Bundelkhand Rural Poverty Alleviation Program (BRPAP), Tikamgarh

Annual Report: 2011- 2012

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1. Summary

SDTT has embarked on a Bundelkhand Initiative to address poverty and inequity in the region through multi-sectoral civil society projects based on a clear strategy. The Initiative is being rolled out through projects in two contiguous districts – Lalitpur in UP and Tikamgarh in MP.

Under the initiative, ABSSS, headquartered in Chitrakoot, UP, is running a project, entitled Bundelkhand Poverty Alleviation Program, in 40 villages of Tikamgarh block of Tikamgarh district.

Of the 40 villages, 20 villages are selected for core intervention, while the remaining 20 are extension villages. The duration of the project is 3 years.

The main objectives of the ABSSS project are as follows:

- To form and build capacity of community organizations especially of women and marginalized social groups for democratic realization of entitlements.
- To enhance participation, savings, role and decision-making power of women in household and community development.
- To enhance income & living standards of the people of target group from land and agriculture through scientific natural resource management and improved agricultural practices & animal husbandry.
- To strengthen capacity of NGO and community in MGNREGA, RTF, etc
- To leverage available public funding (government) resources for optimum realization of above objectives

The major activities of the project are:

- Establishing community based organizations (CBOs) on common platform with focus on women
- Watershed development
- Agriculture development
- Horticulture, forestation, other new livelihood opportunities
- Improve livestock productivity
- Build target group capacity to claim entitlements
- Capacity building of NGO and community

A total of 2565 households (HHs) live in the 20 villages/hamlets covered intensively by the Project. Of these 30% belong to SC groups, 14% belong to ST groups and 56% belong to OBC groups.

An in-depth socio-economic survey of 95 target group HHs in 20 project villages revealed that agriculture and wage labour are the main sources of livelihood, engaging over four-fifths of the HHs. Around a third of HHs have at least one member who migrates to distant locations for 3-9 months. Significantly, around half the HHs get income from fruit and forest species trees, growing on their own lands or in forestlands,

but quantum of income from this source is low. Only a fourth of HHs get income from animal husbandry.

Average annual gross income of surveyed HHs from various sources is Rs 56,000, which means that excluding costs incurred on agriculture, average net income would be less than Rs 40,000. This is reflected in different living-standard indicators.

Barring 6% of the total families, all families own some agricultural land. However, 44% of the total families own less than 2.5 acres (1 ha) and another 38% own between 2.5 to 5 acres (1 to 2 ha).

Of the total 6823 acres of cultivable land, around 60% (4037 acres) is irrigated, and of this, around 67% is irrigated by dug wells. Nearly two-thirds of farmers, cultivating around 40% of the cultivated land, do not have wells.

Wheat, soyabean, and urad are the major crops, accounting for 60% of the total cropped area, with wheat occupying 26% of the area, followed by soyabean (19%) and urad (17%). Around one-fourth of households cultivate vegetables in kitchen gardens and/or parts of their land.

2011-12 was the 1st year of the project, and ABSSS was implementing it in an area where the organisation had no previous work experience or even contacts. Hence, the first year was mainly spent in:

- Establishment of organisational presence in project area
- Gaining confidence of target community
- Soliciting interest and involvement of community in project objectives and activities
- Planning project interventions, and collecting and analysing data for same
- Establishing contact with local government functionaries of related departments
- Selecting and training field workers.

Actual implementation, with sanction of funds, started only in June 2011. Hence, no soil and water conservation works could be envisaged. Despite these limitations, the project could go a long way in fulfilling some of its objectives.

Though it was new to the area, the project staff could establish rapport with the community, secure involvement of key community leaders, and set up four kinds of CBOs: women's SHGs, farmers' groups, groups of teenage girls (kishori mandals) and one water user's group.

An important initiative was the construction of a diversion-based irrigation system for the benefit of 40 adivasi families in Sauryana village.

Agriculture development was done through three activities:

- Focused farmer training programmes
- Promotion of PoPs with input support
- Studies for gaining better understanding of problems and challenges

Four capacity building programmes were organised during the year to increase awareness about MGNERGA and FRA entitlements and procedures for claiming the same.

To leverage available public funding and other resources, for the benefit of project communities, project staff networked with a number of government agencies. Significant success was achieved in initiating the leveraging of public funds through panchayats.

The project is rolled out through farmers' groups and SHGs, which are involved in:

- Prioritisation of activities at different villages
- Selection of sites/beneficiaries
- Local coordination for implementation
- Monitoring work

Notably, all the village-level workers of the project are selected from the community.

In its first year itself, the project had three major impacts:

- Mobilisation of community towards livelihood development
- Demonstrated benefits of PoP, resulting in higher yields and higher returns
- Leveraging public assets for benefit of voiceless poor

Considering various non-beneficial factors like newness of organisation and project to project area, the project made a good start in year 1.

2. Background of Project

SDTT has embarked on a Bundelkhand Initiative to address poverty and inequity in the region through multi-sectoral civil society projects based on a clear strategy.

The Initiative is being rolled out through projects in two contiguous districts – Lalitpur in UP and Tikamgarh in MP—which will be in the form of demonstration models that can be scaled or replicated in the rest of the region. The civil society organizations invited to work in these two districts are reputed CSOs of the region that have worked with SDTT in the past. ABSSS is one of the invitees and has responded positively to the opportunity offered by SDTT.

The ABSSS project, entitled Bundelkhand Poverty Alleviation Program, is being implemented in 40 villages of Tikamgarh block of Tikamgarh district, MP. Of the 40 villages, 20 villages are selected for core intervention, while the remaining 20 are extension villages. The duration of the project is 3 years.

