented in a participatory way. It offers a complete techno-managerial and social solution to the livelihood related problems of the local community. In order to make the programme successful, it is essential that all stakeholders understand the principles of watershed development, nature of the activities, management principles and values & ethics of the programme. This necessitates a comprehensive Capacity Building Plan for all stakeholders keeping in view their various needs.

Gujarat State Watershed Management Agency (GSWMA), the State Level Nodal Agency for implementation of the IWMP in Gujarat has prepared a rigorous plan for capacity building of all stakeholders and placed an appropriate strategy to execute the plans in a time bound manner. It has identified a number of Capacity Building Institutions covering technical institutions like BISAG, CSWCRTI, Agricultural Universities, Krishi Vigyan Kendras (KVKs), etc. social enterprises like AKRSP(I), DSC, Academic institutions like IRMA, NID, NIFT, EDII, etc. These institutions of excellence provide both theoretical and practical knowledge of watershed development and livelihoods.

To standardize the Capacity Building Programmes, GSWMA in partnership with all these institutions has prepared this Manual to guide the implementers in carrying out the programmes properly. This is a matter of happiness that the 1000 copies of the first print have been exhausted in such quick time and there is demand for the re-print of this manual. I hope this will go a long way in making IWMP a great success and ensure that the benefits go to those who deserve them the most.

(Rita Teaotia)

Ram Kumar, IFS
Chief Conservator of Forest
&
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Date: 12 /01/2012.

PREFACE

There has been a realization that to make watershed programmes truly participatory, there is a need to empower people through knowledge. The Technical Committee Report on Watershed Programmes headed by S. Parthasarthy states that more efforts are needed towards capacity building in order to ensure peoples' participation. There is a need for technical and legal empowerment which is possible through capacity building programs which can communicate in an easily understood language. There is also a need to develop a section of people who can absorb the findings of scientific research and implement them on field regularly and voluntarily. Common Guidelines for Watershed Development, 2008 by Government of India emphasises the need for effective capacity building and states that five percent of the total budget for IWMP is to be utilized for capacity building.

After the introduction of Common Guidelines for Watershed Development, 2008 by GoI, which outlines the project in detail, various stakeholders in IWMP have expressed the immediate and foremost need for capacity building in order to implement the project as per new Guidelines. Capacity Building for IWMP involves training of various stakeholders in diverse topics such as agriculture, soil and moisture conservation, water harvesting and recharge structures, livelihood, community mobilisation, use of hi-science tools such as Geographic Information Systems and Management Information System, etc. A large number of organizations with expertise in specific areas can contribute towards the common goal of capacity building.

In order to ensure that various organisations identified for capacity building can work in coordination with each other and stakeholders, a commonly accepted process needs to be followed by all the stakeholders. The capacity building manual is visualized to chart the process of identifying training needs, identifying relevant organizations and stakeholders, planning the training modules, schedules and pedagogy. Such a manual can be used by all the stakeholders to ensure relevant capacity building programs at the right time with the required expertise.

Source of information regarding capacity building process in IWMP will guide all the stakeholders such as project managers, administrative staff, project team members, watershed committee members, village level stakeholders, NGOs and government organisations involved in implementation, research and extension, capacity building and academics. Continually new staff will be inducted into the IWMP projects each year. These persons will have to be oriented towards the participatory nature of IWMP and knowledge of specific disciplines will also be needed to be upgraded regularly. The capacity building manual will help in planning and conducting these trainings.
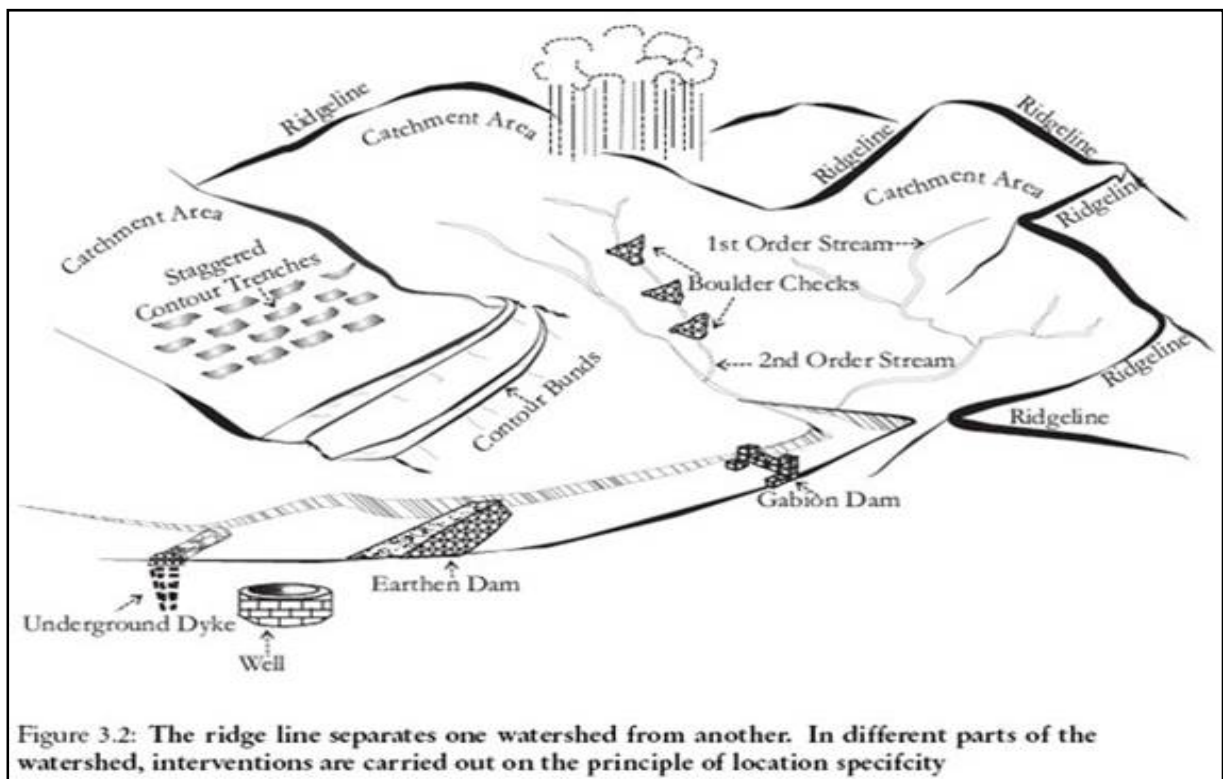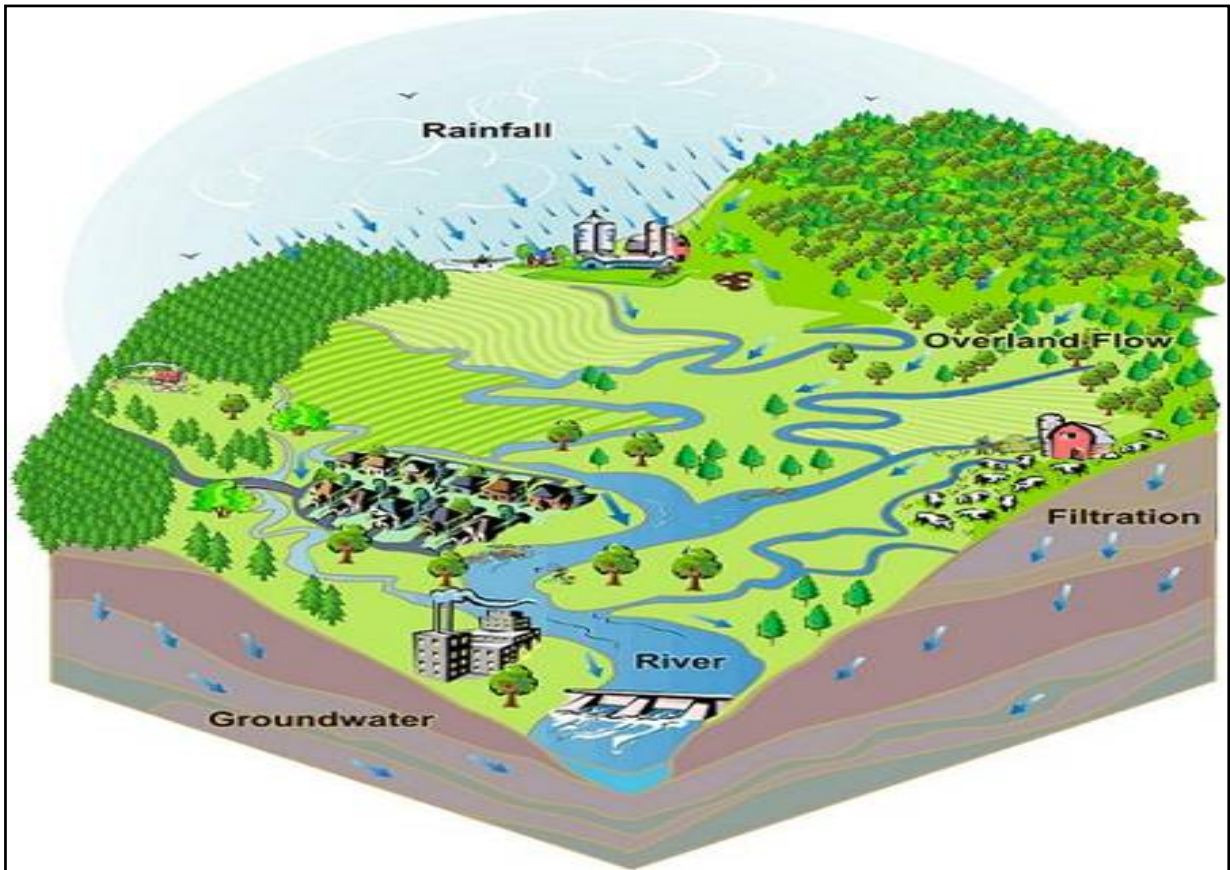
(Ram Kumar)

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Figure 3.2: The ridge line separates one watershed from another. In different parts of the watershed, interventions are carried out on the principle of location specifcity

1. INTRODUCTION

Watershed Development Programme (WDP) is aimed at holistic and sustainable development of an area and its population based on conservation, management and development of the natural resource base of the watershed. As a development programme, it has been running in India since 1960s under different names by different ministries / departments (Box-1). The latest development is that the New Common Guideline, 2008 (Box-2) has come into force and a common programme-Integrated Watershed Management Programme (IWMP) has been floated in place of the three running programmes of the ministry of Rural development (MoRD), viz. Drought Prone Area Programme, Desert Development Programme and Integrated Wasteland Development Programme (IWDP).

The New Guideline, based on the technical report of the Parthasarathy Committee is very scientific and comprehensive; along with natural resource augmentation, it is also focussed on livelihoods. Thus, it requires a huge effort to implement it properly. To succeed, all the different aspects like planning, execution and monitoring & evaluation have to be coherent. The base of the programme has to be technically sound, socially inclusive and managerially full proof.

Box-1: History of Watershed Programmes in India	
Year	**Programme / Event**
1962-63	River Valley Projects (RVP) (arrest silt)- MoA
1973-74	DPAP (Drought Prone Area Programme)- MoRD
1974-75	WDP for Shifting Cultivation Areas
1977-78	Desert Development Programme (DDP)- MoRD
1980s	ICAR model watersheds
1985-86	Reclamation of Alkali Soils (RAS)- MoA
1988-89	Integrated Wasteland Development Programme (IWDP)- MoRD
1989-90	NAEP - National Afforestation and Eco-Development Project- MoEF
1990-91	National Watershed Development Programme for Rainfed Areas (NWDPRA)- MoA
1993 - 94	Indo German Watershed Programme (IGWP)
1994-1995	First Watershed Guidelines; National Watershed Development Programme - MoRD
1999	Common Guidelines- WARASA Jansahbhagita- MoA
1999 -2000	Watershed Development Fund – NABARD
2000-01	Second Watershed Guidelines- MoRD
2003-04	Hariyali Guidelines for Watershed Development Programme- MoRD
2008	New Common Watershed Guidelines- MoRD
2009-10	Integrated Watershed Management Programme (IWMP)- MoRD

1.1. Background

Capacity Building as an aspect can hardly be overemphasized for effective implementation of the programme. This is evident from all the successful cases in watershed development in the country. However, the lessening of focus on this component under Haryali Guideline was unfortunate. This fact is highlighted by Dr. Parthasarathy in his report.

The Parthasarathy Committee Report published in 1994 that paved the way for first watershed guideline of the Ministry of Rural Development has the following to say on capacity building programmes run under the old watershed programme:

- Training is conducted at locations completely cut off from the context where it is tobe applied ("at-a-distance/remote-control training/orientation courses" kind of approach). Training is provided in institutes based in locations far removed from the ground realities of the areas where its benefits are to be realised.
- These institutes are run by personnel who speak a language which is largely incomprehensible to the people and whose attitude is didactic rather than dialogic.
- A very serious lacuna has been the absence of any kind of follow-up to ensure that the benefits of training are materialised at the field-level for which it was meant.

This state of affairs is a serious cause for concern. Under the new Common Guidelines, 2008 a lot of emphasis has been put on the Capacity Building component to correct the above anomalies. Following this, GSWMA is trying to evolve a state policy and strategy for capacity building that will make IWMP a success story.

The first batch of watershed projects under Integrated Watershed Management Programme (IWMP) started in 2009-10 throughout the country. In Gujarat, 151 projects were sanctioned for the year 2009-10 covering more than 7 lakh hectares in all the districts. Similarly, every year around 7 lakh hectares of area would be taken up under IWMP for the next 18 years so as to cover the whole state. The perspective planning data for the same is given below:

S. No.	Item	Details	
		No.	Area (Lakh ha.)
1	Total micro-watersheds (MWS) in the State	13587	196.024
2	Total untreatable MWS (Reserved Forest, Barren Rocky, assured irrigation, etc.)	1005	27.2386
3	Total treatable MWS in the State	12582	168.7854
4 a	Total MWS covered under pre-IWMP schemes of DoLR	3895	31.6302
b	Total MWS covered under schemes of other Ministries	645	6.07954
c	Total MWS covered under IWMP 2009-10 of DoLR	705	7.08186
d	Total of 4 a to d	5245	44.7916

5	Balance micro-watersheds not covered till date	7337	123.9938
6	Plan for covering balance micro- watersheds		
	11th Plan: 2010-11	802	7.1366
	11th Plan: 2011-12	835	7.8572
	12th Plan	2015	39.0000
	13th Plan	1940	37.0000
	14th Plan	1745	33.0000
	Total	7337	123.9938

Under IWMP, there would be a professional team at the state level; each district would have a District Watershed Development Unit (DWDU) with a Multi Disciplinary Team consisting of 5-6 members and each project would have a separate dedicated multidisciplinary Watershed Development Team (WDT) consisting of 5-6 members. Thus, for 2009-10, 151 WDTs have been employed. Considering that each year around 125-150 projects would be initiated, the number of man power employed is going to be huge.

