

# **ANNUAL REPORT**

**2010-2011**



**ARPAN SEVA SANSTHAN**

## **ACKNOWLEDGMENT**

The preparation of this Annual Report is a result of the effort and contribution of a number of people. ARPAN SEVA SANSTHAN would like to thank those who participated in the voyage of development, in one way or another. First and foremost I extend my heartfelt thanks to all of my dedicated ARPAN YOUTH TEAM, who always remains stands in supporting the endeavor to establish standards of excellence in the Rural Development.

ARPAN SEVA SANSTHAN would also like to express special gratitude and appreciation to the Subject Specilaists of College of Technology and Agriculture Engineering - Udaipur (CTAE) especially to Dr. P.K.Singh, who enthusiastically and diligently supported the ARPAN's developmental process.

ARPAN SEVA SANSTHAN also extends its thanks to the entire esteemed patron without whome the process of Development was not possible. I, on behalf of ARPAN Team, extends special thanks to NABARD, NACO, Deptt. Of Agriculture, Department of Tribal Area Development, JICA etc. for effectively coordinating the whole exercise.

Although it is not easy to mention all by names those who participated in the developmental journey, but I wish to thank all of the concerned in regards to the ARPAN's Developmental Journey.

**SUBH KARAN SINGH**  
**PRESIDENT**

## **PREFACE**

This ANNUAL REPORT for year 2010-11 briefly describes the best practices applied and success achieved by organization's practices which have received Grants and other support from the different patrons. ARPAN managed to use the support provided in an effective and efficient manner in the process of improving the well being of the Rural Population. There was significant development in this year in all areas of ARPAN's engagement.

Our core grant activity i.e. NATURAL RESORUCE MANAGEMENT, continued to record positive development in communities through the capacity enhancement initiatives and sustained poverty reduction efforts in communities. We, at the organization, are of the opinion that such initiatives are the key to progress in Rajasthan's development goals.

ARPAN has achieved considerable progress this year in beneficiary's participation and involvement in development processes in communities. During different evaluations, it was also proved that, Community people are responsive in considering the communities development needs in the areas they serve. ARPAN, therefore, work for and on behalf of the target beneficiaries.

ARPAN has proven a great success been under implementation of a Horticulture Development program with successful survival of 919 Fruit plants Orchards with all BPL families. At the same time its triumph also brings another two new long term Livelihood Development Programme for poor marginalized Tribal communities of PRATAPGARH district on a large scale in patronage with **NABARD-TDF** & Department of Agriculture under **RKVY** Scheme.

ARPAN is also developing Watershed Area with a programme sponsored by Tribal Area Development Department in Jaipur, Dausa & Pratapgarh districts & the programme concentrates on treatment of 2500 Ha area which has benefitted 1500 Tribal families.

**RAJMIIP** (Rajasthan Minor Irrigation Improvement Programme) is one of the programmes sponsored by Japan International Co-operation Agency (**JICA**) in collaboration with Government of Rajasthan for duration of 3 years with a major objective to improve the agricultural productivity and hence the livelihood of the farming population by improved and safe access to irrigation water and by its efficient utilization. ARPAN being a consortia partner along with 9 other NGO's, has been allotted with Udaipur irrigation circle with 70 WUA's.

ARPAN in assistance of NACO is implementing "Targeted Intervention" programme where the Target Population is 300 Female Sex Workers (FSW's) and 200 MSM in **CHITTORGARH** district.

**BOARD OF DIRECTORS**

NAME	DESIGNATION	QUALIFICATION	EXP	SPECIALIZED PROFILE
SH. SHUBHKARAN SINGH	PRESIDENT	M.Tech (Agg. Engg)	10 yrs	Formulation of strategy and work plan for organization. Overall monitoring and evaluation of projects. Responsible for overall administrative management of organization.
SH. BIJENDRA LAMBA	VICE PRESIDENT	B.A. (Sociology)	5 yrs	To liaison with Government department. Coordinating the staff at different level. To coordinate formulation of new projects and linkages with donors.
SH. YASHANKAR SHIVHARE	GENERAL SECRETARY	B.E. (Civil)	12 yrs	Watershed Survey Works, Lift Designing, Implementation & Documentation
SH. RAJESH JAIN	TREASURER	B.E. (Electrical)	7 yrs	Designing of Lift Irrigation Schemes, Power Mgt., To coordinate with programme staff for implementation of project. Responsible for Centralized financial management and documentation of all Programmes.
SMT. KAMLA DEVI	EXECUTIVE MEMBER	M.A. (Sociology)	5 yrs	Social Mobilization under different programmes related to Health, Women Empowerment, People's Organization & their Strengthening.
DR. P.K.SINGH	EXECUTIVE MEMBER	B.E. (Ag. Engg.), PhD (SWC)	20 yrs	Proff. In CTAE, Udaipur, Renowned faculty in field of SWC
DR. N.S.RATHORE	EXECUTIVE MEMBER	B.E. (Ag. Engg), PhD (RES)	25 yrs	Prof. & Dean of Dairy Science College, Udaipur, Renowned personality in field of Renewable Energy Sources.
DR. MAHENDRA KUMAR CHALKA	EXECUTIVE MEMBER	PhD (Agriculture Agronomy)	06 yrs	Wide experience on Crop Production, Research and Technology, Marketing Experience with Seeds and Fertilizer Companies.

## **MISSION**

ARPAN Mission ...is to develop an optimal mechanism for Rural Society, especially disadvantaged sections, with commitment for sustainable livelihood & improved quality of life which is achieved through different developmental programmes & effective application of local resources in association with community.