The main objectives of the ABSSS project are as follows:

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The major activities of the project are:

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- Watershed development
- Agriculture development
- Horticulture, forestation, other new livelihood opportunities
- Improve livestock productivity
- Build target group capacity to claim entitlements
- Capacity building of NGO and community.

A notable aspect of the project is that a substantial amount of work is expected to be done through convergence with government departments/agencies and programmes.

2a. Baseline information on project area

Geographical profile

The 20 project villages are located in Tikamgarh block of Tikamgarh district, MP, at a distance of 20 to 40 km from Tikamgarh town, which is the headquarters of the district. Tikamgarh district lies in the northern part of MP, and is bounded by of Sagar district in the south, Chhattarpur district in the east, Lalitpur district of UP in the east and Jhansi district of UP in the north.

Tikamgarh is situated on the Bundelkhand plateau between Jamuni, a tributary of Betwa, and Dhasan rivers. It extends between the north latitude 24º26' to 25º34' and east longitude 78º26' to 79º21'. The northern part of the district is at height of about 200m above the mean sea level (amsl), while the southern part is at a height of around 300m. Thus, the district's topography is marked by a gentle slope from south towards north.

According to geological formations, the district can be classified into two broad regions:
- Hill ranges rising to height of 200-400m amsl.
- Inter-hill valleys.

The hill ranges are made up of hard compact and resistant granite masses intruded by quartz reef. The valleys are covered by colluvial and detrital of parent rock along with organic material. The thickness of alluvial fill varies from 10-16 meters.

The entire district falls in Bundelkhand granite and gneisses, which are profusely intruded by quartz reefs and pegmatites. Long narrow ridges formed by quartz-reef are intrusive into the granite. These quartz reefs act as water dividers and cut off flow of groundwater. Soils derived from parent rocks are of four types:
- Coarse-grained reddish brown soils known locally as Rakar
- Coarse-grained grey to greyish brown soils known as Parua
- Clay loam black soils known as Kabar
- Clayey-black soils known as Mar

Table 2.1: Soil status

Parameter	Value	Rating
pH	7-7.6	Normal
EC	0.10-0.20	Normal
Organic carbon	0.27-0.70%	Low to Medium
Available phosphorous	2-12kg/ha	Low
Available potash	50 to 200kg/ha	Low to Medium

Soil parameters, as obtained from soil tests conducted in the project villages, are generally as shown in Table 2.1

Climate and rainfall

The climate of Tikamgarh district is characterized by a hot summer and general dryness except during the southwest monsoon season. The normal maximum temperature during the month of May is 41.8° C and minimum during the month of January is 7.0°C. The mean maximum and minimum temperatures are 32.4°C and 17.5°C respectively.

The normal annual rainfall received by Tikamgarh district is 1057.1 mm. Maximum rainfall (about 90%) is received during southwest monsoon period from June to September. Only 10% of the annual rainfall takes place between October to May. Thus, surplus water for groundwater recharge is available only during the southwest monsoon period.

During the southwest monsoon season the relative humidity generally exceeds 87% in August. The driest part of the year is the summer season, when relative humidity is less than 35%. May is the driest month of the year.

Maximum wind velocity 9.3 km/hr observed during the month of June and minimum wind velocity is 3.0 km/hr during the month of December. The average normal annual wind velocity of is 5.6 km/hr.

Data on rainfall in the decade (Table 2.1) before the start of the project shows that in 8 years, rainfall was below normal, and in one year (2007), it was 50% below normal. Also significant is the fact that in some years, around 15% of total annual rainfall fell on one day. Due to the sloping topography, and the granite substratum, most of this water would have been lost in runoff.

Table 2.1: Rainfall pattern

Year	Total rainfall (mm)	Highest rainfall in 1 day (mm)
2002	785.1	105
2003	958.2	75
2004	747.7	134
2005	806.4	86
2006	842	155
2007	333	32
2008	1406	57
2009	865	49
2010	627.01	33

Land Use

Tikamgarh is a predominantly rural district with urban population restricted to 30% of total population. According to 2006-07 data from District Statistical Handbook, nearly 60% of the land is cultivated, and of this, over 50% is under double cropping. Only 5% of the land is under different categories of forestland. However, in one of the Adivasi villages covered by the Project (Sapon), the forestland is much in excess of the cultivated land.

Peoplescape

Peoplescape data discussed below related to the 20 project villages selected for intensive intervention.

Demographics

A total of 2565 families live in the 20 villages/hamlets covered intensively by the Project. Of these:

- 30% belong to SC groups
- 14% belong to ST groups and
- 56% belong to OBC groups.

The main SC groups are:

- Ahirwar
- Vanshkar
- Chadar and
- Khangar.

The main ST groups are Saur and Gond. The main OBC groups are:

- Lodhi
- Yadav
- Kushwaha,
- Vishwakarma
- Rai
- Sahu
- Raikwar
- Napit and
- Patel.

The general population (less than 1% of total) consists of a few Thakur, Jain and Brahmin families. Table 2.2 shows the village-wise distribution of families by social group.

