Changing Scenario of Village Through Water Conservation

Village: Hirana Project: IWMP 21 (Chavand Cluster) Batch: IV (2012-13)

PMKSY-Watershed Component (erstwhile named as Integrated Watershed Management Programme) is a one of the flagship program of Govt. of India. The main objectives of this is to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water. Gujarat is one of the largest States in context of land area treatment under PMKSY-Watershed project. The important activities carried out under this projects are Soil moisture conservation, Water harvesting, Vegetative cover and Plantation, Agricultural production and Productivity improvement, Dairy development, Agro processing, Livelihood and Income Generating Activities etc. In Gujarat PMKSY-Watershed component is implemented through a State Level Nodal Agency constituted as Gujarat State Watershed Management Agency (GSWMA), an autonomous society supported under the Rural Development Department (RDD) of Government of Gujarat.

Amreli is located near the Gulf of Khambhat in the Arabian Sea, in the western part of Gujarat; with an area of 7,397 sq.km. The District has 11 Taluka (Amreli, Babra, Bagasara, Dhari, Jafrabad, Khambha, Lathi, Liliya, Rajula, Savarkundla and Vadiya). Amreli comes under South Saurashtra Zone. In Amreli district rainfall is too low (500-600mm) compared to other neighbour districts.

Before IWMP various schemes were implemented in Amreli district for conservation of Soil Moisture and surface water storage but it lacked scientific approaches, hence the purpose was not fulfilled. The introduction of IWMP has brought significance changes in the various blocks and several villages. Creation of various kinds of structures and measures to enhance the water storage and increase in crop production has been fulfilled till a large extent.

Hirana village is selected under Batch-IV sanctioned in financial year 2012-13. Hirana village is located in Lathi taluka of Amreli District. Basic details are given in table no 1:

Table no.1: Basic information of the project

Sr. No.	Particulars	Information
1	Location of the watershed project	Hirana village, Lathi Taluka, Amreli district, Gujarat
2	Name of the scheme	PMKSY-Watershed Component Batch-4 (2012-13)
3	Period of implementation	2012-13 to 2017-18
4	Funding	Department of Land Resources, Ministry of Rural Development, GoI and Government of Gujarat & RKVY
5	State Nodal Agency	Gujarat State Watershed Management Agency (GSWMA), Commissionerate of Rural Development, Gandhinagar
6	Micro-watersheds	5G2C4b2n & 5G2C4d2b
7	Total geographical area of the village	1059 ha
8	Area treated under project	556 ha
9	Project Implementing Agency	District Watershed Development Unit, Amreli

A proposal was submitted at state level for allocation of funds to 2 check dams with total estimated cost of Rs 7.85 lakhs under RKVY in Hirana village. The proposal fulfill the objectives of PMKSY-Watershed Component by bridging the fund gap and ensuring availability of support to this component to complete the works/activities, thus ensuring benefit to the beneficiary stakeholders and farmers in time.

Village level Institutions:

The Gram Sabha selected members of the Watershed Committee to implement the project in the village. The Watershed Committee members were trained on various topics like basis watershed concept, planning, leadership, livelihood orientation, etc. The Watershed Development Team (WDT) conducted Participatory Rural Appraisal (PRA) with the villagers and planned for the watershed development accordingly. The PRA helped in identifying gaps in the developmental needs of the village; it came out strongly that conservation of surface water was the main need of the village from a number of aspects. Therefore, planning was done keeping storage of water as the central focus.

8 User Groups (UGs) were formed to carry out works, monitor their progress, enjoy their benefits and take care of the assets thus created. Along with the UGs, 3 Self Help

Groups (SHGs) were created to participate in the project and take benefits. The details of these institutions is given in table no. 2

Table no.2: Details of the village level institutions

Sr. No.	Institution	No. of groups	No. of Members		
			Total	Male	Female
1	Watershed Committee (WC)	1	11	7	4
2	User Groups (UGs)	8	40	40	0
3	Self Help Groups (SHGs)	3	40	34	6

Physical Activities Undertaken:

The project area being severely water stressed for long, focussed on water conservation and judicious use of water. Along with this, scientific plans were made for appropriate land use planning including plantation. Some of the important activities are given in table no.3
In initial phase of project a common training regarding IWMP and its working in village were given to Watershed Committee (WC), User Groups (UGs) and Self Help Groups (SHGs)

