Case Study

Integrated Watershed Management Programme

Managing Water Resources Sustainably

July 2012

Governance Knowledge Centre

Promoted by Department of Administrative Reforms and Public Grievances
Ministry of Personnel, Public Grievances and Pensions, Government of India
http://indiagovernance.gov.in/

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Executive Summary

A watershed is an area that supplies water by surface or subsurface flow to a given drainage system or body of water such as a stream, river, wetland, lake or ocean. The concept of watershed management has been introduced to respond to the complex challenges of natural resource management and to ensure efficient use of both natural and social capital in the state of Gujarat. The region suffers from an acute water shortage. Gujarat falls under the semi-arid zone and is therefore vulnerable to extreme drought prone conditions in the form of low rainfall, a dwindling ground water table, desertification leading to acute water scarcity and loss of vegetative cover.

To address these deficiencies, the state of Gujarat introduced the Integrated Watershed Management Programme (IWMP) in 2009, an amalgamation of ongoing water regeneration programmes. The initiative took a scientific approach towards natural resource restoration. It is an innovative combination of the use of information and communication technology and decentralised participatory governance which involves citizens in creating a natural and social resource database and involves local governance institutions like Gram Sabhas in the planning process.

The IWMP has greatly boosted productivity in Gujarat, improved decision-making and laid in place an enabling infrastructure for future planning. It has earned the Prime Minister's Award for the year 2010-11, the state silver icon award for innovative use of technology in e-Governance at the 14thconference organised by the Department of Administrative Reforms and Public Grievances.

Methodology

The Governance Knowledge Centre team identified the Gujarat Integrated Watershed Management Project as a best practice in view of its innovative approach towards natural resource management. Based on its unique implementation strategy, Gujarat has outperformed other states in terms of reviving its natural resource base and was the first state to use ICT for the programme, use a convergence model and prepare detailed project reports. Though the Government of India provided the same guidelines for every State regarding the IWMP, Gujarat outperformed other states through the use of scientific tools, coordination between Government Organisations (GOs), NGOs & people at the grassroot level and proper planning, implementation and evaluation of the programme.

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Secondary research consisted of detailed project reports, presentations and documents obtained from the implementing agency. This provided information on the background, operations and objectives of the initiative. Primary research involved interviews with the CEO and Professional Experts of the Gujarat State Watershed Management Agency, the State Level Nodal Agency in charge of the programme.

Background

The Integrated Watershed Management Programme (IWMP) is considered one of the landmark achievements of the state of Gujarat. As the recipient of the Prime Minister's excellence award, the project has earned itself accolades for restoring the ecological balance and productivity of the region based on a scientific and technologically advanced model of land and water resource management.

Almost 50 percent of the total geographical area of the state of Gujurat is arid and drought prone. The topographic conditions of the region have largely remained unfavourable for the pursuit of sustainable livelihood practices. 80 percent of the physical area of the state has access to only 29 percent of water resources[1]. Additionally, depleting ground water levels, degraded top soil, scanty rainfall and drought like conditions have intensified livelihood insecurity, forcing high rates of migration from the state.

With the objective replenishing water resources in the region and enhancing livelihood sustainability and security, the state government introduced several watershed programmes including the Drought Prone Areas Programme (DPAP), Desert Development Programme (DDP) and Watershed Development Programme (WDP) to address the severity of the situation. However, ineffective planning and implementation acted as impediments to their success.

The state government of Gujarat introduced the IWMP in the year 2009. The main objectives of the IWMP was 'to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water'[2]. The Gujarat State Watershed Management Agency is the state level implementation agency of the programme.

[1]http://www.narendramodi.in/gujarat-cm%E2%80%99s-vision-in-water-management-yields-outstanding-results/
[2] http://www.ruraldev.gujarat.gov.in/wds.html

The IWMP is posited as a futuristic approach towards land and water management. It utilizes ICT to create a database on the natural and social conditions of Gujarat that allows for a data-driven approach to decision-making. The programme relies on a participatory approach, involving citizens to upload data on to the ICT system and local governance bodies in planning and decision-making. Indeed, one of the reasons for the success of the IWMP was involvement of the local community. While in the initial stages it was a major challenge through extensive capacity building and the deliverance of benefits to them today community participation is an integral part of the IWMP.

Objective

The primary objective of the IWMP is aimed at enhancing sustainable livelihood alternatives for the rural poor based on scientific management of land and water resources.

