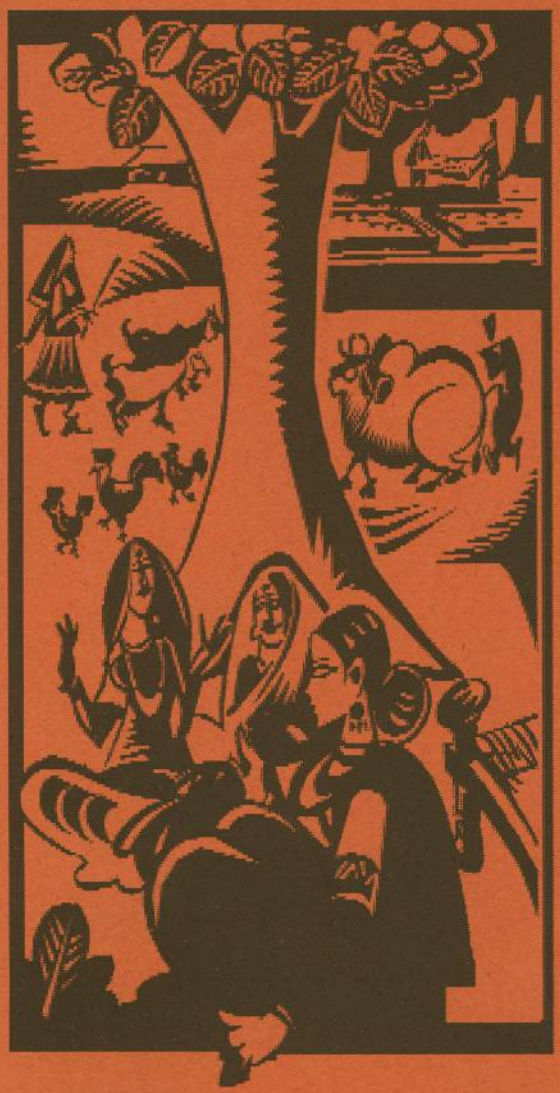
The Livelihoods and Development Monthly

NewsReach

JULY 2005
Volume 5 Number 7



Risk Management for the Poor in Kesla

Weather Risk conducted a detailed study to assess and analyse risk amongst poor communities at Pradan's Kesla project area to structure a community risk management programme

Sonu Agrawal

A number of development organisations strive towards the larger goal of human development by facilitating improvement and consolidation of livelihoods. The promotion of sustainable livelihoods, however, needs to encompass mechanisms that facilitate coping with and recovery from stress and shocks. This is not only vital to conserve positive outcomes but also to stop the poor sliding back into abject poverty.

A majority of livelihood promotion programmes overlook the necessity of plugging the erosion of accumulated capital in the form of financial outflows incurred to meet the stresses and shocks of life. The result is evident in the limited success of most of these interventions.

Rationale

These shocks and stresses can be referred to as risks. To study risk management, the ideal entity is the individual family or household. The reality of poverty is that the rural poor are the most vulnerable to risks and have to pay the greatest price for these risks. In order to meet some of the severe risks, the poor may have to resort to coping mechanisms like defaulting on loans and distress selling of productive assets.

Such a counterproductive strategy further jeopardizes their access to means for upward economic mobility. The rationale for a well-researched risk management programme stems from such risk management behaviour demonstrated by the rural poor. It is with this perspective that we studied communities at Pradan's Kesla project area to structure a community risk management programme.

Pradan's Kesla project area comprises 2 development blocks each in Betul and Hoshangabad districts of Madhya Pradesh. Shahpur and Ghodadongri blocks in Betul and Kesla and Sohagpur blocks in Hoshangabad are adjacent to each other and lie in the catchments of the Tawa River.

The broad study design can be divided into 2 main components: risk assessment of a sample population in the project area, and design and evaluation of appropriate risk management instruments.

We undertook field research to understand the risk profiles, risk cultures and prevalent risk management systems in the study area. We also analysed secondary data from government sources to gain a macro-level perspective of the study area.

A couple of focused group discussions were also conducted to validate secondary data and to appreciate the variability that can exist in even adjoining villages. Based on the macro-level perspective, we conducted micro-level research predominantly through a household-level questionnaire survey accompanied by informal interviews of village resource persons like local shopkeepers, SHG (self-help group) accountants, panchayat members, etc.

Sampling Plan

The sampling plan of the risk assessment study was based on two variables believed to have significant impact on the economy and

the risk profile of a village in the project area. These factors are: access to the village, and level of irrigation. We chose respondents from the sample villages on a random basis, working within local constraints.

The objective of the survey was to assess and prioritise key risks according to incidence and impact on the poor, and estimate the buffer provided by the traditional coping mechanisms. Through this we aimed to develop suitable risk management mechanisms that could quantitatively reduce impact of risks, given the paying capacity of the poor.

The study of risk assessment was divided into macro-level analysis at district and block levels, microanalysis based on key findings from the field survey, and risks and implications.

District Level Macro analysis

The district level macro analysis included studying cropping patterns, productivities, dependence of productivity on rainfall, net irrigated area to gross cropped area, food preferences, worker population and health.

Agriculture in Betul is highly skewed in favour of Kharif crops whereas Hoshangabad shows a more equitable distribution of cropped area during both the Kharif and Rabi seasons. The apparent reason is the availability of irrigation to the farmers of Hoshangabad for Rabi crops.

Even within Kharif crops, there are marked differences in the choice of crops. Unlike the Hoshangabad farmer, who mainly prefers to grow non-food crops like soybean, the typical Betul farmer displays a pragmatic approach by equally preferring food and non-food crops. This indicates a high dependence on Kharif crops to ensure basic food security.

In terms of net irrigated area to gross cropped area, there is a stark contrast between Betul and Hoshangabad. The poor irrigation coverage in Betul explains the lower preference for water intensive and winter crops and also accounts for the lower productivities of crops like wheat and gram that are dependent on irrigation.

As indicated by key resource persons of Pradan's Kesla team, the signs of shifting food preference towards finer food grains like rice and maize are fairly evident in Betul. The area under these crops seems to be increasing at the expense of traditional coarse food grains like *kodu*, *kutki*, *sama*, etc.

Disconcerting Spurt

A glance at worker population statistics for Betul reveals a disconcerting spurt in the marginal worker population in 1991-2001. This may point towards an intensification of marginal labour that is possibly characterized by a high degree of seasonality in the availability of labour.

Although this may make the employment statistics look respectable, yet it could be making things worse for the labourers since it increases fluctuations in income and induces a depression in the prevalent wage rates at the lower end.

The study found that the state of health infrastructure in Madhya Pradesh is quite deficient in terms of the average number of villages covered by a PHC (primary health centre) or a CHC (community health centre) with a high number of villages covered by a centre, making it difficult to allocate resources as required

Another category of healthcare providers rendering their services at the village level

comprises quacks, subdivided into 'Bengali' doctors, RMPs (registered medical practitioners) and bhagats (traditional tribal healers). Among these, the bhagats enjoy high patronage, especially in tribal villages.

The monthly outpatient records of the last 24 months for Hoshangabad were analysed to gain an understanding of the pattern of communicable diseases. It revealed that for both male and female outpatients there was a predominance of ADD (Acute Diarrhoeal Diseases including gastroenteritis and cholera) and ARI (Acute Respiratory Infections including influenza and excluding pneumonia) cases in addition to cases of 'All Other Diseases'. The total cases under these three categories constituted almost 98-99% of the total OPD cases in public health institutions of Hoshangabad.