Table 2.2: Village-wise population by social groups

Village	Total Families	SC Families	ST Families	General category Families	OBC Families
Rajapur	200	90	0	5	105
Magra	202	10	60	0	132
Mayrikhera	209	95	32	0	82
Nagara	400	90	0	0	310
Madnikhera	55	54	0	0	1
Satyanagar	45	45	0	0	0
Sapon	50	0	40	1	9
Gopalpura	135	75	0	0	60
Bhagalpura	40	40	0	0	0
Ratanganj	60	0	30	3	27
Sauryana	64	4	59	0	1
Basiyan Khera	68	0	36	7	25
Dudataura	330	30	40	0	260
Ramnagar	305	60	0	6	239
Harinagar	40	16	0	0	24
Matapur	56	32	4	0	20
Madanpur	42	12	0	0	30
Mujra	98	41	12	1	44
Haidarpur Adivasi Basti	30	0	30	0	0
Suda Dharampura	136	60	15	1	60
Total	**2565**	**754**	**358**	**24**	**1429**

As the table shows, 16 of the 20 villages have a significant SC population, and in 5 villages (Madnikhera, Satyanagar, Gopalpura, Bhagalpura and Matapur), the SC population is predominant. Half the villages have a significant ST population, and in 3 villages (Sapon, Sauryana, Basiyan Khera) and Haidarpur adivasi basti, the ST population is predominant.

Livelihood pattern

An in-depth socio-economic survey of 95 target group HHs in 20 project villages revealed that:

- Agriculture and wage labour are the main sources of livelihood, engaging over four-fifths of the HHs.
- Around a sixth of HHs have at least one member who migrates annually to distant locations for 8-12 months.
- Around half the HHs get income from fruit and forest species trees, growing on their own lands or in forestlands, but quantum of income is from this source is low.

- Only a fourth of HHs get income from animal husbandry.
- Around a fifth of HHs have small businesses, usually in trading.
- The number of HHs with at least one person having a salaried job is negligible.

Table 2.3 below shows breakup of HHs by source of livelihood (most HHs have more than one source of livelihood) with gross income from each source.

Table 2.3: Income sources of HHs and income from each source

Income source	% of HHs getting income from source	Average income (Rs) of HHs from source
Agriculture	99	35,000*
Wage labour	82	12,600
Annual migration	15	20,200
Animal husbandry	25	3600
Tree produce	52	3150
Business	22	13,000
Service	2	30,000

* Not excluding cost of production

Average gross income of surveyed HHs is Rs 56,000 per annum, which means that excluding cost of production in agriculture, average net income would be less than Rs 40,000. This is reflected in living-standard indicators:

- while most HHs live in semi-pukka houses made of mud and stones, only 17% HHs own motorcycles
- only 13% own TV sets, and
- only 14% use a kerosene or gas stove for cooking.

Land ownership

Table 2.4: Land owning pattern in 20 villages

Land owned in acres	No of families
0	145
<2.5	1116
2.5-5	986
5-10	260
10-20	52
>20	6

Agriculture and agriculture labour is the main occupation of the people in the selected villages and barring 6% of the total families, all families own some agricultural land.

However, as data in Table 2.4 indicates, 44% of the total families own less than 2.5 acres (1 ha) and another 38% own between 2.5 to 5 acres (1 to 2 ha). Thus 80% of the population comprises marginal and small farmers.

Only in 7 villages (Magra, Mariyakhera, Dudataura, Ramnagar, Harinagar, Mujra, Suda Dharampura) are there some families owning more 10 acres.

Water & irrigation status

In all villages, there are functioning handpumps. However, in 13 villages there are only 2 or less than 2 handpumps, and shortage of drinking water is experienced in summer months. In 10 villages, there are a total of 15 ponds, used mainly for washing and feeding water to animals. In all but 3 of the 20 villages, there are public wells. The water is used mainly for domestic consumption.

Groundwater tapped through private dug wells is the main source of irrigation in the entire Tikamgarh district, and the situation is the same in the 20 Project villages. Of the total 6823 acres of cultivable land, around 60% (4037 acres) is irrigated, and of this, around 67% is irrigated by dug wells. Around 15% of the irrigated land is irrigated by tubewells, and 13% of the irrigated land is irrigated by lifting water from nallas or rivers. Three villages are near a river and in 15 villages there is a nalla nearby, and in 10 villages a total of 18 checkdams have been built by the government across these nallas or rivers. There is no canal irrigation in the selected villages. Table 2.5 shows the consolidated irrigation pattern in the 20 villages.

Table 2.5: Total irrigated land by source of irrigation

Irrigation source	Land irrigated (acres)
Dug well	2713
Tubewell	619
Nalla	535
Pond	170
Canal	0
TOTAL	4037

There are 980 dug wells and 183 borewells in the 20 villages. That is, there is roughly one well per three farmers. It is seen that normally 80% of wells have water in Kharif and Rabi, and some amount of water in summer. It must be however noted that nearly two-thirds of farmers, cultivating around 40% of the cultivated land, do not have wells.

Cropping pattern

Of the total 6823 acres of cultivable land, around 80% (5485 acres) is sown in the Kharif season, and around 70% (4919 acres) is sown in the Rabi season. However, including around 7% of the sown area under different vegetables, only around 38% of the cultivable land is double-cropped, compared to the district average of 50%. A tiny part of the land is under cultivation in summer under some vegetable crops.

Wheat, soyabean, and urad are the major crops, as shown in the table below, accounting for 60% of the gross cropped area (10925 acres), with wheat occupying 26% of the area, followed by soyabean (19%) and urad (17%).

Table 2.6: Major crops

Crop	Cultivated area (acres)
Wheat	2805
Soyabean	2082
Urad	1849
TOTAL	6736

A variety of minor crops are grown, viz. mustard, till, paddy, gram, barley, peas, lentil, mung, sugarcane, groundnut, kodo, maize, and jowar. The important minor crops accounting for over 5% of cultivated area are mustard, til and paddy.

Mustard is grown in small patches or intercropped with gram by 44% of households. Til is also grown by an equal proportion of households in Kharif in area of around 0.7 acres per household. Paddy is cultivated by around 23% households.

