ECONOMY OF THE SANTHAL TRIBALS OF BIHAR

a review of the coping mechanisms

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In the backward and poverty-stricken reaches of Bihar, live the community of the Santhal tribals. Subsisting on meagre production and resources in ecologically fragile areas, the quest of survival for the Santhals is an everyday struggle - a condition which has remained unchanged over the decades. The piecemeal approach of the government development programs centred around employment generation through undertaking of public works and livestock- rearing have done little to alleviate the plight of the tribals. Yet, they survive, having developed a coping mechanism which enables them to survive in the adverse of the circumstances and at the same time minimise their losses.

Jan Jagran Kendra is a NGO working in Bihar for almost 20 years. The long-term collaboration of Jan Jagran Kendra (JJK) with ActionAid started in 1995. The main focus of JJK's work has been to raise awareness among the oppressed and the backward people and to assist in the process of their empowerment by bringing them together in their struggle against exploitation, poverty and inequality. It has taken up a range of issues, from minimum wages to land rights and abolition of the superstitious practices over a period of time.

The development area (DA) of ActionAid is situated in Churchu and Hazaribagh Sadar blocks of Hazaribagh district of Bihar. Almost 80% of the target population in the DA constitute of the Santhal tribals. The economy of the area can be best described as the one that operates at the subsistence level - the mode of production is primitive with negligible marketable surplus, antiquated technology, high involvement of human labour and significant dependence on forest for food supply. Women contribute significantly in the tribal economy. They have a pivotal role to play and engage themselves in all domestic and agricultural activities.

Observations from the Field Transect

The development area, henceforth referred to as region, presents a variegated landscape, ranging from hill ranges with moderately dense vegetation to low lying, undulating, chequered farm land. The common occurring soil is red and reddish- brown soil. The hill slopes have loamy soil which

is mixed with gravel in some areas. The soil depth is very shallow on the upland and land recently denuded of forest cover. The undulating land makes it difficult to check water flow and is the prime reason behind soil erosion during heavy rainfall. The water table in the area is at an average depth of 5-6 *purisa* (35-40 feet) but goes down by another 6-8 feet during the summer months. Rocky underlying layer is found in some areas, especially uplands and poses a difficulty in digging wells for irrigation purpose. Santhal households are usually located in the middle of the farmland but clusters of households located together are also seen at some place.

The Agricultural System

Agriculture is the primary occupation of the Santhals in the region. Agriculture practised in the region is however predominantly rainfed and only 14% of the area constitutes irrigated farming. The average size of agricultural land holdings is between 2.5 -3 acre but a large proportion of the land falls in the low productivity category. The rainfall in the area is between 1200 mm - 1300 mm but is limited to four months between June to September. High intensity rainfall spread over a relatively short period does not support multiple cropping. Further, the absence of in-situ water catchment and storage mechanism results in much of the water falling on the farmland flowing out unharvested.

Cropping Pattern

The present cropping pattern in limited to cultivation of a single major *kharif* crop. Production during *kharif* season accounts for over 80% of the total production in the region. Paddy is the main crop and is grown between June and November. Both the late and early harvesting variety of paddy is cultivated in the area. The late harvesting variety of paddy (*jarrhan*) requires more soil moisture and is grown on the lowland whereas the early harvesting variety (*lahvan*) is planted on the highlands. Other *kharif* crops grown alongside paddy by many of the farmers are maize and *madua*. See Figure 1 for the agricultural crop calendar of the region.

The major *rabi* crops grown by the farmers is *sarguja* (an oilseed crop), mustard between September to January, and wheat between end-November to April. *Surthi*, a local pulse too is grown by some farmers on the rainfed land. All these crops, except for wheat require little soil mositure and external inputs. Lately, more and more farmers have started to replace *sarguja* with mustard because of its higher yield and better quality of oil.

The cropping practice followed by farmers is mixed cropping. In case of houses built on the farm lands, homestead agriculture for vegetable production is religiously practised and it is invariably the responsibility of the women member of the household to maintain the homestead farm.