## **VISION**

- ❖ To become a state level resource centre in water resource development.
- ❖ Develop resource centre for training and capacity building in watershed development programs.
- ❖ Having intensive experience for design and implementation of rural livelihoods program in Rajasthan.
- ❖ As a resource centre offer consultancy and training and capacity building support to government and other NGOs in the participatory technology development in NRM.

## **PROGRAMMES IMPLEMENTED**

### **NATURAL RESOURCE MANAGEMENT**

ARPAN Seva Sansthan is working in tribal region which has been distinguished as degraded for natural resources due to deforestation & neglected as well. Worsening of natural resources in coincidence with poor agricultural practices have contributed widespread ecological insecurity and low level of productivity of natural resources. However, local communities continue to be critically dependent on their land for livelihood.

Soil, water and vegetation are three basic natural resources. The survival of God's creation depends upon them and nature has provided them as assets to human beings. The management of natural resources to meet people's requirements has been practiced since the pre-Vedic era. Farmers were ranked high in the social system and village management was in their hands. In order to manage land, water and vegetation, technical knowledge suitable to the specific conditions of a region was required. They gained this knowledge and developed skill through experience and learning by doing.

Over-exploitation of natural resources by growing population resulted in various severe problems. Destruction of vegetation has resulted in land degradation, denudation, soil erosion, landslides, floods, drought and unbalanced ecosystems. A balanced ecosystem is an urgent need.

### **THRUST AREAS**

- Development of Sustainable land use strategy for different agro-ecological sub-regions in the area.
- Devising cost effective methods of resource conservation and reclamation.
- Multiple uses of water to enhance productivity and livelihood.
- On-farm water management to enhance water-use efficiency.
- Development of location specific model watersheds in various agro ecological zones of the rainfed areas for resource conservation, enhancing productivity and livelihood generation.
- Developing package of practices for organic farming.
- Developing location specific integrated farming systems involving agriculture, horticulture and livestock etc to enhance productivity, income and livelihood.

The basic objective behind Natural Resource Development Programme is to work with communities to improve livelihood security through range of interventions including

(1)Watershed Development (2) Water Resource Management

### **WATERSHED DEVELOPMENT**

Uncertainty of assured income from the land forces the small and marginal tribal farmers in search of alternative vocation for survival leading to migration from villages to the cities or bondage as labour to large and more well off land holders. The land mass alone is not sufficient to meet our requirements. Its interaction with water and ability to make water available for various uses in required quantity and quality over the entire year is also a paramount necessity because water is crucial input for optimum use of land either for primary production systems or for meeting any other social priorities,

With the beginning of the new millennium, Watershed Development Programme in India has embarked on a new phase of consolidation of



experiences so that the programme could effectively perform its role as the key strategy for rural development in large parts of the country.

Water is the most essential natural resource next to air, required for sustaining life on the earth. It is required for drinking and industrial uses, for irrigation to meet the growing food and fiber needs, for power generation, navigation and recreation. The development, use and conservation of water, therefore, play a vital role in the country's development planning. The water resources in the country are, however, limited considering the future demands. The rainfall in the country is mostly confined to monsoon season and is unevenly distributed with respect to both space and time. As a result, some parts of the country are affected by frequent droughts at the same time other parts are affected by floods. Nearly one third of the country is drought prone. In the very near future, water will become a scarce resource due to increasing thrust of population and increasing demands for various uses. Therefore, it need not be emphasized that water should be harnessed in the most scientific and efficient manner.

Hence, ARPAN has taken up innovative projects by addressing water resource development to strive for desired objective of drinking water security, to boost agriculture & livestock production, particularly to benefit weaker sections of the community.



Watershed is an area of land within which all the rainfall it receives feeds into a particular drainage channel. Under the Watershed Development

Programme, all the land falling within the area is treated on the basis of soil & water conservation techniques. Major of them are plugging of drainage line by construction of check dams, gabions & masonry structures, constructing farm bunds & digging contour trenches on



steeper land. After basic treatment of watershed, a variety of watershed - plus activities are taken up such as the promotion of improved farming systems, horticulture & animal husbandry.

ARPAN is implementing a Watershed programme sponsored by Tribal Area Development Department in Jaipur, Dausa & Pratapgarh

districts & the programme concentrates on treatment of approx 2500 Ha area which has benefitted 1500 Tribal families. Under Soil & Water Conservation activity 155 Gully Plugs, Loose Stone Check Dams, Dug out Ponds has been constructed. Trainings & Demonstration on Vermicomposting, Plantation of Ratanjot has also been done, Horti & Forestry Plantation, Pastureland Development, Crop Demonstration & SHG formation. 45 Vermicomposting Units have been yet established. This year the fourth year has been completed where ARPAN has developed AMLA, MANGO & LEMON Orchards, Earthen Bunding, Treatment works has been done.

### STRATEGY

- Community participation with special concentration on poor sections, in planning & implementation.
- Efficient Water Conservation with appropriate technologies & systems.
- Convergence for holistic development, particularly for food & water security, supply of drinking water, health & hygiene and environmental conservation.

As a result of Watershed Program there has not only reduced the soil & nutrient loss and eased the supply of water protective irrigation, but also demonstrated the potential of recharging the ground water table. As a result of efficient recharging groundwater, there is also significant increase in crop production round the year for all the three seasonal crops.