Mung, barley and gram are grown by 15-20% households in small patches. Mung and lentil is usually grown along plot boundaries.

Vegetable crops

Around one-fourth of households cultivate vegetables in kitchen gardens and/or parts of their land. The major kitchen garden vegetables are tomato, brinjal, bottle gourd, pumpkin and bhendi (lady's finger). In addition, a few families grow coriander and cucumber.

Most of these vegetables, along with potato, onion and arbi are grown in parts of fields as well, with chilli, tomato, and brinjal accounting for two-thirds of the area under vegetable cultivation. Except for onion, which is grown by a couple of farmers in areas over 1 acre, average area under vegetable cultivation per cultivating household ranges from 0.3 to 0.7 acres.

Yields of important crops

Average yields of major crops in Project area broadly match average yields in entire Tikamgarh district. Data given in Table 2.7 indicates that it is only with respect to urad and gram that there is significant variation between average yields in Project area and Tikamgarh district. In any case, in both areas, the yields of all major crops are much lower than highest average yields obtained in other parts of MP. Also to be noted is that there is much variation in yields—across villages and across farmers in a village—particularly in case of urad (this is most probably due to some farmers irrigating the crop at critical phases, whereas the majority do not provide any irrigation).

Table 2.7: Yield (kg/ha) comparisons of important crops

Crop	Highest avg. yield in MP (district)	Avg. yield in Tikamgarh	Avg. yield in Project area
Wheat	3180 (Morena)	1340	1560
Soyabean	2160 (Gwalior)	920	970
Urad	570 (Narsimpur)	330	525
Mustard	1470 (Morena)	420	440
Til	820 (Balaghat)	330	333
Gram	1530 (Harda)	1130	722

MP and Tikamgarh figures are for 2005-06 and sourced from: Districtwise crop production statistics, Crop Production Statistics Information System, Ministry of Agriculture, GOI

Income from trees

Trees in and around Project villages are a source of income to around half the families. While almost all ST group families get income from collection of tendu leaves, many families also get income by selling fruits borne on trees on their lands, or on public lands.

There are over 6500 ber trees in the 20 villages and around 60% of total households gain some income from these trees. Around 30% and 25% of households also get income from a total of 1655 mahua and 1352 mango trees respectively. There are also other fruit-bearing trees like guava, lemon, jamun, custard apple, amla, bel, tamarind, chironji and kainth, which provide income to some families.

There are around 6700 palas trees and 7300 neem trees in the 20 villages, which also provide some direct income, apart from other benefits. Most land-owning families have at least a couple of neem trees on their lands.

Nearly 1000 families get some income from collection of chakon (casia tura) fruit, available in trees on roadside or nearby forests. The number of families getting income from other NTFP like medicinal plants or gum (other than palas gum) is very low.

Livestock

There are around 2700 heads of cattle owned by around 1000 HHs, or 2.7 heads of cattle per cattle-owning household. Additionally, 233 HHs own 1545 goats, or 6.6 goats per goat-owning HH. A total of 113 HHs own 598 poultry animals, or 5.3 poultry animals per HH. The productivity of the animals is quite low, with average daily milk production per cow being only 0.8 litres. Average milk production per buffalo is 2.7 litres.

While ownership of cows is found across social groups, the number of ST HHs owning buffaloes is very low. Goat-ownership is highest among SC and ST families, with some of these families owning over 10 goats each.

It is notable that only around a third of all HHs own bulls. Most HHs depend on use of tractors for ploughing.

Table 2.8: Domestic animals population

Animal	Total no. Of animals	Total no. of animal-owning HHs
Bull	1682	885
Cow	1545	818
Buffalo	1123	491
Goat	1545	233
Sheep	15	3
Poultry	598	113
Pigs	18	4
Horses	7	7

Public infrastructure

The 20 villages are well served by public infrastructure in terms of primary schools and electricity supply. In other respects, especially health and transport infrastructure, the villages are poorly served. However, most services are available near the village (within distance of 5 km).

Access to entitlements

A total of 2562 children are enrolled in schools in the 20 villages, but around 25% are not attending regularly. It is also seen that nearly 20% of children attend school only to have mid-day meals. Hence, one can gauge that satisfaction with school education quality is not high, and there are a number of families that see no benefit in sending children, especially girls, to school regularly.

Around 17% of HHs are not covered by PDS—they do not have any kind of card. Of the card-holding HHs, 46% have BPL cards, 42% have APL cards, and 12% have Antoyada cards. Data on actual quantity of PDS commodities received by HHs every month shows that BPL HHs get 20% less than official foodgrains entitlement (20kg/month), which is itself only 60% of average HH requirement (35kg/month).

Around 77% of HHs have MGNREGA cards. However, only a third of card-holding HHs had got work in the preceding 12 months. Most HHs were unaware that work has to be demanded by written application, and an allowance is payable if work is not given after submission of the application. Only 17% of HHs had worked for more than 50 days under MGNREGA in the preceding 12 months, and 8% had wage payments pending for over 30 days.

Food insecurity

The in-depth study of 95 sample-HHs revealed no HH suffers from chronic starvation. However, 48% HHs have less than 3 full meals a day, and 11% HHs reported that they sometimes cook and eat grains of wild grasses

3. Program Findings

This section discusses the project's achievements in 2011-12 vis-à-vis its objectives. It also throws light on project design and implementation.

3a. Fulfillment of Objectives

2011-12 was the 1st year of the project, and ABSSS was implementing it in an area where the organisation had no previous work experience or even contacts. Hence, the first year was mainly spent in:

- Establishment of organisational presence in project area
- Gaining confidence of target community
- Soliciting interest and involvement of community in project objectives and activities
- Planning project interventions, and collecting and analysing data for same
- Establishing contact with local government functionaries of related departments
- Selecting and training field workers.

