

# Collective Approach Towards Food Security of Santhal Community

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## 1. Background

The condition of the environment plays an important role in ensuring sustainable livelihoods to the community. Soil, water and natural vegetation are the main resources for the rural community for their sustenance. If these are degraded continuously, the community would become marginalised in terms of their socio economic development. The extent and quality of soil and land resources is the first consideration in planning for the sustainable management of land resources. The components of land i.e. soils, climate, water, nutrient and bio-organisms are organised into an eco-system which provides a variety of services that are essential to the maintenance of the life support system and the productive capacity of the environment. We cannot increase the area of land, on the other hand population is increasing rapidly; therefore, land resource management is essential for ensuring the livelihood of the rural poor. The productivity and fertility of soil is an aspect of the soil-plant relationship. Soil fertility depends on the presence of natural microorganisms, soil retention, no erosion, crop rotation and usage of organic manure and organic pesticides. The continuous removal of nutrients by soil erosion, mono cropping, chemical fertilisers, and chemical pesticides increases the nutrient problems for crops, leading to lower productivity of available cultivable land. Preservation and conservation of organic matter in the soil is very important for sustainable agriculture practices and ensuring livelihood of the small and marginalised farmers.

Gondwar village, Panchayat Ango, Block Churchu, district Hazaribagh, Jharkhand, is one of the 20 project villages of IGSSS situated around 29 km from the district headquarter. There are a total of 33 households in Bando hamlet of Gondwar village. All families belong to the Santhal tribe. The Santhals are the largest tribal group in Jharkhand among the existing 32 tribal groups.

## 2. Socio-Economic Condition

The Santhal community of Bando Hamlet Gondwar village are still living a life of simplicity as they did thousands years ago. They are preserving their indigenous life, livelihood and lifestyle. They have unique traditions and customs intertwined with their present, past and future life. Their mother tongue is Santhali but 50% know Hindi and Mundari language also.

The village is home to 172 people, of which 73 are male and 99 are female. Most of the people are illiterate. The primary and secondary schools are 3-5 km away from the village. There is no higher secondary school near the village for the students to continue their education. The nearest higher secondary school is in Hazaribagh, which is 29 km away from the village. However, many from the community are so poor that they are unable to afford the expenses of tuition fees and transportation cost.

The village is connected with the block by a mud road; there is also lack of availability of public transport. They have to travel to the block office on foot or use a bicycle. The communication and transportation is one of the obstacles in their access to basic facilities and also for selling minor forest produce in the nearby markets. Their main occupation is agriculture, followed by gathering of forest produce like mahua, karanj, bamboo, broom sticks, kendu, mango, tamarind, mushroom, etc. They practice traditional methods of cultivation and use conventional machinery and equipment for paddy and vegetable cultivation. The average landholding is 2.5 acres. But there are no irrigation facilities and therefore high dependency on monsoon. These factors result in low yield of crops and thereby food insecurity. Beside agriculture and minor forest produce their livelihoods is dependent on selling of firewood and agriculture labour. 10-15 families sell firewood for supplementary income.

The naturally available food in the area is nutritious, but people are unaware of this fact. In the lack of nutritious food, people suffer from many diseases. The primary health centre is located in Churchu block, which is 5 km from the village. The Balwadi – ICDS (Integrated Child Development) centre is located 3 km from the village. However children are not given supplementary food at the centre.

### **3. Needs of the Community**

The socio-economically marginalised tribal families of the village are unable to meet their minimum basic needs from the income they earn. This problem is aggravated by the climatic fluctuations – low erratic rainfall, temperature rise and degradation of natural resources – land, crop/tree/plant diversity, water, moisture, etc. Rain-fed, plateau, degraded forest regions are among such regions where the livelihood security is, to a large extent, threatened by the large-scale change in the resources that people were using for their livelihoods, and inability of the community to deal with the changes through their traditional practices and knowledge systems.

Despite all these odds, there is wide range of assets such as crops and trees, as well as skills and practices which help them survive despite degradation of

natural resources and climate change. These can be strategized to provide an effective platform for ensuring security of food and income enhancement. Their traditional knowledge can be used for soil and water resource.

