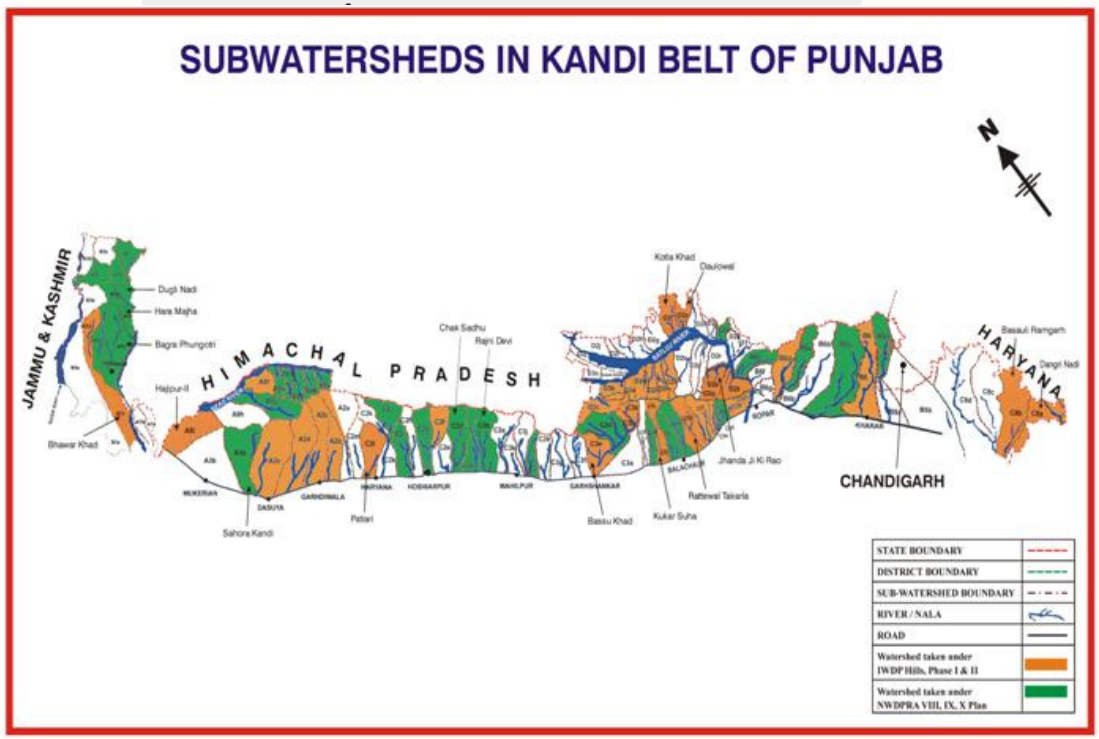
SUCCESS STORIES
ON WATERSHED MANAGEMENT PROGRAMMES IN PUNJAB

DEPARTMENT OF SOIL & WATER CONSERVATION, PUNJAB


Gurdaspur
Amritsar
Hoshiarpur
Kapurthala
Kapurthala
Jalandhar
Nawanshahr
Firozpur
Ludhiana
Rupnagar
Chandigarh
Faridkot
Moga
Fatehgarh Sahib
Patiala
Muktsar
Bathinda
Sangrur
Mansa


SUBWATERSHEDS IN KANDI BELT OF PUNJAB
N
JAMMU & KASHMIR
HIMACHAL PRADESH
HARYANA
CHANDIGARH
Dugi Nadi
Hara Majha
Bagra Phungotri
Hajipur-II
Bhawar Khad
Chak Sadhu
Rani Devi
Kotla Khad
Daulowal
Basauli Ramgarh
Sangri Nadi
Jhanda Ji Ki Rao
Rattewal Takaria
Kukar Suha
Basiu Khad
Pidani
Sahora Kandi
STATE BOUNDARY
DISTRICT BOUNDARY
SUB-WATERSHED BOUNDARY
RIVER / NALA
ROAD
Watershed taken under IWDP Hills, Phase I & II
Watershed taken under NWDPRA VIII, IX, X Plan