Actual implementation, with sanction of funds, started only in June 2011. Hence, no soil and water conservation works could be envisaged.

Despite these limitations, the project could go a long way in fulfilling some of its objectives, as discussed below.

Forming and building capacity of CBOs, especially of women

Though it was new to the area, the project staff could establish rapport with the community, secure involvement of key community leaders, and set up four kinds of CBOs: women's SHGs, farmers' groups, groups of teenage girls (kishori mandals) and one water user's group to manage a diversion based irrigation system installed under the project. The details of these groups are given in Table 3.1.

Table 3.1: Details of CBOs formed

Type of CBO	Total CBOs	Total members	SC members	ST members
Women's SHG	66	754	219	155
Farmers' group	37	442	142	72
Kishori mandals	21	236	96	63
Water users' group	1	13	0	13
TOTAL	125	1445	457	303

It must be noted that the project's expected output for 3 years is 225 CBOs. Over half the target was achieved in year 1 itself.

After mobilising the target community into CBOs, the project built members' capacity through focused training programmes:

- A total of 209 women SHG members were trained in "formation and strengthening of SHG, stages of SHGs and role of leaders", over 5 training programmes held from December 2011 to February 2012. Apart from project staff, the resource persons included the manager of the branch of Madhya Bharat Grameen Bank near the project area
- 6 women SHG members were taken on an exposure visit to Kesla, MP

Capacity-building of farmer group members was done through technical training programmes, as discussed later.

Overall, we will rate performance against this objective as very satisfactory.

Enhance savings of women and role in decision-making

Women in the project have traditionally been following 'purdah' (except in adivasi settlements) and their role in household finances and decision-making was minimal. To reverse this situation, the project used SHGs as a platform for initiating households savings that would be controlled by women, and a platform for discussing women's rightful position in the home and the village.

While some members of groups have decided to save Rs 50 a week, most groups have decided on a norm of Rs 10 per member per week. From December 2012, when most groups became functional, till March 31, 2012, the groups saved a total of Rs 41,530. Bank accounts of 17 groups were opened.

A notable result of mobilisation of women was that for the first time, a number of women participated in the gram sabha meetings held on or around January 26.

Table 3.2: Women participants in gram sabha meeting

Gram sabha (Panchayat)	Date of meeting	No of women participants
Madnikhera	January 24	13
Sapon	-"-	10
Nagara	-"-	12
Ratanganj	-"-	18
Sauryana	January 26	15
Rajapur	January 23	9
TOTAL		77

Overall, we will rate performance against this objective as satisfactory.

Scientific NRM and improved agriculture practices

This objective head includes:

- soil and water conservation (SWC)
- water resource development and management (WRD &M)
- agriculture development
- horticulture, forestation and grassland development.

SWC

As already mentioned, no soil and water conservation works could be initiated during the year because of the late start of the project.

WRD&M

Under the head of WRD &M, an important initiative was the construction of a diversion-based irrigation system for the benefit of 40 adivasi families in Sauryana village. Barely 600 metres from the village, and at a height, there is small dam and pond built by the irrigation department, but the people of Sauryana could not get water from the pond as there was no channel made towards their lands. For some years, a rich farmer provided the Sauryana farmers water under highly exploitative terms. The rich farmer brought a pipeline that had to be temporarily laid by the Sauryana farmers from the irrigation department pond to their lands, and water flowed down by gravity. Merely for using the pipe, the farmers had to give half their produce to the rich farmer. This system continued informally for a few years.

Under the project, a gravity-based water distribution system was given permanent footing, by installation of an underground PVC pipeline from the irrigation department pond to a chamber, from where water is released through mud channels to individual fields, at specific times. Beneficiary farmers did all the labour work of excavating a channel for laying the pipe, and constructing the chamber. They also contributed the construction materials for the chamber. The project had to incur expenditure of only Rs 1.30 lakhs for the PVC pipe. A water user group has been formed to regulate water distribution and collect user charges, to pay the irrigation department and recover maintenance costs. As a result of this simple and inexpensive system, around 70 acres of agricultural land owned by poor adivasi families has been brought under permanent irrigation.

As there are already a number of dug wells in the project area, it was decided to focus on renovation and deepening of existing wells rather than construction of new wells. Three wells used by 10 adivasi farmers in Sapon village and one well Madnikhera have been identified for renovation and deepening. The three wells at Sapon irrigate a contiguous patch of around 14 acres. In the same patch, four sites have been identified for farm ponds. Technical planning has been done and beneficiaries have agreed to contribute their labour free of cost. Deepening work in two wells commenced before March 31, 2012.

Agriculture development

Agriculture development was done through three activities:

- focused farmer training programmes
- promotion of PoPs with input support
- small studies for gaining better understanding of problems and challenges

In October 2011, 27 participants, including project staff, underwent perspective-building programme for rabi crop demonstration. A total of 41 farmers selected by farmer groups were given intensive training in pest and disease control in rabi crops, by KVK scientists in January 2012. To build income-earning capacity of SHG women, a training programme on cultivation of vegetables in summer was organised in February. A total of 47 persons participated in this programme.

Apart from this, field training was provided to farmer-group members, on seed treatment, line sowing, and preparation of Jeevamrit.

A total of 35 farmers were encouraged to follow KVK-recommended PoPs for main rabi crops (wheat, mustard, gram), with input support in the form of seeds, fertilisers and seed treatment materials, for an area of 1000 sqm per farmer. Twenty-five farmers were encouraged to follow PoP for wheat; 7 were supported for mustard; 3 were supported from gram. The results of the PoP demos were positively striking, as discussed in the Impact section.