Box-2: Salient features of the New Common Guidelines, 2008

✓ Delegation of powers to the States for sanctioning and implementation of projects.

✓ Dedicated institutions of multi-disciplinary professionals at national, state and district levels

✓ Project duration made flexible into 3 distinct phases- preparatory phase, works phase and consolidation phase

✓ Focus on Livelihoods through integrated farming systems

✓ Clustering of small watershed in the range of 1000-5000 ha. areas to optimize transaction cost.

✓ Focus on scientific planning and capacity building

✓ Multi tier Ridge to valley approach


Further, IWMP is being implemented on very strong scientific basis. The strategy involves the previously neglected aspects in watershed management like:

- Strict adherence to the ridge-to-valley principle
- GIS based planning, execution, monitoring and evaluation
- Community participation at all phases of the project
- Baseline survey and Participatory Net Planning for DPR preparation

This enormity of the task needs the people involved in the programme to be trained properly so as to carry out the programme effectively. It is in this background we look at the capacity building strategy of the Gujarat State Watershed Management Agency (GSWMA). This document spells out the capacity building strategy and the *modus- operandi* involved therein clearly.

1.2.   Institutional Arrangement under IWMP: Gujarat model

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:

NRAA	• Central Level Nodal Agency (CLNA)
GSWMA	• State Level Nodal Agency (SLNA)
DWDU	• In all the districts
PIA	• At project level
WC	• At village level
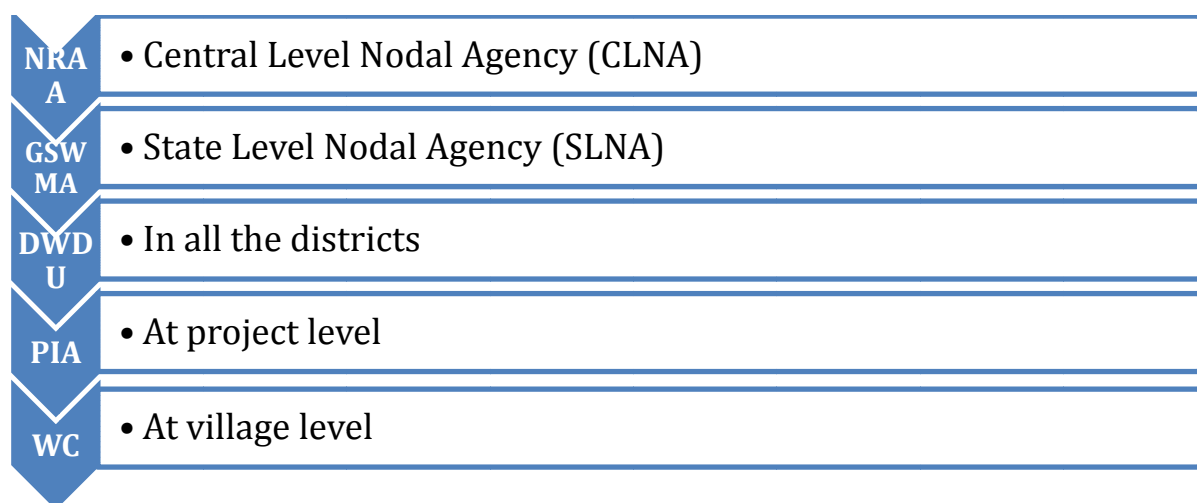
State level: Gujarat has modelled its institutions in line with the guideline, with some innovations here and there. Gujarat State Watershed Management Agency (GSWMA) is the nodal agency for implantation of IWMP at the state level. It is registered under the Societies Registration Act, 1860 on 20.7.2007, 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:
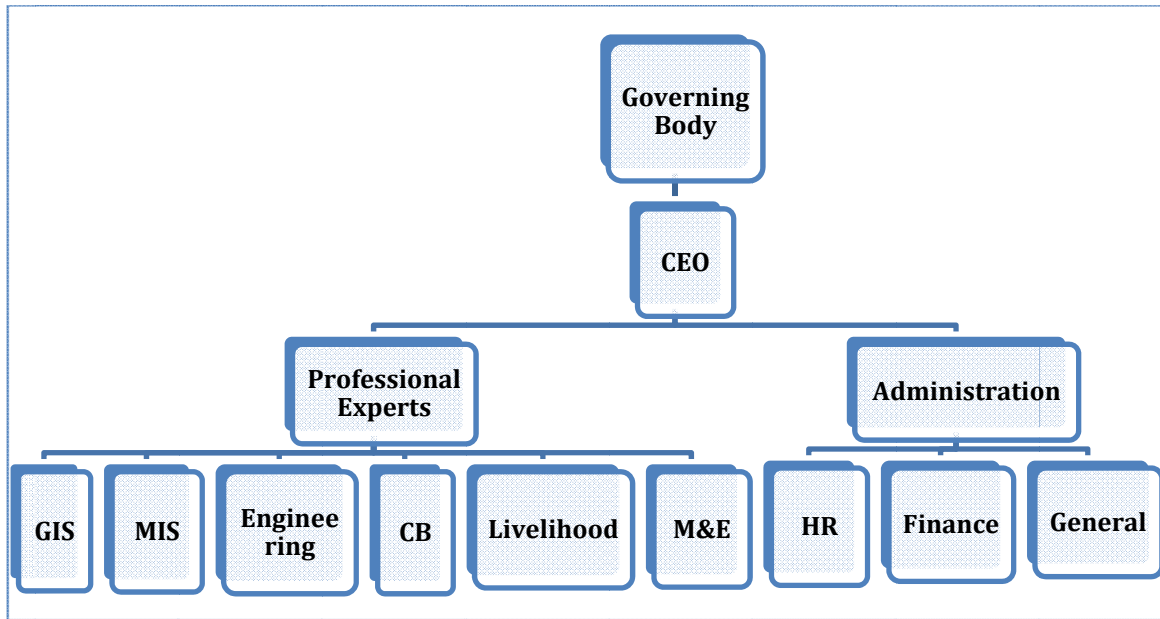
District level: District Watershed Development Units (DWDUs): There is a DWDU in each of the districts of Gujarat. It is chaired by the District Development Officer (DDO) under whom a Project Manager is in charge of management of all the watershed projects of the district. The Project Manager is supported 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, surveying, etc. This structure is presented in the diagram below:
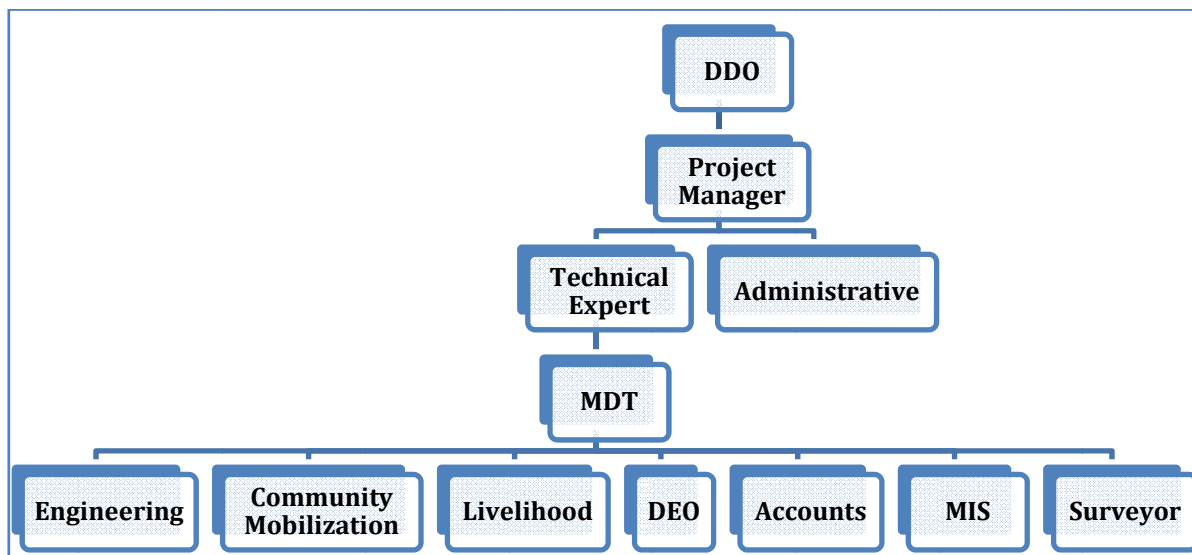
Project level: At the project level, there is a Nodal Officer for each of the project and below him works a dedicated Watershed Development Team, consisting of grass root level experts in the same subjects as the MDT at the district level.
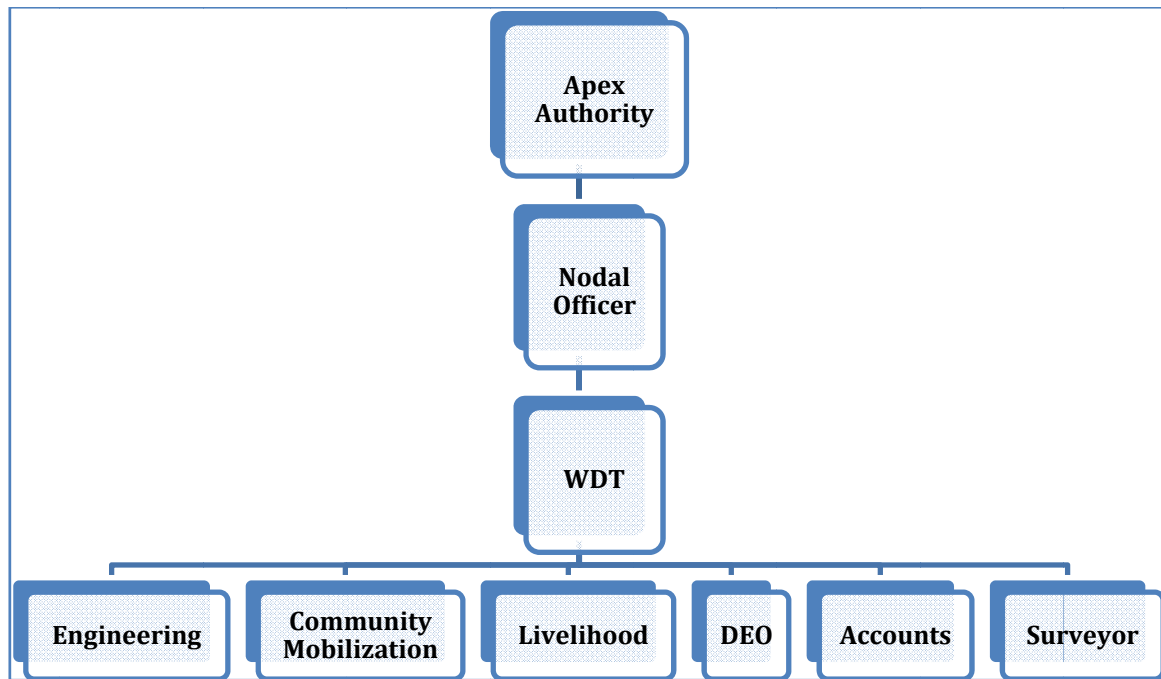
Village level: At the village level, there is a Watershed Committee to take care of the project. It works closely with the WDT to implement the project at the village level. Its structure is like the following:
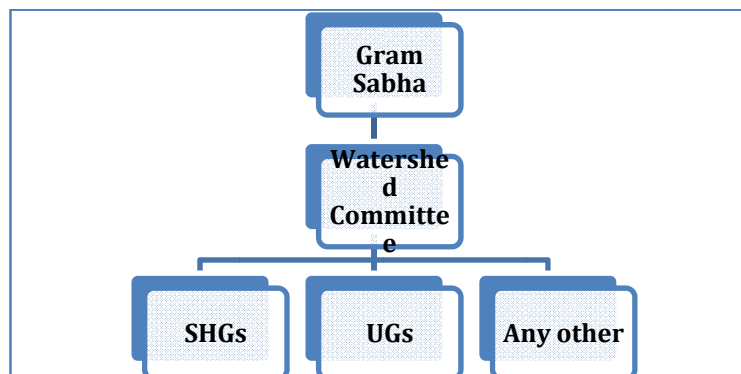
Watershed Committee (WC) is constituted by a President, a secretary, an accountant, and at least 8-10 other members with representation from various class and caste groups and women. This committee has to be registered under the Society registration Act, 1860.

Self Help Groups (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.

User Groups (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.

1.3. Scientific Planning and prioritization under IWMP

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:
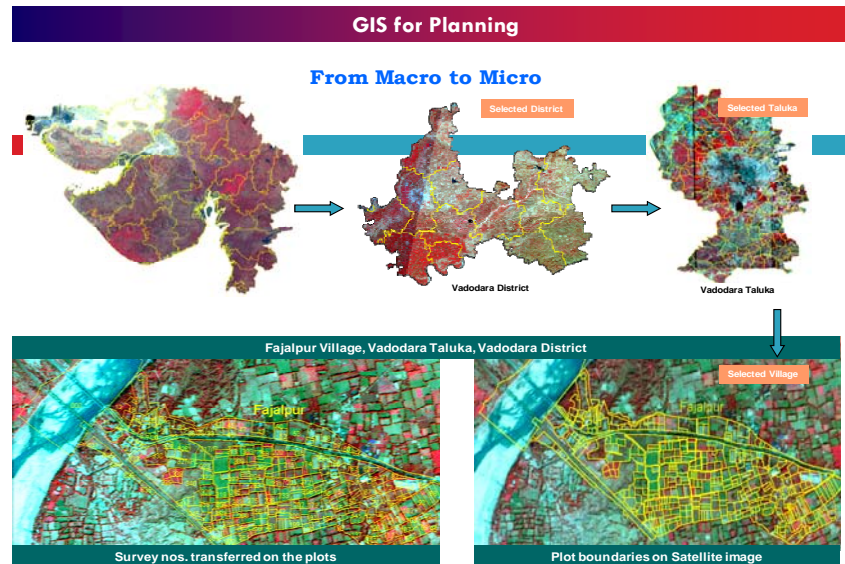
During the previous projects, some of the important concerns were: project selection and developing a scientific action plan. GIS has helped in solving these two concerns. The strategy is divided into two phases: 1) Prioritization of watersheds according to set criteria mentioned in the guideline, 2) Prepare the development plan (action plan).