GENERAL DESCRIPTION OF KANDI AREA

10.7% of Punjab's Geographical area

Terrain: Hilly

Climate

Semi-arid to Sub-humid,
Annual Rainfall 800-1050 mm

Temperature

Max : 41-42℃ (June) **Min : 5-6℃ (January)**

Major problems of Kandi area

- **Soil erosion**
- **Scarcity of water**
- **Erratic Rainfall**
- **Sloping lands**
- **Poor soil fertility**
- **Poor socio-economic conditions**
- **Animal damage**
- **Illiteracy**

ARELI–MATTI-DOONG WATERSHED,
Block: Dhar Kalan
District: Gurdaspur, PUNJAB

TOP VIEW(PARTIAL)

PROJECT PROFILE

- Sanctioned in the Year 2001-02 under Pre- Haryali Guidelines
- First Project Sanctioned in the State.
- Year of Sanction 2001-02
- Treatable Area 3142 Ha
- Unit Cost 6000/Ha
- Total Outlay 188.52 Lacs

-Administration (10%) 18.85 Lacs

-Community Organization (5%) 9.42 Lacs

-Training (5%) 9.42 Lacs

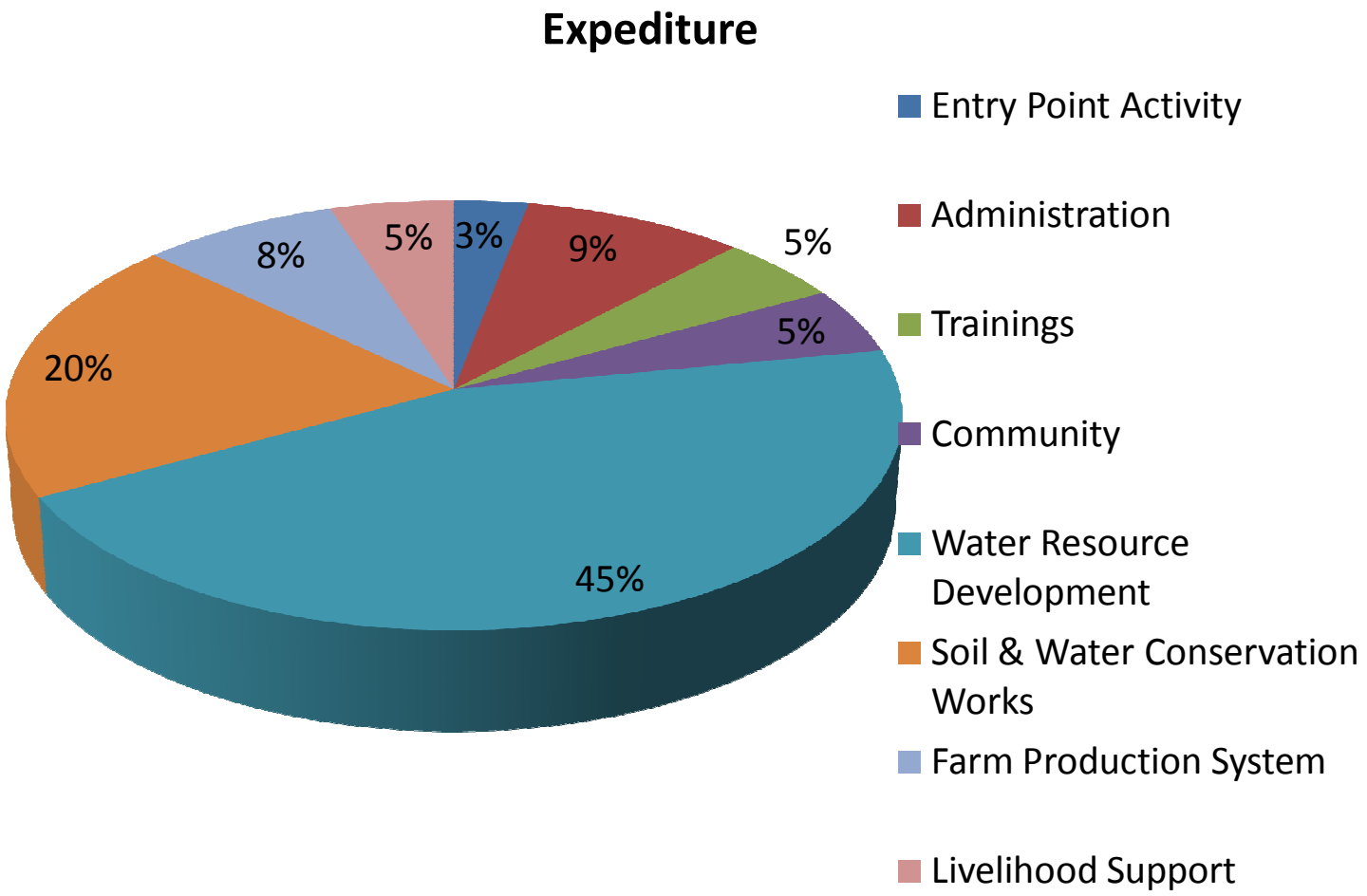
- Works Component(80%) 150.83 Lacs
- No. of Microwatersheds 5 Nos
- No. of Beneficiary Villages 8 Nos