Block Level Macro Analysis

The blocks where Pradan works (except Sohagpur) are the ones that have the lowest gross cropped areas. Similarly, the blocks where Pradan works (except Sohagpur) have lower cropped areas for food crops during the Rabi season relative to other comparable blocks of Betul and Hoshangabad. This is in line with the low net irrigated area and low gross cropped area.

We also analysed the ownership profile for certain assets such as television, LPG connection and telephone that may serve as indicators of the economic status of a rural household. Except for access to banking services, Hoshangabad outscores Betul in the ownership of television, LPG and telephone by rural households.

Microanalysis

Our microanalysis of the area included studying landholding patterns and family sizes, income profile of families in various landholding segments, productivity and irrigation, crop intensity and land utilisation, labour (farm and non-farm, skilled and unskilled), purpose of wage labour, labour risks, livestock rearing, social and lifecycle events, and health.

The survey found that average landholding in the sampled villages is between 3-5 acres. In the category of seven acres and above, the size of family has a direct correlation with the size of land. The findings indicate many undivided large families have large holdings in range of 10-15 acres. Large families irrespective of landholding however have good income levels due to income from wage labour and NTFP (non-timber forest produce) collection.

The village economy largely operates on barter system in these areas, even for retail purchases within the village for products like soaps, oil, groceries etc. The villagers exchange farm produce to buy such daily needs.

In the medium and large landholding segments, the availability of irrigation facilities translates into a marginal increment in agricultural output.

A majority of farmers both in irrigated and non-irrigated categories practice rainfed farming, especially with crops like paddy. The dependence on monsoon thus increases the element of risk with such crops. The cropping pattern also indicates that in villages with low irrigation, farmers grow crops like jowar and maize.

Even in villages with good irrigation facilities, there are patches of unutilised dry land. This could be close to 20% of the total land

in many cases. Many respondents indicated that such lands are used for growing fodder. Multi-cropping is evident in Kharif crops, especially in medium to large landholdings.

Dependence on Wage Labour

As far as agricultural labour is concerned, there is heavy dependence on income from wage labour across all groups. The employment is mainly during the harvest months of October, November, March and April. Average wages range from Rs 45 to Rs 32. The average annual household income from agriculture labour is between Rs 950 and Rs 1,300.

Dependence on wage labour is higher in villages with low irrigation. Accessibility does not seem to determine the level of economic output from labour. Remotely situated villages such as Jamnagri have higher output than many of the well-connected villages.

We also found that almost 50% of the respondent households are engaged in construction, digging and casual labour. The annual income from such categories can vary between Rs 2,000 to about Rs 12,000.

The survey results indicated about 15% of the respondent households had at least one skilled labourer from their family. The most common types of skilled labour found in the area are carpenters and masons.

The wages for casual and farm labour are given both in form of cash and grains (wheat, paddy, gram). Since agriculture is largely subsistence based, this activity besides NTFP collection provides villagers with ready cash. The earnings from these activities are largely used as ready cash in times of dire needs like illness, consumption during crop failure and in months when sowing is done and there is high capital need.

The labour in this area is largely non-migrant, hence the risk faced by them are largely specific to issues like health, wage rates, and availability of work. Health is a major concern with most labourers who work either in farms or on a casual basis. This is largely due to the heavy physical work not backed up by adequate food. Approximately 30% of respondents engaged in labour identified it as an issue of concern.

Rearing Livestock

Livestock rearing as a secondary means of income seems to be relatively under tapped in the project area. There are distinct patterns for livestock holding across different communities. Tribal communities like Korkus and Gonds predominantly rear milch animals for self-consumption whereas the Gawalis harness the livestock produce for commercial ends.

The average productivity values for milch animals on the basis of the survey data comes to around 0.1 - 0.3 litres per day for cows whereas the corresponding figure for buffaloes comes to around 0.5 - 2 litre per day.

Rearing of goats is almost ubiquitous, as it is believed to be a livestock suitable for the economy as well as the vegetation in the project area. Goats are mostly reared for sale rather than for milk. However, as in the case of cows, the effort invested in rearing goats for high commercial value is generally minimal. Death of goats due to HCN poisoning on eating flowering jowar is common in the area.

A large number of households admitted loss of livestock both on account on mortality and morbidity. Since the veterinary service infrastructure does not reach most villages, treatment of livestock is generally not undertaken. The general expectations of the rural populace in seeking doorstep services and house-to-house notice for vaccination camps seem incongruent with the state of public health and veterinary infrastructure.

Social and Lifecycle Needs

A major component of yearly expenditure in the region is on social events. There are recurring events like festivals (Diwali, Rakshabandhan, etc.) and non-recurring events like marriages, childbirth and death (expenses on rituals). Most villagers agreed that they spend around Rs 1,000 to Rs 2,000 every year during Diwali mostly on crackers, delicacies, clothes and liquor.

The villagers do not have any regular source of income. Most of the income they get from farming, wage labour and NTFP is received in lump sum. This disallows a villager to make any substantial planning to invest the money. This is compounded by low accessibility of formal institutions like banks. For events like festivals and childbirth, financing is done mostly through savings. This is largely because a villager has almost a year to plan for such events. However, in case of marriages, the scale of expenses inhibits the person to plan accordingly.

Risk can definitely be hedged if the villagers plan their savings in advance. Some respondents indicated banks as one of the preferred sources of credit but since formal institutions do not have the scope to provide credit for portfolio like festivals, rituals on death etc., most people depend on sources like SHGs, moneylenders, traders, etc.

The rate of interest varies from 24% (SHG) to 120% (moneylenders). It was also found that these moneylenders are mostly traders in Bhoura, Sukhtawa or within the village who provide credit on the purchases made and in return collect commodities like grains, NTFP, mahua oil, etc. Since credit rates are high, the villager faces a huge risk if his anticipated source of income fails to arrive.

The main diseases afflicting households in the study area include coughs and cold, viral fever, diarrhoea, and malaria. This is in line with the findings of the macro-analysis. The respondents preferred private doctors to government doctors although private doctors are more expensive and are located at greater distances as compared to PHCs. This highlights the inefficiencies present in the present government healthcare infrastructure. Hospitalisation cost was the major expense incurred by respondents, which is at about 36% of the total cost.

Risks and Their Implications

We simulated an income statement for various categories of farmers (small - large landowning, small - large families, across irrigated and rainfed lands) based on the information gathered on land productivity, sown area, crop types, food requirements, labour, NTFP, expense profiles, etc. While preparing the simulation model, wherever we felt that the data collected from our research was inadequate, we used the data from more credible sources (for example, regions with similar risk profiles).

The simulation provided interesting insights into the household economics. It was found that financial condition of a household

improves with landholding, availability of irrigation and number of adult working members. We also found that food security is a prime concern for most households, especially the marginal landowners in rain-fed areas. Food security drives households to engage in other productive activities such as agricultural labour, casual labour (construction, digging, forest cutting) and collecting NTFP.

Households can cope with marginal distress situations (such as temporary food deficit) by putting extra effort in casual labour of various kinds. In distress situations, higher the number of adult working members in a household, the better is the ability of the household to cope with distress. Applying the same logic, small families with low landholding may be more susceptible to risks. Simulation results show that small families can be heavily indebted when faced with risks such as extreme drought or death of a key earning member. Economic value of a member's life to a household decreases with increase in household size. Disguised unemployment in medium to large landholdings reduces economic value of a member to rest of the household.

Implications of Risks on Households

Households frequently grapple with food deficit on account of variations in rainfall, sub-standard farm practices, soil conditions, etc. The deficit situation aggravates in a drought year. While a moderate drought (less than 20% of the average annual rainfall) occurs once in six years, an extreme drought (less than 40% of the average annual rainfall) occurs once in 30 years (based on last 30 years daily rainfall data of Betul and Hoshangabad). The effect of successive moderate droughts can also be severe.