During the transect it was found that farmers leave aside small patches of land on which they grow multiple crops - beet root, raddish, black gram, tomatoes, potatoes, beans, onions etc. Most of these crops except for tomatoes and potatoes to an extent are grown for domestic consumption.

JJK has introduced the white variety of potatoes in the area. The earlier grown potato varieties, namely the red variety such as *kufri* and *sindri* are susceptible to frost which is a common occurrence during the winter season. The white variety therefore has a higher yield owing to its ability to withstand frost and the area under white variety of potatoes is gradually increasing.

Co-operative Farming

Co-operative farming is commonly practised in the region especially in raising of the wheat crop. A visit to the village Tasnalo in Churchu block presented an example of the co-operative farming system. Tasnola is a small village of around 26 households. Co-operative farming is practised in the village in the case of wheat crop. Last year 18 farmers took up wheat cultivation on 6.5 acres of land. Around 3.2 quintal of seed was sown, at the rate of 50 kgs. of seed per acre, the cost of which in addition to the cost of application of 10 quintals of urea and 2 quintals of phosphate was borne equally among the participating farmers. The total yield from the farm was about 27 quintals. However, unexpected rain caused some damage to the harvested crop and the remaining yield stood at 18 quintals - one quintal per farmer. Under the given edaphic conditions, the productivity of wheat crop should normally be around 20 quintals per quintal of seed. The net productivity in this case was however less than 6 quintals per quintal of seed input which points out to the limitation of the current farming system and how farmers inspite of their labour and time investment are unable to reap adequate benefits from farming.

Inspite of low productivity, co-operative farming proves to be advantageous for the local community under the present conditions because of low opportunity cost for labour in absence of alternate employment opportunities in the village and unavailability of adequate capital among the households for raising of the crops. The co-operative system of farming enables the landless and marginal farmers to participate in it and draw their share of produce from it.

Role of Irrigation

Unavailability of support irrigation facilities is a major problem in the area. JJK has intervened in the area with construction of check dams, percolation tanks and lift irrigation schemes. The interventions are aimed at increasing the gross cropped area in the target villages through provision of support irrigation. Lift irrigation proves to be useful in providing last irrigation for rice which has a significant impact on the productivity. With the increase in area brought under the command area of lift irrigation schemes, there is a significant trend towards replacing other *rabi* crops with wheat. Wheat requires irrigation after 21 days of sowing and according to the farmers, the assured water supply through lift irrigation schemes prove to be a boon during this period. Further many farmers were found to be putting increased area under tomato and potato crops which command a higher market price due to availability of support irrigation.

Forest Systems

Forests are an integral part of the livelihood of the Santhals and serves as a nucleus around which the economy and culture of the community revolves. The commonly found tree species in the forest are sal, mahua, teak, aamla, acacia species, harra and behra. The forests serve as an important source of fuelwood and virtually all the domestic fuelwood requirement in the household is met through the forests. Households often make piles of fuelwood procured from the forest outside their forest for later use. The fuelwood sourced from the forest is also an important source of income for the households. It is not uncommon to find women travelling over 20 kilometres carrying headloads of fuelwood everyday to sell in markets located at a distance from the forests. Around 4-5 wood bundles are sold in the market for Rs. 40-50. At times of severe food scarcity in the household, tubers growing wildly in the forests are dug from underneath the ground to serve as food.

Overtime the gradual degradation of forest due to illegal felling by the contractors and expansion of agricultural land into forest tracts have created serious environmental problems like regular recurrence of droughts, soil erosion and loss of bio-diversity putting the livelihoods of the tribal community at stake. JJK has intervened in the area by planting horticultural crops - mango, aamla. lemon etc. on community wastelands to increase their productivity and enhance their value to the community. The local community have a role to play in safeguarding the plantation against grazing. JJK has undertaken planting of horticulture trees like lemon, mango, aamla on the wasteland to increase their productivity and enhance their value to the community. The forest protection committee formed by JJK play an active role in protection of the forests.