Training & Capacity building of Rural People under Watershed programme was also taken up by ARPAN in last 10 years. Foremost topics such as Horticulture, Agro forestry, Organic Farming through Vermi Composting, Nursery Development of Medicinal & Horti Plants, Kitchen Garden, Pasture Land Development, Health & Hygiene, Sanitation, Animal Husbandry, Seasonal Crop Demonstration, Natural Resource Management, Orientation Training to Water Users Group & other institutions, Training to Farmers Community Organization, Peoples Institutions (SHG's), have facilitated more than 80,000 people in project areas directly.



## WATER RESOURCE DEVELOPMENT

### INSTALLATION & REVIVAL OF COMMUNITY LIFT IRRIGATION SCHEMES (CLIS)

Irrigation is one of the most important means for food and fodder in this semi-arid area. Earlier, when dry farming was the only means of food production and sustenance, the tribal communities depended on the vagaries of nature for their survival. In this undulating landscape, ARPAN has introduced lift irrigation scheme by installing electric pumps that lift water from various water sources like rivers, tanks, bunded rivers, natural ponds, reservoirs to main distribution chambers at the highest point in a command area. *Kundis* (masonry outlets) are constructed at convenient locations in the command area, all connected to the main distribution chamber through underground pipes. The outlets have two to four openings, each feeding open channels that ultimately bring water to the fields.

The design of lift is such that the whole command area divides into chacks & each chack covers 4-6 hectare area depending upon the topography. Each chack has one outlet. The command area of lift normally varies from 25 to 40 hectares. Cost benefit ratio comes to 2.5 to 3. Water Users Committee is strengthened and empowered by Social Mobilization efforts by organization so that they can manage their distribution system, Power Consumption, electricity bills and overall management.



The Community Lift Irrigation project is one of the major activity taken by GO and NGO's in



Pratapgarh, Banswara, Udaipur & Dungarpur districts to enhance the agricultural production and also to ensure livelihood through enhanced irrigation potential of the area. Now in most of the villages these lifts are not marking due to lack of maintenance and electricity bills. There was an urgent need for Installation and revival of these lifts with formation of active people's institutions so that they can manage it very effectively. ARPAN

is developing strategy for developing and reviving about 36 lift irrigation schemes located in different villages of Pratapgarh district with the objective that by this activity a sustainable

livelihood option for the Tribal people will be ensured and their socio-economic status will improve.

Tribal Area Development Department is working in this TSP region for their holistic development. ARPAN with the financial assistance of Tribal Area Development Department (TADD) and implemented many programmes like Revival and new installation of community lift irrigation schemes and renovation of old water resource in a short span of period.

YEAR	DISTRICT	ANICUT	NEW INSTALLATION OF CLIS	REVIVAL OF CLIS
2009-10	PRATAPGARH	0	7	4
2009-10	BANSWARA	2	1	0
2009-10	UDAIPUR	0	2	0
2009-10	DUNGARPUR	0	1	0
2009-10	SIKAR (under MADA Scheme)	1	0	0
<b>TOTAL</b>		<b>03</b>	<b>11</b>	<b>4</b>

ARPAN under the financial assistance with Tribal Area Development department and implemented many programmes like Revival and new installation of community lift irrigation schemes and renovation of old water resource in a short span of period in Udaipur, Chittorgarh, Banswara & Dungarpur districts of Rajasthan. This year, ARPAN has constructed 03 Anicuts, revived 4 old CLIS and installed 11 new Community Lift Irrigation schemes. It helps in increasing the irrigation facility of thousands ha area under Rabi crops.



As a result of these constructions the cropping pattern has changed favorably & irrigated land has been increased & more than 65 wells have recharged, which has benefited thousands of farmer families.

## HORTICULTURE

ARPAN Seva Sansthan is betrothed in Horticulture Development Programme commonly known as WADI Programme since 2007 in Bundi, Jaipur & Pratapgarh. 919 Orchards have been thus far planted with BPL ST families for the basic objective of their economic upliftment for the duration of 5 years which is monetarily assisted by Tribal Area Development Department. The fundamental intent of the programme is:

- (1) Farmer should use his own available Natural Resources for the Development of the area and his family.
- (2) To renovate the Wasteland available with farmer into Cultivable land so as to earn from Crops and Fruit Plants.
- (3) To motivate farmers regarding Improved Agriculture Practices.

Encouragement of tree based farming on private wastelands for food security and income generation is also a part of ARPAN. With the denudation of forests, tribals, representing 10% of Indian population, have been deprived of their livelihood. The poor BPL ST families participating in this programme, establish drought tolerant fruit Indian gooseberry i.e. AMLA on their marginal or wastelands covering 0.5 to 1.0 ha. The interspace is used for cultivating arable crops, which they have been growing earlier and the field bunds and borders are used to establish hardy shrubs and trees useful for fodder, fuel, timber and herbal medicines.



Foremost activities the programme is covering are:

### (a) Horti Plantation:

Farmers with access to irrigation are encouraged to grow an Orchard (WADI) of 30 AMLA fruit tree on their land. This year we have planted 27570 AMLA plants in all three districts. Although the production of AMLA tree will start after 3<sup>rd</sup> year but it is proven that after a period of 8-10 years a



farmer can easily earn Rs. 25,000-30,000/- yearly from a single orchard. This year onwards many of the Orchards will initiate fruiting.

**(b) Forestry Plantation:**

Forestry plants (150) like Bamboo, Subabool, Desi Mango, Neelgiri, Neem, Sheesham, Setur etc are planted across the border of AONLA Orchard. The basic objective behind the forestry plantation is to cover the Orchard for protection from Natural calamities, the leaves of trees itself makes organic compost, farmer can obtain timber, fuel & fodder for domestic purpose.

