# Background Information of the District  Dumka

## Location, Extent and Population:

The district Dumka is located at the Central and North-eastern plateau zone of Bihar. The district comprises of two sub-divisions namely, Dumka and Jamtara. There are 14 blocks in the district viz; Dumka, Jama, Jarmundi, Saraiahat, Ramgarh, Kathikund, Gopikandar, Sikariprara, Raniswar, Masalia, Jamtara, Narayanpur, Nala and Kiundhit. The district is having 4,119 villages under 282 panchayats. The total population is 14,95,628 which maintains an approximate male to female ratio of 1.04:1.The tribal population is 43%of the total population.
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## Agro-Climate :

The climate of the district is characterized by hot summer and cool winter. The average annual rain-fall varies from 1300 to 1400 mm which covers about 80%of the PET. The district experiences a prolonged dry period from January to May which keeps the soil dry for more than 90 days in a year. As such the area, in general, qualified for typical soil moisture regime. The length of growing period varies from 150 to 180 days.

## Physiography and Soils :

The landscape of the district is characterized by gentle to very gentle slopes. Soils are sandy loam to clay loams, non-calcareous, slightly to moderately acidic and have location exchange capacity. The soils are generally shallow on the ridges and plateaus and deep in the valleys.

## Land use :

Total geographical area of the district is 5.58 lakh hectare out of which nearly 40% area comes under net cultivated area,11%covered forests and the rest 49%area falls under barren, cultivable waste, pasture and other agricultural use. The details of land use pattern in the district are presented in table 2.1.0ut of 2.18

lakh hectare net cultivable land, about 50%is under upland situation,30%under medium land and 20%under low land situation.

## Land utilization pattern

| S.No | Items | Area Lakh hect. |
|---|---|---|
| 1. | Geographical area | 5.58 |
| 2. | Forest | 0.60 |
| 3. | Barren and uncultivated land | 0.33 |
| 4. | Land put to other agriculture use | 0.53 |
| 5. | Cultivable waste land | 0.44 |
| 6. | Pasture land | 0.29 |
| 7. | Current fallows | 0.53 |
| 8. | Net cultivable land | 2.18 |
| 9. | Total cultivated land | 1.99 |
| 10. | Area under more than two crops | 0.02 |

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As per table 1 in Dumka district total cultivable land is 2.18 lakh consisting
Upland -1.090 (50%)
Midland -0.654 (30%)
Lowland -0.436 (20%)
Majority of area comes under rainfed,only 11%area is used for irrigated condition which is in midland situation.

***Cropping pattern :***The principal agricultural crops grown in the district are rice, maize,pigeon pea,horsegram,nigar,mustard,groundnut etc.

## Cropping Pattern,Area and Productivity of major agricultural crops in Dumka district :

Rainfed farming system is the traditional practice followed by the farmers of this area. The Major crops grown in the district are rice,pulses such as moong,black-gram, pigeon pea and horse gram.Wheat is grown during rabi season mostly mustard and linseed, and pulses e.g.gram are also grown on stored or residual soil moisture.In some places, potato is also grown under irrigated condition.During the last five years there has been a marked increase in area under vegetables at some places in the district..The important cropping patterns followed in different parts of the districts are as follows **:**

I.**Mono-cropping :**Rice/Maize/Pigeon Pea /Groundnut /Horse gram.In some
areas,farmers follow inter-cropping of Maize with Pigeon pea /Cow pea.

II.**Double cropping :**Rice wheat,Rice-Mustard,Maize-Wheat,Maize-Mustard,Rice-Potato,ice-Vegetable,Maize-Vegetables.

At few places in the district,where irrigation water is available in summer also, farmers take rice and /vegetables at very scanty level.

Area and productivity of major agricultural crops in the district are presented below :

**Area productivity of major agricultural**

| crops | Crop Area (ha) | Productivity (Q/ha) |
|---|---|---|
| **I.Kharif** | | |
| a.Rice | 150289 | 12.6 |
| b.Maize | 13000 | 16.0 |
| c.Arhar | 2394 | 4.7 |
| d.Urad | 998 | 6.0 |
| e.Other pulses | 3392 | 5.0 |
| f.Oil seeds | 1500 | 5.0 |
| g.Finger millet | 860 | 4.0 |
| h.Mesta | 998 | 4.0 |
| **II.Rabi** | | 11.0 |
| a.Wheat | 7000 | 14.0 |
| b.Maize | 399 | 5.0 |
| c.Gram | 4589 | 6.0 |
| d.Masoor | 598 | 5.5 |
| e.Pea | 598 | 7.0 |
| f.Mustard | 13000 | 3.2 |
| g.Linseed | 798 | |
| **III.Summer** | | |
| a.Paddy | 997 | 11.8 |

**Horticulture :**

The horticulture department was established in 1990 to promote fruits and vegetable cultivation in the district. The main objective of the department is to provide improved technologies and impart training to the farmers to boost up the production of fruits and vegetables. The total area under horticultural crops is 0.2 lakh hectare which is about 14% of the cultivated area.