While prioritizing the projects, different parameters 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:

1. The projects could be equitably distributed among all the districts.
2. The most needy watershed areas could be identified; the districts were able to take those watersheds on priority.
3. The Planning for convergence of IWMP with other developmental schemes of various Government Departments is prepared on the basis of the GIS based maps
4. 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:

Map Depicting Area Covered, Proposed for 2010-11 and To be Covered Under Future Plans

Legend
- Sanctioned (2009-10)
- Proposed (2010-11)
- Eleventh plan **(2011-12)**
- Twelth plan
- Thirteenth plan
- Fourteenth plan
- Treated
- Not To Be Treated
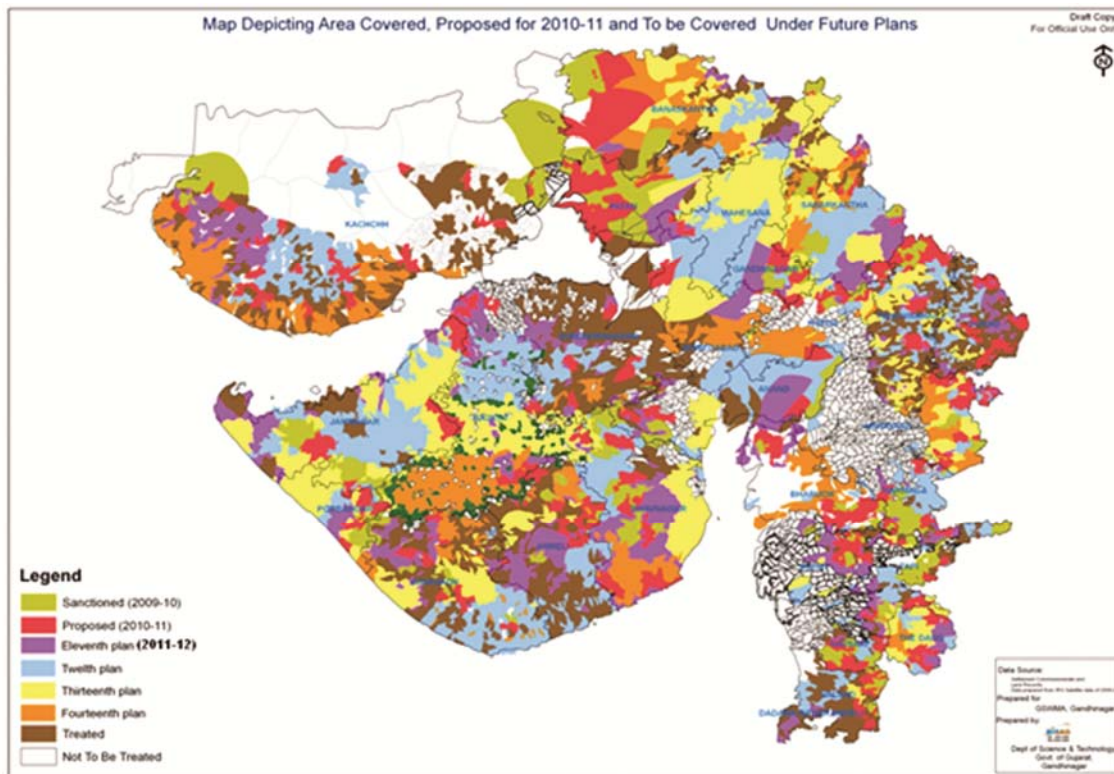
Execution and monitoring:

1. At the village level, the GIS based maps would help the Watershed Development Team and the Watershed Committee to take appropriate decision on physical activities to be carried out in different survey numbers.
2. During implementation, Monitoring and Evaluation plays an important role. The survey number wise action plan on the GIS will help in monitoring the projects better.

Impact Assessment:

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.

1.4. Activities carried out under IWMP

Integrated Watershed Management Programme (IWMP) is carried out under three phases:

I. Preparatory phase
This phase may continue for 1-2 years; focus will be on strengthening people's participation.

Activities:
    i. Entry Point Activity (EPA)
    ii. Development of village level institutions (WCs, SHGs, UGs)

      iii.   IEC activities
      iv.   Base line surveys for DPR
      v.   Hydro-geological survey
      vi.   Build up a network of technical support agencies
      vii.   Prepare DPR
      viii.   Work out detailed resource use agreement
      ix.   Participatory monitoring of progress and processes

II.   Works phase:

The major activities in this phase are depicted in the diagram below:

Ridge Area Treatment
- Contour bunds
- Contour trenches
- Vegetation
- Land leveling

Water Conservation
- Check dams
- Percolation tanks
- Farm ponds

Direct Livelihood Support
- Agriculture
- Animal Husbandry
- Handicraft
- Micro-enterprise Development
- Linkages
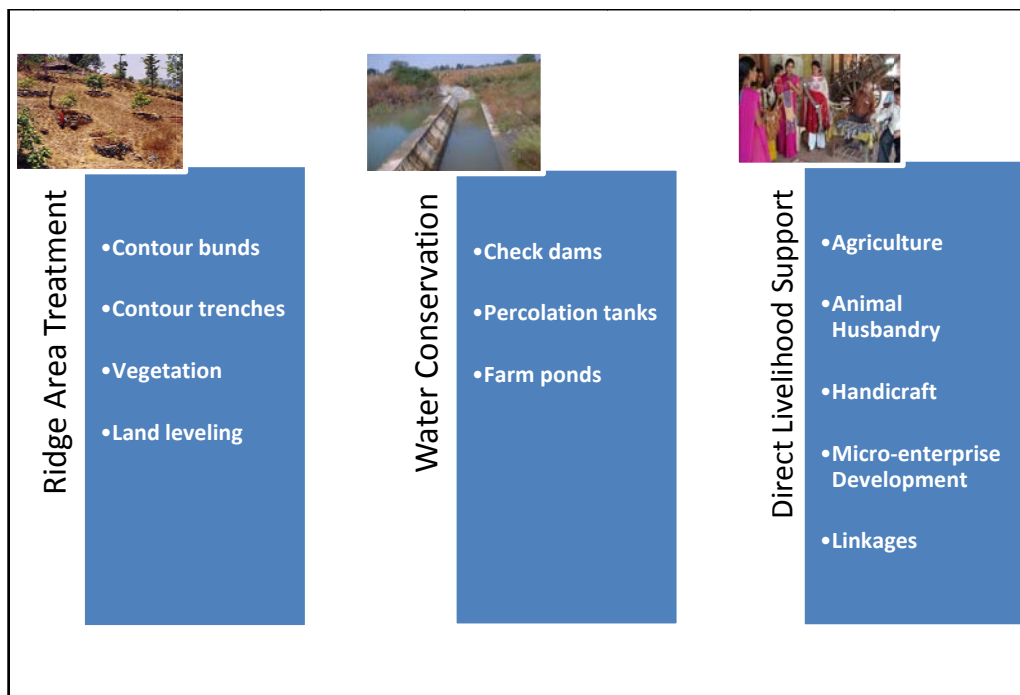
III.   Consolidation phase:
- Consolidation and completion of various works
- Building capacity of the community for sustained post-project management
- Sustainable management of natural resources
- Up-scaling successful experiences

The activities are discussed in detail below:

Community Mobilization

      The process of community involvement starts from identification of the village to problem analysis, and continues all along implementation, monitoring and evaluation of the watershed programme. The activities under community mobilization include video shows, street plays, exposure

visits and entry point activities, etc. These are followed by institution development activities like formation of village watershed committee, organizing Self help Groups (SHGs) and User groups (UGs). Participatory rural Appraisal (PRA) is often used as a good method of involving people in the programme. The project work in a village starts with solving some immediate needs of the village (popularly known as Entry Point Activity (EPA) in the WDP. This also helps in building rapport with the community. Through Participatory Net Planning (PNP) method, the WDT involves the WC to prepare the Detailed Project Report (DPR).

Land development including in-situ soil and moisture conservation measures

The engineering measures adopted differ with location, slope of the land, soil type, amount and intensity of rainfall. Depending on these parameters, the methods commonly used are contour trenching, contour stone walls, gully plugging structures.

Water Harvesting

Check dams, percolation ponds, silt detention tanks and irrigation tanks are constructed to harvest water and recharge it to the groundwater for use in agriculture (irrigation). Farm ponds can also be constructed for every 4-5 ha in the watershed to provide protective/supplemental irrigation

Plantation and Afforestation

Afforestation is done on wastelands that include block plantations, agro-forestry and horticultural development, etc. Nurseries, farming systems such as intercropping, strip cropping, relay cropping, crop rotation and diversified cropping systems such as alley cropping, agri-horticulture, silvi pasture, etc., can be adopted which results in better utilization of available land. Pasture development for fodder, fibre, fruits, medicinal and aromatic plants can be grown which can yield good results.

Livelihoods Support for Poverty Alleviation

Shifting the focus of efforts from resources and products to people and their livelihood outcomes lies at the heart of the sustainable livelihoods approach of watershed development. A key goal of watershed management is to create and enhance traditional and alternative enterprises and activities and to increase livelihoods, especially for women and marginalized groups. Land based livelihoods are supported through the use various modern techniques which yield better produce**:**

- Improving soil fertility and productivity
- Improving seed varieties, propagation techniques and integrated farming
- Promotion of judicious use of water
- Pest control and productivity
- Innovation technology and practices for improved productivity

In the non-land-based livelihoods sector, efforts are focused on promotion of self-help groups, skill building, and community enterprise in processing of agriculture and minor forest produce and technological applications for livelihood promotion.

2. CAPACITY BUILDING: MEANING AND IMPORTANCE IN IWMP

Capacity Building is the process of assisting the group or individuals, organization and system to identify and address issues and gain the insights, knowledge and experience needed to solve problems and implement change.

Capacity building is an ongoing process through which individuals, groups, organizations and societies enhance their ability to identify and meet development challenges. A fundamental goal of capacity building is to enhance the ability to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environment potentials and limits and of needs perceived by the people of the country concerned(*Capacity Building - Agenda 21's definition (Chapter 37, UNCED, 1992.)*

In the diagram given below, one can see the overall processes and components involved in a standard capacity building exercise.
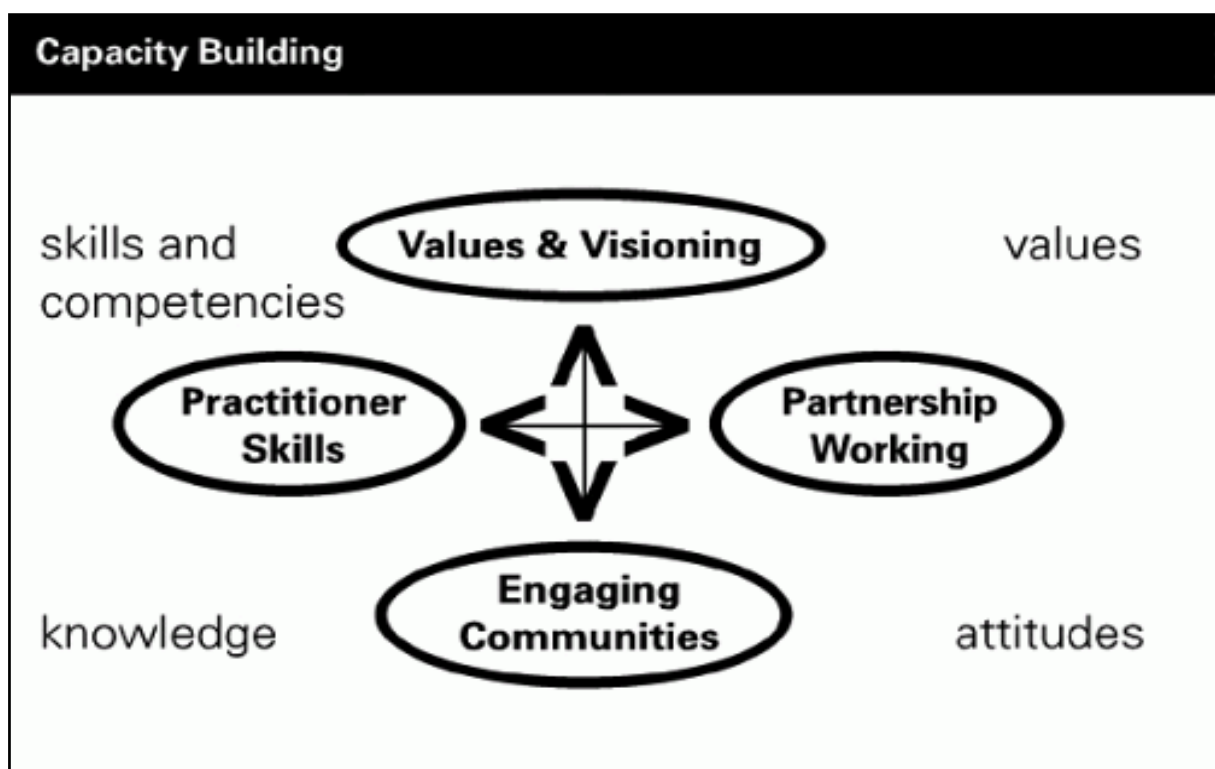
The capacity building exercise involves expanding existing knowledge base by inculcating right skills and competencies, attitudes and values. The extent to which such exercises depends upon the skills of the practitioners and the resource organizations concerned.

2.1. Factors responsible for successful training program

To hold a successful capacity building programme, some of the important things that need to be kept in mind are:

- The objectives of the training program must reflect the objectives of the organization / program.
- Training program objectives should be limited, focused and practical in nature.
- A training program is not effective unless the skills and/or knowledge level of each individual trainee is assessed prior to the trainee's participation in the training program.
- A training program is not effective unless it is tailored to the unique culture of the program.
- The training program goals and objectives must be communicated to the trainee to create a clear understanding as to why the trainee is participating in the class.
- The training must have real life application to the trainee's job and the utilization of such real life applications should be visible to the trainee.
- The training program must be related to real life job specific functions.
- The training program must be taught in a way to address all different learning styles.
- A training program should be instructor facilitated, but trainee led.
- The training program is geared towards individual departments/positions and not a general audience.
- The training program must apply a varied approach to address the varied requirements of the organization's culture and trainee population.
- Training programs must be taught by instructors that are not only knowledgeable in the subject matter, but certified and experienced in adult learning principles.
- All training programs must be interactive.
- A training program must have a transfer of learning component to evaluate the knowledge transfer to the job.

2.2. Importance of Capacity Building in IWMP:

Watershed Development Programme is based on a combination of technical, managerial and social solutions. This requires human resource from different backgrounds ranging from remote sensing, GIS, and civil engineering to fields like rural management, agriculture, animal husbandry, dairy development, handicrafts, etc. All the specialists belonging to different fields should know the watershed concept as well as all other components. This holistic understanding only can ensure sustainability of the programme. The most important way to achieve this is by keeping in place an organized capacity building programme.