DISTRICT	BLOCK	VILLAGES COVERED	NO. OF PARTICIPANTS	AMLA PLANTS PLANTED	FORESTRY PLANTED
JAIPUR	BASSI	30	292	8760	43800
BUNDI	NAINWA, TALERA, KESHORAIPAT AN	55	555	16650	83250
PRATAPGARH	CHOTI SADRI	09	72	2160	10800
<b>TOTAL</b>		<b>94</b>	<b>919</b>	<b>27570</b>	<b>137850</b>

**(c) Improved Agriculture:** Each participant family is provided with improved variety of Composit Seeds (Wheat, Groundnut, Black Gram, Soyabean, Til) so that farmer can get more of the production in lesser expenditures and at the same time farmer can also collect the seeds and he himself develops his domestic Seed Bank. ARPAN is also providing well-timed technical on & off farm trainings to farmers for different aspects related to line sowing, irrigation time & techniques, diseases & their medicines.

Income from agriculture is extremely low and erratic that marginal farmers cannot risk any investment on it. Consequently, there is no organized effort to make use of inputs and adopt

improved practices. ARPAN's sustainable approach involves appropriate degree of land preparation with soil and moisture conservation measures; use of improved seed; and integrated nutrient management and crop protection measures. Practices like total dependence on hybrid seed, heavy doses of fertilizer and agrochemical application and selection of crops that have high water requirement are not usually introduced by us. Field staff closely work with farmers and gradually pass on technical information, which results in overall improvement in farm output over a period of time.

Three Peoples Organization (PO) at district level (Bundi, Pratapgarh & Jaipur) called **Gram Vikas Ayojan Samiti (GVAS)** have been promoted for better implementation and involvement of participants. Each participant is a member of GVAS and an elected body of 15 members meets every month and sits together and discuss regarding the seasonal agriculture, after care of plants and respective diseases with their remedies.



### **TARGETED INTERVENTION PROGRAMME**

The Targeted Intervention programme was started in district Chittorgarh in Month Dec 2008. As per the main objective of NACP-III, to halt and reverse the tide of the HIV epidemic in India. ARPAN strives to follow the basic objective to reduce new infections in all categories and prevent spread of HIV from High Risk Groups (HRG's) to the general populations. Under the said Targeted Intervention Programme we have to Target 300 Female Sex Workers (FSW's) and 200 Men having Sex with Men (MSM).

### **OBJECTIVES**

Although along with the other objectives we endeavor to:

Develop safe sexual behaviors and attitudes particularly among the FSW's (Female Sex Workers) under particular focus on most affected regions. It also aims to ensure that people infected and affected with HIV get easy access to a comprehensive package of services that include prevention, care, support and treatment.

The objective behind the Programme may be summarized as follows:

- Identifying sub-populations with high risk behavior
- Identifying specific behavior in need of change
- Providing indicators to monitor programme's success and identifying persistent problem areas
- Serving as an advocacy and policy tool

### ACTIVITIES ACCOMPLISHED

- Celebrated AIDS DAY on 01<sup>st</sup> Dec 2010, workshops were organized in different Government/Private Schools keeping the main objective to generate the awareness through distribution of BCC material.
- Two workshops with 45 HIV Positive People was conducted on dated 28<sup>th</sup> Jan 2011 in which awareness regarding facilities be availed by a Positive Patients, when and how to visit ART.
- Health Camp on 31<sup>st</sup> Jan 2011 has been organized which has directly benefitted 200 women and got free treatment over there.
- Series of awareness programmes, Behavioral Change Communication Programmes have been organized with our targeted population.
- Road Rally on 8<sup>th</sup> March 2011 - Women's Day was organized where 78 Women from our Target population were participated.
- Drop in Center (DIC) has been executed which is having all recreation facilities like Audio



Visual equipments for the entertainment of Target population as they are coming regularly. A small library for reading different books and novels based on Women especially.

A series of trainings at regular interval of all Peer Educators has been organized where each Peer Educator has been given a task or might be said as Target to confirm that each enrolled FSW of 300 has

been tested at ICTC and at the same time MSM must be undergone into ICTC testing mechanism with a due motivational process.

- A Community Mobilization Programme as a formal get together cum entertaining group event with identified (71) FSW's was also organized. During the programme, one to one interaction, group discussions, playing games, dance, and songs were performed by FSW's in collaboration with project team.



- Puppet show was also demonstrated, to give a Social message regarding Family Planning, Vaccination, Health Education, Safe Delivery and STD and lastly especially on HIV/ AIDS.
- In a chain of community events "EID Milan" was celebrated on 20<sup>th</sup> Sept 2010 with a group of 94 FSW's in a Public Park. FSW's belonging to different religion also celebrated the festival of Muslims and enjoyed the programme.
- 300 Female Sex Workers have been referred to ICTC and have got tested and diagnosed for Sexually Transmitted Diseases (STD) there.
- 19 HIV Positive patients were identified and were referred to ART center Udaipur and also linked with the Social Network of CNP+.
- For promotion of Safer Sex, 50 Condom Outlets/ Depots have been arranged where Condom Boxes are installed within the reach of anyone who needs.



## KEY FINDINGS

The majority of male clients are economic migrants from rural to urban areas and also from other Urban areas and other neighboring states in search of work during the lean period or been transferred from other places. While staying they have an opportunity to visit FSW's and the risk of contracting HIV infection.

When they return to their families they transmit the infection to their wives, which further gets transmitted to their children. The infection thus spreads from the core group population to the rest of the low risk general population and from urban areas to many villages.