Programme Design

Key Stakeholders

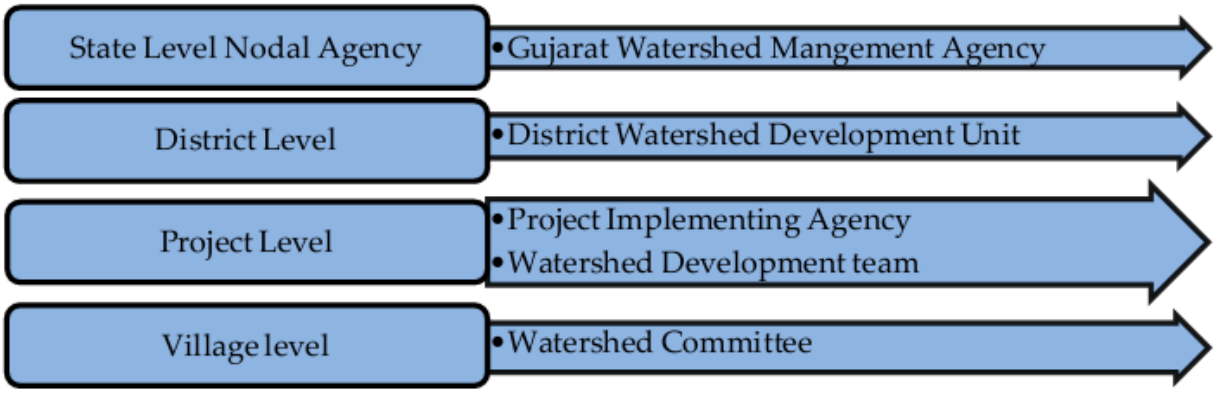


Figure 1: Key stakeholders in the IWMP; Source: OneWorld Foundation India

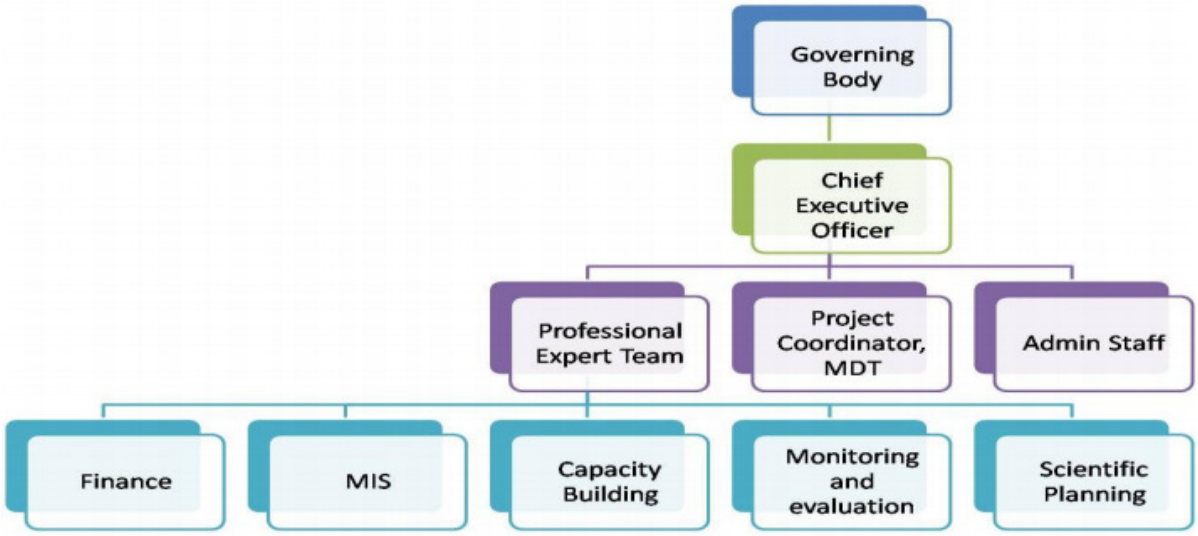


Figure 2: Organisational Structure of Gujarat State Watershed Management Agency[3]; Source: Commissionerate of Rural Development Gujarat State

Gujarat State Watershed Management Agency (GSWMA): This is the State Level Nodal Agency (SLNA) in charge of the IWMP. It is a managed by a Board of Governors which consists of the Commissioner and Principal Secretary (Rural Development) as the Chairperson along with senior officers from Government of Gujarat. The officials who run the GSWMA are: the CEO, a team of professional experts of different subjects like Finance, MIS, Capacity Building, Monitoring and Evaluation, Scientific Planning, etc, and other Administrative Staff.