Located Immediately Down stream of Ranjit Sagar Dam and Upstream of Proposed Shahpur Kandi Barrage

PROBLEMS OF WATERSHED

- Due to dissected terrain there is severe erosion which is eating up the cultivated area
- Lack of irrigation facilities due to deep ground water table
- Low fertility and problem of nutrient losses due to erosion.
- Deforestation in hilly area.
- Problems of choes as they are flooded during the rainy season and damage the adjoining area.
- Poor socio-economic condition of the farmers.

EXPENDITURE ON DIFFERENT COMPONENTS



ENTRY POINT ACTIVITIES

- 3 % Funds utilised on Entry Point Activity
- Mainly Addressed problem of Drinking Water and for Domestic Use.
- 9 Nos Water Sources indigenously called boulies has been developed

Development of Water Source
Village: Matti

RENOVATION OF BOULI

VILLAGE KOT

Renovation of Well

COMMUNITY ORGANISATION

- WATERSHED DEVELOPMENT TEAM

  5 Multi-Disciplinary Watershed Development Teams for covering 5 micro watersheds.

- SELF HELP GROUPS/USER GROUPS

No. of Self Help Groups	24 Nos.
Main Activity	Credit & Thrift
Total Saving	12.40 Lakhs.
Bank Linked Groups	5 Nos
Total Inter-loaning	3.45 Lakh
User Groups	19 Nos.
No. of Groups in Micro Enterprises	4 Nos

COMMUNITY ORGANISATION

WATERSHED ASSOCIATION & WATERSHED COMMITTEE

- No. of Watershed Association / Watershed Committees : 5 Nos.
- Registered under Societies Act 1860
- Due representation to SC/ST and Women

TRAININGS

SHG: Mainly skill enhancement Trainings like

Cutting & Tailoring , Embroidery, Sauces & Pickles Making , Washing Powder, ChawanPrash, Soft Toys


ਸ਼੍ਰੀ ਅਸ਼ੋਕ ਸ਼ਰਮਾ

COMMUNITY ORGANISATION

Title	Institution	No. of Farmers
Bee Keeping	Krishi Vigyan Kendra, Gurdaspur	30 Nos
Floriculture	Reginal Research Centre, YPS Parmar University, Jachh(HP)	25 Nos
Mushroom Cutivation	Krishi Vigyan Kendra, Gurdaspur	30 Nos
Vermicompost	Krishi Vigyan Kendra, Gurdaspur	25 Nos

Awareness Generation

- Wall paintings at various places in watershed regarding Watershed Programme and other awareness regarding soil and water Conservation.
- Publication of Brochure regarding works done.
- Publication of Wall Hanging Calendars/Table Calendars
- Publication of stickers for awareness.
- Prizes to the farmers who has done exceptionally well than other farmers in production and adoption of soil& moisture conservation practices