Female illiteracy is of great relevance in understanding HIV epidemics. Imbalances between female and male illiteracy rates can also reflect broader gender discrimination and a lack of female empowerment. The increasing feminization of migration, coupled with gender inequalities and pay disparities, has contributed to a fast-growing sex industry. After an experience of past 5-6 months working with Female Sex Workers (FSW's) we came to know that there is a need to develop a Humanitarian social environment. In recent years the international response to AIDS in humanitarian situations has been rapidly evolving and expanding. Significant progress has been made in integrating HIV into the humanitarian response. Much still needs to be done, however, if universal access to HIV prevention, treatment and care services is to be achieved.



We as a Society need to address the issues of:

- Reproductive health needs that are sometimes forgotten, including the need for emergency medical supplies, Interventions to ensure safe motherhood,
- HIV and Sexually Transmitted Infections prevention, and
- The prevention of, and response to, gender-based violence.
- Programmes on demonstration & distribution of male and female condoms, sexually transmitted infections drugs, emergency reproductive health kits, and contraceptives.
- A comprehensive HIV information system has to be developed and implemented for assessments, voluntary counseling and testing, prevention of mother-to-child transmission, HIV prevention, development and dissemination of information-education-communication materials we have to develop competency and expertise in HIV conflict settings, particularly related to displaced populations.
- There is need to educate school going children, boys & girls regarding vulnerabilities of children and adolescents, including those affected by emergencies. In this context, we have to educate them regarding HIV prevention and care initiatives for emergency affected populations by providing training opportunities, providing information to young people about





HIV transmission and prevention, Awareness Campaigns, Rally by school going children, Nukkad Shows, Puppet Shows and demonstration of related Movies and at the same time including where to access HIV prevention services.

### COMPREHENSIVE DEVELOPMENT OF RURAL TRIBAL COMMUNITIES IN PRATAPGARH

It is a long term Livelihood Development Programme for poor marginalized Tribal communities of Pratapgarh district sponsored by NABARD under Tribal Development Fund Assistance for a period of 7 years. The programme will cover 700 deprived Tribal families.

The main objective of the programme is the upliftment of 700 disadvantaged poor family units through improvement of economic, health and women's status and stabilized. The project will initiated in 12 remote villages of Pratapgarh district



of Rajasthan through a process of economically viable, agronomically sustainable, socially acceptable and technically replicable.



At the same time it will be also taken into consideration *“To identify the poorest families to prepare a family Micro level plan based on their assets. This plan aims to assure food security and raise the family's economic status above the poverty line, sustainably.”*

Under this programme more thrust will be given to food security and maximum production from the local resources. Tree Based, Land Based,

Livestock Based, Small Enterprises are the major activities to be carried out in a developmental phase of 7 years.

The Programme will basically focus on Four Major Components which will cover a range of interventions to achieve the desired Developmental Objective. The components are:

- (1) LIVELIHOOD DEVELOPMENT
- (2) COMMUNITY HEALTH
- (3) TRAINING & DEVELOPMENT

#### (4) WOMEN DEVELOPMENT

WADI approach will be introduced with concept of Agro-Horti-Forestry on 1 acre land; with intercropping fruits, vegetable and medicinal plants cultivation.

It has been suggested to have three kinds of Model under Tree based activity where a WADI will be developed at the farm of family and different Models have been introduced like Model I, Model II & Model III. Model I comprises 40 Mango plants with 100 plants of forestry species in that area where Water availability is secured and Model II comprises 20 GUAVA & 20 MANGO with 100 plants of forestry species where there is a bit of Water Scarcity and Model III comprises 20 GUAVA & 20 LEMON with 100 Forestry species. Forestry species will serve the constraint of fuel, fodder and timber.



500 families will be enrolled under WADI component and 200 families will be enrolled under NON - WADI component 100 of those who are not interested under WADI will be further provided with CB Cow & Buffaloes and 100 landless families will be provided with Non Farm Activities like teashops, grocery stores, barbershops, cycle repair shops, welding shops, masala mills, flourmills etc.



Till date 100 families have been enrolled and the WADI Development activities with these 100 participating families have been completed. 2 Exposure Visits have been conducted to get well acquainted with the Horticulture Development and its different technicalities.

Four On Farm Training programmes regarding the Project knowledge and different issues of the Project have been imparted to the 100 participating families.

Four Health Training programmes to the 7 Self Help Group Women of the participating families



regarding the distance between Children and general health precautions have been imparted to the women of participating families.



Mahila Mela and Purush Mela as a big Community Events have been organized regarding the Empowerment of Women and to bring the higher level of participation under the programme and the Men Fare was organized to get acquaint of Project and its objective. In both the Events many type of Games, Cultural activities were organized, the people of all age enjoyed the events.

### COMMUNITY HEALTH

These will be designed on the basis of a local-area-specific needs analysis. While largely preventive in nature, some of these interventions may need to be curative as well e.g. children's nutrition supplementation (to tackle malnutrition, a distinct possibility in the wake of the drought), women's health issues, tuberculosis control etc.



## TRAINING & DEVELOPMENT

To build a sustainable institutional set-up, project aspires to organize villagers into Participant Groups of 10 families (each group). In all there will be 70 PGs where equal participation of men and women will be suggested.

PGs in a village will be grouped at the village level by one representative from each PG to create 4 Peoples Organization (PO - 25 members in each PO), so that they are able to take-up various problems in livelihood system and also work together to solve any sort of problem related to community. In all there will be 70 PGs with an average membership of 10 members totaling (700)



families. Mechanism of Producer Groups will be developed as Resource Sharing Groups to take care of small scale seed bank, grain bank, fodder bank, and tools/implements banks, household thrift & credit activities etc.