District Watershed Development Unit (DWDU): The DWDU functions at the district level and identifies potential Project Implementation Agencies (PIAs) in consultation with the SLNA.

Project Implementing Agency (PIA): The PIA implements the watershed projects in different districts. The eligible candidates for a PIA include relevant line departments, autonomous organisations, under State/Central governments, government institutes/research bodies, panchayats and voluntary organisations. The Department of Land Resources has suggested that PIAs should preferably have prior experience in watershed related aspects or management of watershed development projects and should be prepared to constitute dedicated Watershed Development Teams (WDTs).

[3] MDT – Multi Disciplinary Team

Watershed Development Teams (WDT): These provide technical assistance and capacity building to the Watershed Committees and update progress in the treatment areas on to the server. The WDT is typically composed of personnel specializing in areas such as agriculture, engineering, community mobilization, data entry and accounting.

Watershed Committee (WC): The Gram Sabha constitutes the WC and implements the watershed project in the village with the technical support of the WDT. The Gram Sabha of the village selects the chairman of the WC with the secretary who will be a paid functionary.

Table 1: Role of partner institutions; Source: OneWorld Foundation India 2012

Scientific prioritization of watersheds	Bhaskaracharya Institute for Space Applications and Geoinformatics (BISAG)
Participatory micro planning through scientific approach	Central Ground Water Board (CGWB), Central Soil and Water Conservation Research and Training Institute (CSWCRTI), BISAG, Agricultural Universities and Krishi Vigyan Kendra (KVK)
Capacity building	33 institutions like IRMA, ICRISAT, NID, NIFT, CSWCRTI, KVK, and NGOS like AKRSP, Sadguru Foundation, DSC, BAIF
Livelihood Promotion	KVK, NID, NIFT, Agricultural Universities, NDDB, regional dairies like SUMUL, Vasudhara, Banas, Sabar, etc.
	Govt Depts/Schemes like MGNREGS, GGRC, NHM, Agriculture, Forest, etc.
Monitoring and Evaluation	BISAG – Scientific M&E
	Third party agencies, independent audit firms, social audit – gram sabha
Impact assessment	BISAG – Satellite Images, third party assessors

The focus areas of the programme are:

1. .Soil and land management: It includes leveling of land, maintaining an adequate amount of moisture, minerals and other nutrients in the soil, increasing tree plantation and improvement of degraded pastures.

2. Water management: A watershed is commonly defined as an area in which all water drains to a common point. By this it maximizes the quantity of water available and helps in the judicious use of water. The main objective of this project is water management.

3. Agricultural development: It includes increase in the net sown area, irrigation, productivity, multi-cropping and introduction of suitable crops, improved crop varieties sericulture, and horticulture on a large scale.
4. Livestock management: It includes livestock development, fodder cultivation, bee-keeping, sheep rearing and cattle rearing.
5. Development of community skills: Involvement of Community Based Organisations (CBO) is a vital part of IWMP. This is basically done through capacity building by User Groups (UGs) and Self Help Groups (SHGs). This helps in development of better skills, coordination and communication among villagers as well as with government functionaries.
6. Afforestation: Afforestation is an essential part of the IWMP. Taking into account the preferences of villagers as well as natural conditions, trees are planted in different combinations for forestry and horticulture.
7. Rural energy management: It involves the use of alternate sources of energy like biogas to decrease the use of non-biodegradable sources of energy that damages the environment.
8. Pasture development: It involves intercropping, the diversification of crops and development of pastures with suitable grass and fodder.