Smaller families may find it more difficult to cope with drought related distress than the larger families (due to working member factor). However, drought accompanied with major illness, disability or death to an adult working member can have a severe impact on households, especially on the small and marginal landowning households. Successive years of drought can also have a severe impact.

Droughts may result in opportunity losses. For instance, a household may need to sell early its NTFP collection in order to pay off it drought related debt. Excessive rainfall can also cause temporary food deficit.

Untimely death or permanent disability: The impact of untimely death differs across segments. Our simulation exercise shows that untimely death of a working member may not cause significant impact on surviving members of the large families (especially if there is large landholding). Untimely death without prolonged illness is not a drain for larger families as expenses reduce proportionately to the economic output. In case of large households with large landholding, death of a member leaves more agricultural output per surviving member (effect of disguised unemployment). However, small families (especially with low landholdings) may face distress if the main working member dies untimely.

Permanent disability (such as loss of eyesight, limbs, etc.) has more impact than untimely death, as while economic output of the household reduces significantly, the expenses remain more or less the same.

Incidences of diseases such as malaria, gastroenteritis, viral fever and other water borne diseases are much higher than the

national rural average. It is not uncommon to find 3-4 members in a family suffering from malaria and diarrhoea during rainy season. The impact of the diseases compound when more than one working member in a household fall ill at the same time. Health problems during the mahua season can be more distressful as the afflicted member cannot contribute to the mahua produce.

Annual expenses on health can be in the range of Rs 3,000 to Rs 10,000, causing severe impact on the finances of a household. It must be noted that 'money' may not only (and not always) imply high treatment cost. It may signify the high overall cost including livelihood loss, transportation, etc. The poor may be forced to discontinue treatment at some point when the expenses become unbearable.

Although prices in the local market fluctuate a lot across the year for various commodities, the villages are largely unaffected due to the barter system and subsistence agriculture. Also, prices in villages are much lower than the market.

Most of the marginal and medium landowning farmers engage in subsistence agriculture, leaving only the large landowners (especially in irrigated lands) to engage in commercial production. As a result, a large portion of the households remains immune to fluctuations in food grain prices.

Further, prices at the local grocery store is much more stable than what is observed at the commercial market. However, in cases of extreme drought or successive moderate droughts, impact of price fluctuations could be noted on account of food deficit forcing households to buy from the local grocery store, and increase in food grain prices. However, the impact in such a scenario is still moderate.

It is also seen that the impact of a risk event compounds in case the household is in debt. With annual interest rates looming between 60-120%, risks under debt situation can cause severe impact.

Impact of a risk compounds during seasons when casual work availability is low (for instance, the rainy season). However, such impacts are temporary in nature as credit is available within the community and the households can make up for the deficit in the following seasons.

Risk Profile

Based on the impact analysis (as per the simulation exercise), frequency of the risks based on the best available record data, a frequency severity profile was created for the

Risk Priority

The priority of risks for low-income group (essentially marginal land owners) are illness or disability; untimely death (important for smaller families); livestock risks, and agricultural risks. The priority of risks for the higher income group (essentially large landowners) are agricultural risks; illness or disability, and untimely death.

Precious savings have to be deployed accordingly. Other risks such as localized water overflow, price fluctuations have a minimal impact and can be absorbed easily by a household. Impact of a risk event compounds in case the household is under debt (especially when the debt has been taken for non-productive purposes).

various households. The frequency severity profile throws light on the best way of managing the various kinds of risk for various households.

It may be noted that impact has been quantified by using the ratio (change in income due to the incidence of a risk/economic output after incidence of the risk). While the change in income signifies the net effect of a risk on a household, the economic output after incidence of risk shows the ability of the household to cope with the effect of the risk.

Suggested Risk Management Mechanisms

As income contribution of agriculture is low for marginal farmers, the impact of drought and other agriculture risks on their livelihoods is minimal. The poor can cope with these impacts with traditional mechanisms. However, it is felt that there is potential to enhance livelihoods through improvement in the present agricultural model. This will help in stabilising volatile incomes of marginal farmers, as well.

It is noted that the region, due to its geographical location, has several advantages. The region receives good average rainfall (1,100 mm). The soil type is black alluvial and has great potential for financially viable farming. The terrain makes it suitable for practices non-traditional farming activities like horticulture, floriculture, plantation farming, etc. It is felt that the above advantages can be harnessed for better agriculture risk management through the following mechanism:

- Aggregate land (titles remains with individual farmers);
- Provide a fixed amount plus a variable compensation for growing suitable crops to farmers;
- Takes care of the risks faced by farmers;
- Facilitated project by venture capitalists;
- Allow the framework to be effective in 4-5 years, and
- Provide adequate technical assistance.

A proposal for the above has also been prepared and discussions are progressing with one venture capitalist.

However, medium to large farmers suffer substantial income fluctuation on account of agricultural risks. Given their paying capacity, some of the risks faced can be effectively managed through select insurance products

Rainfall insurance: Rainfall insurance is a mechanism, which protects the farmer against anticipated shortfall in yield arising out of deviations in rainfall. In this, compensation is paid when the actual rainfall recorded during the season falls short of specified percentage of normal rainfall of the area. Adverse rainfall can be independently verified and measured with rain gauges. It allows for speedy settlement of claims, as early as a fortnight after the insurance period.

There is a wide range of available coverage options such as sowing failure risk, seasonal rainfall, rainfall index, etc. For Kesla several rainfall insurance schemes have been worked out for various crops.

Residual risks such as pests, hailstorm, etc. can be managed through area yield index based insurance products. Here, crop losses are estimated and settled based on transparent agricultural yield index for a given area. A combination of rainfall and area yield index products have been worked out.

Proposed Health and Life Insurance

This study proposes specific plans to cover health risks that involve surgery and hospitalisation. The health risks that could be covered include illness and accidents. Claims need to be settled on each category of surgery and hospitalisation based on two factors: costs of hospitalisation and amount payable for livelihood loss. At present prices, livelihood loss has been calculated as Rs 30 per day.

There would be 2 options offered for each insurance product. In the first option the coverage would be for the 150 most critical days (March to September). The second option would provide cover for the entire year. There would a lump sum compensation of Rs 500 in a drought year. The products also envisage cashless claim settlement facility at hospitals of Pader, Betul and Hoshangabad. The policies would be available both to individuals and families.

The life insurance products need to distinguish between low- and high-income categories. The study has formulated policy structures that would be suitable for this region. We also propose that the health and life insurance product be bundled together and offered by a single insurance company in the region.

We have also proposed livestock risk management through mutual insurance. Details are provided in the accompanying box.

For full text of the report, write to newsreach@pradan.net

Box 2: Livestock Risk Management through Mutual Insurance

A new idea of mutual insurance by villagers is being suggested in case of livestock insurance. The suggested product is as follows:

- *Coverage:* For mortality of bullocks, cows and buffaloes
- *Sums insured* will be Rs 2,000 for a cow, Rs 3,000 for a bullock and Rs 4,000 for a buffalo
- *Premiums:* 2.5% of sum insured for each category of animals
- *Condition for Provision of Coverage:* At least 50% households in each village take the insurance.
- *Maturity Benefit:* The residual premium after the settlement of claims will be adjusted in the calculation of next year's premium.
- *Exclusions:* Animals above the age of 10 years and those, which have become victims of negligence and improper care.
- *Basis of Claim Settlement:* A 3-member committee comprising of village representative, cluster representative and the veterinary doctor appointed by Pradan will investigate the cause of mortality and assess the reasonableness of claim. The payout will be decided by this committee and may lie between 60-100% of sum insured for claims deemed to be genuine.