The community was far behind the mainstream in terms of socio-economic development. The baseline report and observation highlighted the need of community/groups for the following reasons:

### **3.1 Poor Management of Natural Resources by the Community**

The area abundant natural resources but due to poor management by the community, these local resources were degrading very fast. Secondly, people were unaware of the nutritional value of the locally available minor forest products. There was need to conserve and preserve locally available natural resources.

### **3.2 No Collective Efforts for Soil and Water Management**

There was soil and water management at the individual level but a collective effort was not seen before the project. The poor community was not able to meet the expenses of soil treatment. The topography of the land was uneven; therefore there was continuous soil erosion and degradation of fertile land.

### **3.3 Low Productivity of Land and Soil**

There was poor management of soil with continuous soil erosion, no proper tilling, less porosity and no usage of organic manure, which led to low productivity of land. The soil in this region is mostly nutrient-poor. A combination of undulating and hilly terrain and high runoff of water produces a wide variation in soil, slope, water availability, soil depth etc.

### **3.4 Poor food basket and unawareness about nutrition value on different crops**

The people of the village were ignorant about nutrition from the naturally available plants around them. Therefore, there were health problems, mainly among children and women due to poor food intake.

## **4. Nature and Strategy of Programme**

Indo-Global Social Service Society (IGSSS), a national level organisation, has been working on livelihoods since 1960 for promoting and ensuring livelihood option and opportunities for the disadvantaged community of the society. The organization's interventions span across 22 states and 1 union territory. IGSSS has been working in Bando Hamlet, village – Gondwar, Block

– Churchu, Hazari bag district, Jharkhand since 2014. The nature of the program was community-based soil and water conservation for ensuring the livelihood of marginalised and the disadvantaged community.

As the first step, a participatory rural appraisal (PRA) exercise was conducted at the village level to collect baseline information and take stock of the household income and status of the indigenous agriculture practices, crop varieties and land use pattern. A village level meeting on erosion of the soil, soil health, water availability and use pattern and indigenous agriculture practices like mixed cropping and millet farming were conducted to motivate the villagers to revive their traditional agricultural practices.

The community mobilisation/institutionalization was the first strategy of the program. The identified target households were organised into four groups i.e. three women’s Self-help Groups and one Village Development Committee. The skills and knowledge of the group members were capacitated on the importance of groups, micro planning for village development, sustainable and organic agriculture practices, soil and water conservation techniques, preparation of organic manure and pesticide and convergence and networking.

The group members regularly sat together and reflected on their situation and their own development. They prepared the village micro plan with the help of the PRI (Panchayati Raj Institution) members and IGSSS staff members. They decided on the time frame for achieving results which will also bring about the desired changes.

The community came together for the soil and water conservation and sustainable agriculture practices based on the micro plan. Under soil and water conservation, they have treated 15 acres of uncultivated land for the last 50 years. Contour bunding was done in 15 acres of land and one pond was deepened. Beside this intervention, they approached government department and submitted an application for digging of DOVA<sup>1</sup>. Their applications were accepted and two DOVAS were dug in the area of 15 acres treated land. They also got support for contour bunding in 1 acre of land.

The 33 families were supported with paddy and vegetable seeds. The team provided handholding support on field preparation, sowing and management of different crops. They were motivated to cultivate crops by using organic manure and organic pesticide for ensuring production of nutritious food and for healthy consumption. The project team also supported the community level green nursery in which they raised a seedlings of different vegetable crops.

1 Small water conservation structures 30 ft x 30 ft x 8 ft.

The last strategy of the programme was linkages and synergy with the government department. The awareness level on social entitlement was increased among the community through regular discussion, street play and training programme. A total of 12 old men/women got old age pension, 33 families could get BPL revised cards, regular vaccination of children was ensured, support on soil and water conservation as well as agriculture equipments from block office were facilitated. Now they could get support from government departments in a sustained way for their upliftment and legal entitlements.

## **5. Innovation Adopted**

The IGSSS Hazaribagh team organised a planning meeting with the members of the apex body - the Village Development Committee - in November 2014. The team discussed the available waste land and its causes, cropping pattern, agriculture practices, their possible contribution and contribution from other stakeholders.

As a result of this meeting, they arrived at a common consensus for the treatment of wasteland that had not been cultivated for the last 50 years. The waste land belonging to 22 households were covered with wild bushes, and land owners were not planning on cultivating it. These households decided to clear the land through voluntary work. Collective decisions were taken for practicing sustainable and organic agriculture practices for increasing the household income.