Process Flow

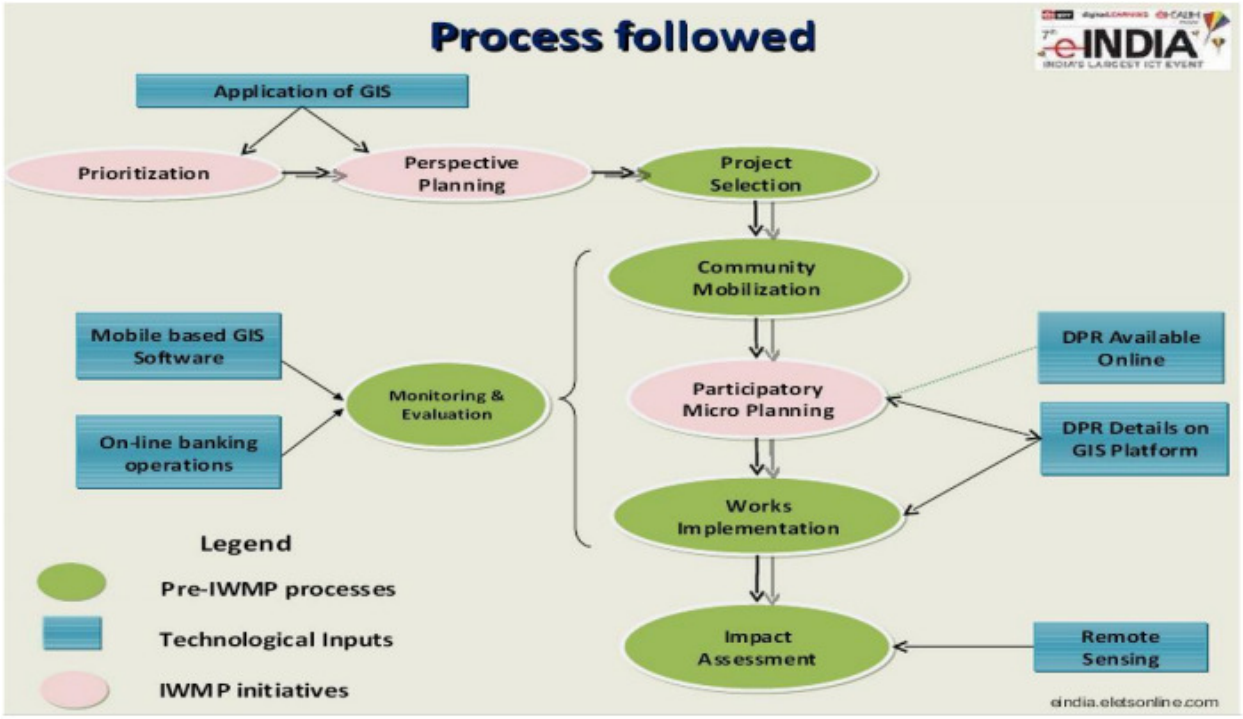


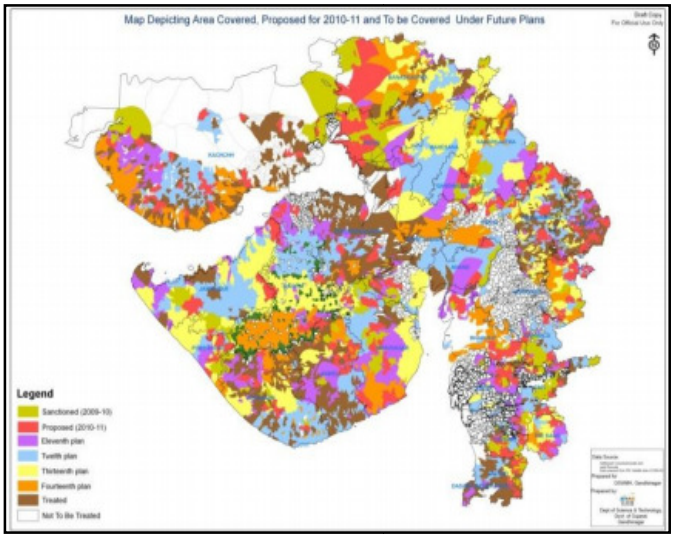
Figure 3: IWMP process flow; Source: GWSMA 2011

The process begins with the prioritization and targeting of watersheds. The prioritization is done using the following criterion:

S. No	Criteria	Maximum score	Ranges & Scores			
1	Poverty Index	10	Above 80% (10)	80 to 50% (7.5)	50 to 20% (5)	Below 20% (2.5)
2	% of SC/ST population	10	>40% (10)	20 to 40% (5)	<20% (3)	
3	Actual Wages	5	<min wages (5)	>= min wages (0)		
4	% of SF &MF	10	>80% (10)	50 to 80% (5)	<50% (3)	
5	Ground water Status	15	Over Exploited (15)	Critical (10)	Subcritical (5)	Safe (0)
6	Moisture index	10	DDP block (10)	DP Alluvial Plain (5)	Non DDP or DPAP (0)	
7	Assured irrigation area	15	<10% (15)	10 to 20% (10)	20 to 30% (5)	>30% (reject)
8	Drinking water	10	No source (10)	Problematic village (7.5)	partially covered (5)	fully covered (0)
9	Degraded land	15	>20% (15)	10 to 20% (10)	<10% (5)	
10	Productivity potential	10	low production & high potent lal (10)	moderate production & moderate potential (5)	High production & low potential (0)	
11	Contiguity to watershed	10	Contiguous to previous and contiguity within the micro WS (10)	Contiguity within microWS but not to previous (5)	neither both (0)	

Figure 4: Natural and social criteria used in watershed prioritization; Source: GWSMA 2011

The data for these decision criteria come from a geo-spatial database which contains data on topology, ecological conditions of the area, level of soil erosion, rainfall pattern, texture of soil, soil depth, nutrient content in the soil, slope percentage and other such indicators.