Table no.3: Activities undertaken in the project area:

Sl No	Type of work	Quantum of work (in different units)	Cost incurred (in Lakh)	Status of Activity
	Entry Point Activity Work			
1	Drinking Water Facility	1 Unit	2.67	Complete
	Watershed Works			
1	Farm Outlet	2 Unit	0.30	
2	Nala plug	2 Unit	3.16	1 Complete
3	Check dam	4 Unit	15.25	Complete (2 IWMP, 2 RKVY)
4	Causeway cum Check dam	2 Unit	7.50	Complete
5	Pond Deepening	1 Unit	2.90	Complete

6	Check dam Renovation	3 Unit	8.25	Complete
	Livelihood and Production System			
1	Drip Irrigation	9 Unit	2.16	
2	HYV Seed Store	1 Unit	1.80	
3	Cattle Feed & Nutrition Store	1 Unit	1.80	
4	Agriculture Implements (Rotavator & Thresher)	1 Unit	2.00	
5	Cattle Health Camp	3 Unit	2.23	
6	Bio Gas Plant	7 Unit	1.68	
7	Provision Store	1 Unit	1.00	
	Total		**52.70**	

Table 4. Detail of UG

UG Name	Beneficiary Name	Survey No
UG2 NP2	Rajubhai Becharbhai Der	164
UG2 NP2	Kanjibhai Becharbhai Der	164p2
UG3 CD1	Kalubhai Hardashbhai Sutariya	122/P1
UG3 CD1	Ranshodbhai Hardashbhai Sutariya	
UG3 CD1	Chimanbhai Mohanbhai Talaviya	
UG4 CD2	Kalubhai Hardashbhai Sutariya	122/P1
UG4 CD2	Ranshodbhai Hardashbhai Sutariya	
UG4 CD2	Chimanbhai Mohanbhai Talaviya	
UG5 CD3	Manjibhai Bhagvanbhai Virani	133/P3
UG5 CD3	Dhirubhai Mohanbhai Virani	
UG5 CD3	Shavitaben Parshotambhai Virani	
UG6 CD4	Manjibhai Bhagvanbhai Virani	133/P3
UG6 CD4	Dhirubhai Mohanbhai Virani	
UG6 CD4	Shavitaben Parshotambhai Virani	
UG7 CD Renovation 2	Odhabhai Shamjibhai Khut	56/2p1
UG7 CD Renovation 2	Amababhai Bhavanbhai Khut	
UG8 CD Renovation 3	Chandubhai Dhanjibhai Virani	82/P2
UG8 CD Renovation 3	Ashokbhai Dhanjibhai Virani	
UG8 CD Renovation 3	Mohanbhai Bhagavanbhai	

Table 5. Activity Proposed and completed under RKVY

Sr No.	Work Detail	Estimated Cost (In Lakh)	GPS	Survey No	Expenditure (In Lakh)
1	Checkdam-3	3.85	N 21 50 11.5 E 71 26 85.0	133/P3	3.65
2	Checkdam-4	3.70	N 21 50 11.7 E 71 26 84.0	133/P3	3.51

Photographs of completed Structure

Picture:1 Photograph of location (Before construction of structure)

Picture:2 During progress work of Check dam

Picture-3 Completed Check dam

Impact of structures

Crop production has increased and benefitted to 30 beneficieries.
Cotton production before intervention: 1900 to 2450 Kg/Ha
Cotton production after intervention: 3250 to 4120 Kg/Ha
Number of Beneficiaries (Farmers): 30

After construction of the of these structures there is visible changes observed and benefit to farmers has reached as they are taking rabi crops now.

Oghabhai Shamjibhai Khunt- a farmer narrated the case by saying “Due to low water level in borewell, they can get only two irrigation after Kharif. Growing area for crop is also less and they were not getting proper agricultural production due to water scarcity. But after construction of storage structures water level in bore well rises, that's why they are getting better agriculture production as well as taking second crop in Rabi."

Expected Benefit through RKVY

The structure will facilitate to irrigate around 50 hectares of land and benefit to 35 farmers. Dhirubhai Mohanbhai Virani says"this check dam will increase irrigation facilty as well as helps to increase water level in the ground water. Farmers can grow Rabi crop also.

Watershed development programs undertaken in the mission mode by involving local communities had several beneficial effects. It increased water availability, irrigation, intensity, cropping intensity. It simultaneously reduced the runoff loss.