The existing orchards of mango and litchi are very old and the yields are down due to lack of maintenance. There is one progeny nursery in Dumka, namely Shilandha. There are also five block nurseries in the district. However, the infrastructures of these nurseries are very poor and they can not cater to the demand of saplings.

**Fisheries :**

There is a great shortage of fish production in the Dumka district. According to 1996-97,the area under fish cultivation is 32 acres with the production capacity of 2200 fingerlings per annum. Both government and private agencies are involved in distribution of fingerlings. There are only 15 tanks /reservoirs at five blocks in the district. Thus, the suitable lands lying fallow should be brought under inland fisheries.

## Sericulture :

Sericulture plays an important role in the development of economy of this district. A large number of tribals are engaged in this activity. There are tassar seed supply stationsat Kathekund, Dumka (by central government)and few training centres and storage centers for starting of cocoon in the district.

## Forestry :

The total forest area in the district is 0.60 lakh hectare, which comprises 11%of the total geographical area of the district. A vast area in the district exists as barren lands where even grazing is not possible due to lack of adequate grass cover. This problem can be solved if waste land and uncultivable lands, are brought under silvi-pastural system.
Thus,there is urgent need for

i. Afforestation
ii. Establishment of forest nurseries in different blocks
iii. Social awareness of plantation works..

## Irrigation :

Very limited irrigation potential has been exploited in the district. Although, it is claimed that 15%of the total cultivated land is irrigated, the effective irrigated area during rabi is much less. Majority area under irrigation receives water mostly from wells and tanks, and at places from canal. The different irrigation schemes functioning in the district are as follows :

(a) Mayurakshi lift bank canal.
(b) Kairabani reservoir scheme.

A programme namely “Jal Dhara ”is going on in the district at each block with an aim to cover about 84,000 ha.land.

## Existing extension agencies &farmer organization :

There are research and extension linkages with Z.R.S &Agriculture department like D.A.O, D.H.O, P.P.O, D.T.O and Krisa Vidyapith, Animal Husbandry, NGO ’s and other allied department for agricultural development. There are agriculture extension office and block level workers in each block to transmit the technical knowledge and information to the farmers in the district. Currently extension activities are being carried out not only under public sector

but also under private and Voluntary sector, cooperative sector, ZRS of Birsa Agricultural University, line departments of agriculture, horticulture and animal Husbandry in Dumka district. All line departments have partial technical persons for extension activities.

**Animal Husbandry :**

The district has one of the largest livestock population in the state. Strong cattle are common in the district. However, this cannot be taken as an index of the prosperity of cattle health. Despite the large population of cattle, the yield of milk in the district is very poor. Efforts have been taken by state government to improve the breed of milk cattle by the department of animal husbandry to boost up the milk production, and simultaneously economic growth of the tribal people of this district. There are veterinary hospitals and dispensaries in each block for the treatment prevention and suppression of diseases of
livestock. As per the census 1992 the total livestock population of the district is 38.85 lakhs.

## PROPOSED RESEARCH STRATEGY FOR EVOLVING TECHNOLOGY

### Synthesis of technological package for farming situation of each commodity

The district Dumka features three types of land situations i.e. upland, medium land and low land. The cultivation of these lands is under two conditions i.e 90%rainfed and 10%under irrigated condition through the natural water resources and wells. The region is predominantly mono-cropped area. The growing of second crop is under infancy stage in very limited pockets of the geographical area. The cultivation of commodity /enterprises are solely dependent upon the traditional innovative ideas and techniques either evolved by the farmers or followed by the community in the area.

Agro-eocological situation based technology is totally lacking for almost all crops /commodity. But the technology available for the necessary problems /limiting factor needs testing in the following manner:

Adaptive trails on the farmers field in each AES

- Refinement of the technology for its suitability to the problem
- Innovative technologies testing at ZRS and thereafter in each AES according to the need
- The location specific problems of each commodity /enterprises will be addressed for research followed by adaptive trials of each AES.