The women's institution promoted by JJK market non-timber forest produce obtained from the forest mainly *mahua*, *harra*, *behra* and *aamla* to sell in the local market. The collection of *mahua* takes place during the month of April while it is sold around October. The market price of *mahua* in the market is around Rs. 13 - 14 kgs. and is an important economic activity for the women.

Farm Forestry

Bamboo is commonly grown by most of the households wherever space is available. Farmers are

not too inclined towards growing tree crops on the fields boundaries because of easy availability of fuelwood from the surrounding forest. Bamboo however is a fast growing grass and has a readily available market locally where it is sold at the rate of Rs. 20 for each full grown strand. Bamboo often serves as a source of income during periods of distress and hence has an important role to play in the coping mechanisms adopted by the tribal communities. the farmers.

Role of Migration

Migration is an inevitable event in the yearly life-cycle of the Santhals. Migration in the region is predominantly seasonal and takes place between the month of January to May. People migrate in search of labour opportunities to nearby villages and townships, and even go in for cross-state migration to Gujarat, Uttar Pradesh, Punjab and Harayana. Most of the migrants work as agricultural labourers where their earnings are at the mercy of landlords are partly in cash and partly in form of consumption commodities, mainly rice. The prevalent agricultural labour rate in the nearest town of Hazaribagh is around Rs. 45-50 per day. Employment opportunities in Hazaribagh are however scarce and seasonal.

Need for generation of cash income compounded by unavailability of employment opportunities within the village is the prime cause behind migration. Nevertheless, people seldom have more than Rs. 500 at the end of migration - a part of which goes in for repayment of the loan they had taken prior for migrating. With the introduction of wheat as the second crop, there is a noticeable impact on the number of people migrating. The number of people migrating shows a downtrend in such cases as there is a need for manpower in the households at the time of wheat harvesting.

Seeds of Food Insecurity

Undulating land prone to erosion, low farm productivity, unavailability of support irrigation, absence of capital with farmers for farmland development induce seeds of food insecurity in the area. The agriculture practice in the area is primitive and even the simplest of farm technologies are not to be found at the field level. The absence of thresher machines in the villages often leads to huge losses as the harvested grain is left lying unprotected on the fields for a longer period. A large proportion of rice gets wasted during threshing of paddy by animals and beating it against the stone. Excess rainfall in the area at time of paddy harvesting causes heavy damages to the standing crop and makes it more susceptible to pest attack.

Food Security among the Humans

The indicators of food insecurity in the region are explicit. The dietary intake of people is low and many a times the daily meal constitute no more than a handful of rice and salt. Pulses and milk

are virtually absent from the everyday diet and the monthly household consumption of pulse is a meagre 2-3 kgs. The timings of meals are also irregular and dependent on availability of grain in the house. In short, the amount of consumption is directly related to availability in hand. The problem of food availability becomes acute in between January to May when little food is available from the field and the household food storage is exhausted. The problem of food security become so severe at times that people are dependent on tubers growing wild in the forests for their food requirements. Many of these tubers are poisonous and require a lot of boiling and processing before they become fit for consumption.

Significantly not much difference was found out in between food security conditions of large farmer and small farmers in the area. In both the cases the food stock were not enough to last more than 4-5 months. The increase in area under cultivation under wheat in the region through the efforts of JJK has had a positive impact on the food security situation and the foodgrain availability has gone up during the period April to May.

Food Security for the Livestock

Most of the households in the area do possess livestock, mainly bullocks. Livestock is essential for ploughing and de-husking paddy. Cultivation of paddy in the area provides ample fodder material for the livestock. The rice straw left over after cultivation is sufficient to feed livestock for 9 months after which green fodder is readily available in the fields between the months July-August. Farmers often stock the paddy straw on bamboo platforms for use during later part of the year. Food security for the livestock is thus not a major concern in the area and farmers pointed it to the absence of buffaloes in the households which have a higher feed consumption

Public Distribution System

Public distribution system run by the state governments has not proved to be very effective in dealing with the basic consumption needs of the community. The distribution system in the region provides limited commodities which include rice, wheat, kerosene oil and sugar. The rate at which rice is sold is around Rs. 4.62 per kilogram, the availability of which is not assured at all times. Purchase of sugar from the PDS is practically negligible in absence of buying power. This often results in siphoning of the controlled priced commodities to the open market. Further, the dealers of PDS do not give rations to everyone and their behaviour is based upon their individual relationships with the household.