A Short Primer on SRI

The System of Rice Intensification provides an opportunity to increase productivity in the 21st century

Arup Dutta

Rice is the primary food source for more than a third of the world's population, grown on 11% of the world's cultivated area. It is estimated that the rice demand in India will be 140 million tons in 2025. This projected demand can only be met by maintaining steady increase in production over the years through various ways like adopting hybrid rice, super hybrid rice, transgenic rice, system for rice intensification (SRI), etc.

Over the past 40 years, extensive investments have been made in improving the genetic potentials of rice, along with those of wheat and maize, leading to what has been called the Green Revolution. These gains have been immensely beneficial. But at least in the case of rice, it appears that there has been unexploited productive potential within the rice genome that has been inhibited by prevailing management practices associated with irrigated rice production.

What is SRI?

The System for Rice Intensification (SRI) is a method to increase the productivity of irrigated rice by changing the management of plant, water, soil and nutrients. These practices contribute to healthier soil and plants supported by greater root growth and the nurturing of soil microbial abundance and diversity. SRI concepts and practices have also been successfully adapted to upland rice.

Through SRI, yields can be doubled or more just by changing certain common practices to manage the interactions among rice plants, soil, water, and nutrients by transplanting rice seedlings early, carefully, singly and widely spaced, with the soil kept well aerated (moist but not saturated) during their vegetative growth phase.

Increased yields result from a synergy between the greater growth of rice plant roots and more growth of tillers. SRI practices promote greater root growth and more soil biological activity. It increases productivity by capitalising on existing genetic potentials and by biological processes, particularly in the soil. SRI farmers managing their resources differently can achieve these dramatic productivity gains at low cost.

The SRI method was synthesized in the early 1980s by Father Henri de Laulanié, who came to Madagascar from France in 1961 and spent the next (and last) 34 years of his life working with Malagasy farmers to improve their agricultural systems, particularly their rice production, since rice is the staple food in Madagascar. Though SRI was 'discovered' in 1983, it took some years to gain confidence that these methods could consistently raise production so substantially. In 1990, Fr de Laulanié, together with a number of Malagasy colleagues established an indigenous non-governmental organization, Association Tefy Saina (ATS), to work with farmers, other NGOs, and agricultural professionals to improve production and livelihoods in Madagascar.

In 1994, ATS began working with the Cornell International Institute for Food, Agriculture

and Development (CIIFAD) in Ithaca, New York, to help farmers living around Ranomafana National Park to find alternatives to their slash-and-burn agriculture.

Preparing the Nursery and Starting Seedlings

Father de Laulanié emphasized that the nursery for growing seedlings should be treated like a garden, where the soil is kept moist but not saturated. Watering by hand is sufficient if there is not enough rainfall to maintain moisture in the soil and for the seedlings. With SRI, the nursery is quite small. It can be only a small fraction of the size of the field to be planted. The following steps are recommended for a modified dry bed method of nursery development for SRI seedlings:

- Rice seeds should first be soaked in normal water for 24 hours. Any that are irregular or float should be discarded.

- Normal seeds are then placed in a sack and kept in a warm compost pile or in a hold in the ground that has been warmed by fire. Cover the sack completely with either compost or soil and leave it for 24 hours for slow warming of the seeds.

- The seedbed should be prepared as closely as possible to the field that will be planted, so as to minimize transport time between seedlings' removal from the seedbed and their transplanting in the field.

- Compost should be mixed into the soil of the seedbed at a rate of 100 kg per are. Prior to seeding, lay down a fine layer of 'ripe' compost in the seedbed to ensure good root growth.

- Broadcast the pre-germinated seeds onto the bed at a rate of about 200 grams for every 3 square meters, and then cover the seeds with a fine layer of soil.

- Water the seedbed every day in the late afternoon, or as often as needed to maintain a moderate level of soil moisture. The soil should not be saturated or kept continuously wet. If there has been rain during the day, no watering may be needed.

- Seeds should not be sown all at the same time. Rather, appropriate batches of seed should be sown on successive days, so that the plants when they are put into the field can be all a uniform age.

Field Preparation

The land preparation does not require special steps, though the soil should be well prepared to get the best results. Make sure that there are adequate drainage channels to ensure proper water control. With SRI, one does not want to have standing water in the field or saturated soil.

In general, compost is quite sufficient as a source of nutrients. Farmers have found that they get best results by applying compost into the field during the preceding cultivation season, when they are growing a crop between their rice crops, such as potatoes or beans or onions. The compost applied then helps that crop grow better, and the further decomposition of the compost provides adequate nutrients for the rice crop that follows.

SRI does not require any special preparation, only good normal preparation for having best results. Levelling the field is important but need not be as precise as when one is trying to maintain a uniform layer of water on the field. It is more important to ensure that the soil can be well drained.

Taking Seedlings from the Nursery

Instead of transplanting rice seedlings when they are 20-30 days old, seedlings with SRI are transplanted when they are very young - less than 15 days old and as young as 5 to 8 days. Early transplanting, together with other SRI practices, preserves plants' potential for exponential growth of tillers and roots. If transplanted after the start of the fourth phyllochron, the rice plants' potential for tillering and root growth is diminished.

Seedlings should be lifted out of the seedbed gently, rather than being pulled up. It is important that the seed sac remain attached to the infant root.

Transplanting

Instead of planting 3 or 4 seedlings together in a hill as is commonly done, with SRI, single seedlings are transplanted in a square pattern rather than in rows. Seedlings should always be transplanted from the nursery into the field within half an hour, and preferably within 15 minutes. The roots should never be allowed to dry out.

When transplanting the seedling, the root should lie horizontally, so that the plant's shape (including the root) is like the letter L, with the root tip able to grow downward easily and quickly. Planting the seedling with a vertical motion, plunging it into the soil in a downward movement (like the letter J) is liable to leave the root tip inverted upwards and destroys many seminal roots and set back young plants' growth by 1-2 weeks. With careful transplanting, this setback does not happen, and the plant retains its capacity for rapid tillering toward the end of its vegetative phase.

Instead of planting seedlings densely, they are widely spaced in a square pattern, rather than in rows, which increases spacing and facilitates weeding. They are planted at least 25 cm x 25 cm apart and up to 50 cm x 50 cm. This means having 4-16 plants per square metre instead of 50-150 per square metre as with current practice. With wider spacing, roots have more room to grow, and plant shoots have more opportunity to intercept light.

Water Management

Water should be given one week after transplanting, and then the first weeding (using the rotary hoe) should be done after soil is sufficiently moist, within the first 10 days. If there is intermittent rain, sufficient to keep the soil moist, no water additions are needed. The best time to add water is before the periodic weeding.

During the growth phase, water should be applied only to the fields for weeding purposes, being left to dry out even to the point of cracked surfaces. This will contribute to soil aeration. One can flood the field for 3-5 days and then drain it and keep it dried for 3-5 days. This drying should be done at least 3 or 4 times before the phase of flowering and panicle initiation. Under continuous flooded condition, rice roots degenerate with as many as 75% dysfunctional by panicle initiation. Recent research from India supports the benefits of well-drained soil when growing rice.

Weed Management

Because paddies are not flooded, with SRI, farmers must do more weeding. A simple mechanical hand weeder is good. This aerates the soil while uprooting weeds, leaving them in soil to decompose (thereby retaining nutrients in the soil). The first weeding is done about 10 days after transplanting, and 1, 2 or 3 more weeding are done at 10 to 14-day intervals. Additional

weeding increase yield, probably because of the increased soil aeration.