Community participation was ensured in the process of reclaiming degraded landscape through contour bunding and deepening of ponds. They were involved in analysing the situation, planning, executing the work, supervising and monitoring the work.

## **6. Impact of the Initiative**

IGSSS' presence and initiative changed the scene of Bando hamlet – Gondwar village in Churchu Block, Hazaribagh district, Jharkhand. At present the following changes have been observed among the community, which are:

### **6.1 Organised Community**

The villagers were organised into 3 women's Self-help groups and 1 Village Development Committee. The women's Self-help groups organised their meeting on a weekly basis. In the meeting they discussed the social, economic and leadership aspects. They distributed role and responsibilities for their socio-economic upliftment. On the other hand, the village development

committee which is an apex body, organised their meeting on a monthly basis. They reflected about their socio-economic issues/problems with an action plan and took steps for the village and community development. The village development committee members had taken the collective efforts to clear all the wild bushes in the areas of contour bunding.

## **6.2 Increased the Cultivable Land**

A total of 15 acres of wasteland was converted into cultivable land. A total of 22 farmers started to cultivate different crops (black gram, yellow gram, millet, tomato, pumpkin, beans, brinjal, chilly, etc.) on their land.

## **6.3 Reduction in Soil Erosion and Runoff Rainwater**

The land was sloping and as a result the rainwater was flowing with high velocity. The high velocity of rainwater increased soil erosion. The soil erosion reduced the productivity of soil due to which the upper layer was washed out. The contour bunding reduced the speed of runoff water during rainy season. This resulted in a decrease in soil erosion. This intervention led to reclamation of wasteland into cultivable land. The productivity of the soil increased gradually.

## **6.4 Increased Moisture Capacity**

The contour bunding helped to stop rainwater in the field. The stored rainwater percolated in the soil and as a result the moisture level of soil increased.

## **6.5 Increased Water Table**

The contour bunding helped to increase the water table of wells in the villages. The villagers could see the changes in water level in their wells. In the rainy season the water volume was 15 feet before intervention, but for first time they could see water upto 22 feet in the well.

## **6.6 Reduction in Firewood Selling**

Earlier a total of 12 households were selling firewood for their survival but now only 2-3 households sell firewood. The community were capacitated on vegetable and paddy cultivation and started to get income from selling vegetables.

## **6.7 Appreciation by Government Officials**

The Block Development Officer and government personnel visited the area and recognised the work of IGSSS. They appreciated the work towards

using local solutions for ensuring livelihood of the marginalised community. Observing and realising the results of farm field bunding, the block level government officials also started to replicate it in other regions of the block.

## 6.8 Application of Organic Farming

The community knew the importance of organic sustainable agriculture practices. They reduced application of chemical fertiliser in their crops. They used vermicompost and organic manure in their agriculture fields. The practice helped in maintaining the productivity of land and soil.

## 6.9 Convergence with Government Program

The community were motivated to submit an application for agriculture equipment and small ponds – DOVA. They submitted and two small ponds - DOVAS were approved and constructed in the contour bunding area as well as one acre of land was treated under contour bunding. The interventions added value in soil and water conservation.



Mr. Sonaram Marandi says that “the farm field bunding promoted by IGSSS changed the scenario of our village. Now 22 families have cultivated different crops which was never practiced before. The program has taught us that our own plants and crops are the best. We only need a little support and we can develop our own land ourselves.”

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Mrs. Bahmuni Murmu shared that “for the first time I have cultivated maize in my land due to soil & water conservation technique promoted by IGSSS.”



Mr. Binod Marandi and wife are happy that there is moisture in their field and as a result of which they are able to cultivate tomato, that was never cultivated earlier in their field.