In Sauryana, where the DBI system was installed, farmers were unable to sow wheat in time. Hence, short-duration wheat varieties were promoted, by distributing certified seeds of KVK-recommended varieties to 29 farmers. Farmers got better yields, with lower seed quantity of 48kg/acre instead of the 60kg/acre they used normally.

While small-scale vegetable cultivation is established in the project area, many families have never grown vegetables due to lack of knowledge and confidence. Also, use of good vegetable seed varieties is uncommon. Hence, the project set up three small nurseries for producing quality seedlings of tomato, chilli and brinjal. The seedlings (1400 of tomato and 100 each of chilli and brinjal) were then given to a total of 28 families that had not done vegetable cultivation before.

Seed replacement rate (SRR) is low in the project area, with farmers using grains as seed for more than five years. To promote SRR, the project provided foundation seed of a quality wheat variety (GW-322) to 20 farmers of 5 villages, through KVK. KVK will be guiding the farmers for production of next generation seeds.

To gain better understanding of agriculture in the project context, a value chain study of major agriculture crops was conducted with the help of a documentation consultant. The study resulted in detailed understanding of the economics of cultivation in the project area, as explained later.

A more technical understanding was obtained by conducting 75 soil tests. The results, discussed earlier, give us a sound basis for recommending nutrient requirements for different crops in different soil conditions.

Horticulture, forestation and grassland development

The project area already has a number of fruit-bearing trees providing food and some income to a number of families. Through a value chain study, the project identified that further promotion of horticulture in the given local market situation is not advisable, though some fruits like custard apple, which are grown in lesser quantity can be promoted. However, more priority should be given to protecting the existing ber and mahua trees, which are affected by pest and disease problems.

Forestation and grassland development work could not be undertaken during the year as the monsoon had commenced by the time the project got started.

Overall, we will rate work done under the head of scientific NRM and improved agriculture practices as satisfactory.

Building capacity to claim entitlements

The project's fourth main objective is to strengthen the capacity of CBOs to claim entitlements under MGNERGA, Forest Rights Act (FRA), etc. Towards this end, four capacity building programmes were organised during the year to increase awareness about MGNERGA and FRA entitlements and procedures for claiming the same. While the resource persons for the first subject were MGNREGA APOs, for the second subject the resource person was the ranger of the forest department.

Further, to gain better understanding of the entitlement status and need, a rapid baseline survey and in-depth socio-economic study were commenced during the year.

We will rate work done under this objective head as satisfactory.

Leveraging available public funding

To leverage available public funding and other resources, for the benefit of project communities, project staff networked with a number of government agencies as shown in table below. As ABSSS is new to project area, and local officials were unaware of the organisation or the project, efforts were made to show project sites and achievements to government functionaries. In this connection, mention must be made of visit of Assistant Director Agriculture to Sauryana DBI installation, which was highly appreciated.

Table 3.3: Project convergence related meetings

S. No.	Department	Designation of person met	Date of meeting	Subject
1	Agriculture Department	Sr ADO	4.11.2011	Technical/input support for project
2	Forest Department	DFO	4.11.2011	-"-
3	Horticulture	Technical Assistant	4.11.2011	-"-
4	Agriculture	DDA.	7.11.2011	Supply of crop mgmt chemicals and fertilizers through department
5	Women and Child Welfare Dept.	W&CD officer	7.11.2011	Starting Anganwadi centre at Sauryana
6	NABARD	DDM, NABARD	28.11.2011	Discussion on DBI of Sauryana village
7	Irrigation	Executive Engineer	29.11.2011	-"-
8	Agriculture	ADA	15-12-2011	Fertilizer support
9	Collectorate	Collector	24-12-2011	Sauryana DBI
10	Zilla Panchayat	CEO	24-12-2011	-"-
11	Janpad Panchayat	CEO	24-12-2011	-"-
12	Integrated Watershed Management Programme (IWMP)	Engineer	29-12-2011	Programme information
13	Horticulture	ADH	30-12-2011	Support for plantation
14	Janpad Panchayat	CEO	30-12-2011	MNREGA convergence
15	Collectorate	APO, MGNERGA	30-12-2011	-"-
16	NABARD	DDM	6-1-12	Support under watershed and SHG programme
17	Zilla Panchayat	CEO	9-1-2012	IWMP partnership
18	Janpad Panchayat	CEO	9-1-2012	-"-
19	Horticulture	DDH	16-1-12	Horticulture programme support
20	Agriculture	DDA	18-1-12	Seed support
21	NABARD	DDM	3-2-12	SHG proposal
22	NABARD	DDM	10-2-2012	Watershed development

Table 3.4 : Development works approved at January 26 gram sabhas

Panchayat	Approved work	No. of Beneficiary families	Estimated value (Rs)
Madnikhera	Land bunding	6	43,000
	Dug well construction	5	
	Farm ponds	3	1,490,000
	Construction of latrines	19	150,000
	Community centre and CC road	Entire village	Not prepared
Sapon	Dug well construction	7	2,086,000
	Farm ponds	4	200,000
	Small pond	6	1,200,000
	Stop Dam	2	600,000
	Indira Awas Yojana (IAY) houses	14	As per norms
	Community centre, CC Road and community latrine	Entire village	Not prepared
Nagara	IAY houses	57	As per norms
	Farm ponds	12	600000
	Land bunding	17	73100
	Dug well	07	2086000
	Dug well renovation	13	Not prepared
Sauryana	Bunding	22	174,795
	Land leveling	19	Not prepared
	Renovation of dug well	6	Not prepared
	Dug well construction	7	2,086,000
	IAY houses	13	As per norms
Ratanganj	Construction of dug well	6	1,788,000
	Renovation of dug well	6	Not prepared
	Land bunding	6	51,600
	Land leveling	9	Not prepared
	Farm ponds	5	250,000
	Stop dam	1	600,000
	IAY houses	20	As per norms
Rajapur	Dug well construction	6	1,788,000
	Renovation of dug well and hand pump	Entire village	Not prepared
	Boundary wall for nalla	Entire village	Not prepared
	Bunding and land leveling	7	60,200
	CC road and Community hall	Entire village	Not prepared
GRAND TOTAL OF PREPARED ESTIMATES (Rs)			15,387,495