Pest and Disease Management

Pest and disease problems are less with SRI methods, perhaps because the fields are kept less humid. It is known that healthier, more vigorous plants have more capacity to resist pest and disease attacks. Farmers in Bangladesh, Cambodia, the Philippines, Myanmar and Sri Lanka, as well as Madagascar, have reported fewer pest and disease problems with this method.

Management after Flowering

SRI focuses most of its efforts on getting the rice plants well established in the soil and on encouraging their active increase of roots and tillers during the vegetative growth stage. The water management strategy changes once flowering begins, with a thin layer of water (1-2 cm) being maintained continuously on the field. It is recommended that farmers drain their fields about 25 days before harvesting, to let the soil dry out and encouraging the plant to transfer as much of its nutrient supply to the grains as possible.

Harvesting

SRI rice is harvested just like any other rice, except there should be much more rice to harvest. This makes the farmer's task more difficult, but this is the kind of difficulty everyone should accept happily. Some farmers find that the way rice grows with SRI management makes harvesting easier. For one thing, there is almost never any lodging, even with larger panicles. Also, the panicles are easier to collect off the plants.

Labour Requirement

One of the main reasons cited by farmers and others for not adopting SRI methods is that SRI requires more labour. This is true in the sense that any intensification will require more work and certainly more management effort. However, the increased labour requirements for SRI are not simply a matter of needing to invest more labour, and in some respects, farmers will find that SRI requires less labour.

First, when any new method of production is used, there is some time required for learning how to use the method correctly and quickly. Some of the increased labour needed for SRI is simply a matter of learning time. This is an investment that should be recouped within the first season.

One study of SRI labour requirements found that it required about two-thirds more days of labour per hectare when using the method in the first or second year. But after farmers had become better acquainted with the methods, and had become more comfortable with them (particularly the transplanting), the labour requirement decreased by about one-third. A more recent study with 108 farmers in Madagascar who used both SRI and conventional methods on their farm found that the difference in labour requirements for SRI was 25% greater. Since yields with SRI were at least doubled, the amount of rice produced for each day of work invested was increased greatly.

Plant Structure and Yield Components

Rice yields are a function of the number of fertile tillers per square metre, the number of grains per fertile tiller, and the weight of grains (grams per 1,000 grains).

Tillering

With SRI practices, the number of tillers per plant goes up dramatically, from 5 to10 tillers to 30, 50, 80, even sometimes 100 or more, depending on farmers' management skills as

well as on soil fertility, temperature and other factors. Some of this change in tillering is due to the wider spacing between plants. But other practices also contribute to this result. With wider spacing, there are fewer plants per unit area, which produces more tillers along with greater number of fertile grains. The aim should be to maximize the number of fertile tillers per square metre while getting maximum grain filling. Researchers and farmers thus seek optimum spacing that will yield the largest total number of panicles (fertile, grain-bearing tillers) per unit area.

When rice is grown in saturated soil, dense planting is done. However, it is known that close spacing inhibits tillers from flowering and becoming fertile. So it should not be surprising that SRI, taking the advantage of wide spacing (in un-flooded soil).

Roots

It has been found that the amount of force required uprooting a clump of three rice plants grown conventionally (mature seedlings, close spacing, in standing water) averaged 28 kg. In contrast, single SRI plants (young seedlings, widely spaced, in well-drained soil) averaged 53 kg. Almost six times more force per plant is necessary to pull up rice grown with SRI methods.

It has also been found in controlled experiments in pots with soil that was kept either saturated or well drained, by the time that the rice plants grown in saturated soil began their reproductive phase (panicle initiation), 78% of their roots had degenerated. In contrast, the plants grown in well-drained soil had virtually no root degeneration. Such degeneration of roots occurs under flooded conditions and is known as senescence.

With greater root growth and depth, SRI plants can access more and a greater variety of nutrients in the soil. Rice plants growing in irrigated soil (through conventional methods) in contrast have most of their roots (75%) within the top 6 cm of soil where they can access some of the dissolved oxygen in the water. Under flooded conditions, 30-40% of rice roots' cortex disintegrates to form aerenchyma [air pockets] to supply oxygen to the roots' cells and tip.

Under hypoxic conditions, little oxygen reaches the root tips, from which root growth below the ground occurs. By the start of the process of grain formation, a large majority of rice roots have died for lack of oxygen. Although scientists know this process, it has not been taken very seriously because most plant research focuses on aboveground parts and functions; only a small fraction of plant research deals with belowground processes.

Recent research in India has shown that 10-25% increases in rice yields can be obtained, all other things being equal, simply by keeping soils well drained rather than saturated. With more root growth, the plant can access a much larger volume of soil, absorbing small amounts of essential trace elements. Having a 'more balanced diet' of nutrients, not just nitrogen, potassium and phosphorus, presumably adds to the growth and vigour of SRI plants. It also enhances the plants' resistance to pests and diseases, which are somewhat reduced just by growing rice in a less humid microenvironment. All of these factors together contribute to the positive association between tillering, rooting and grain filling.

Advantages and Benefits

In SRI less time is required to prepare land. The field preparation is essentially the same for SRI and usual methods of production. As

the nursery is much smaller, there can be a saving of time on this part of the process.

The amount of time initially spent in setting up a field for planting with SRI is greater, as lines need to be laid out for planting seedlings in rows carefully and well-spaced. Although the amount of time spent for putting each seedling into the field is several times greater, there will be fewer seedlings to be planted. The number of seedlings transplanted with SRI is only one-tenth as many as with conventional planting, and possibly even fewer if wider spacing is used.

Water requirements are reduced about 50% because fields are not kept flooded during the vegetative growth period. Free-living bacteria and other microbes around the roots of rice may fix nitrogen for the plants. Where nitrogen fertiliser had not been applied (since this suppresses production of the enzyme nitrogenase required for biological nitrogen fixation), microbial action fixed 150-200 kilograms of nitrogen per hectare. However, less nitrogen fixing occurs where chemical fertilisers have previously been applied. It is known that about 80% of the bacteria in and around rice roots have nitrogen-fixing capability but this potential will not be realised where inorganic nitrogen has been applied, or in anaerobic, waterlogged soil.

SRI is also eco-friendly because it reduces methane emission, thereby diminishing greenhouse gases. Expanded rice root systems and rhizosphere in SRI methods reduce methane emissions because methane oxidation takes place in the rhizosphere where methanotrophs are reported to proliferate and the concentration gradients of methane and oxygen overlap.

Because of stronger tillers and larger root systems, SRI plots withstood the wind and rain of a recent cyclone that hit Andhra Pradesh while neighbouring fields were blown down and their grain submerged (Eenadu, December 20, 2003).

SRI farmers have also widely reported fewer pests and disease attacks. 88% of the 60 SRI farmers interviewed for an evaluation in Sri Lanka said that they had fewer pests and disease attacks. Farmers thus can avoid or reduce their expenditures on agrochemical applications.

Because many fewer plants are grown, the seeding rate is only 5-10 kg per hectare. This is a benefit particularly for hybrid rice where seed cost can be a barrier for adoption. Also, farmers can use whatever varieties they are already planting since SRI methods enhance yield for traditional as well as improved cultivars.

SRI is an alternative sustainable low-cost system to the conventional farming systems. With external input requirements reduced, farmers can save substantial expenditure. At the same time, yields are increased. SRI farmers have reported that their cost of production is usually lower than conventional system and the yield was high. Costs of production per kg are reduced from 25 to 100% depending on practices and resulting yields.

Some Misconceptions about Rice Cultivation

Rice plant does not require continuous standing water. The rice plant during its growth stage only needs to have soil that is moist, but not saturated. Indeed, the field should occasionally be dried even to the point of cracking. An important discovery of SRI is that rice is not an aquatic plant. Although it can survive when its roots are continuously submerged

under water, it does not thrive in this situation. Rice does not grow as well underwater as when its roots are able to get oxygen from direct contact with air.