IWMP has been designed scientifically which demands right from baseline survey to PRA survey and extensive use of GIS application at field level to frequent and accurate monitoring. It requires manpower with relevant expertise and proper system in place. The manpower needs to be empowered adequately to carry out the activities required to perform IWMP. Hence, the capacity building of all those manpower assumes greater importance.

Under IWMP programme, the project area has been prioritised and selected after a rigorous exercise applying scientific methods with GIS inputs. The profile of these project areas displays interesting patterns.

To illustrate the necessity of capacity building, one can take the example of IWMP-6 (Eval) Project. After conducting baseline survey to assess socio-economic and biophusical conditions, following were the major problems identified:

- Salinity ingress of the land
- Shortage of Drinking water
- Lack of irrigation as ground water is saline
- Lack of fodder
- Low productivity of crops
  Seasonal Migration

The problem of low productivity can be clearly seen from the graphs below where productivity of different crops grown in the project area has been shown with comparison to that of the district, state, country and world.

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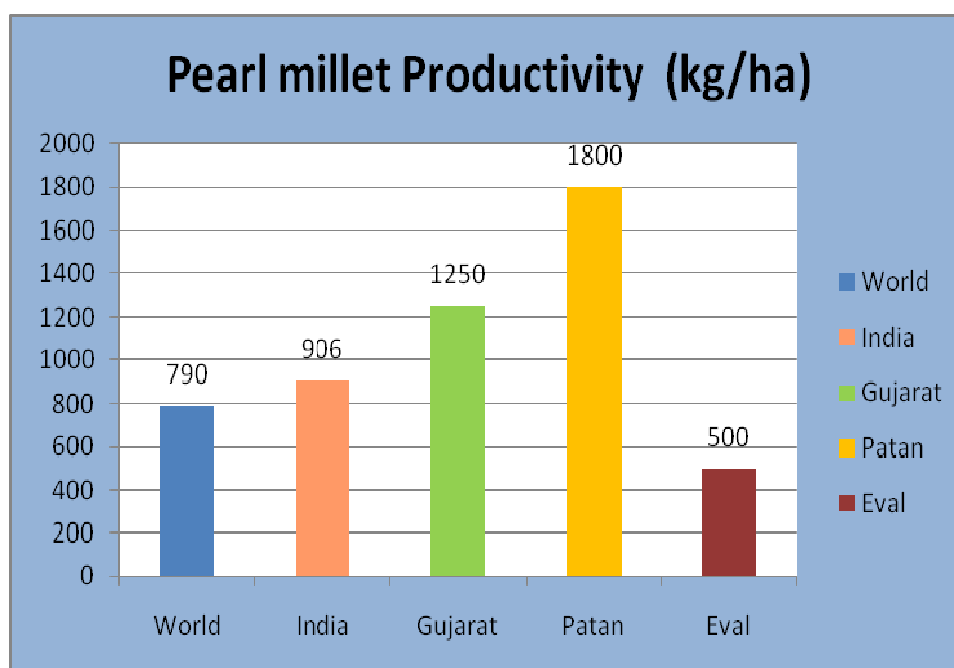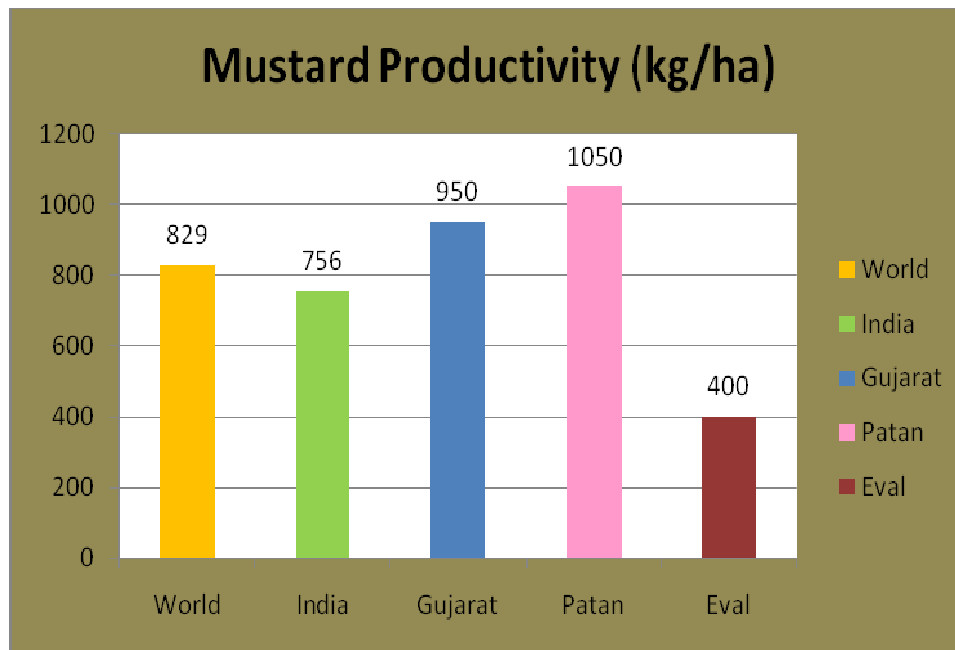
In the given context of a project area like Eval, it is evident that the proper capacity building is of great importance to address the dominant problems.

Capacity Building is important because it implants new concepts in the minds of stakeholders, develops knowledge and enhances awareness which equips them with necessary skills. It builds a shared vision among stakeholders at various levels.

2.3. The New Common Guideline, 2008 on Capacity Building:

Common Guidelines 2008 categorically and emphatically underlines the importance of capacity building at each and every stage. Five percent budget of the whole budget has been allocated exclusively for this very purpose.

The relevant guiding principles for capacity building are as follows:

a. Equity and Gender Sensitivity: Watershed Development Projects should be considered as levers of inclusiveness. Project Implementing Agencies must facilitate the equity processes such as 1) enhanced livelihood opportunities for the poor through investment in their assets and improvements in productivity and income, 2) improving access of the poor, especially women to the benefits, 3) enhancing role of women in decision-making processes and their representation in the institutional arrangements and 4) ensuring access to usufruct rights from the common property resources for the resource poor.

b. Decentralization: Project management would improve with decentralization, delegation and professionalism. Establishing suitable institutional arrangements within the overall framework of the Panchayati Raj Institutions, and the operational flexibility in norms to suit varying local conditions will enhance decentralisation. Empowered committees with delegation to rationalise the policies, continuity in administrative support and timely release of funds are the other instruments for effective decentralization.

c. Facilitating Agencies: Social mobilisation, community organisation, building capacities of communities in planning and implementation, ensuring equity arrangements etc need intensive facilitation. Competent organisations including voluntary organizations with professional teams having necessary skills and expertise would be selected through a rigorous process and may be provided financial support to perform the above specific functions.

d. Centrality of Community Participation: Involvement of primary stakeholders is at the centre of planning, budgeting, implementation, and management of watershed projects. Community organizations may be closely associated with and accountable to Gram Sabhas in project activities.

e. Capacity Building and Technology Inputs: Considerable stress would be given on capacity building as a crucial component for achieving the desired results. This would be a continuous process enabling functionaries to enhance their knowledge and skills and develop the correct orientation and perspectives thereby becoming more effective in performing their roles and responsibilities. With current trends and advances in information technology and remote sensing, it is possible to acquire detailed information about the various field level characteristics of any area or region. Thus, the endeavour would be to build in strong technology inputs into the new vision of watershed programmes.

f. Monitoring, Evaluation and Learning: A participatory, outcome and impact-oriented and user-focused Monitoring, Evaluation and Learning system would be put in place to obtain feedback and undertake improvements in planning, project design and implementation.

g. Organizational Restructuring: Establishing appropriate technical and professional support structures at national, state, district and project levels and developing effective functional partnerships among project authorities, implementing agencies and support organizations would play a vital role.

Capacity building support is a crucial component to achieve the desired results from watershed development projects. These Guidelines broadly define the contours of the capacity building strategy for watershed development projects in the country. NRAA would facilitate the evolution of operational strategies for capacity building in each state in consultation with SLNA and other resource organizations. The capacity building strategy and activities enumerated below by NRAA, Nodal Agencies at the central level and consortium of resource organizations should be funded separately over and above the earmarked budget for institution and capacity building in the preparatory phase of the watershed development project."

Key Elements of Capacity Building Strategy:

NRAA will collaborate with various resource organizations for developing national level as well as state specific capacity building strategies. Key Components of Capacity Building Strategy are the following:
- 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.

Resource Organizations and Developing Partnerships National Institute of Rural Development (NIRD), National Institute of Agricultural Extension Management (MANAGE), Central Arid Zone Research Institute (CAZRI), Central Soil and Water Conservation Research and Training Institute (CSWCRTI) and its regional centres, Central Research Institute for Dry land Areas (CRIDA), Water Technology Centres (WTCs), Indian Institute of
Remote Sensing, Dehradun, Institute of Rural Management, Anand (IRMA), Indian Institute of Forest Management (IIFM), National Remote Sensing Agency (NRSA), Indian Space Research Organization (ISRO), Soil and Land Use Survey of India (SLUSI) are some of the well known national level institutions that could impart capacity building inputs to senior government officers at national/ state/district levels.

There are also several reputed voluntary organizations/ resource organizations with considerable expertise and experiences related to watershed development projects such as AKRS (P) (Gujarat), MYRADA (Karnataka), WOTR (Maharashtra), Dhan Foundation (Tamilnadu), Samaj Pragati Sahyog (MP), Development Support Center (Guajarat), AFARM (Maharashtra), WASSAN (Andhra Pradesh), ARAVALI (Rajasthan), PRADAN (Jharkhand), CYSD (Orissa), Seva Mandir (Rajasthan) and so on, in different parts of the country. Some of them are already functioning as resource organizations for watershed development projects in collaboration with state governments.

NRAA would help the State Governments in preparing the comprehensive list of all such resource organizations across the country and profile their expertise and capacities. As part of this process, NRAA and SLNA identify National/ State/ District level resource organizations. Based on this analysis, NRAA facilitates formal partnerships between the Ministries/Departments/ SLNA/DWDU and resource organizations from government/ voluntary/ ICAR backgrounds. These resource organizations could operate at national/ state/district/ sub district level, depending on the need and capacity building strategy of each state. SLNA develops clear Terms of References (ToRs) with resource organizations. Depending on the need, NRAA / SLNA could also form Consortium of Resource Organizations to provide necessary capacity building support to the watershed development projects at various levels.

2.4. Objectives of the Capacity Building Manual

Following are the objectives of the capacity Building Manual:

- To provide a manual which can be used by stakeholders to organise capacity building programmes for Integrated Watershed Management Programme.
- To standardize the processes with respect to capacity building while ensuring essential flexibility.
- To clearly outline the various modules required, their timeframe within the project, identify the stake holders and the organisations to be involved for the training programmes.
- To enable the administrators and managers concerned with IWMP to plan for capacity building with respect to stakeholders, resource organizations and funds.
- To help various organisations understand the capacity building requirements for implementation of IWMP and contributes towards the same.
- To ensure that all stakeholders receive a standard training for implementation of IWMP and receive post training follow up.

- To document the learning derived from the workshops and interactions with rural communities, research and extension organisations, training organisations and organisations involved in funding, monitoring and evaluation.

2.5. Methodology adopted to prepare the Manual

A literature review focussing on capacity building in watershed projects lead to a series of exercises and deliberations with various stakeholders to derive inputs towards the capacity building manual. The Capacity Building Manual documents the process of capacity building developed after a lot of deliberations with the stakeholders in various ways. The manual is based on the following.

- Field visits, interactions with community, women SHGs, Watershed Committee members, watershed development teams, administrative and managerial staff at all levels.
- A workshop with NGOs which have experience of implementing watershed projects and capacity building
- A workshop on capacity building for IWMP which provided a common platform to government and non government organisations involved in implementation, research, extension, capacity building and academics on subjects related to watershed development.
- Governments experience regarding capacity building in implementation of watershed projects under Hariyali and Pre-Hariyali guidelines.
- Training programmes conducted for watershed development teams under IWMP.

A two day workshop on Capacity Building in Integrated Watershed Management Programme was held in Sasan Gir on 9th and 10th September, 2010. Leading research institutions such as Agriculture Universities, Soil and Land Use Survey of India, Geological Survey of India, organisations working for livelihood development such as AKRSP (India), NIFT, VRTI, institutions for training such as DSC, SIRD, organisations with expertise in geo-informatics such as BISAG, representatives from Project Implementation Agencies, State Level Nodal Agency and District Watershed Development Unit, in all twenty two NGOs and government organisations participated in the workshop. After understanding the nature and scope of Integrated Watershed Management Programme, the requirements for capacity building of various stakeholders were discussed. Each organisation discussed how it knowledge pool, experience and infrastructure can be harnessed for IWMP. Next, all the organizations formed groups according to subjects of their relevance and chalked out the modules essential for each stakeholder. Thereafter, the modules were discussed by all the participants and finally a consensus was arrived upon for the capacity building process within IWMP

These exercises focussed on identifying stakeholders, their training needs, identifying trainers based on expertise, infrastructure and mandate of the organization, the timeframe and modules of training. The discussions have also considered the cultural practices, attitude, awareness levels, education and availability of time with respect to rural communities. The output of all these efforts has culminated in the form of a capacity building manual which will provide ready guidance to all the stakeholders. The capacity building manual will be made available to all stakeholders such as District Watershed Development Units, NGOs and Government organisations involved in capacity building programmes, Project Implementation Agencies and Watershed Committees.