The Block Officials of Churchu visited the sites and met Ms. Rita Ekka – Ward panch of Gondwar. They appreciated the work of soil and water conservation through contour bunding initiated by IGSSS which was never done before in Churchu Block. The government approved and constructed two DOVAS in the project site for adding value on soil and water conservation

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Table 1: A cost-benefit analysis of mixed crop: Area-15 acres (22 farmers)

<b>A cost-benefit analysis of mixed crop: Area-15 acres (22 farmers)</b>		
<b>INPUT COST</b>		
<b>Own contribution</b>		
<b>Labor cost</b>	<b>Days</b>	<b>Value in Rs.</b>
Land leveling and sowing	2 x 22p x Rs. 300	13200.00
Weeding	1 x 22p x Rs. 150	3300.00
Watering	1 x 22p x Rs. 150	3300.00
Harvesting	1 x 22p x Rs. 150	3300.00
Manure	1 x 22p x Rs. 500	11000.00
<b>TOTAL</b>		<b>34100.00</b>
<b>Project Inputs</b>	<b>Qty. in kg</b>	<b>Cost in Rs.</b>
Tomato	5 gm x Rs. 100 x 22	2200.00
Beans	250 gm x Rs. 60 x 22	1320.00
Pumpkin	5 gm x Rs. 50 x 22	1100.00
Millet	1 kg. x Rs. 80 x 22	1760.00
Black gram	1 kg. x Rs. 120 x 22	2640.00
Maiz	500 gm x Rs. 100 x 22	2200.00
<b>TOTAL</b>		<b>11220.00</b>
<b>PRODUCTION</b>	<b>Qty. in kg</b>	<b>Value in Rs.</b>
Tomato	120 kg x Rs.20 x 22	52800.00
Beans	30 kg x Rs. 60 x 22	39600.00
Pumpkin	65 kg x Rs. 30 x 22	42900.00
Millet	200 kgs. x Rs. 50 x 22	220000.00
Black gram	46 kg x Rs. 100 x 22	101200.00
Maiz	150 kg x Rs. 15 x 22	49500.00
<b>TOTAL</b>		<b>506000.00</b>
<p>The net profit within 3-4 months is around Rs. 460680.00 if own (labor and farm manure) contribution is calculated. But actually those are shadow cost derived during their own leisure time. So actual total profit from intervention area is Rs. 494780.00, per farmer total profit is 22490.00</p>		

*X Change of mindset/attitude:*

Many farmers had not realised the benefits of contour bunding and were not taking active participation in implementing and monitoring of the work.

## **7. Challenges Faced**

The IGSSS team faced some challenges in the process of reclaiming degraded land and ensuring sustainable agriculture practices in the Bando hamlet of Gondwar village:

### **7.1 Convincing the Community**

The community was not aware of the results of contour bunding as tribal community believes in seeing the results before accepting new intervention or technology. 3 farmers were not allowing farm field bunding on their land. The team made them understand the benefits of farm field bunding and could complete contour bunding in 15 acres of wasteland.

### **7.2 Unavailability of Local Resilient Seeds**

Local seeds were disappearing day by day, due to unawareness among the community and promotion of hybrid seeds by outsider traders. The community were sensitised on the importance of local seeds even in the drought situation. The local seeds also provide adequate nutrition to the community. The farmers were motivated to collect traditional seeds and preserve it for future use.

### **7.3 Resource Mobilization**

Resource mobilization was another challenge in the area because the community was unaware of the process of accessing government schemes. The IGSSS team organised street plays on different government schemes. Beside street plays, the staff regularly motivated villagers to visit government offices and get clarification on the process of application. This helped the community to mobilize government resources for their development. Now they don't hesitate to visit block offices and discuss with the government officers on how to avail different schemes.

## **7.4 Stall Feeding**

Open grazing of cattle was the general practice in the village. This led to destruction of crops. The village development committee took a decision for stall feeding and a fine was imposed if people left cattle their cattle free and it damaged the crops.

## **8. Sustainability**

The project supported the community in getting organised for their planning and development. They organised meetings regularly and discussed major issues and challenges. They divided roles and responsibilities to solve the challenges and problems. The organised community visited block offices for accessing their entitlements. This was a good indicator that they could access government resources after withdrawal of the project.

They shifted their cropping pattern from mono cropping to mixed cropping, and single cropping to double/multiple cropping. This helped to increase their food basket, nutrition and overall income of the households.

The community started to adopt sustainable organic cultivation practices through use of organic manure, organic pesticides and local seeds. This increased soil organisms, and productivity of land.

The contour bunding increased the cultivable land of the marginalised community. The community and individual farmers decided to maintain and repair the structures for long-term benefits. They collected Rs. 40 per month and created a common fund. They utilised the fund towards purchase of seeds, equipment, illness, marriage and other rituals at a nominal 2% interest rate.