Rice plants that grow in standing water will adjust to this environment. Their roots develop small air pockets (known as aerenchyma) that permit oxygen from above ground to reach the roots. But this is not an ideal condition for plant growth. It interferes with transfer of nutrients from the soil to the plant's tillers and leaves.

Surprisingly, plant growth will benefit if occasionally, even once a week, the soil is permitted to dry out, at least on the surface. This permits more oxygen to enter the soil and reach the roots. When the soil is not saturated, the roots need to grow longer to seek out water. When the soil around rice plants' roots has abundant water, they can be 'lazy' and need not grow very much. This limits their ability to acquire nutrients from the soil

Conclusion

In summary, the main elements of SRI are as follows: Transplant young seedlings to preserve their potential for tillering and root growth. Provide the plants with wide spacing, without competition either in hills or between hills. Keep the soil well aerated but sufficiently moist, so that the roots can 'breathe'; for this, use both water management and weeding practices that aerate the soil. Finally, provide nutrients that feed the soil as well as the plant, so that a rich and healthy soil gives plants the nutrients and positive environment needed for best growth and performance.

SRI should be understood as a system of production that through synergistic interactions can produce much higher grain yields than are usually achieved by conventional practices utilising new 'high-yielding' varieties and external inputs. The concept of synergy appears to explain why SRI works so well. This refers to positive interaction between and among SRI practices. Profuse root growth helps in tillering; more tillering provides more photosynthates to support root growth; both contribute to greater grain filling and larger grains.

Each of the management practices used in SRI makes a positive difference in the yield but the greatest potential of SRI is seen when the practices are used together. Yields with SRI methods have been typically around 8 tons per hectare in Madagascar, where the national average is 2 tons per hectare.

The SRI methods described above are not a formula or a recipe. Farmers should make some adjustments in practices like timing, spacing, soil preparation, weeding, and water management, and should try any other thing they think might give their rice a better chance to grow vigorously.

One thing that particularly needs to be evaluated by each farmer according to his or her field conditions is the spacing of the rice plants. For best yield, one should emphasise on getting most tillers per square metre. This depends on the farmer's soil, temperature and climatic conditions, as well as on the variety of rice used. It must be remembered that soil conditions can be changed (be improved) over time by good management of organic matter (compost, crop residues, etc.) and water (keeping the soil well-aerated).

Goat Rearing in Dholpur

Goat rearing in the Daang region of Dholpur has received enthusiastic response from the community

Shouvik Mitra

Rearing goats (*Capra hiscus*) have helped the poor in their struggle for survival throughout India. This is especially true in semi arid regions like Rajasthan. The goat is often called the poor man's cow because it can adapt to marginal resource conditions. Goats survive efficiently on available shrubs and trees in adverse environments and in low fertility areas where few crops can grow.

Pradan has been promoting rearing of goats in Dholpur and Dausa districts of Rajasthan for the past couple of years. Dholpur district (3,034 sq km) comprises the 4 blocks of Bari, Baseri, Dholpur and Rajakhera, home to 9.83 lakh people (2001 census). The district can be divided into 3 topographical zones: the densely populated plains, the sparsely populated, forested and rocky region of the Aravalli plateau commonly known as the Daang and the undulating areas around the Chambal River catchments. The average annual rainfall in Dholpur is about 640 mm. It has however been receiving less than average rainfall in the past 4 years. In 2004 only about 340 mm of rainfall was recorded, resulting in severe drought-like conditions.

Rain is the only source of water in the Daang. The drinking water wells fail to cater to the needs of villagers in the summer months, with more than 90% of the wells drying up during the hot season. Since water is so scarce, agriculture in this region is primarily rain-fed. The people have therefore opted for alternate livelihood sources such as livestock rearing on a large scale.

Rearing goats have become popular in the Daang. This region is home to large numbers of Gurjars, for whom livestock rearing is a traditional occupation. For other villagers, too, livestock rearing is a major source of annual income as the rocky terrain and lack of irrigation restricts agriculture to only subsistence levels. As a result, this area has a huge population of buffaloes, cows and goats.

Rearing goats has become popular in the recent past because of increasing shortage of green fodder and abundant availability of pastures. Even in the plains of Dholpur, families with marginal or no landholding and families who find it difficult to meet the cost of feeding a buffalo are opting for rearing of goats.

Traditionally goats are reared in Dholpur for their meat and not milk. The rearing practices have been to a large extent been determined by the varied topographical characteristics of the district. Livestock management is largely traditional, using old, primitive and low technology. Such management practices often defeats the purpose of rearing goats and greatly hamper the profitability of the enterprise.

In the Daang, usually large herds of 10-15 goats are maintained. The traditional practice is based entirely on free grazing since there are plenty of pastures. But in the process a

goat is made to walk about 12-15 km every day. As a result, the conversion of feed is minimal. In contrast, people in the plains practice stall-feeding since grazing areas are limited. Even in these cases the nutritional requirements of a goat is not entirely met.

Although the widespread practice of free grazing in the Daang has created tremendous pressure on forests and pastures, it has been unable to meet basic requirements of raising goats for their meat.

Since goats are not expensive assets, there is also a lot of negligence as far as the health of the herds are concerned. In the Daang large number frequently die because of disease and lack of proper treatment. In the plains too, little attention is paid to the health of a goat until the condition becomes critical. In most cases the animal dies before it has had the opportunity of receiving adequate care. Preventive healthcare measures are greatly lacking and there is no concept of insuring the animals. The government vets also do not give the same kind of importance to goats as they give to buffaloes.

According to Pradan field surveys in various districts of Rajasthan, there is a lot of potential to promote goat rearing amongst the poor in this region provided the gaps in rearing practices and infrastructure facilities are plugged and modern rearing techniques are encouraged (*Experiences in Goat Rearing*, NewsReach December 2003).

Pradan's Method

The Dholpur team selected an area (called a cluster) in the Daang where goat rearing can be a viable livelihood activity for the community through extensive field visits and interactions with local people. It currently promotes 61 common interest groups (CIGs) comprising 738 women around goat rearing.

Box 1: Asha Devi's Success

Asha Devi of Gironiya purchased 16 goats (15 does and 1 buck) from Karoli. The total cost for the animals was Rs 32,200, out of which she mobilised Rs 12,800 on her own. Although 2 of the animals died, her herd has increased to 30 (21 does, 1 buck and 8 kids).

Last year (2004) Asha Devi sold 10 bucks at an average price of Rs 1,100 per buck and earned Rs 11,000 in just one year. She spent Rs 600 on feed, medicines and vaccinations. Her net income was therefore more than Rs 10,000.

Asha Devi has now taken full charge of the activity. She has built a shelter for the animals out of her own resources. Earlier her husband was involved in illegal tree felling as a means to a livelihood, which involved a lot of hardship and risk. Now both of them are involved full time in rearing goats.

Such an area-based approach has been adopted to strengthen the sub-sector, be in the area of individual management practices or infrastructure and service requirements of the CIG members. Pradan is also contemplating promoting a producers' organization, which would play a pivotal role in bringing about a significant and visible change in the viability and profitability of the activity and assist group members towards a positive spiral of growth. This in turn would enable access to these services, skills and infrastructure for others in the region.

Pradan encouraged the purchase of a large number of goats through women managed funds. Spouses or other male family members helped the women in exploring mar-

kets in nearby villages of Karoli district in Rajasthan and Morena district in Madhya Pradesh. The men organised the goats to be brought at a convenient place where they were purchased under the direct supervision of the local government vet and Pradan professionals.