This database is created using GIS maps, remote-sensing satellite imagery which helps in identifying natural boundaries and integrating the data collected onto maps and spatial and non-spatial data. Other sources of data are District Watershed Development Unit (DWDU), Bhaskaracharya Institute of Space Applications and Geo-Informatics, Gram Panchayat records, Revenue Records, Census records, Village Dairy, Local Market Yard, Irrigation Department, Agriculture Department, Agriculture University. Where primary data is required it is gathered through Focus Group Discussions (FGDs) with Watershed Committee members, SHG members and UG members.

The data is then used for perspective planning for 18 years upto the 14th Plan so as to assist future planning, channelisation of resources and implementation.

The data collected is used to create an action plan/matrix for the programme. Community participation also plays a very important role in plan development. Villagers are trained by the Watershed Development Team (WDT) to develop maps. Group discussions are also carried out related to budgets and convergence of schemes and these assist the planning process.

The phases involving data capturing, assessment, prioritization, targeting areas and plan development may take about 1-2 years for completion. After assembling and analysing all the data and preparing the action plan/matrix, the programme is implemented by the Project Implementing Agencies, WDT, Watershed Committee (WC) and the local community. For this process, scientific tools like GIS and mobile tracking systems are used extensively. The Watershed Committee monitors the implementation of the programme through mobile tracking and villagers are trained to upload maps on web based GIS system

Technology

End-to-end computerization: Starting from the state level office at Gandhinagar to the district level offices to the project offices at taluka (block) level, most works are computerized. Computer, telephone and internet facilities have been made compulsory for all the offices.

Geographical Information System (GIS): The GIS used in the project has been developed by the Bhaskaracharya Institute of Space Applications and Geo informatics.

Centralized Management Information System (MIS): The MIS is centralized at the Government of India level. All the data fields are entered at the project level (block). So real time updated data is available to decision makers at different levels - district, state and central government.

Online banking operations: All the transactions for the IWMP projects in the state are carried out by a single bank. It has helped the state to track the flow of funds at different levels on line on the computer at the state level office at Gandhinagar.

Hydrological modelling: Hydrology modelling technique was used for locating drainage, stream length, flow direction, sink, flow accumulation. This model overlaid over cadastral map to calculate the catchment area of each structures like the check dam etc. This has helped to remove the human error which generally occurs while calculating the catchment area of a check dam.

Training and Capacity Building

Objectives of the Training Program:

1. To develop comprehensive understanding of Common Guidelines and Salient features of IWMP
2. To analyse the livelihood profiles of watershed communities in the context of climate change.
3. To draw the end results to be achieved.
4. To explore the potentiality of watershed programme in developing natural resources, converting them to productive assets to secure livelihoods.
5. To understand the good practices by the communities with regard to natural resources, their management and livelihoods
6. To explain implementation arrangements and to attain greater clarity on the role and responsibilities of WDTs and other stakeholders.
7. To develop understanding on the key processes in implementation of the Programme.
8. To familiarize with processes of DPR preparation tools, methodology and processes

9. To familiarize with the files and records.

There are two kinds of training, internal and external undertaken for the effective implementation of IWMP.

Internal training is given by the GSWMA. District-wise workshops are organised and topics like using GIS, roles & responsibilities of each level, baseline survey, and Detailed Project Report (DPR) preparation are discussed. They have operational guidelines, technical manuals, capacity building manuals, livelihood manuals and human resource manuals for the process of training. Capacity building training to the watershed committee is given by the WDT.