Finally, APEX BODY will be constituted of 11 members selected from PG's. This body will act as the top management of any organization. It will take care for Marketing & Processing of the WADI

produces, then for development of further market linkages to sell the products under Brand. At the same time APEX BODY will be responsible to help, guide, support PG to manage and execute the programmes undertaken by them.

## WOMEN DEVELOPMENT

90 Self Help Group (SHG's) will be promoted respectively in year 1, 2 & 3 according to the interested women participants. The project will actively seek out women-headed families as a particularly vulnerable section of the community and undertake interventions to support them. Ensuring that women are able to participate in



the mainstream of the development process i.e. being active participants, beneficiaries and

decision makers; will be the focus of these efforts. Actively supporting the education of the girl child is another such effort that will be undertaken.

Drudgery reduction Interventions include Chaff cutter, Improved Bearing, Improved Pulley for Community Well, Cemented Water Storage Tank

Sports Day, Mahila Mela, Cultural Day and other traditional occasions/programmes will be celebrated so as to empower women.

### ***ENTREPRENEURSHIP FOR WOMEN***

Under this particular component, Women interested in any of the Income Generation activity will be provided with skill development training. For e.g. Tailoring, Horti (grafting) - Forestry (sapling) Nursery Raising, washing powder/detergent making, Chulha making etc. will be promoted.

### **RAJAMIIP - Rajasthan Minor Irrigation Improvement Programme**

**RAJAMIIP** (Rajasthan Minor Irrigation Improvement Programme) is a programme sponsored by Japan International Co-operation Agency (JICA) in collaboration with Government of Rajasthan for duration of 3 years. Foremost objective of the Programme is to improve the agricultural productivity and hence the livelihood of the farming population by improved and safe access to irrigation water and by its efficient utilization. At the same time rehabilitation & Improvement of 334 selected Minor Irrigation Projects in 20 Districts of the State of Rajasthan where ARPAN Seva Sansthan being allotted with **Udaipur irrigation circle with 70 WUA's in Udaipur, Rajsamand, Banswara & Dungarpur districts covering 36,977 farmer beneficiaries in 219 villages under 19044 hectare CCA.**



Major objectives of the programme are to:

- Improve agricultural productivity and hence the livelihood of the farming population by improved and safe access to irrigation water and by its efficient utilization.
- Institution Building (e.g. establishment of WUAs & of SHGs)



- Human Resources Development (Training of Farmers, NGO-staff & of GoR Officials)
- Strengthening of Agricultural Extension (e.g. to improve water use efficiency, to promote cultivation of appropriate crops)
- Introduction and promotion of “Pro-Poor” Activities
- Introduction of Health Measures to reduce the risk of Malaria Transmission from open water surfaces.



#### **Governmental agencies involved**

- Water Resources Department (lead agency)
- Department of Agriculture
- Department of Health
- Department of Rural Development
- IMTI Training Institute Kota



#### **Role of ARPAN**

ARPAN will act as a community organizer for development work at village level with focus on:

- Organizing Mass Awareness Campaigns at selected project sites to generate interest
- Collection of socio-economic data based on stratified sampling (20% sampling size)
- Establishment and capacity building of WUAs
- Formation of various sub committees in each WUA and assign work to each
- Training of WUA-members in institutional matters as well as in simple maintenance and rehabilitation work
- Establishment and capacity building of SHGs
- Implementation of the ‘pro-poor component’



Since start of the programme,

ARPAN has organized 69 Mass Awareness Campaigns, there were 96 average participants in each Mass Awareness Campaign whereas total no. of participants attended 69 Mass Awareness campaigns were 6666

- 70 One Day Orientation Camps
- 446 Village Level Meetings have been held in which 11,200 beneficiaries have participated. Various sub committees have been formed in 67 WUAs (Administrative, finance & resource committee, Construction committee, Monitoring evaluation and training committee, Irrigation committee).
- 45 WUAs have their own letter pads and seals and they use the same to contact with WRD and various other authorities for development work and their issues.
- Savings accounts for 35 WUAs have been opened in respective local banks.
- 7614 baseline forms for socio economic survey have been filled, coded and submitted for data entry and SPSS analysis.
- Four capacity building training programmes have been organized for ward members (in which more than 150 members have participated).
- Eight day “EXPOSURE VISIT TO MAHARASHTRA” for 12 WUA Presidents has been planned in June 2011.
- Now Department of Agriculture shall form Technical Support Groups (TSG) at WUA, district and state level after which agriculture extension services shall be provided to beneficiaries (for improved agriculture technologies, agro-inputs and information about various government schemes especially related to irrigation). ARPAN has submitted WUA level names for formation of TSG.
- Total meetings with Water Resource Department: 89
- Total Meetings with Agriculture Department: 42
- Guest Visit (Dignitaries, WRD, AAO etc): 112



### **SUSTAINABLE AGRICULTURE DEVELOPMENT OF TRIBALS IN PRATAPGARH**

ARPAN is under implementation of an Agriculture Development Programme under **Rashtriya Krishi Vikas Yojna (RKVY)** in financial assistance with **Department of Agriculture - Govt. of Rajasthan** in Pratapgarh district with 1000 farmer families,



where the Livelihood of individual farmer family will be enhanced with the intervention support of Horticulture, Improved Agricultural Practices, Dairy Development and Water Resource Development at farmer's field.