Twenty-two groups purchased 3,712 goats at an average cost of Rs 1,600 per animal. Part of

Box 2: Goatery in Gironiya

Gironiya village, 24 km south of Samathura, is part of the Domai panchayat. It is home to 25 households of the Thakur community and a single Gurjar household. There are 7 listed BPL (below the poverty line) families in the village although the economic conditions of all the households are more or less the same.

Gironiya lies on a plateau of the Aravalli range. The main occupations of the people are illegal tree felling, rainfed agriculture and cattle rearing. The undulating agricultural fields are lying barren these days due to want of water. Water scarcity is so acute in the village that some of the households had to sell their cattle.

The main source of income for the villagers comes from selling firewood in markets of Samathura. They cut trees illegally and load camels with firewood in the dead of the night. A trip to the market fetches only about Rs 60 per camel. Low demand of firewood in the summer forces them to look at other sources of income to ensure 2 square meals a day. Most migrate from the village in search of wage labour.

Pradan's Dholpur team conducted a participatory rural appraisal of Gironiya in 2002 to know more about the village, its resources and the problems the villagers were facing. Lack of drinking water for both animals and humans topped the list of problems. At this point, some villagers showed keen interest in rainwater harvesting. They were eager to form a common interest group (CIG) so that they could avail DPIP funds to construct a rainwater harvesting structure.

The women however showed an interest in rearing goats. They formed a common interest group called Bharobaba Pasudhan Vikas Samiti and took up savings and credit activity along with rearing goats. The groups managed to generate a revolving fund of Rs 17,000, which is used to provide credit to members.

In May 2004 they applied for funds under DPIP to purchase goats. The members contributed more than Rs 72,000, mostly by mortgaging their belongings at very high rate of interest (36% per annum).

Each member then purchased 15 goats and a buck. They also purchased other accessories like iron feeders and chaff cutters. Their initiative and efforts have paid off. Average herd size has increased to 27 goats from 16 goats. Group members have sold bucks worth Rs 113,000 through local traders. The profits they earned helped group members to repay the loans they had taken from moneylenders.

The group was then able to apply for and procure a bank loan to the tune of Rs 30,000 for consumption purposes. This loan also has been repaid. A member of this group is now the treasurer of the Saheli Sangathan, the apex body of self-help groups in Dholpur district.

the cost (Rs 1,120 per animal) was met though funds from the government's District Poverty Initiatives Programme (DPIP). The women organised the rest, taking loans either from banks or local moneylenders.

Managing the health of the goats received special attention. Pradan facilitated regular health checkups, de-worming and vaccination. Vaccinations for ET, FMD and PPR (common diseases) along with de-worming were done for 80% of the goats and kids. The CIG members provided all costs of medicines. The vaccines for FMD and ET were arranged from the Animal Husbandry Department of Dholpur while PPR vaccines were arranged from Indian Veterinary Research Institute at Izzatnagar.

Pradan also facilitated training of members so that they are able to administer the drugs on their own. Medical kits were also provided to groups to promote better health management. The groups paid for the kit. They collected money from members when drugs from the kit were used. This money is being used as a revolving fund. Till date, medical kit training were organised for 20 groups (out of the 22 groups that purchased goats). As a result of these initiatives, the community has started taking up the issue of goat health more seriously.

Nineteen CIGs conducted skill enhancement trainings from funds provided by DPIP. Pradan facilitated these training with the help of government vets. A veterinary consultant has been employed to provide on-the-field support to the groups. Pradan has also facilitated the training of 7 paravets.

More than 150 goats have since died. The mortality among adult goats was 8.5% and 26% among kids. However, wild animals caused 25% of the deaths. Members filed insurance claims for 46 goats. The insurance company disbursed more than Rs 29,00, settling claims on 25 goats.

The community is now contributing to Aapna Kosh (our treasury) of the Saheli Sangthan (the apex body of self-help groups in the district)) to minimise risks of mortality. Apna Kosh is a people owned and managed fund to cover risks to a certain extent. The community came up with this idea after unfavourable experiences with the insurance company. Efforts are also on to link up with some other insurance company.

The herd size of the entire sample has increased by 68%. The average herd size has increased to 27 from 16. Some of the groups have sold bucks with an average net income of Rs 3,500 per member in 9 months. The bucks were sold at prices ranging between Rs 800 and Rs 1,500 per buck depending on the bargaining skills of the rearer. Some members have earned up to Rs 11,000 from the sale of bucks.

Future Plans

In view of the success of the intervention, the community and Pradan have made plans to expand this activity. We plan to purchase more goats and reduce mortality of the animals. We also plan to build scientifically designed shelters for the animals. There are also plans to expand the pool the paravets to provide medical and animal management support. There would be emphasis on enhancing the capacity of rearers in animal management, de-worming, vaccination and medication. Forty members have also decided to develop pastures on 10 hectares of land. We also intend to strengthen the groups and pass on more responsibilities to the members regarding operational issues and decision-making.

Committed to Rural Development in Orissa

Adarsha Social and Health Service Association (ASHA) is working to enhance incomes of the poor in western Orissa through women's groups

Dr Meenakshi Satpathy

Adarsha Social and Health Service Association (ASHA) is a not-for-profit organisation engaged in rural poverty alleviation. It was registered in May 1995 at Jharsuguda in Orissa under the Societies' Registration Act, 1860. ASHA presently works with 3 staff members and 15 local supervisors in rural areas of Jharsuguda, Sambalpur and Sundergarh districts of western Orissa.

A governing board of 7 members, experts in various disciplines, provides the overall sanctioning to the society's operation. Pradan has been extending external guidance for its various activities. Annual evaluation is conducted internally to assess the impact of ASHA's activities on building group accountants and supervisors; developing new insights and skills among the participating women, and improving the overall well being of their families.

ASHA started promoting women's self help groups (SHGs) towards the end of 1995. There was no external financial assistance to ASHA till October 1997. The initial venture was made through mobilization of local human and financial resources. The first external financial support came from Sir Ratan Tata Trust (SRTT) when ASHA was given a grant to set up 50 SHGs benefiting around 750 women in about 30 villages in Jharsuguda district. ASHA is also working under the guidance of MY-HEART, an NGO working on reproductive and child health (RCH), to implement a RCH programme in the Babu Chhipidihi gram panchayat in Laikera block of Jharsuguda district.

Area and People

ASHA's works in one of the most backward areas of Orissa. The general caste people in this area mainly include Brahmins, Agharias and Gaudas. The scheduled tribe and scheduled caste communities primarily include Gonds, Bhuyans, Kisans, Kolhans, Kharias, Chamars, Dombs and Ghasias. The coverage of ASHA's women's SHGs in these districts is presented in the accompanying table. It is evident that ASHA works predominantly with scheduled castes, scheduled tribes and low-income families.

District	Total	SC	ST
Jharsuguda	2,921	539 (18%)	1781 (61%)
Sambalpur	390	109 (28%)	205 (53%)
Sundergarh	511	37 (7%)	405 (79%)
Total	**3,822**	**685 (18%)**	**2391 (63%)**

Problems in the area

Exploitation of the disadvantaged people by the upper and more privileged castes is rampant in these areas. Although credit is made available by the upper castes, exorbitant interest rates are charged, at times against heavy mortgage. This discourages the poor from taking loans for any productive purpose.

The condition and status of women are

deplorable. They are subservient to men even if they are earning members of the family. Wife beating and misdemeanours with women are quite common. There is wide discrimination even in wages. While men are paid a daily wage of Rs 40, women are paid only Rs 20 for the same work.