WALL PAINTINGS

WATER HARVESTING AND ITS IMPACT

- 11 No. Water Harvesting Tanks Has been constructed for life saving irrigation benefitting 52 Ha.
- Base flow Project village Salari irrigating 25 Ha area
- Tapping of hill seepage village Doong irrigating 12 Ha
- Tapping of sewage water of Ranjit Sagar Dam Colony Uparala Thara to irrigate 08 Ha
- Three Lift Irrigation Projects in village Kot supplemented by other schemes .
- Lift Irrigation Project Kot-I,II,III having total command area 175 Ha
- Lift Irrigation Project Mansoo irrigating 20 Ha
- Perennial flow project Awan irrigating 80 Ha


Lift Irrigation Project, Kot

LIFT IRIGATION PROJECT-II

LIFT IRRIGATION PROJECT KOT-III

COMMAND AREA 100 Ha

VIEW OF COMMAD AREA KOT-III

WHEAT SEED 343 VARIETY IS BEING PROMOTED UNDER FARM PRODUCTION SYSTEM

IMPACT OF WATER HARVESTING

- After the project, the entire command area came under multiple cropping thereby increasing the cropping intensity from 50% to 150%.
- Now farmers are using hybrid varieties instead of traditional varieties of seed.
- Rise in Basic Value of Land
- Ecological Development
- Wage Employment
- Dairy farming: Before the construction of the dams, there were only cows and goats in the village. Presently, there are about 150 buffaloes in the village and the people sell their milk in the neighboring Shahpur Kandi Township. Every day, more than 4 Quintals of milk is being sold in the nearby Shahpur kandi township after meeting the requirement of the village.

IMPACT OF WATER HARVESTING

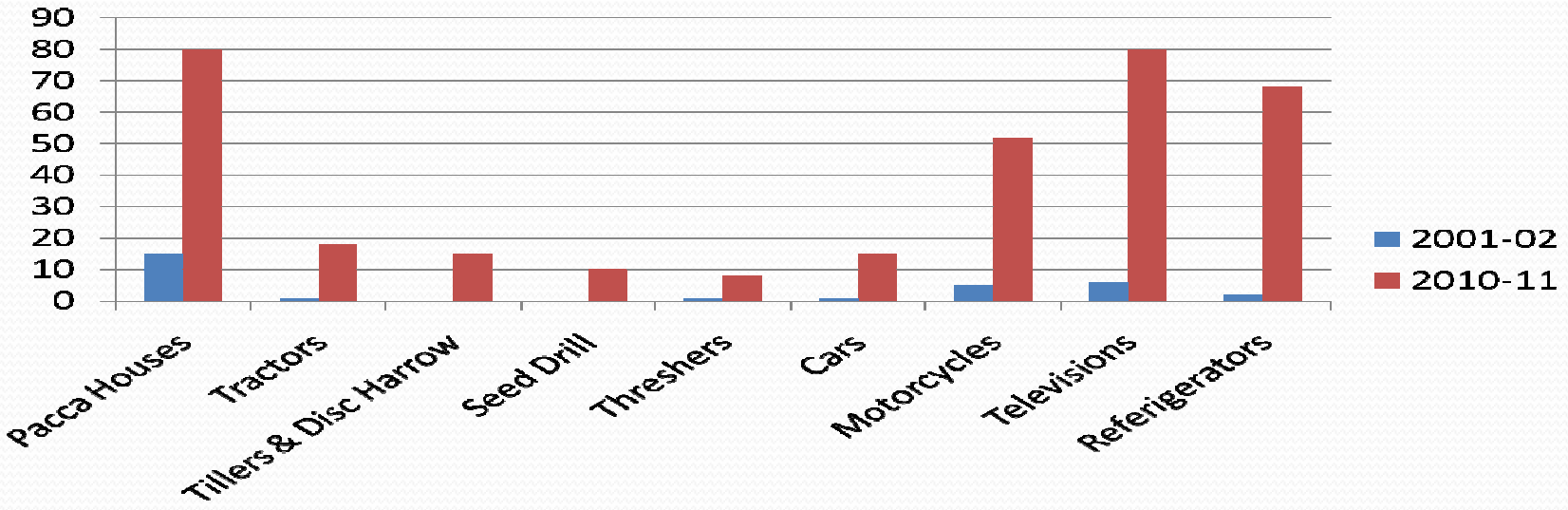
CROP	YIELD PRE-PROJECT (QTL/ACRE)	YIELD POST PROJECT(QTL./ACRE)	INCREASE IN INCOME PER ACRE(RS.)
WHEAT	5-7	18-20	12000
PADDY		16-18	16000
FODDER	40	200	24000
VEGETABLES		40	24000