The major objectives of the programme are

## 1. DEVELOPMENT OF WATER RESOURCES (Approx. 1000 ha)

- 1.1. Installation of 14 new community lift irrigation schemes in the project area.
- 1.2. Renovation of 3 old non working community lift irrigation schemes, which were already installed in the project area.
- 1.3. Construction of 8 water harvesting structures in the project area.
- 1.4. Construction of 100 new open wells in the project area.
- 1.5. Well Deepening and bracket construction of 300 Wells in the project area.

## 2. HORTICULTURE DEVELOPMENT (1000 WADIs)

## 3. ADOPTION OF IMPROVED AGRICULTURE PRACTICES (1000 families)

## 4. DAIRY DEVELOPMENT THROUGH CROSS BRED LIVESTOCK (300 FAMILIES)

The future impacts of the long term sustainable programme are the increase in productivity of farmer families through the restoration of Water resources and per hectare area under irrigation will be enhanced. A new Dairy route will be established in the project area so as to strengthen 300 farmers economically and to sustain the productivity.





ARPAN's innovation for adopting an **AGRO SERVICE CENTER** will be proven highly efficient to adapt the Marketing and channelize the farm produces at local to National Markets.

700 participants have been selected this year and one exposure visit and 5 training programmes have been yet conducted which has benefitted directly to 700 participating families. The Entry point activity applied was the construction of Compost Pit and Nursery Raising at farm fields of all participating families.

#### **TRAINING PROGRAMMES CONDUCTED UNDER DIFFERENT DEVELOPMENTAL PROGRAMMES**

Sr. No.	Name of District	No. of Blocks	No. of Villages	Name of Training Programme	Project Sponsoring Agency	No. of beneficiaries
1	PRATAPGARH	2	8	EXPOSURE VISITS (2)	NABARD-TDF	225
2	PRATAPGARH	2	8	HORTICULTURE DEVELOPMENT TRAINING (4)	NABARD-TDF	400
3	PRATAPGARH	2	8	HEALTH AWARENESS TRAINING TO SHG WOMEN (4)	NABARD-TDF	280
4	PRATAPGARH	3	15	EXPOSURE VISITS (1)	Deptt. Of Agriculture - RKVY Scheme	200
5	PRATAPGARH	3	15	AGRICULTURE DEVELOPMENT TRAINING PROGRAMMES (5)	Deptt. Of Agriculture - RKVY Scheme	700
6	UDAIPUR	5	14	MASS AWARENESS CAMPAIGN (14)	RAJAMIIP	1400
7	UDAIPUR	2		BLOCK LEVEL ONE DAY ORIENTATION WORKSHOP OF WATER USER'S ASSOCIATION (2)	RAJAMIIP	69
8	UDAIPUR	5	60	VILLAGE LEVEL MEETING (75)	RAJAMIIP	1725
9	DUNGARPUR	5	50	MASS AWARENESS CAMPAIGN	RAJAMIIP	1955

				(17)		
10	DUNGARPUR	2		BLOCK LEVEL ONE DAY ORIENTATION WORKSHOP OF WATER USER'S ASSOCIATION (2)	RAJAMIIP	82
11	DUNGARPUR	5	50	VILLAGE LEVEL MEETING (92)	RAJAMIIP	1655
12	BANSWARA	3	60	MASS AWARENESS CAMPAIGN (19)	RAJAMIIP	2755
13	BANSWARA	2		BLOCK LEVEL ONE DAY ORIENTATION WORKSHOP OF WATER USER'S ASSOCIATION (2)	RAJAMIIP	92
14	BANSWARA	3	60	VILLAGE LEVEL MEETING (108)	RAJAMIIP	2800
15	RAJSAMAND	6	44	MASS AWARENESS CAMPAIGN (20)	RAJAMIIP	1960
16	RAJSAMAND	1		DISTRICT LEVEL ONE DAY ORIENTATION WORKSHOP OF WATER USER'S ASSOCIATION (1)	RAJAMIIP	110
17	RAJSAMAND	6	44	VILLAGE LEVEL MEETING (116)	RAJAMIIP	1972
<b>TOTAL</b>		<b>21</b>	<b>242</b>			<b>18380</b>

## SUSTAINABILITY OF FARMERS THROUGH HIGH QUALITY PROTEIN MAIZE

The maize kernel, like that of other cereal grains, includes pericarp (6%), endosperm (82%) and germ (12%)<sup>6</sup>. The main structural component of the endosperm is starch, a complex carbohydrate that constitutes on an average 71% of the grain and is a source of concentrated energy. Bulk of the proteins in a mature maize kernel is in the endosperm and germ; but, the germ protein is superior in both quantity and quality.

### High Quality Protein Maize

It is an improved variety of maize which contains higher amount of *lysine* and *tryptophan* with lower amount of *leucine* and *isoleucine* in the endosperm than those contained in normal maize. Such balanced combination of amino acids in the endosperm results into its higher biological value ensuring more availability of protein to human and animal than normal maize or even all cereals and pulses.

### Nutritional superiority and biological value of QPM

The nutritional benefits of QPM for people, who depend on maize for their energy and protein intake, and for other nutrients, are indeed quite significant. The QPM protein contains, in general, 55% more tryptophan, 30% more lysine and 38% less leucine than that of normal maize. Besides protein quality, another important factor is 'biological value', which refers to the amount of absorbed nitrogen needed to provide the necessary amino acids for different metabolic functions.

The biological value of normal maize protein is 45%, while that of *o2* maize is 80%. Only 37% of common maize protein intake is utilized compared to 74% of the same amount of *o2* maize protein. A minimum daily intake of approximately 125 g of *o2* maize might guarantee nitrogen equilibrium. This could not be obtained by using even twice the amount of normal maize. The nitrogen balance index for skim milk and *o2* maize protein is 0.80 and 0.72, respectively, which indicates that the protein quality of QPM is 90% of that of milk. Besides, around 24 g of normal maize per kg of body weight is required for nitrogen equilibrium, compared to only around 8 g for QPM.