Apart from that the project established close contact with local KVK, which responded warmly with support for training programmes, PoP design and guidance on crop managements.

Continuous support was also got from Pradan, the technical consulting organisation appointed for the project.

Significant success was achieved in initiating the leveraging of public funds through panchayats. First, the project facilitated the preparation of panchayat-level selection of priority development works with budgeting. Then, SHGs and farmer groups were helped to present the case for these works at the January 26 gram sabha meetings. Subsequently, a number of proposals presented were approved in the gram sabha meetings as shown in table 3.4.

Overall, we will rate achievement under this objective as satisfactory.

3b. Project design and implementation

The project was designed by ABSSS following specific guidelines given by SDTT under Bundelkhand Initiative, and reviewed by Pradan.

The project is based on the multi-sectoral approach of the SDTT Bundelkhand Initiative, which seeks to address the complex of social, economic and political challenges to development in the region through a comprehensive intervention, as the issues are interlinked. Accordingly, the project is designed on four strategic pivots:

- Building voice of the poor, especially women, and increasing accountability in delivery of health and education services
- Demonstrating sustainable land-based livelihood models
- Leveraging government resources
- Strengthening NGO and community capacity

The core implementation strategy is working with the community. Initially, village level meetings were conducted to orient the community about the organization and project objectives and activities. Initially these meeting were informal but gradually they were turned into formal meetings. Rapport and relationship building among community, and formation of CBOs were the prime objectives of these meeting. Possible members who may become a part of CBOs were also identified through village level meetings.

Once CBOs were formed, all activities are rolled out through them. Farmers' groups and SHG are involved in:

- Prioritisation of activities at different villages
- Selection of sites/beneficiaries
- Local coordination for implementation
- Monitoring work

Notably, all the village-level workers of the project are selected from the community and have been given handholding support to perform expected tasks.

3c. Project outputs and dissemination

The project undertook a number of studies in 2011-12, which were completed in early 2012-13. The studies were:

- Rapid baseline study of 20 project villages to identity: number of HHs by landholding and social group; cropping pattern and area under cultivation of major, minor and vegetable crops; fruit-bearing trees on private lands; livestock population; basic facilities in villages; enrolled schoolchildren; PDS beneficiaries; MGNREGA status; volume of migration to distant locations for work; water resources for drinking and irrigation
- In-depth study of 95 HHs to identify: sources of income and quantum of income per source; expenditure heads and amounts; agriculture equipment owned; loan sources and amount of loan; living standards; awareness about good agriculture practices; entitlement status; women's participation in decision-making; women's work contribution; food security status
- Soil sample studies (75 samples) to identify nutrients in soil and other critical parameters
- Value chain study of major and minor crops (including vegetables) to identify crop preferences; economics of production; constraints to higher value realisation, and viable ways of overcoming same
- Value chain study of income from tree produce to identify number of income-generating trees on private lands; number of HHs getting income from different tree produce; quantum of HH income per kind of tree; constraints to higher value realisation and viable ways of overcoming same

All the above studies are initially of dissemination and use within project framework (including technical advisors and SDTT officials).

For making people outside project area aware of the project, efforts were undertaken to invite a number of different experts and officials to visit project sites. Key visitors, apart from SDTT officials and project consultants, were:

- Sanjeev Sharma, ADA (Agriculture)
- Shailendra Rai, People's Science Institute, Dehradun
- Govind Singh, sub-engineer (MGNREGA; Tikamgarh)
- Dr BL Sahu, Dr RK Prajapati, Dr SS Gautam, all from KVK, Tikamgarh

3d. Capacity building

Apart from training programmes mentioned earlier under section 3a, exposure visits were organised to help build the community's confidence and resolve to undertake development work:

- In October and December 2011, a total of 14 project participants visited Srijan site at Jatara
- In February 2012, 6 participants visited Pradan site at Kesla
- In January, 4 participants visited APMAS, Hyderabad, to familiarise themselves with SHG organisation and federation
- In December, a total of 30 participants visited sites of Bundelkhand Sewa Samiti (BSS) and Pradan at Lalitpur

4. Project Management

The project is managed by professional staff comprising:

- 1 Director (part time)
- 1 Programme Coordinator
- 2 Subject matter specialists (agriculture; women's mobilisation)
- 2 Cluster coordinators
- 7 village level workers

As work under heads like soil and water conservation has not started, the project has not filled all sanctioned posts.

On need-basis project uses services of consultants in the field of improved agriculture, and field-based documentation and research.

Other than the Director, all staff are located in Tikamgarh town, close to the project area. The Director and ABSSS accountant make regular visits to project at various stages of implementation.