3. PROCESS OF CAPACITY BUILDING

It is essential that while designing and conducting a capacity building programme, certain processes are to be followed. A structured and well organized capacity building programme must follow the following process:

- 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

The training programmes can be conducted in-house or can be outsourced to pre-identified institutions. The decision depends upon the type of training to be imparted. The first step in conducting a training programme is identifying the stakeholders; they are well defined later in this section. Then, Training Need Assessment (TNA) is done. TNA provides decision making input regarding whether training is to be conducted in-house or to be outsourced. If the training is to be conducted in-house, training module has to be developed. However, if it is to be outsourced, appropriate institution has to be selected from the list provided in this section. Post- training follow up including evaluation is mandatory irrespective of the way the training programmes are conducted. The process is shown in a simplified flow diagram (no.3) below:

Diagram no. 3. Flow of the capacity building Process:
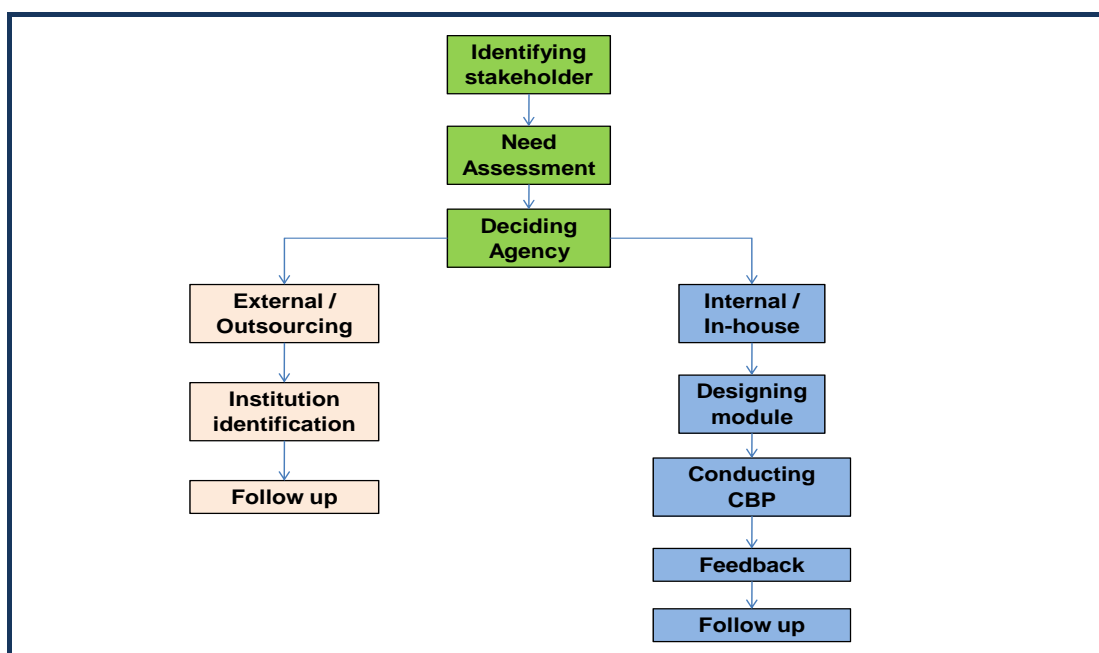
3.1. Identifying stakeholders

Stakeholder is anyone who has an interest in the project. Project stakeholders are individuals and organizations that are actively involved in the project, or whose interests may be affected as a result of project execution or project completion. They may also exert influence over the project's objectives and outcomes. Accordingly, stakeholders can be categorized into three types: primary, secondary and tertiary.

Primary stakeholders are those who both affect the outcome of the project and also be affected by the project. Secondary stakeholders basically affect the outcome of the project but not so much affected by the project. Tertiary stakeholders are those who are affected by the project outcome, but do not affect the project very much.

Training programmes under IWMP are mainly targeted towards the primary stakeholders. Separate training programmes are to be designed and organized for different stakeholders. The list of stakeholders is given in table no. 1:

Table no.1: Stakeholders of the program and the personnel to be trained:

Stakeholder type	Institution	Personnel to be trained
Primary Stakeholders	• National Rainfed Are Authority • Panchayat Raj Institutions (PRIs) • State Level Nodal Agencies (SLNA) • District Watershed development Units (DWDUs) • Project Implementing Agencies (PIAs) • Watershed Committee • User Groups • Self Help Groups (SHGs)	• Professional Experts • Project Managers • Technical Experts • Nodal officers of the PIAs • Multi Disciplinary Team (MDT) members • Watershed Development Team (WDT) members • Administrative staff • Watershed Committee office bearers • Farmers • Land less poor • Cattle owners • Wage labourers • Artisans • SHG members • Rural youth
Secondary stakeholders	• Capacity Building Institutions • Other Line Departments • Technical Support Agencies	• Sarpanch • Other PRI officials
Tertiary stakeholders		• Farmers of nearby villages • Businessmen around the village

3.2. Training Need Assessment

Training Need Assessment is a critical activity before designing the training programme. A kind of test or interview can be conducted with the proposed stakeholder and the results can be used for deciding the way the training is to be done.

Objectives of need Assessment:

1) Deciding whether training programme is to be held in-house or to be outsourced.
2) Determining current skill/knowledge levels
3) Understanding participants psychology and expectations
4) Designing (components, Methods, etc) the training programme

Methods to be used:

- **Observation -** an informal assessment based on observations
- **Focus Group Discussion and/or Interviews -** The advantage of conducting focused group discussions and/or interviews is that one will get qualitative feedback from users.
- **Questionnaire method-** A structured questionnaire can be prepared and be filled up by the proposed participants.

Training Need Assessment results in establishing overall Training Objective.

3.3. Deciding the agency (in-house / outsource)

After conducting the need assessment and analyzing the results it is to be decided whether the training can be held in-house or to be outsourced. The decision depends upon whether GSWMA / DWDU / PIA have the required strength in terms of specialization, experience and resource persons to conduct the training programme effectively. If the required strength is there, it will be conducted in-house; otherwise one of the pre-identified institutions (By GSWMA; list given in Annexure I) is to be selected and be given the task.

Institutes / organizations identified for Capacity Building Training

The Government of Gujarat realized the importance of capacity building of all stakeholders in successful implementation of watershed development and made considerable efforts towards it. Details of training institutes identified and approved by GSWMA has been given in Annexure I.

3.4. Designing a training module

The next step is to design the training module, if it is to be conducted in-house. The design of the training program can be undertaken only when a clear training objective has been produced. The training objective clears what goal has to be achieved by the end of training program i.e. what the trainees are expected to be able to do at the end of their training. Training objectives assist trainers to design the training program. In order to design a training module, a suggestive model is given below in table no3.

Table no.3: A suggestive matrix for designing a training module

Subject	Objective of the Training	Resource Person	Duration	Methodology

3.4.1. Choosing resource persons

In internal training programmes, most of the resource persons may belong to the organization itself, e.g. professional experts from GSWMA, project managers, technical experts from DWDUs, nodal officers of the PIAs, etc. Sometimes, if need be, resource persons from various Governmental or Non Government Organizations, subject experts,   Government representatives, academicians, expert farmers etc. may be invited to contribute in the internal training programmes.

3.4.2. Different Methodologies to choose from:

There are a wide variety of methodologies which can be adopted for conducting the training programmes. The methodology adopted should as far as possible be participatory so that the programme becomes effective. The different methodologies are categorized into the following types:

1. Class room training
   a. Lecture method
   b. Presentation method
   c. Audio-visual method
   d. Brain storming
   e. Group discussion
   f. Games and simulations
   g. Case study
   h. Role play

2. On-field training:
   a. Exposure visits
   b. Demonstrations

3. Workshops
4. Seminars
5. Information, Education and Communication (IEC) techniques

Some of the methodologies are discussed here:

• **Lecture Method** – This method is used to create understanding of a topic or to influence behavior, attitudes through lecture. A lecture can be in printed or oral form. Lecture is telling someone about something. Lecture is given to enhance the knowledge of listener or to give him the theoretical aspect of a topic.

• **Presentation method-** In this method the speaker takes the help of computer power point presentations. It helps in making the terminologies clear to the participants. Some of the diagrams and photographs used in the presentations help in creating a good impression.

• **Audio-Video Presentation** – This method is a visual display of how something works or how to do something. This method is suitable to make the technical things simpler.

• **Brainstorming** - is a group creativity technique designed to generate a large number of ideas for the solution of a problem. Each member of a group has different ideas on a given topic. This method involves giving everyone a chance to express his or her thoughts on the subject. The ground rule of brainstorming is that the more ideas that are generated the better.

Steps in brainstorming –
1. A warm-up session, to expose novice participants to the criticism-free environment.
2. The facilitator presents the problem and gives a further explanation if needed.
3. The facilitator asks the brainstorming group for their ideas.
4. If no ideas are forthcoming, the facilitator suggests a lead to encourage creativity.
5. All participants present their ideas, and the idea collector records them.
6. To ensure clarity, participants may elaborate on their ideas.
7. When time is up, the facilitator organizes the ideas based on the topic goal and encourages discussion.
8. Ideas are categorized.
9. The whole list is reviewed to ensure that everyone understands the ideas.
10. Duplicate ideas and obviously infeasible solutions are removed.

• **Group Discussions** - This method uses a lecturer to provide the learners with context that is supported, elaborated, explains, or expanded on through interactions both among the trainees and between the trainer and the trainees. The interaction and the communication between these two make it much more effective and powerful than the lecture method.

• **Games and Simulation** - Games and Simulations are structured and sometimes unstructured, that are usually played for enjoyment sometimes are used for training purposes as an educational tool. Training games and simulations are different from work as they are designed to reproduce or simulate events, circumstances, processes that take place in trainees' job.

A Training Game is defined as spirited activity or exercise in which trainees compete with each other according to the defined set of rules.

Simulation is creating computer versions of real-life games. Simulation is about imitating or making judgment or opining how events might occur in a real situation.

- **Case Study** - try to simulate decision making situation that trainees may find at their work place. It reflects the situations and complex problems faced by managers, staff, HR, CEO, etc. The objective of the case study method is to get trainees to apply known concepts and ideologies and ascertain new ones. The case study method emphasize on approach to see a particular problem rather than a solution. Their solutions are not as important as the understanding of advantages and disadvantages.

- **Role Play** - is a simulation in which each participant is given a role to play. Trainees are given with some information related to description of the role, concerns, objectives, responsibilities, emotions, etc. Then, a general description of the situation, and the problem that each one of them faces, is given.

- **Exposure Visits** - Exposure visits are organized so that participants living in one place can visit another location to observe and learn from the other community's development activities. The purpose of exposure visits is to learn from the experience of others outside one's own community, by direct interaction and observations. Participating communities may be a short distance from one another, or in some cases, in different regions or even different countries.

How to use exposure visit

- Think carefully about how participants are chosen. They should represent the whole community and be willing to share their new knowledge when they return from the exposure visit.
- Ensure that the visiting and host groups are both clear about the purpose of the visit.
- Prepare a programme for the visit. This makes it efficient and cost effective with regard to transport, accommodation and other expenses.
- Allow adequate time for discussions and demonstrations where necessary.
- If the two communities speak a different language, a translator should be arranged in advance.
- Photographs, video or audio tape can be used to record the experience.
- Consider the possibility of reciprocal visits or longer learning tours involving visits to various locations.

Exposure visits have to be followed by a follow up meeting in which:
- The visiting participants share their experience with the non-participants in the village
- The participants spell out the learning from the visit
- The whole group prepares an Action Plan for implementing the learning in their village

- **Different IEC Activities**

Electronic Media – Doordarshan, AIR, Internet, Dish TV, etc are available Medias, which could be used for educating the community

Print Media - newspapers, posters, banners, leaflets, handbills, brochures.

Health Melas : District officers to select venue and time as per suitability and need for the health melas for organizing health camps/melas

Community newspaper/newsletter: A monthly newspaper/newsletter could be brought out in local language highlighting the watershed activities. The photographs of the community group meetings, discussions etc. could be pasted on a chart paper briefly describing the purpose of the activity, date, time, venue, major decisions taken etc. Such newspapers/newsletter could be placed at the venue of the community meetings. This would give the community members a sense of ownership and help to connect with the programme better.

Video shows: By showing docudramas during the meetings at the block/village/Panchayat level either using electronic or folk media awareness about the watershed programme could be generated and then ask for their feedback i.e their perception/reception of the message and misconceptions to be corrected.

Folk Media – puppetry, nukkad natak, magic shows, folk dances etc.

Outdoor/Reminder Medias - Hoardings, wall paintings, balloons, tin plates, bus panels, etc. The size has to be determined by the implementing office within the overall unit cost.

Hoardings, wall paintings, kiosks, tin plates, neon signs to be erected/painted/placed at the following places:

- Venue of the community Group Meeting of the local Panchayat
- Office of the watershed committee
- Public Health Centre, School, Haat /Mandis where people gather

3.5. Conducting the programme

When it comes to conducting the training programme, the role of the training coordinator becomes very crucial. He/she has to anchor, coordinate and guide all the sessions during the programme. The coordinator has to ensure that the sessions are interactive and participatory; and mutual learning takes place.

The coordinator is responsible for creating a learning environment. A learning environment means making the participants comfortable physically and mentally. The participants and the coordinator have to know clearly each other's expectations.

Appropriate logistics have to be in place. Reading material, teaching material, food, accommodation facility, transport facility, etc. have to be in their places at appropriate times.

3.6. Feedback

Feedback is an integral part of a training programme. It helps in knowing whether the programme was liked by the participants. It also enables the training coordinator to identify the limitations in the programme management, which can be improved upon in future such programmes.

To know the honest feedback, expectations of the participants have to be collected at the beginning of the training program. At the end of the programme feedback about the program through proper questionnaires must be collected and matched with the expectations. The task then is to summarize the feedback and plan for necessary action to be taken to improve the program next time. A sample feedback format (questionnaire) is given below.

SAMPLE FEEDBACK QUESTIONNAIRE

Program Title:_____Venue:_____

Starting Date:_____Duration :_____

I. Ratings by participants on the scale of 10.

10	9		8	7	6		5	4	3		2	1	0

←--------------------Tick mark in relevant boxes-------------------→

1. Structure of course   Very well Planned   Well Planned   Less Planned   No Planning

2. Course Material   Very Relevant   Relevant   Less Relevant   Not Relevant

3. Teaching Faculty   Very Effective   Effective   Less Effective   Not Effective

4. Practical session   Very Useful   Useful   Useful   Not Useful

5. Food Quality/Logging Facilities
  (if applicable)   Excellent   Very Good   Just OK   Poor

6. Interaction with Faculty   Excellent   Very Good   Just OK   Poor

7. Usefulness of Course   Very Useful   Useful   Useful   Not Useful

8. Overall impression   Very beneficial   Beneficial   Less Beneficial   No Beneficial

II Which topic of the Course You found :   Most Useful   Least Useful

            _____   _____

            _____   _____

III Your suggestions /Comments for further improvements

3.7. Follow up

'Follow up' means reviewing, evaluating and taking appropriate actions to make the impact of the training programme significant and sustainable. Resource Institutions or the training coordinator has to ensure that the training programs lead to expected outcome.

Some of the important steps of follow up are:

- Post-training evaluation
- Visiting field areas to observe participants at work
- Modifying training programmes
- On-field guidance
- Identifying new training needs

For post-training evaluation a customized questionnaire has to be developed to evaluate the difference in learning between pre-training and post-training levels of information, skills and knowledge.

Another way of following up is visiting the participants at work. This method is used to observe the participants when they are on the field. Interviews should be conducted with the participants, which include:

- Questions related to the subject matter
- Request job-related examples and files that piggyback on the training material.
- Solicit feedback
- Identify topics that need more emphasis during future training programmes

Ideally, two follow-up sessions should take place with the participants after training:

- Within a week after the training, ask for any immediate feedback they have received from employees.
- Check back a month after the training to find out whether the training has addressed the job needs identified prior to training. Also ask what other needs could be met.