Market Economy

One of the striking features of the local economy is the absence of cash movement. The barter system is very much alive in the village economy and the households are largely reliant on the barter system for fulfilment of their everyday consumption needs. Farmers in the area grow an

oilseed crop *sarguja*, three kilograms of which is exchanged for one kilogram of mustard oil which is used for domestic consumption. This however is not without a reason. The agricultural practised in the area is largely subsistence based. Even that which is produced on the farmland is not sufficient to fulfil the yearly requirement of the household. The productivity of rice in the area is extremely low and a typical tribal household is unable to produce enough to meet more than 5 months of its rice requirement. The average productivity of rice in the area is around 3-4 quintals per acre of which around 0.6 - 0.8 quintal is retained to be used as seed for the next crop. Market sale of rice under such conditions is therefore absent. During the PRA exercise, it came out that households are sometimes forced to go in for distress sale of rice to meet an impending emergency. Even in such cases, the prices commanded by a meagre sale of 10-20 kgs. of rice is no more than Rs. 2 - 3 per kilogram.

The *sundi* (local trader) plays an important role in the market economy especially during the distress periods, such as droughts, times of food insecurity etc.. More often than not, the trader operates in the exploitative mode. The price obtained against cash sale of the farmer's meagre produce is determined by the trader and is a product of conflicts of interests and of compromises. Needless to say, the farm gate price commanded by the produce is much less than the market price. In absence of other linkages the tribals can do little to resist against the exploitation.

The village *haat* (local market) is an important arena in the tribal economy for transaction of goods and services. The *haats* have existed since a long time and have several socio-economic functions for the tribal community. Essential items for everyday consumption are brought at these *haats*. Many of the sales made in the village *haat* (market) are based on the barter system. Much of the bartering takes place in these markets and the commodities bartered are far from homogeneous. The increase in area under marketable crops such as tomatoes, potatoes and wheat is however gradually building linkages of the local community with the wider market economy.

Credit Mechanisms

Credit has a role to play in the economy of the region. See Figure 2 for the credit PRA depicting the needs and sources of credit. Credit needs are however seasonal and specific. The need for credit among the local community is greatest just at the onset of the migration period. Credit needs to be taken by the farmers to meet their travel costs and pay for their subsistence before they start to earn. The local money lender is an important source for credits and the repayment of this credit is done at the end of the migration period. Crop credit is not a major felt need in the area in absence of purchase of external inputs for paddy cultivation and the agricultural practice being traditional and less intensive. Lately agricultural credit has started to assume importance in areas newly brought under irrigation. Farmers in such cases have taken have taken credit for

purchase of seeds for the second crop, namely wheat, tomatoes etc. Bank loans for agriculture have been taken by some well-off farmers having wells on their land for the purchase of pump sets for irrigation. The women's saving and credit group initiated by JJK in the village is an important source of credit for women for undertaking house-repairs, to fulfill social customs and ward off emergencies. Significantly there is little dependence on neighbours and relatives for credit because of the similar household economic situation.

Macro-level Perspective

Tribal communities living close to the townships and developed markets have progressed well compared to farmers living in the interior areas. A farmer close to the town of Hazaribagh was found to have made a profit of Rs. 1000 by growing potatoes in 1.5 *kathas* of land and selling them at the rate of Rs. 20 per kilogram. An understanding of the market conditions - farm gate prices, timings of flow of produce in the market and availability of larger market for their produce give such farmers an edge to maximise their profits.