External Training and capacity building is given by 33 institutions selected by GSWMA. The list below enumerates the primary institutional partners involved in the process:

Table 2: List of institutional partners Source: GSWMA 2011

List of Institutional Partners

Sr. No.	Name of Instituitional Partner	Type	Location
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	

Monitoring and Evaluation

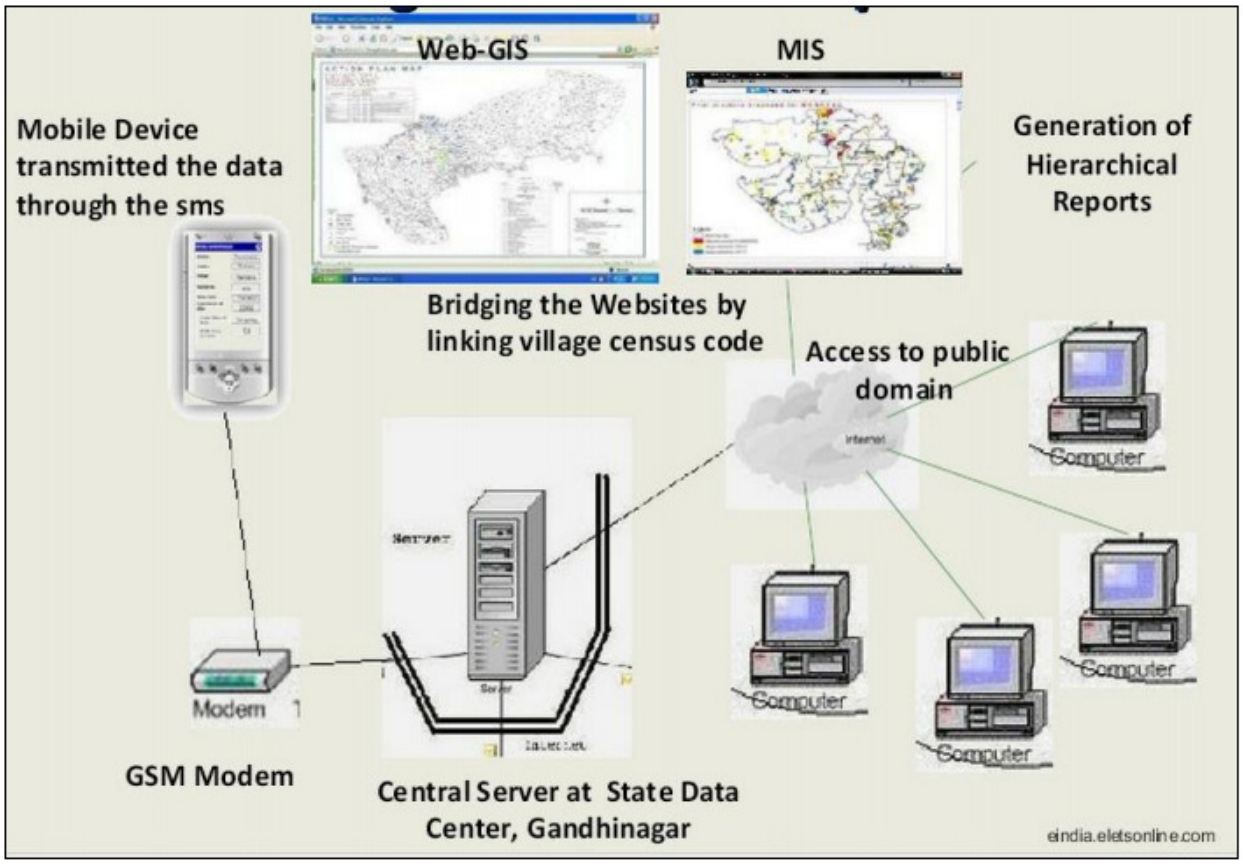


Figure 5: Monitoring and evaluation system; Source: GSWMA 2011

IWMP leverages ICT tools including GIS, MIS and the mobile embedded tracking system to enhance the monitoring of the programme at several levels;

- Web-based GIS helps in timely identification of most needy watersheds.
- Satellite imagery assists to compare initial images with post-project images. This analysis helps to compare and evaluate the difference between the two situations and the impact of the watershed on that area.
- MIS helps in monitoring the performance of the programme and also assists planners to maintain transparency and accountability.
- Mobile phones support customized software that is attached to web based GIS system. Nokia C5 mobile phones are used for this purpose.

The Watershed Committee is mandated to update the IWMP database through the e-Grams, an e-governance project connecting 13716 Gram Panchayats to 6000 Citizen Common Service

Centres. The access to an updated and authentic database on the programme facilitates the monitoring further. There is also a provision for mandatory social audit in the Gram Sabhas and of validation by independent evaluators.

Financial Costs

IWMP funding is supported by the central and state government on a 90:10 ratio basis The Government of India, Ministry of Rural Development and Department of land Resources released a total budget of Rs. 11719.38 lakh for the implementation of IWMP for the year 2010-11 while the State government allocated an amount of Rs. 1302.153 Lakhs.