WATER HARVESTING TANK

VILLAGE DALLA

CHANGE IN SOCIAL STATUS

PARTICULARS	YEAR 2001-02	YEAR 2010-11
PACCA HOUSES	15	80
TRACTORS	01	18
TILLERS & DISC HARROWS	-	15
SEED DRILL		10
THRESERS	01	08
CARS	01	15
MOTORCYCLES/SCOOTERS	5	52
TELEVISIONS	6	80
REFERIGERATORS	2	68



SOIL CONSERVATION WORKS

- 1725 Ha of private land has been treated with different soil conservation practices.
- 7.5 Km length of different rivulets has been treated under DLT.

ARABLE LANDS

WIRE CRATE STRUCTURES (R.O.M.)	145NOS
STONE MASONARY STRUCTURES	23 NOS
RETAINING WALLS	18 Nos
DIVERSION CHANNEL	4 NOS

NON ARABLE LANDS

WIRE CRATE STRUCTURES	220 NOS
STONE MASONARY STRUCTURES(DS)	21 NOS
RETAINING WALLS	14 NOS

RETAINING WALL VILLAGE DALLA

SAVED 20 Ha of upstream land

AGRICULTURE DEVELOPMENT& AFFORESTATION WORKS

- Agro forestry Plantation over 120 Ha.
- Innovative farming practices like mushroom cultivation, sericulture, vermi-compost are promoted.
- 125 Ha of wasteland was brought under cultivation.
- 200 Qtl. Of wheat seed was distributed.
- 150 Qtl. Of fodder seed was distributed
- 5000Nos. of Horticulture Plants(Mango, Amla, Citrus) were promoted, survival rate is more than 70% at the end of project.
- Vegetable cultivation has been promoted.

PROJECT IMACT-OVERVIEW

- Watershed development through its concept, implementation activities has brought about considerable ecological , social & economic changes.
- Since project was designed with holistic development there are tangible as well as intangible benefits.
- Activities of land and desire to improve livelihood are linked with tangible benefits. Few of them are as follows:

- Greening hills & valleys.
- Rejuvenation of water streams
- Increase in ground water availability.
- Over coming droughts
- Mitigating Fodder Scarcity.
- Reduction in labor migration.

PROJECT IMACT-OVERVIEW

Social Impact

Employment: Project has generated 87265 man days directly .

Labour Migration: Migration of labour in search of employment has come down considerably.

Leadership Development: Institutional set up during project has created the sense of leadership

Social Harmony: People learn to live collectively.

School Drop- Out: Drop out rate of children from school has come down.

Women Empowerment: Women feel more empowered as they came out to participate in project activities i.e. SHG activities

WITHDRWAL & POST PROJECT SUSTAINABILITY

WATERSHED DEVELOPMENT FUND

ARELI-KOT	181024-00
MATTI	135570-00
DOONG AWAN	172580-00
DALLA MANSOO	163526-00
SALARI- SUKRET	147500-00

- Watershed Committee maintains the register of assets.
- Watershed Committee shall submit annual action plan for maintenance & repair.
- Works Done on Private lands shall not be eligible for repair & maintenance .However if the work on the private land is beneficial to the community and environment at large, the same can be considered with the approval of Gram Sabha .

WITHDRWAL & POST PROJECT SUSTAINABILITY

- Priority for repair from WDF can be set for the assets based on their scope of benefit to the community.
- Some of the money from WDF should be used as revolving fund to advance loan to SHG/UG and members of MWS who has contributed To WDF
- Explore opportunity from NREGA to converge with maintenance and sustenance of the assets.

Replicabilty and Dissemination

The technology adopted is simple and can be replicated in the other watersheds where perennial flows are going waste. Horizontal linkage has been done by means of exposure visits from other watersheds and interaction of them with beneficiaries and committee members.

THANKS