The use of external inputs was found to be significant among such households. A few of the farmers were found to have switched to high yielding varieties which require increased dosages of DAP fertilisers at the time of paddy sowing. Some farmers were also reported to have used pesticides to ward of pest attacks which causes whitening of rice grains. Pesticides were found to be used in the wheat crop to ward off *"diya"*, a disease which damages the wheat grain. Farmers who have been planting wheat for a long time due to availability of well irrigation revealed that use of fertilisers have aggravated pest problem in wheat. The shift to such kind of external input system, even for seed procurement has begun only lately and is a very gradual shift. Such a shift unless marked by a commensurate increase in cash income of farmers from the sale of the produce could prove to be a disaster for an insulated tribal economy. The lack of safety mechanisms and the fact that productivity is still largely dependent on the vagaries of the monsoons may eventually push the farmers into a debt trap, sometimes even resulting in alienation from their land.

Interestingly, a decline in varieties of crops cultivated was observed in both interior villages and villages close to markets. A number of crops grown earlier now no longer constitute in the present cropping pattern. Farmers point out to increased labour requirement and untimely rainfall as the reason behind loss of particular crop varieties. A small but a noticeable trend towards market purchase of seeds can also be attributed behind the loss. Crops like *gundli* and *koodo* are now rarely grown in the area. The high labour requirement behind growing "*koodo*" and low-mineral and nutrition content of "*gundli*" as the reasons behind their non-cropping. In case of rice, more farmers are growing *jarrhan* -low land, late harvesting variety of rice. The cultivation

of *lahavan* -upland, early harvesting variety of rice is dependent on the capacity of the farmers, in terms of labour availability, to manage the crops. Many varieties of rice are lost in this selection process leading to narrowing of the food production base and has a long-term impact on the food security situation among the tribal communities.

Significantly, well developed markets in Hazaribagh were found to be stocked with rice procured from Delhi and other places. Such rice is sold in the open market at the rate of Rs. 12-14 per kilogram whereas the locally produced rice is sold at the rate of Rs. 6-8 per kilogram. There is a higher demand for outside procured rice because of its quality and fineness. It results in a dip in the prices of locally produced rice and has a detrimental impact on the local cropping practice.

Discussions

From a holistic perspective, the livelihood of the tribal community in the region rests primarily on agriculture, forests and labour. In some of the interior forest villages, the primary occupation of nearly 60% of the households is collection of minor forest produce. Each has its specific role to play in the tribal economy and the coping mechanism adopted by the communities is based on fulfilling their needs from each of these sources.

All the tribals in the area have land holdings and as such they do not constitute the absolute resourceless poor. The farming practised in the area is however primitive and agricultural activities are carried on with primitive tools like wooden ploughs, spades and small sickles. The prime need of the area is therefore two fold. First, development of land and second, provision of capacity-building resources, namely support irrigation facilities and basic farm technologies. Both these interventions need to be focussed on increasing productivity from the land, increasing the gross area under agriculture and minimising production losses.

The initiatives of JJK to introduce wheat and potatoes as subsistence as well as marketable crop in areas newly brought under irrigation represents a farming model of growing cash crops after a subsistence crop. The model certainly holds prospects for development of the present subsistence economy to a market economy which provides for their subsistence needs and leaves them with marketable surplus. As more and more farmers take to wheat as the *rabi* crop, it is imperative to provide them information about the right time of sowing and providing irrigation. Stress also needs to be given on imparting water management skills to the farmers as inspite of rainfall being above average, farmers are unable to provide irrigation for the second crop.

JJK has taken initiatives to initiate some economic activities in the region, such as goat-rearing, pig-rearing, basket weaving etc. The idea behind these activities is to improve the economic status

of these households by generating productive employment within a village. Nevertheless activities such as pig-rearing for meat are time, labour and capital demanding and their lateral expansion to make them economically viable is an arduous process. Such activities often add to the burden of the women and child members in the family - a burden which aggravates during the migration period.

The problem of migration however may not be to totally solved until the agriculture in the area moves completely out of the subsistence mode. The communities are virtually insulated from the market economy which is substantiated by the absence of cash movement in the local economy. Further they have little capacity and resources to produce beyond their subsistence mode. An absence of a safety net to fall back upon at times of distress such as droughts, food scarcity etc., proves to be a disincentive for farmers to take risk and step towards market production mode. People are therefore forced to migrate. Increase in agricultural productivity would however relocate labour in a manner which increases the value of marginal product of labour and thereby optimising the household income.

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