The other nutritional benefits of QPM include higher niacin availability due to a higher tryptophan and lower leucine content, higher calcium and carbohydrate, and carotene utilization. Further, high quality protein maize can be transformed into edible products without deterioration of its quality or acceptability, and can be used in conventional and new food products.

The nutritional and biological superiority of QPM has also been amply demonstrated in model systems such as rats, pigs, infants and small children, as well as adults. Besides its obvious significance in human health, QPM could play an increasingly important role in reducing the protein supplement in animal feed, if used as a gradient

## Nutritional impact of QPM on human and animal

### As Food

**Impact on children:** QPM feeding of preschool children continuously for six months showed a significant increase in weight and arm circumference with marginal increase in height. Increase in Intelligence Quotient (I.Q.) amongst children due to QPM feeding is also a reported fact.

Potential of QPM maize in meeting the calorie and protein daily allowances in children				
Children in Age Group (Years)	Calorie requirement		Protein requirement	
	RDA* (Kcal/day)	% of total energy from QPM	RDA* (g/day)	% of total protein from QPM
4-6	1690	24	30	42
7-9	1950	21	41	31
Adult >18¥	2875	28	60	42

Source: National Institute of Nutrition, ICMR, Hyderabad (1999 & 2002); ¥ 50 percent of total daily allowance of cereal requirement of an adult with moderate work supplied with 240 g QPM grains.  
\* RDA - Recommended daily allowance for children is 120g of grains.

**Impact on pregnant women:** Feeding of QPM to pregnant women continuously for six months starting from the end of 1<sup>st</sup> trimester up to last trimester showed significant impact upon the health of the babies and mothers.

**Impact on old age people:** Use of QPM as food by old age people proved beneficial by providing them relief from gastric and other indigestion ailments.

### As Feed

**Impact on animals:** QPM feeding to pigs and chicks resulted into fast growth in their bodies. A significant increase in milk production has been reported when QPM is fed to cows and buffaloes.

## **ACTION PLAN OF ARPAN**

ARPAN SEVA SANSTHAN has taken initiative towards betterment of livelihood of farmers through production of improved seeds of HQPM. In this regard, a pilot project has been implemented in Banswara district of Rajasthan. ARPAN aims to encourage innovative and business friendly practices to harness its potential in a manner more appropriate for the people most of whom are tribal belonging to neglected communities that rely heavily on external assistance for their livelihood.



### **Beneficiary farmer in Bhuasa**

The pilot project aims to offer tremendous opportunities for the tribal communities of Banswara by introducing an organized way of producing quality seeds and its allied activities resulting in the substantial increase in the seed replacement ratio (SRR) leading to higher yield and enhanced return to tribal farmers in the belt. This will create job prospects for tribal and poor communities not only in producing quality seeds on a large scale but also processing, distributing, sowing and procuring increased grain production in the district.



**ARPAN's President Shri Subh Karan Singh with Additional Commissioner, TAD, Banswara Shri Upadhyay at the pilot project farm at Bhuasa**

Our experiment to produce QPM hybrid seeds is the first of its kind program in Rajasthan to popularize the concept of high quality seed production in the state which shall help farmers reap economic benefits by not only increasing yield of grains produced in the field but earn high income of producing quality protein hybrid seeds in their fields.

ARPAN has undertaken this pilot experiment of producing high quality QPM hybrid seeds over 7.5 hectares (45 Bigha) in two unique seed clusters; namely Bhuasa cluster and Ganoda/Sambla cluster in Banswara district of southern Rajasthan in Rabi 2010-11 season for which an estimated 230 quintals QPM hybrid seeds shall be ready for marketing in Kharif 2011 season. The QPM hybrid seeds program is already undergoing the seed certification by the RSS Certification Agency (RSSCA). The performance of QPM hybrid seed production program is closely supervised by Dr Sain Dass, the developer of QPM hybrid and former director of the Directorate of Maize Research (DMR) of ICAR in addition to supervision by MPUAT, Udaipur and RSS Certification Agency in Rabi 2010-11 season.

**ARPAN Seva Sansthan has its own Information Education & Communication material published in simple Hindi Language on different developmental aspects which are as below:**

1. *Kharif Phaslon ki Unnat Krishi Vidhiyan* - A booklet in Hindi which elaborates the different systems & practices for better production in Kharif Cropping.
2. *Swayam Sahayta Samooh (Prashikshan Pustika)* - A booklet in Hindi as a Training Guide for the formation & better operation of Self Help Groups.
3. *Nursery Prabandhan* - A booklet in Hindi demonstrating the modus operandi of Management of Nursery.
4. *Vermi Compost - Jaivik Krishi Ka Adhar* - A booklet in Hindi describing Vermicomposting in easy language.
5. *Jaivik Krishi - Khushaal Kisan, Vermi Compost - Prashikshan Pustika* - A booklet in Hindi to perform Organic Farming with Vermicompost.
6. *Phalotpadan Ki Unnat Krishi Taknik* - A booklet in Hindi for Horticulture.
7. *Pashudhan Prabandhan* - A booklet in Hindi for Livestock Management.
8. *Aushdhiya Phaslon Ki Kheti* - A booklet in Hindi telling Farming Procedures of Medicinal Plants.
9. *Sabjiyon Ki Unnat Kheti* - A booklet in Hindi detailing best farming practices of Vegetables.