Impact

As of April 2012, the IWMP has covered 21.34 lakh hectares in the state. The result of the program's innovative blend of scientific planning and ICT enabled monitoring and implementation has been that:

1. 90% of watersheds report increase in ground water (more than 1 meter)
2. 88% of watersheds have reported reduction in soil loss (more than 25%)
3. 85% of watersheds reported more than 100% increase in cropping intensity
4. 60% watersheds reported increase in cereal yield (more than 50%) and 62% reported increase in yield (more than 25%) of cash crops
5. 93% watersheds reported increase in employment as labour days.
6. 40% micro watersheds in Gujarat have resulted more than 2 meters increase in ground water level after implementation of IWDP.
7. 98.3% of micro watersheds reported a reduction in soil erosion.
8. Net sown area has increased.

A CASE STUDY OF AMRELI

Amreli is situated in the western part of Gujarat. It is constituted by small and marginal farmers engaging primarily in rain fed agriculture. The region receives an average rainfall about 600mm and experiences an average soil erosion of 15-20%. Inadequate levels of rainfalls had led to increased instances of deprivation amongst these farmers. With limited livelihood alternatives available, they were forced to migrate to other prosperous districts in Gujarat.

Harvesting rainwater and IWMP was adopted to increase the area under irrigation. After the construction of water harvesting structures under IWMP in the district, the availability of water for irrigation gradually increased.

Previously drinking water was only available for duration of 8 months, with the initiation of IWDP, today, the district of Amreli accesses good quality drinking water all round the year.

9. 50% of watersheds report an increase in cropping intensity above 100%.

Collective organisation

Decentralised participatory approach is one of the major reasons for the success of IWMP. The process of planning and implementation of programme has become more inclusive with the participation of SHGs, UGs and local inhabitants especially women, marginalised groups and landless people.

Social upliftment

With the prioritization of livelihood security, IWMP is playing a crucial role in generating employment and facilitating poverty alleviation. This has had a direct imp act in form of reduced rate of migration and enhancement in the standard of living of the local community

The systematic changes that were introduced with the implementation of IWMP are enumerated in the following table:

PARAMETER	BEFORE IMPLEMENTATION	AFTER IMPLEMENTATION
Scheme	Drought Prone Area Programme (DPAP), Integrated Wastelands Development Programme (IWDP) and Desert Development Programme (DDP) were individual schemes.	Drought Prone Area Programme (DPAP), Integrated Wastelands Development Programme (IWDP) and Desert Development Programme (DDP) were integrated into one scheme i.e. Integrated Watershed Management Programme (IWMP).
Project Area Selection	Subjective and unscientific	Completely scientific and external influence was eliminated
	Selection made on the basis of instinct of the district authorities	Use of ICT in project area selection. It enabled identification of the most needy areas
Planning Process	Short-term and haphazard	State Perspective and Strategic Plan preparedfor18Years
	Less participatory in nature	Net planning using thematic maps
	Detailed Project Report was mere a formality	
Standardisation Process	Minimal and not state specific	State Perspective & Strategic Plan Technical Manual Operational Guidelines were set
Cost	4000/HA	12000/ HA
Duration	5 Years	4-7 Years

Challenges in Implementation

The major challenges faced by Government in implementing IWMP are-

Convergence with other schemes: The government of Gujarat faced a lot problem in convergence with MGNREGS and other schemes because they have their own working pattern. Coordinating with them is a problematic task.
Idle funds are another issue faced with the unspent balance on the IWMP[4] being INR 347.95 out of a total allocation of INR 439.53.

Potential for Replication

Gujarat is a rich state with good infrastructure, strong governance institutions and a well-developed human resource pool. These were key factors that allowed for the success of this technology-driven program. The resources required are both expansive and expensive and in the absence of an enabling infrastructure across the state such a program would not function effectively and would be limited in its efficacy. The replicability of such a program is better suited to states which have already have good infrastructure, are facing limits to growth owing to natural resource constraints and seek to push this productivity constraint further. Assuming these conditions exist, the strategies used by the Gujarat government are certainly worth replicating. The specifically useful strategies were:

1. Using a data-driven approach to decision-making through the extensive focus on data gathering.
2. Having well-defined, quantifiable criteria for decision-making.
3. Involving citizens in both managing the GIS infrastructure and in the planning process.