The learning from the evaluation of the training programme and the field visits has to be used for improving the training module for the future programmes. This learning also would be used for identifying new training needs. If necessary, required on-field assistance should be provided to improve application of the knowledge gained during the training programme.

4. COST NORMS

As is evident from the above discussions, training programmes and workshops would be conducted both in house or can be outsourced. The cost norms of such programmes are detailed below:

All the figures of expenditure per participant per day has been given keeping in view the batch size of 30 participants with four sessions in a day. Accommodation cost is applicable only in case of residential programmes. Transport cost is applicable only if there is an exposure visit.

- **Cost norms for workshops conducted by GSWMA/DWDU/PIA**

Sl No.	Budget head	Unit	GSWMA (Rs.)	DWDU (Rs.)	PIA (Rs.)
1	Food	Per person/day	200	150	150
2	Accommodation	Per person/day	350	250	200
3	Venue	Per person/day	200	150	150
4	Training Material	Per person/day	150	100	50
5	Resource Person	Per person/day	100	75	50
6	**Sub-total**	**Per person/day**	**1000**	**725**	**600**
7	Transport for exposure visit	Car: per km	10	10	10
8		Mini bus: per km	15	15	15
9		Big bus: per km	20	20	20

The 9th Governing Body of GSWMA held on 8th December, 2011 sanctioned the following Cost norms for Training Programmes, Seminars and Workshops conducted by GSWMA for Class-I officers & Grade-A

Sl No.	Budget head	Unit	GSWMA (Rs.)
1	Food	Per person/day	400
2	Accommodation	Per person/day	1000
3	Venue	Per person/day	250
4	Training Material	Per person/day	150
5	Resource Person	Per person/day	200
6	**Sub-total**	**Per person/day**	**2000**
7	Transport	Small Car: per km	6
		Big car: per km	10
		Mini bus: per km	18
		Big bus: per km	28

Cost norms for Capacity Building Programmes outsourced:

- GSWMA would have separate understanding with each of the following institutes to conduct time to time training programmes for different stakeholders; cost of these programmes would be decided at the time the programme is planned.
    - o Central Ground Water Board (CGWB)
    - o Soil and Land Use Survey of India (SLUSI)
    - o Geological Survey of India (GSI)
    - o Bhaskaracharya Institute of Space Applications and Geo-informatics (BISAG)
    - o Research Foundation (Deptt. Of Forests)
    - o International Water Management Institute (IWMI)
    - o Geer Foundation

- Government of India sponsors a number of training programmes in certain institutions for the functionaries of the IWMP. GSWMA would send its participants to the workshops and training programmes conducted by the same institutes. Two of such institutions are identified by GSWMA:
    - Institute of Rural Management Anand (IRMA)
    - National Institute of Rural Development (NIRD)

- The following institutions would provide handicraft based livelihood promotion and enterprise promotion support to the village communities and officials / professionals engaged in the same. The cost norms for these institutions would depend upon the kind of programme designed from time to time.
    - National Institute of Design (NID)
    - National Institute of Fashion Technology (NIFT)
    - Entrepreneurship Development Institute of India (EDII)

- Agriculture Universities would provide training programmes in agriculture based livelihood promotion; the cost norms are given below:

Sl No	Budget head	Unit	For officials	Exposure visit	For villagers	Exposure visit
1	Food	Per person/day	200	250	150	200
2	Accommodation	Per person/day	200	250	100	200
3	Venue	Per person/day	200		100	
4	Training Material	Per person/day	100	25	50	25
5	Resource Person	Per person/day	100	100	100	100
6	Transport	Per person/day		200		200
7	**Sub-total**	**Per person/day**	**800**	**825**	**500**	**725**

- Capacity Building Programme conducted for MDTs / WDTs (by the institutes like SIRD, DSC, Sadguru, BAIF, FES, CSWCRTI, AKRSP, SRISTI (Honey Bee))

Sl. No	Particular	Class room Per Parti/ Day	Exposure Per Parti/ Day
1	Training Venue	100	
2	Food	200	250
3	Accommodation	200	250
4	Resource Person (for per day)	67	67
5	Training Material	75	20
6	Transport		200
7	Sub- Total	642	787
8	Overheads 10%	58	78
9	**Grand Total**	**700**	**865**

- Capacity BuildingProgrammes for UG Memebers/SHG Members/Community Members: (by institures like SIRD, DSC, Sadguru, BAIF, FES, VRTI, AKRSP, KVKs)

Sl. No	Particular	Class room Per Parti/ Day	Exposure Per Parti/ Day
1	Training Venue	100	
2	Food Expenditure	150	200
3	Stay	100	200
4	Resource Person (4 per day)	54	54
5	Training Material	50	25
6	Transport		200
7	Sub- Total	454	679
8	Overheads 10%	46	71
9	**Grand Total**	**500**	**750**

* In case of KVKs, cost norms for the training programmes for MDTs and WDTs will also be as above. KVKs being Government sponsored Agencies, costs in certain components may be reduced if the concerned KVK agrees.

5. CAPACITY BUILDING PROGRAMME IN DIFFERENT PHASES

Considerable stress would be given on capacity building as a crucial component for achieving the desired results. This would be a continuous process enabling functionaries to enhance their knowledge and skills and develop the correct orientation and perspectives thereby becoming more effective in performing their roles and responsibilities. With current trends and advances in information technology and remote sensing, it is possible to acquire detailed information about the various field level characteristics of any area or region. Thus, the endeavour would be to build in strong technology inputs into the new vision of watershed programmes. Developing capacity building action plans for actively support capacity building programmes at all levels is very important for successful implementation of integrated watershed management programmes.

The duration of different phases of capacity building programme may be spread over 3 different phases as decided by the Nodal Ministry and as given below:

Phase	Phase name	Duration
I	Preparatory Phase	1-2 years
II	Watershed Works Phase	2-3 years
III	Consolidation and Withdrawal Phase	1-2 years

The major objective of this phase is to build appropriate mechanisms for adoption of participatory approach and empowerment of local institutions (WC, SHG, and UG). WDT will assume a facilitating role during this phase. In this phase, the main activities will include taking up entry point activities to establish credibility of the Watershed Development Team (WDT) and create a rapport with the village community.

DPR preparation is a crucial activity at the district level, which is to be facilitated by the WDT for an identified project area. The technical inputs in the form of resource maps and cadastral maps have to be made available at local level. It is necessary to capture the entire database of DPR in a systematic manner as a structured document at the initial stage itself. DPR preparation requires a strong PRA exercise and comprehensive beneficiary level database separately for private land and community land development with linkages to the cadastral database. This will facilitate spatial depiction of the action plan. The DPR should include basic Information on Watershed including rainfall, temperature, location including geographical coordinates, topography, hydrology, hydrogeology, soils, forests, demographic features, ethnographic details of communities, land-use pattern, major crops & their productivity, irrigation, livestock, socio-economic status etc.

Watershed Works Phase (Phase – II)

Watershed Works Phase

This phase is the heart of the programme in which the DPR will be implemented. Some of the important activities to be included in this phase are:

(i)   Ridge Area Treatment: All activities required to restore the health of the catchment area by reducing the volume and velocity of surface run-off, including regeneration of vegetative cover in forest and common land, afforestation, staggered trenching, contour and graded bunding, bench terracing etc.

(ii)   Drainage line treatment with a combination of vegetative and engineering structures, such as earthen checks, brushwood checks, gully plugs, loose boulder checks, gabion structures, underground dykes etc.

(iii) Development of water harvesting structures such as low-cost farm ponds, nalla bunds, check-dams, percolation tanks and ground water recharge through wells, bore wells and other measures.

(iv)   Nursery rising for fodder, fuel, timber and horticultural species. As far as possible local species may be given priority.

(v)   Land Development including in-situ soil and moisture conservation and drainage management measures like field bunds, contour and graded bunds fortified with plantation, bench terracing in hilly terrain etc.

(vi)   Crop demonstrations for popularizing new crops/varieties, water saving technologies such as drip irrigation or innovative management practices. As far as possible varieties based on the local germplasm may be promoted.

(vii) Pasture development, sericulture, bee keeping, back yard poultry, small ruminant, other livestocks and other micro-enterprises.

(viii) Veterinary services for livestock and other livestock improvement measures

(ix)   Fisheries development in village ponds/tanks, farm ponds etc.

(x)   Promotion and propagation of non-conventional energy saving devices, energy conservation measures, bio fuel plantations etc.

Consolidation and Withdrawal Phase (Phase – III)

Consolidation and Withdrawal Phase

In this phase the resources augmented and economic plans developed in Phase II are made the foundation to create new nature-based, sustainable livelihoods and raise productivity levels.

The main objectives under this phase are:
a)   Consolidation and completion of various works.
b)   Building the capacity of the community based organizations to carry out the new agenda items during post project period.
c)   Sustainable management of (developed) natural resources and
d)   Up-scaling of successful experiences regarding farm production systems / off-farm livelihoods.

An indicative list of various activities during this phase is given below:
 (i)   Consolidation of various works
     a)   Preparation of project completion report with details about status of each intervention;
     b)   Documentation of successful experiences as well as lessons learnt for future use.

(ii) Management of developed natural resources
   a) Improving the sustainability of various interventions under the project;
   b) Formal allocation of users right over common property resources (CPRs);
   c) Collection of user charges for CPRs;
   d) Repair, maintenance and protection of CPRs;
   e) Sustainable utilization of developed natural resources;
   f) Involvement of gram panchayat / corresponding institutions (as a governance body) in addressing the above aspects.

3. Intensification of farm production systems/off-farm livelihoods
   a) Up scaling of successful experiences related to above aspects through revolving fund under the project as well as credit and technical support from external institutions;
   b) Promotion of agro-processing, marketing arrangements of produce and similar off – farm and informal sector enterprises.
   c) Farmers may also be encouraged to develop non pesticide management, low cost organic inputs, seed farms and links with wider markets to fetch competitive price.

4 Project management related aspects
   a) Participatory planning, implementation and monitoring of activities to be carried out during consolidation phase;
   b) Terminal evaluation of project as per the expected outcomes.

The classification of activities in the three phases must not be understood in a rigid manner. Many of the Phase III activities may even start in many watersheds during Phase I and/or II itself. Phases of activities need to have an internal logic and integrity that must flow through the entire action plan.

6. TRAINING PROGRAMMES IDENTIFIED FOR DIFFERENT STAKEHOLDERS

As per the methodology given in chapter 2.5 of this manual, The training matrix has been developed to facilitate the project implementing agencies, nodal agencies and other concerned agencies/organizations could play a facilitating role to either conduct the relevant training programme themselves or get in conducted through eligible and competent training institutes.

6.1. Training Programme on Scientific Planning, Survey and Technical Functions

Sr. No.	Module (Name of training)	Stakeholder	Duration	Institutes	Phase	Topics
1	Participatory net planning	VWCs, WDTs, PIAs	1 week	Sadguru, FES, BAIF, (NGOs)	I phase	Participatory net planning concept, land capability classification and proposed land use planning
2	PRA tools and techniques	VWCs, WDTs, PIAs	1 week	Sadguru, FES, BAIF, (NGOs)	I phase	PRA concepts, process, tools and techniques.
3	DPR preparation	WDTs, PIAs	1 week	Sadguru, FES, BAIF, (NGOs), CSWCRTI	I phase	Collecting field data, Analysis, Preparation of proposal
4	Resource survey	WDT, MDT, PIA, NGO	1 week	SLUSI / GUIDE / BISAG, CSWCRTI, CGWB	I Phase	Soil survey, Engg. Survey, GW survey, Socio-economic survey, Vegetation survey.
5	Geo-informatics application for planning	WDT, MDT, PIA, NGO	2 week	BISAG, / JAU, / CSWCRTI, CGWB / GSI	I Phase	Concept of remote sensing and GIS, Digital image processing, Land use land cover classification, preparation of thematic maps, Interpretation and of planning from Geo-Information data.
6	Soil moisture conservation planning and execution	PIA, WDT, MDT	2 weeks	CSWCRTI, AUs, FES	I phase	Soil moisture measurement, SMC in arable and non-arable lands, SMC planning
7	Watershed monitoring & Evaluation	PIA, WDT, MDT	2 weeks	BISAG, AUs, CSWCRTI, FES	II Phase	Preparation of thematic maps, Increase in water resources, vegetative resources, ecological and environmental benefits, Analysis of cost and benefits

6.2. Training Programme for Agriculture & allied activities

Agriculture and Production System						
Sr. No.	Module	Stake holder	Duration	Institute	Phase	Broad Topics
1	Agricultural need assessment	WDT	5 days	AU/KVK	Phase I	Different methods of needs assessment
						Basic pillars of PRA
						PRA tools and techniques
2	Pre-seasonal trainings	WDT	2 days	AU/KVK	All	Agronomic practices of different crops
						Newly recommended technologies for the crops
3	Training and demonstration methods	WDT	3 days	AUs/KVK	Phase II	Training methods
						Types of demonstrations
						Use of audio visual aids in training

4	Use of resource conservation technologies	WDT	5 days	AUs/ KVK	Phase I	Low cost echnologies
						Seed treatment
						Use of bio-fertilizers
						Vegetative bunding
5	Enhancement of water productivity/water use efficiency	WDT	3 days	AUs/ KVK	Phase I	Conservation
						Selection of crops
						Land configuration
						Critical stages
						Micro irrigation
						Mulching
						Low tunnel
						Low cost green house
6	Arid horticulture	WDT	3days	AUs/KVK	Phase II	Selection of tree species
						Insitu plantation of fruit trees
7	Floriculture	VWC/ UGs/ SHGS	3 days	AUs/KVK	Phase II	Cultivation practices f flower crops
						Post harvest management flowers
8	Cultivation of medicinal and aromatic plants	VWC/ UGs/ SHGS	3 days	AUs/KVK	Phase II	Cultivation practices of medicinal and aromatic plants
9	Organic farming	WDT	5 days	AUs/ KVKs	Phase II	Tools and techniques of organic farming
10	Protected cultivation	WDT	3 days	AUs/ KVKs	Phase II	Low cost green house
						Selection of crops for protected cultivation
11	Integrated pest management	WDT	3 days	AUs/KVKs	Phase I	Concept of IPM
						Use of bio agents and bio pesticides in pest management
						Use of different methods of pest management
12	Integrated nutrient management	WDT	3 days	AUs/KVKs	Phase I	Concept, component, method
13	Nursery management of horticultural crops	WDT	5 days	AUs/KVKs	PhaseII	Methods of seed bed preparation
						Grafting methods for horticultural crops
14	Kitchen gardening/ nutritional gardening	VWC/ UGs/ SHGS	2 days	KVKs	All	Importance of kitchen gardening
15	Crop production technologies	VWC/ UGs/ SHGS	2 days	KVKs	All	Crop production technologies
16	Management of insect pest and diseases of crops	VWC/ UGs/ SHGS	2 days	KVKs	Phase II	Management of insect pest and disease of crops
17	Vegetable growing		2days	AUs	Phase II	Cultivation practices of vegetable crops