As project staff is new to ABSSS, project area and project objectives, two intensive rounds of orientation programmes were held:

- Under Gopalbhai, ABSSS founder, to align staff to organisation's values and ways of working
- Under Ashok Gopal, development consultant, to align staff to approved project proposal

Weekly meetings are held at the project office to assess the progress of activities against objectives. Reviews are conducted by the Director on a quarterly, half-yearly and annual basis to assess the impact of the programmes. Through regular CBO meetings and field visits, senior project staff is attuned to specific problems/issues hindering implementation, and capacity-building and other needs that have to be met.

Annual financial audit has been undertaken by the statutory auditor.

5. Impact

In its first year itself, the project had three major impacts:

- Mobilisation of community towards livelihood development
- Demonstrated benefits of PoP, resulting in higher yields and higher returns
- Leveraging public assets for benefit of voiceless poor

Mobilisation of community

Though no non-government development project had been earlier undertaken in the project area, and ABSSS and project staff other than village level workers were completely new to the project area, the project could successfully mobilise the target community for livelihood development, particularly agriculture development. All agriculture-development initiatives of the project were keenly welcomed and witnessed high interest and participation of farmers. This shows that the target community was virtually waiting for knowledge, technology and management inputs to increase value from agriculture, and the project is filling a vital gap in a timely manner.

There was no mobilisation of women in the community earlier on a development plank, and women did not even attend gram sabha meetings. The project changed a tradition of generations, by encouraging women to form groups and visualise a role for themselves in community development. The number of women who then attended gram sabha meetings is noteworthy. Also noteworthy is the fact that a number of proposals for development works to be undertaken by the panchayat were put up by women.

Demonstrated benefits of PoPs

The project demonstrated to community the benefits of using PoPs incorporating improved varieties, optimum seed quantity, line sowing and optimum nutrient dose. Through these four measures, remarkable increases in returns were demonstrated.

It was seen that:

- Use of the PoPs did not lead to major increases in yield. Farmers were getting comparable yields through traditional methods.
- However, PoP yields were obtained with roughly half the quantity of seeds and nutrients used by farmers under traditional methods.
- Hence, though gross value of produce was roughly the same, the net gain was higher, due to lower production cost.

As shown in Table 5.1, net gain from wheat doubled and net gain from wheat and mustard increased by 50%.

Table 5.1: Comparative per hectare (ha) data for cultivation of main Rabi crops through PoPs and traditional methods

Details	Wheat (average of 23 farmers)		Mustard (average of 6 farmers)		Gram (average of 3 farmers)	
	PoP method	Trad. method	PoP method	Trad. method	PoP method	Trad. method
Seed varieties	GW-366	Lok-1, Sona, C-306	Pusa Bold	Black mustard (local)	JG-322	Khajra (local)
Seed quantity (kg)	115	183	7	20	76	136
Seed cost (Rs)	2422	3835	252	722	2200	3933
Seed treatment	Yes	No	Yes	No	Yes	No
Seed treatment cost (Rs)	329	0	222	0	278	0
Sowing method	Line	Broadcast	Line	Broadcast	Line	Broadcast
Ploughing times	3	3	1.5	2	1.6	1.3
Ploughing cost (Rs)	1766	1820	1042	1250	1083	1250
Irrigation times	4	4	2	2	2	2
Irrigation cost (Rs)	1965	1985	1267	1400	1120	1755
Fertiliser used (kg nutrient)	120	168	45	92	43	90
Fertiliser cost (Rs)	2861	5290	1912	2637	1297	3531
Total labour hours	370	364	217	250	200	211
Total labour cost (Rs)	4633	4556	2710	3124	2491	2640
Threshing cost (Rs)	1595	1453	0	0	917	1125
Insecticide cost (Rs)	0	0	223	0	400	0
Total production cost (Rs)	15,794	18,939	7441	9134	8805	14,235
Yield (kg)	2710	2441	795	649	1135	1075
Value of produce (Rs)	27,110	24,415	23,850	19,475	28,375	26,875
Net gain (Rs)	11,314	5475	16,409	10,341	19,569	12,640

Note:

- All costs are averages of actual costs incurred, and converted to per hectare terms
- Fertiliser cost in case of PoP was lower not only because of lower quantity of nutrients supplied, but also because NPK product of IFFCO, costing Rs 15/kg was used, instead of DAP used by farmers under traditional method, and bought at rate of Rs 25/kg
- Variations in irrigation cost for same number of times of irrigation are due to different HP pumps used by farmers

There were considerable variations in yields under both PoP and traditional conditions. Nevertheless, the broad pattern of results shows that *net returns from agriculture can be increased by 50-100% by using the PoPs, without incurring additional expenditure*.

Leveraging public assets

Through the Sauryana DBI installation, the project demonstrated how public assets could be made available for the benefit of the poor and the voiceless, through civil society initiative. The DBI installation has completely changed the mindset of the Adivasi HHs of the village. From weak and ineffective witnesses to development processes, they have become confident partners, with vision and drive to better their lives.

6. Overall assessment

Considering various non-beneficial factors like newness of organisation and project to project area, the project made a good start in year 1. While some objectives could not at all be met, this was only due to late start of the project, after the start of the monsoons. Moreover, the project did not get sufficient lead time to network with government functionaries and political leaders and thereby leverage public funding for purposes like soil and water conservation. In the first quarter of year 2 also, this remained a matter of concern.

In retrospect, the project design should have been so framed that years 2.5 to 3 were earmarked for leveraging public funding, and emphasis in years 1 to 2.5 was on community mobilisation and capacity-building, and agriculture development.

7. Recommendations

Based on the learning from year 1, ABSSS suggests that when the Trust considers similar projects in other regions, or the same region, it should:

- Give a lead time of at least 6-8 months for organisations new to a project area, for networking and establishing working relationships with government functionaries and political leaders
- Release initial funds in such a way that project is operational well before start of monsoons.