Sustainability of the Programme

The continuous part of the program is the usage of the created infrastructure in planning and implementing. Creating the infrastructure is therefore more of a one-time investment. Therefore sustaining the programme requires that the citizens involved in the maintenance of the infrastructure and planning are given regular capacity building. Institutionally the programme has used very definite criteria for decision-making and laid in place a sound monitoring and evaluation and impact assessment infrastructure thus allowing for easy course

[4] as on 31.05.2012

correction and continuous operational fine-tuning. The demand for such a programme is a function of how the infrastructure created is used in the process of decentralised decision-making and whether it ends up benefiting citizens or not. Ecologically however the programme addresses a very crucial need of the hour, namely sustainable development. As it creates an information system which provides data on the carrying capacity of the environment it is mission-critical that such a programme be continued.

Financially, apart from the financial assistance that the WSP receives from the Government of India and NABARD, there is a pressing need for additional funds to strengthen the institutions at the district, state and national level. This is to ensure effective management of the watershed projects. The growing financial liability of the programme can be attributed to the lack of effective monitoring and maintenance of watersheds. The financial sustainability of the programme therefore, depends on the extent to which these needs are adequately addressed at the implementation level.

Social inclusiveness

Securing a high degree of equity in the way the benefits are experienced at the community level determines the social sustainability of the programme in the long run. It has been observed that equitable access to land and water resources remains unfulfilled to a significant extent. The new guidelines for IWSP aim to address these inadequacies and facilitate to develop the programme into a more socially inclusive model. It recommends Project Implementing Agencies to facilitate the equity processes such by enhancing livelihood opportunities for the poor through investment in asset creation and improvements in productivity and income, improving access of the poor, especially women to the benefits and enhancing their role in decision-making processes and their representation in the institutional arrangements.

Conclusion

IWMP Gujarat is directed toward conserving the depleting water resource and in the process enhances environmental, economic and social benefits for the region. It adopts a participatory approach which strengthens the citizens by including them in the decision-making process and develops their capabilities. The programme allows for data-driven decision making and provides an information system for the carrying capacity of the State, thus making it a foundational aspect of other initiatives.

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Appendix A – Interview Questionnaire

BACKGROUND

1. What was the primary concern that made Gujarat adopt IWMP despite of already having 3 schemes?
2. According to our research, planning of IWMP involves 3vital steps-i. Creation, development and management of geo-special data base providing the present condition of land, water and vegetation in the region.
ii. Analysis of the socio-economic aspects
iii. Historical perspective of the land-water treatment of the area
Can you elaborate these?
3. Participatory approach is used in IWMP. So what is the role of CBOs, SHGs and NGOs? What problems were faced during implementation of participatory approach? How these problems were sorted?
4. ICT is one of the main features of IWMP. How ICT was used in the process of IWMP? Which tools were used? What challenges were faced by the state in implementation of ICT?
5. Who keeps these database updated? Is there any limitation in using ICT?
6. Is there any standardized process for implementation of IWMP? If yes, then what is the process?
7. What are the parameters for assessment of benefits from the project?

STAKEHOLDERS

8. According to our research, there is five-tier authority system. What are the responsibilities of each level?
9. What problems were faced while decentralizing the programme?

PROCESS

10. Participatory approach has been used in IWMP so how state has imparted training and which organisations helped in the process of training?
11. In one training session, how many people are trained and what is the criterion for selection of these people?
12. How much expenditure is incurred in the process of training? After what time interval training is given?
13. How already trained villagers help in imparting training to others?
14. According to our research, strategic plans can be prepared for 18 years. How this is done? What are the strategies planned for next 18 years?

FINANCE

15. How funds were procured for the development of IWMP and what were the major areas of allocation?
16. What is the role of NABARD and MGNREGS in the process of funding? Do these institutions participate in any other process as well?
17. Do CBOs, SHGs and NGOs also contribute in funding?
18. Is IWMP financially sustainable? If yes, in what ways?

ACHIEVEMENTS

19. What are the major achievements of IWMP as compared to previous schemes?

IMPACTS

20. In what ways has Gujarat benefited economically through IWMP?
21. To what extent has IWMP impacted beneficiaries?

CHALLENGES

22. What are the major challenges which have limited the effective functioning of the programme?

ENHANCEMENTS

23. What is being planned for up scaling the IWMP?

SUSTAINABILITY

24. Is IWMP sustainable socially?

REPLICATION

25. Can this model be replicated on national level?
26. What is the current status of IWMP in the state?
27. How Gujarat's IWMP is different and better from others despite of same guidelines?
28. Please provide the current statistics and data on status of IWMP.