18	Use of mulching, low energy drip, low tunnels	VWC/ UGs/ SHGS	2days	KVKs	Phase II	Use of mulching, low energy drip, low tunnels
19	In situ plantation of fruit trees/ wadi yojna	VWC/ UGs/ SHGS	2days	KVKs	Phase II	Plantation method
20	Production of compost/vermicompost	VWC/ UGs/ SHGS	2days	KVKs	Phase II	Composting methods
						Vemicomposting
21	Use of ICT in agriculture	All	2 days	KVKs	All	ICT
22	Conventional energy resource management	WDT /VWC/ UGs/ SHGS	2 days	KVKs	Phase II	Bio energy, wind energy and solar energy
23	Seed production technologies	VWC/ UGs/ SHGS	2 days	AUs/ KVKs	Phase II	Seed production technologies

6.3. Training Programme on other Livelihoods and Enterprise Promotion

S. No	Module (Name of Training)	Beneficiary/St akeholder	Duration	Institute	Phase	Topics
1	Training of Master Artisans/ Training of Trainers	Artisans / Craftsmen	4 weeks	NIFT/NID	II	Handicraft
	Skill up gradation workshop of Artisans	Artisans / Craftsmen	12 – 16 weeks			Remarks: for semi-skilled artisans
	Prototype Development	Artisans / Craftsmen	4 weeks			
		Total	6 Months			
2	Design Development/ Intervention	Artisans, Master Artisans	4 weeks	NIFT/NID	II	Handicraft
	Workshop					Remarks: for semi skilled /skilled artisans
3	Product Development	Artisans, Master Artisans	4 – 8 Weeks	NIFT/NID	II	Handicraft
						Remarks: For Skilled Trainers and Master craftsmen
4	Operators/Supervisors Training	Rural Youth	12 weeks	NIFT	II	Garment Stitching (Residential Training)
5	Craft Specific Training	Artisans & Craftsmen	2 weeks to 4 weeks	NIFT/NID	II	Wire & Bead Jewellery / Leather /Jute / Terracotta /Bamboo /Embroidery/Dyeing and Printing Techniques
6	IT Training	Artisans	4 weeks	NIFT	II	Basic Computer Applications /
7	Product Branding	Federations	1 week	EDI/IIM/IR MA/IIFM	II	GI Registration, Packaging / Marketing / Intellectual Property rights
8	Value addition, PHT	WDT	3 days	SAUs/KVKs	II	Grading and packaging
	And market linking					Preservation of Agril. Produce
						Market linking
9	Poultry / goat/sheep/ fisheries management	VWC/ UGs/ SHGS	2days	KVKs/BAIF	II	Poultry / goat/sheep/ fisheries management
10	Training on Market led extension management	WDT	2 days	AUs/KVKs	II	Marketing strategies
						Market oriented crop production strategies
						Market linkage
11	Entrepreneurship development	State and district officials	5 days	EDII	I	Different entrepreneurship skills
12	Enterprise development	All	3 days	KVKs, EDII	I,II,III	Different agriculturall enterprises
13	Market intervention linkages	MDT/PIA/WD T/WC/SHG	5	BAIF/DSC/ AKRSP/SA DGURU	I,II,III	-orientation to market
						- Business plan
						-Raw material sources and selection

S. No.	Module and name of trainings	Stake holders	Duration	Institute	Phase	Topics
14	Product development and management	MDT/PIA/WDT/SHG	5	DSC/AKRSP/ SADGURU	I,II,III	-physibility and viability analysis
						-Demand and supply scenario
						-local skill identification
						-break even points
						-Risk mitigation
						-Forward and back ward linkages
15	Food Processing	SHG and UG members	2 to 4 weeks	EDII/Agriculture universities / KVKs	II	Different food processing techniques

6.4. Training Programme on Project Management, Behavioural Aspects, Monitoring and Evaluation

S. No.	Module and name of trainings	Stake holders	Duration	Institute	Phase	Topics
Behavioral aspects and IEC						
1	Effective communication and use of ICT material	MDT/PIA/WDT	6	DSC/BAIF/ AKRSP/ SIRD/CEE	I,II	- Importance
						-Methods
						-Different aids
2	Gender sensitization and Benefits sharing	MDT/PIA/WDT	6	BAIF/DSC/ AKRSP/ SADGURU	I,II	- Historical Aspect
						-Integral part of family
						-gender and sex difference
						-ways of participations
3	Leadership development and team building; Conflict management	WC/WDT	5	BAIF/DSC/ AKRSP/ SADGURU	I,II	- Personality development
						-Types of diff leaderships.
						-Role of leaders
						-An ideal leader
						-Pyramids of leaders
4	TOT	WDT/MDT	6	BAIF/DSC/ AKRSP/ SADGURU/ SIRD	I	-Use of Pedagogy
						-Principles of adult learning
						-methods of trainings
						-pre/ during/post activities.
						-Training attitudes
5	Institution building/Social dynamics	WC/WDT/SHG	6	BAIF/DSC/ AKRSP/ SADGURU/ FES	I,II,III	-Types, concepts, role and responsibilities structures.
						-methods of social mobilization.
						-By laws
						Importance and sustainability plan
6	Women participation	WC/WDT/SHG	4	BAIF/DSC/ AKRSP/ SADGURU/ SIRD	I,II	-group formation and strengthening
						-Importance
						-stages and steps of increased participation
7	Apex federation(SHG,UG,VWC,)	WC/WDT/SHG	4	BAIF/DSC/ AKRSP/ SADGURU/ SIRD	I,II	-Role of structures
						-by laws
						-Rules and regulations
						-linkages

						Project Management
8	MIS related training	MDT/PIA/WDT/WC	3	BAIF/DSC/ AKRSP/ SADGURU/ FES	I,II,III	-Understanding about decided formats.
						-Data entry
						-report generation
						-review and reporting
9	Social auditing and gender budgeting	MDT/PIA/WDT/WC/UG/SHG	3	BAIF/DSC/ AKRSP/ SADGURU/ SIRD	I,II,III	-Importance of audit
						-methods of social audit
						- importance and understanding on gender budget
10	Market intervention linkages	MDT/PIA/WDT/WC/SHG	5	BAIF/DSC/ AKRSP/ SADGURU / EDI	I,II,III	-orientation to market
						- Business plan
						-Raw material sources and selection
11	Product development and management	MDT/PIA/WDT/SHG	5	DSC/AKRSP/ SADGURU	I,II,III	-physibility and viability analysis
						-Demand and supply scenario
						-local skill identification
						-break even points
						-Risk mitigation
						-Forward and back ward linkages
12	Sustainability plan/post project management.	MDT/PIA/WDT/WC	6	BAIF/DSC/ AKRSP/ SADGURU/ FES	II,III	-importance
						-maintenance mechanism
						-Role of diff stake holders
13	Quality parameters and management	MDT/PIA/WDT/WC	3	BAIF/DSC/ AKRSP/ SADGURU	I,II,III	-understanding and identification of indicators
						-System and procedures
						-Quality endurance through diff methods.
14	Record and account keeping	MDT/PIA/WDT/WC	3	BAIF/DSC/ AKRSP/ SADGURU	I,II,III	-Analysis of budget and rolling of budget
						-edifications of proper person
						-Basic of accounts
						Types of various books
15	Leveraging of Govt schemes (convergence)	MDT/PIA/WDT/WC	4	BAIF/DSC/ AKRSP/ SADGURU	I,II,III	-Formation of common platform and participatory planning.
16	MIS, Monitoring, Evaluation and Impact Assessment of watershed	SLNA and DWDU officials and PIA personnel	5	IRMA	I, II	- Understanding Integrated Watershed Management
						- Project management (using LFA)
						- Participatory Net Planning
						- Role of ICT in Watershed Manahement
						- MIS and Monitoring of watershed
						- GIS-enabled web based monitoring system
						- Learning process and ABCD-based approaches

17	Monitoring, Management, and Governance of Watershed	SLNA and DWDU officials and PIA personnel		5	IRMA	I,II	- Measuring the sustainable livelihoods
							- Stakeholders' participation in a watershed & livelihood enhancements
							- Learning process and ABCD-based approaches to livelihood enhancement
							- Lessons from successful livelihood interventions
							- Business plan formulation & marketing for livelihood enhancements
							- Governance and institutional interface
18	Livelihood Enhancements and Collective Enterprise Development in a Watershed	SLNA and DWDU officials and PIA personnel		5	IRMA	I,II	- Implementing watershed projects in various agro-climatic zones
							- Livelihoods and life support systems in the context of watershed
							- Understanding livelihoods and livelihood enhancement: an appreciative cycle approach
							- Approaches to livelihood enhancements
							- Design of collective enterprises for sustainable livelihoods
							- Measuring the sustainable livelihoods
							- Appreciative inquiry
16	LFA	MDT/PIA/WDT/WC		3	BAIF/DSC/ AKRSP/ SADGURU/ FES	I,II,III	-Identification of problem
							-activities sequence
							-pick work time
							-formation of problem tree
17	Concurrent monitoring	MDT/PIA/WDT		3	BAIF/DSC/ AKRSP/ SADGURU/ FES	I,II,III	-Monitoring tools
							-Data analysis
							-Tier system of monitoring
18	Participatory monitoring methodology/ systems	MDT/PIA/WDT/WC		4	BAIF/DSC/ AKRSP/ SADGURU/ FES	I,II,III	-Cross learning and experience sharing
							-understanding on Tools and format
							-monitoring indicators and utilization methods.
19	Benefit sharing (equity and equality)	MDT/PIA/WDT/WC		4	BAIF/DSC/ AKRSP/ SADGURU	I,II,III	-sensitization
							-need assessment and planning
							-mainstream activities.

7. CONCLUSION

Capacity building done appropriately can go a long way in sustaining the efforts made in Watershed Development Programmes (WDPs). Without adequate training inputs, the workforce may achieve short term objectives, but the long term objectives would not be achieved. This effort at standardizing capacity building programme across the state in IWMP will be successful only if all the DWDUs and PIAs make an honest effort at following the guidelines and develop an effective strategy.

This manual is prepared to guide training programmes in Gujarat under Integrated Watershed Management Programme (IWMP). GSWMA, all the DWDUs and all the PIAs have to follow this manual for conducting their respective training programmes. Minor changes in procedures mentioned in the manual can be done at DWDU level; but major changes should be done with the approval of the GSWMA.

This manual is specifically useful for:

- Establishing procedures for capacity building
- Identify institutions for capacity building
- Designing training modules
- To design feedback system and follow-up mechanism for the training programmes
- To follow cost norms

The different norms may be modified from time to time; the same will be intimated to all the DWDUs, who in turn will intimate the PIAs.

Annexure-1: Details of Training Institutes

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 distrcts	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	Gujarat

Annexure-2: Finalized Training Programmes

Out of the training programmes listed above, GSWMA has zeroed in on the following sequence of programmes for each batch (sanction year) of projects.

1st Six Months:

Sr. No.	Name of the Training Programme	Trainee	Duration (days)	CB Institution
1	Orientation workshop	MDT / WDT- All **(including Accountants, MIS, SA, DEO)**	1	DWDU
2	**Basic Training:**			
	Watershed concepts, livelihood enhancement through watershed development and common guidelines	MDT / WDT- All **(including Accountants, MIS, SA, DEO)**	2(1+1)	AKRSP(I), NM Sadguru, DSC, BAIF, FES, SIRD
	Behavioural Aspects- Participation, Gender, Leadership, Team Building, Conflict Management		1	
	Institution building/Social dynamics		1	
	DPR Preparation (Base Line survey, PRA, PNP, LFA)		6(4+2)	AKRSP(I), NM Sadguru, DSC, BAIF, FES, SIRD
	Micro- Finance and SHG concept		1	
	Micro Enterprise Development		1	
3	Application of GIS and GPS under IWMP	MDT / WDT- All **(including Accountants, MIS, SA, DEO)**	1	BISAG
4	Record and account keeping	MDT/WDT- Accounts	5	AKRSP(I), NM Sadguru, DSC, BAIF, FES, SIRD
5	Orientation- workshop for preparatory phase	WC- President, Secy; SHG leader	1	DWDU or PIA or Assigned Capacity Building Institutions
6	IWMP and New Watershed Common Guidelines; Soil moisture conservation planning and execution	WC- President, Secy	3(2+1)	DWDU or PIA or Assigned Capacity Building Institutions
7	Watershed concept; Micro- Finance and SHG concept	SHG- President, Secy	2(1+1)	DWDU or PIA or Assigned Capacity Building Institutions

2nd Six Months:

Sr. No.	Name of the Training Programme	Trainee	Duration (days)	CB Institution
1	Behavioural Aspects- Participation, Equity, Gender, Leadership, Team Building, Conflict Management, etc	MDT/WDT- All **(excluding Accountants, MIS, SA, DEO)**	3	AKRSP(I), NM Sadguru, DSC, BAIF, FES, SIRD
	Effective communication and IEC		1	

Sr. No.	Name of the Training Programme	Trainee	Duration (days)	CB Institution
	Monitoring, Evaluation, Social Audit		1	
2	MIS training	MDT/WDT- All	1	GSWMA
3	Soil moisture conservation planning and execution	MDT/WDT- Engineer, Surveyor	6 (5+1)	CSWCRTI
4	Agricultural need assessment	MDT/WDT- Agriculture & Community Mobilizer	1	KVKs/ AUs
	Training and demonstration methods		1	
	New production Techniques and water use efficiency in agriculture, Post-Harvest Technology		1	
	Agro-forestry, Horticulture, Floriculture, Medicinal & Aromatic Plantation , Organic farming, Integrated Pest Management		2(1+1)	
	Animal Husbandry		1	
5	Micro-Finance and SHG concept	MDT/WDT- Agriculture & Community Mobilizer	3(2+1)	AKRSP(I), NM Sadguru, DSC, BAIF, FES, SIRD
	Micro-enterprise development		3(2+1)	
6	Record and account keeping	WC- Secy	2	DWDU or PIA or Assigned Capacity Building Institutions
7	Orientation- Guidelines; Activities; Responsibilities	WC Members	2(1+1)	PIA (WDT)
8	Watershed concept; Micro- Finance and SHG concept	SHG members	2(1+1)	PIA (WDT) / KVKs

3rd Six Months:

Sr. No.	Name of the Training Programme	Trainee	Duration (days)	CB Institution
1	Orientation- workshop for works phase	WC- President, Secy; SHG leader	1	DWDU or PIA or Assigned Capacity Building Institutions
2	Training of Trainers (ToT)	MDT / WDT- All **(excluding Accountants, MIS, SA, DEO)**	6 (5+1)	AKRSP(I), NM Sadguru, DSC, BAIF, FES, SIRD
3	Soil moisture conservation planning and execution; Livelihoods (agriculture, horticulture, animal husbandry, etc)	WC Members	2(1+1)	PIA (WDT)
4	Nursery raising, Vermi-compost techniques and Fodder production	SHG members	2(1+1)	PIA (WDT) / KVKs

Annexure-3: Contents of Training Programmes

Sr. No.	Subject	Content
1	**Basic Training Course**	
	Watershed concepts, livelihood enhancement through watershed development; common guidelines	- Livelihood concepts - Watershed concepts - Watershed for livelihood enhancement - Evolution of watershed approach - Provisions of common guidelines - Participation - Equity – gender - Equity- class and caste - Governance- Social audit/ transparency, accountability - Gujarat Govt. circulars - New Scientific and Participatory Approach in Gujarat
	Guidelines of GSWMA	- Operational Guidelines - Human Resource Manual - Technical Manual - Capacity Building Manual - Livelihood Manual
	Institution building/Social dynamics	- Social and Power dynamics in community - Need and objectives, different types of institutions in community - roles, structures of different types of institutions in WSD - Linkages b/w different VIs - Systems and practices - Methods of social mobilization (including skills of facilitator) - Governance- Social audit/ transparency, accountability - Sustainability factors(norms of good VIs, convergence –post project management)
	Micro- Finance and SHG concept	- Concept of poverty and vulnerability - Concept, history and importance of micro finance in the context of livelihood enhancement - Role/activities of SHG in WSD - Modalities, rules and regulation - Mode of operation - Planning in MF- linkages with bank and other institutions
	Micro Enterprise Development	- livelihood activities under IWMP - concept of micro and small enterprises - forms of organizations - business opportunity guidance (including business plan preparation) * - Forward backward linkages - Sustainability factors
	DPR Preparation	- What, why, how of DPR - Baseline survey methods - PRA techniques - Problem analysis from baseline survey and PRA - PNP/PLP - Preparing watershed based livelihood plan (2 days) - DPR documentation

2	**Training of Trainers (ToT)**	- Training concepts - principles of adult learning - importance of participatory training - trainers' attitudes and behaviors - Pre training preparation(need assessment, concept note, budgeting , class session) - Skills of facilitator in Participatory training/communication - participatory training methods - Post training activities (feed back, report writing) - Actual preparation of module (sector wise – agri, engi., CO etc.)
3	**Soil moisture conservation planning and execution**	- Developing strategy for Soil conservation and water resource development o Types of Soil Erosion o Preliminary Survey o Detail Investigations o Mapping and Site Investigation o Partial area treatment o Upstream downstream concept - Use of various instruments for survey o Hydro Marker (U tube) "A" frame and Dumpy level - The Abney Level - Global Positioning System (GPS) - Information extraction through Remote Sensing, GIS and GPS. - Application of advance tools (Remote Sensing, GIS and GPS) for Watershed planning. - Practical Application of GPS technology for mapping watershed resources- Field Practical - Hands on practice on GIS & Remote Sensing data analysis - Hands on practice on GIS & Remote Sensing data, interpretation and reporting o - Importance, Planning and Designing of various Soil and Moisture Conservation Measures - Selection of activities and structure of different field situations and need of community - Ridge to Valley Approach - Decentralised planning - Conservation Measures for Arable and Non-arable Land o Continuous Contour Trench(CCT) o Contour Staggered trenches(CST) o Contour Bunding with Field Outlet o Graded Bunds/ Field Bunds o Land Levelling o Terracing o Farm Pond o Ground water recharge - Conservation agronomic measures for soil and water conservation - Vegetative measures for soil and water conservation - Drainage line treatment o Vegetative measures o Gully Plug o Gabion Structure o Check Dam o Earthern Nala Bunding / Earthern Dam - Natural rain water harvesting structures (jal kund)

		- Lay out, construction management and quality control measures - Payment records and book keeping - Role of user groups in planning, implementation and management of the structures o Maintainance and Sharing of water and other natural resourses - Participatory monitoring and impact evaluation of watershed project. - Economics of watershed management - Impact assessment of hydrological and biological interventions in watershed project. -

4	**Agricultural need assessment**	- Agriculture in Gujarat & India- overview
		- Agro-climatic zones
		- Existing situation in Agriculture in the project area
		- Tools of Agriculture Need Assessment
		    o Baseline Survey
		    o Interview
		    o Group Discussion
		    O PRA
		    o Resource recycling
		- Cropping pattern of the zone in which the project is situated
		- Strategy Development

	Training and demonstration methods	- Concept of Agricultural Demonstration
		- Agriculture Extension Techniques & Methodology
		    o Village level Meeting
		    o Exposure Visit
		    o Audio Visual Tools
		    o Demonstration
		    o Mass Media, etc
		- Training Management

	New production Techniques and water use efficiency in agriculture	- Latest techniques in productivity enhancement
		- SRI and other such techniques in different crops
		- Sustainable Agriculture
		- Cost Effective Net house
		- Integrated Pest Management
		- Integrated Nutrient Management
		- Organic Farming
		- Water Use Efficiency enhancement
		    o Mulching
		    o Responsive crop selection
		- Efficient Irrigation Systems
		    o Drip Irrigation/fertigation
		    o Sprinkler Irrigation
		    o Affordable Micro Irrigation
		        ▪ Bucket Kit
		        ▪ Drum Kit
		        ▪ Custom Kit (5-10 Guntha)
		        ▪ Pot Drip Irrigation
		        ▪ Furrow/alternate/ surge irrigation
		    o Mini Lift Irrigation (upto 8 HP)

	Agro-forestry, Horticulture, Floriculture, Medicinal & Aromatic Plantation	- Objective of Farming System
		- Classification of Farming System
		    o According to Size of Farm
		    o According to Proportion of Land, Labour and Capital Investment
		    o Mix Farming
		    o Subsistance Farming
		    o According to Irrigation
		- Agro-Forestry
		    o Selection of various tree species

		- Agro-Horticulture o Selection of horticulture crops (Wadi Concept) - Floriculture - Medicinal and Aromatic Plantation - Other such combined farming systems

	Nursery raising, Vermi-compost techniques and Fodder production	- Nursery Raising Techniques
		    o Raising of Seedlings on Beds
		    o Planning of Nursery
		    o Various Plant Propagation Techniques
		- Traditional Methods of Composting
		    o Pit Compost Method
		    o Heap Method
		- Modern Composting Methods
		    o Vermicompost Making Techniques
		    o NADEP Compost Method
		- Pasture Development
		    o Land Preparation and Method of Sowing
		    o Selection of Species
		    o Seed Rate
		    o Spacing
		    o Time of Sowing
		    o Depth of Sowing
		    o Seed Mixtures
		    o Raising of Grass seedling in Nursery

	Animal Husbandry (2 + 1)	- Animal Husbandry Development - Artificial Insemination - Cattle shed Development - Nutrition Management - Preventive and Curative Measures for Diseases
5	**Record and Account Keeping**	- Importance of accounts in programme management - Government Accounts System - Maintenance of Records in Govt. System - Double Entry Account & Tally Soft Ware - Double Entry Account - Financial provisions in New Watershed Common Guidelines - GSWMA's (IWMP) procedures and systems relating to accounts and finance - Human Resource Management at GSWMA - RTI - CA, AG, and Pre Audit - MIS

Annexure-4: Planning Formats (Training Calendar)

Training Calendar-1: For DWDU staff

Name of the district:
Name of the batch (Project sanction year): 2009-10
Participant: Employees (PM, TE, MDT, etc)

Sr. No.	Name of the training	Name of the Institution	Date	No. of Participants	Names of participants	Designation

Training Calendar-2: For Project staff

Name of the district:
Name of the batch (Project sanction year): 2009-10
Participant: Employees (PIA-Nodal officer, WDT, etc)

Sr. No.	Name of the training	Name of the Institution	Date	No. of Participants	Names of participants	Designation

* Separate sheets to be prepared for each batch (project year)

Training Calendar-3: For Villagers

Name of the district:
Name of the batch (Project sanction year): 2009-10
Participant: Villagers (WC, SHG, UG, etc)

Sr. No.	Name of the training	Name of the Institution	Date	No. of Participants	Names of participants	Designation

* Separate sheets to be prepared for each batch (project year)

Annexure-5: Review Formats

Format-1: Summary of training programmes- DWDU staff

Employee Training Programmes Imparted till date...								
Sr. no.	District	Name of the institution	Name of the Training Programme	Trainee (TE/MDT etc.)	Date: From-to	No. of days	No. of participants	Whether payments settled (Y/N)
1	....	xxx	aaa		....	...	...	
			bbb		...	...	...	
		yyy	aaa		....	...	...	
			bbb		...	...	...	

* Include training programmes conducted by all agencies including GSWMA or DWDU themselves; all other trainings must be mentioned

Format-2: Summary of training programmes- Project staff (Batch wise)

Employee Training Programmes Imparted till date... (Batch-)								
Sr. no.	District	Name of the institution	Name of the Training Programme	Trainee (PIA Nodal officer / WDT etc.)	Date: From-to	No. of days	No. of participants	Whether payments settled (Y/N)
1	....	xxx	aaa		....	...	...	
			bbb		...	...	...	
		yyy	aaa		....	...	...	
			bbb		...	...	...	

* Include training programmes conducted by all agencies including GSWMA or DWDU themselves; all other trainings must be mentioned; separate sheet for different batches

Format-3: Summary of training programmes- Villagers (Batch wise)

Watershed Committee Training Programmes Imparted till date... (batch-)							
Sr. no.	District	Name of the institution	Name of the Training Programme/ workshop	Trainee (President/Secy/UG/SHG, etc.)	Date: From-to	No. of days	No. of participants
1	....	xxx	aaa		....	...	...
			bbb		...	...	...
		yyy	aaa		....	...	...
			bbb		...	...	...

* Include training programmes conducted by all agencies including GSWMA or DWDU themselves; all other trainings must be mentioned; separate sheet for different batches

Format-4: Employee wise training programmes- DWDU staff

<table>
<tr><td colspan="6" align="center">**Employee wise Trainings received till date...**</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>**Sr. No.**</td><td>**District**</td><td>**Name of the employee**</td><td>**Designation**</td><td>**Names of Training Programmes attended**</td><td>**Date: From-to**</td></tr>
<tr><td>1</td><td>xxx</td><td>......</td><td>PM / TE / MDT / Other</td><td>aaa</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>bbb</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>Total</td><td></td></tr>
<tr><td>2</td><td>yyy</td><td>......</td><td>....</td><td>aaa</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>bbb</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>Total</td><td></td></tr>
</table>

Format-5: Employee wise training programmes- Project staff (Batch wise)

<table>
<tr><td colspan="7" align="center">**Employee wise Trainings received till date... (Batch-)**</td></tr>
<tr><td>**Sr. No.**</td><td>**District**</td><td>**Name of the project**</td><td>**Name of the employee**</td><td>**Designation**</td><td>**Names of Training Programmes attended**</td><td>**Date: From-to**</td></tr>
<tr><td>1</td><td>xxx</td><td>......</td><td>......</td><td>WDT- subject / Any other</td><td>aaa</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>bbb</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Total</td><td></td></tr>
<tr><td>2</td><td>yyy</td><td>......</td><td>......</td><td>....</td><td>aaa</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>bbb</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Total</td><td></td></tr>
</table>

* separate sheet for different batches

Format-6: Training programme details (Register)

<table>
<tr><td colspan="4" align="center">**Name of the training Programme:**
Name of the institution:
Date: from-to:</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>**Sr. No.**</td><td>**District**</td><td>**Name of the participant**</td><td>**Designation**</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>

* To be maintained for all training programmes; Register to be maintained too

ACRONYMS

AAU	Anand Agriculture University
AKRSP	Agha Khan Rural Support Programme
BISAG	Bhaskaracharya Institute of Space Applications and Geoinformatics
CEE	Centre for Environment Education
CGWB	Central Ground Water Board
CPRs	Common Property Resources
CSWCRTI	Central Soil & Water Conservation Research & Training Institute
DoLR	Department of Land Resources
DPR	Detailed Project Report
DSC	Development Support Centre
DWDU	District Watershed Development Unit
EDI	Entrepreneurship Development Institute
GIS	Geographical Information System
GPS	Global Positioning System
GSWMA	Gujarat State Watershed Management Agency
GUIDE	Gujarat Institute of Desert Ecology
IEC	Information, Education and Communication
IRMA	Institute of Rural Management, Anand
JAU	Junagadh Agriculture University
KVKs	Krishi Vigyan Kendras
LFA	Logical Framework Analysis
MDT	Multidisciplinary Team
NGO	Non-Governmental Organization
NID	National Institute of Design
NIFT	National Institute of Fashion Technology
NIRD	National Institute of Rural Development
NRAA	National Rainfed Area Authority
PE	Professional Expert
PIAs	Project Implementing Agencies
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institution
SHGs	Self Help Groups
SIRD	State Institute of Rural Development
SLNA	State Level Nodal Agency
SLUSI	Soil and Land use Survey of India
TE	Technical Expert
UGs	User Groups
VRTI	Vivekanand Research and Training Institute
WC	Watershed Committee
WDF	Watershed Development Fund
WDT	Watershed Development Team

REFERENCES

1. The Capacity Building manual by Myrada

2. Common Guidelines for Watershed Development 2008, Government of India

3. Report of the Technical Committee on Watershed Programmes in India, Department of Land Resources, Ministry of Rural Development, Government of India, January 2006

4. Capacity Building Proposals from Aga Khan Rural Support Program (I), Development Support Unit, Agricultural University, Junagadh, Krishi Vigyan Kendras of all districts, Sadguru Foundation, Dahod, Gujarat Institute of Desert Ecology, Central Soil and Water Conservation Training Institute – Vasad, National Soil & Land Use Survey of India, Ahmedabad, FES, Anand

5. Watershed Development Programmes in Gujarat: An Overview; By. Suvendu Rout and Sachin Oza (DSC), for GSWMA

6. *http://www.baif.org.in/aspx_pages/pdf/water/watershed%20experience%20of%20baif.pdf*

7. *http://www.natcomindia.org/planning_commission/special_study_reports/watershed_gujarat.pdf*

8. *http://www.bryanttraining.com/pdf/14_key_elements_of_a_successful_training_program.pdf*

9. *http://traininganddevelopment.naukrihub.com/*

10. *http://www.its.ucdavis.edu/tcenters/repts/train*

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