Although a number of schemes are operating in the area to eradicate poverty and illiteracy, most low-income people are ignorant of these. Insufficiency of income generating activities (IGA) in the area is a big problem. There is lack of technical support on IGAs.

A problem faced by the groups assisted by ASHA so far in IGA is of marketing products like garments, bamboo crafts and terracotta at competitive prices. Access to services like health and education by people in this region is also very weak. People still spend a lot of resources on customary ways of treating diseases without much success.

ASHA is lead by two qualified physicians. So it is expected that they should take up more health related projects. But, as narrated above, most of the population is below the poverty line. They do not have the capacity to pay the cost of medicines, let alone pay fees to physicians.

ASHA therefore felt that it is better to first introduce IGA to build their financial capacities. At the same time, ASHA did get involved in RCH and other health awareness programmes by collaborating with other NGOs.

Prospects

ASHA has found that forming SHGs of women has helped them to overcome social and financial problems some extent due to more awareness, unity, financial freedom and timely access to loan at reasonable terms. Even men have been observed to have gradually support such groups. There is increasing demand from the people in adjoining areas of ASHA's operations to form such groups. ASHA has also found that clusters of 8-12 nearby groups help in better communication, problem solving and access of external services. Clusters of groups also help interaction between group leaders, members, and government and private agency officials, which enhances external linkages.

ASHA is currently working to strengthen SHGs and promote livelihood generation activities in western Orissa with financial support from SRTT. The specific purposes of the work are as follows:

- To enhance the capacity of the existing ASHA Mahila Mandals (AMMs) and cluster associations;
- Filling gaps in the existing operational area by organising new AMMs;
- Enhancing professional capacity of ASHA to strengthen the savings and credit programme and identify livelihood opportunities in the area in a structured manner;
- Developing a long term vision, focus and strategy of the organisation and building linkages with other donors and financial institutions, and
- Developing intervention strategies in 3-4 potential sub-sectors.

Major obstacles to community development in the area include low awareness among people. This is why it takes a lot of time to organise women into groups. By March 2005, ASHA has promoted 310 women's SHGs with a total membership of 3822 in 55 villages of Laikera block, 39 villages of Kirmira block, 6 villages of Lakhanpur block and 4 villages of Kolabira block in Jharsuguda district, 19 vil-

lages of Bamra block of Sambalpur district and 11 villages of Sadar block and 14 villages of Gurundia block of Sundargarh district.

Besides strengthening access to credit by forming SHGs, intervening in various livelihood generation programmes and other important issues of the community in a small way showed ASHA that these were quite crucial for the empowerment of the community. Hence AHSA proposes to continue to work towards the development of the low-income rural community not only through building and sustaining strong SHGs but also by creating economic opportunities and linking them to a range of basic services.

ASHA has facilitated 195 members from 29 groups to take up income generating activities (see accompanying table). For agriculture our staff upgraded their skills, for irrigation help of Pradan was taken and for the rest, experts from relevant government departments were contacted and the families trained.

Activity	Families
Dairy	10
Lift irrigation	19
Leaf cup plate making	59
Fishery	13
Poultry	15
Paddy cultivation	79
Total	**195**

Future Plans

ASHA's work in the near future will focus more on strengthening the existing groups than expansion. Half of the existing groups will be supported in better record keeping and group management. Secondary level organisations (clusters and federations of women's SHGs) of the existing groups will be promoted as well and their capacities will be built to facilitate primary groups run well. To form and strengthen these, structured exercises will be undertaken to help member groups spell out their expectations from their clusters and the clusters to define their objectives and role vis-à-vis the groups. ASHA proposes to expand its group formation programme only in the existing operational area to fill up gaps.

Out of the IGAs explored until now, ASHA intends to promote dairy, leaf plate making, agriculture and micro-irrigation and fishery in a focussed manner. It plans to promote these activities amongst 1,500 families. ASHA will promote service providers from among the local community for each activity to provide skills and enterprise based support on a sustained basis.

ASHA will also facilitate collaboration between community organisations and relevant institutions for knowledge, skill, finance, input procurement and marketing the produce. All this calls for professional capacity enhancement within the organization. It has already contacted organisations like Pradan for this, who has promised to extend their support.

News and Events

• Pradan's Raigarh team has received the first prize this year in self-help group (SHG) and Bank linkage programme from NABARD on July 12, 2005. This is the second time that they have received the best performance award. Vina Singh, wife of Raman Singh, the Chief Minister of Chhattisgarh, gave the prize. Other dignitaries present on the occasion were Panchayat and Rural Development Minister Ajay Chandrakar, MLA Lelunga constituency Satyanand Rathia, Chief Secretary Vijay Vargiya and NABARD Chief General Manager Arvind Kumar Sinha. Congratulations!

• ICCO's Annual Project and Monitoring Evaluation Meeting was held during June 21-24, 2005. It was organised by Gram Vikas at Berhampur in Orissa. Seva Mandir, Pradan, Action Fertana, Adats and Gram Vikas are the 5 partner NGOs implementing the project. Deep Joshi, Achintya Ghosh, Anirban Ghose and Soumen Biswas from Pradan attended. For details write to anirbanghose@pradan.net.

• S Parthasarathy, Chairman of the Expert Committee on Watershed Development set up by the Union Ministry of Rural Development, visited the Purulia team's watershed project on July 15 2005. He also attended a consultative meeting of Jharkhand NGOs held in Ranchi on July 16, 2005. The meeting was organised by Pradan. Deep Joshi, Dinabandhu Karmakar, Soumen Biswas and Manas Satpathy attended the meeting. For details write to dinabandhu@pradan.net.

• A daylong workshop on a database of SHGs was organised by the National Institute of Rural Development on July 19, 2005. D Narendranath from Pradan attended. Pradan also provided district-wise data of the SHGs promoted by it. For details write to naren@pradan.net.

• Pradan's SHG regional thematic meeting took place during July 16-18, 2005 in Dholpur, Rajasthan. Teams from Rajasthan, Chhattisgarh and Madhya Pradesh participated. The participants included Shouvik Mitra, Sumita Kasana, Abhishek Prakash, Zebul Nisha, Prataya Jagannath, D Narendranath, Neelam Maheshwari, Naveen Jha, Amjad Khan, Shivaji Choudhury, Nishikant Dixit, Suparna Soni, Archana Singh, Sameer Kumar and Mousumi Sarkar. The highlights of the meeting were sharing issues and concerns, taking stock and peer review of the SHG programme. For details write to naren@pradan.net.

• A livelihoods training was conducted at Kesla between June 20 and July 5, 2005. Thirteen participants attended the programme. Sanjiv Phansalkar was the resource person.

Present a New Idea for Peer Review

Pradan has always been in the forefront in innovating on new ideas that could be implemented at the grassroots. ***Concept Papers*** in NewsReach are a way to share and air new untested ideas to solicit peer feedback. If you have a new idea you would like to test before implementing, send us a 2,000 word ***Concept Paper***. If you have experience or views on any ***Concept Paper*** that would help the author, email us at newsreach@pradan.net.

PRADAN (Professional Assistance for Development Action) is a voluntary organisation registered under the Societies' Registration Act in Delhi. We work in selected villages in 7 states through small teams based in the field. The focus of our work is to promote and strengthen livelihoods for the rural poor. It involves organising them, enhancing their capabilities, introducing ways to improve their incomes and linking them to banks, markets and other economic services. PRADAN comprises professionally trained people motivated to use their knowledge and skills to remove poverty by working directly with the poor. Engrossed in action, we often feel the need to reach out to each other in PRADAN as well as those in the wider development fraternity. NewsReach is one of the ways we seek to address this need. It is our forum for sharing thoughts and a platform to build solidarity and unity of purpose.

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