### Farmer participatory on farm research :

As the farmers of the Dumka district are mostly small and marginal with low literacy and social hindrances, this aspect is to be taken up for very small bottleneck problems of different commodity /enterprises of the agro-ecological situation in the farming system. The problems general in nature requiring community operation will be taken into account :

- Identification of specific problems affecting the productivity and income of the farmers – IPM//INM types
- Identification of available technological options from public /private sector
- Preference ranking of technology by farmers after adaptive trial
- Reputation of adaptive trials with suitable modifications in available technology
- Diversification of farming system for market demand and immediate local consumption specific needs.

### Contractual research –ZRS /private:

Under all AES, the specific problem will be identified and its solution will be obtained through contract research under stipulated short time.

- Management of paddy false smut

- ˜ Technology for store grain pests
- Non pesticidal vegetable cultivation
- Introduction of new remunerative crop
- Study on utilization of small fragment of land
- Intensification of cropping in small holdings
- Micro-nutrient research in agriculture and horticultural crops
- Animal husbandry, livestock, goatery &poultry disease and physiological problems
- Frozen Semen research for storage and technique

# A. Basmatta basks in attention

## B. Background:

Located 32 km off the district headquarters town of Dumka, Basmatta village of Jarmundi block comprises 18 families of Pahariyas — a primitive tribe battling extinction. Lack of awareness about the modern trends in agriculture and other income-generating programmes had left the villagers a hapless lot. With a paltry 15 hectare of land under cultivation — mono cropping — the tribals weren't assured of food security round the year. Almost half of the village population used to migrate to the neighbouring West Bengal during the months of February-March or June-July to eke out a living. Besides, alcoholism was rampant among the tribe.

## C. Intervention and process:

The Project Director of ATMA, Dumka, paid a visit to the village on August 8, 2001 to have a feel of the villagers' problems. While interacting with the villagers, it was learnt that they relied heavily on government assistance to change things for the better. Also, the village folk had little knowledge about the type of crop that could be successfully planted in midlands and uplands, thereby leaving such areas barren. Whatever agriculture activities were undertaken by them were in the lowlands where they grew paddy the traditional way. Community participation was lacking.

ATMA felt the necessity to develop and strengthen people's organisations like Farmers Interest Group, Self Help Group, Gramsabha and Mahila Mandal and encourage community participation for sustainable agriculture development and initiation of other income-generating programmes. It also

outlined more utilisation of the locally available resources and their better management at the macro level. Besides, diversification from traditional agriculture practices to the modern trends was also felt mandatory.

The areas to be improved upon identified, ATMA embarked on organising the villagers and provided them adequate training according to their needs. Some new varieties of upland paddy, oilseed and pulses were also introduced. Villagers were encouraged to undertake vegetable cultivation to supplement their income. Maize was introduced as a cash crop. Villagers were given demonstrations on the farming of upland paddy, sunflower, mustard and mulberry. They were persuaded to use indigenously prepared pesticides, i.e. cow urine, neem leaves and neem cakes.

## D. Benefits and impact:

The total land under cultivation in the village increased from 15 to 37.8 hectare. Barren area was brought down considerably. The villagers took to joint cultivation in the barren lands. They also are involved in Tasar rearing and weaving works, thereby getting access to supplementary sources of income. Migration of villagers has been almost curbed. Now, mono cropping is passé. Mixed and multiple cropping have taken over. Villagers cultivate maize thrice a year. Vermicompost production has been initiated. Villagers now prefer to use organic fertilisers in place of chemical ones. Two FIGs and an equal number of SHGs have been formed in the village. The villagers have come together to undertake joint cultivation on barren land and forestry of Tasar host plants (Arjuna, Mulberry). The village was on the itinerary of the Governor of Jharkhand during one of his visits. Outsiders frequent the village to learn the techniques being adopted by the villagers to turn their lives around. Better water management has eased the over-dependence on monsoons. Horticulture has tiptoed into the village as

an added source of income. Villagers are now much happier and prosperous, thanks to the efforts put in by ATMA.

## E. Lessons learnt:

(i) Community participation can work wonders. The need is to organise the villagers and get them to help themselves.

(ii) The formation of FIGs and SHGs in the village has brought the villagers closer, instilling a sense of camaraderie among the tribals.

(iii) With resource s in the backyard, one doesn't need to bank heavily on outside support. It's advisable to put them to the best of use. They too can do the trick.

# A. Title: Fishing no more in choppy waters

## B. Background:

Kendkhapra village of Ramgarh block is located 50 km off the district headquarters town of Dumka. Around 10 families in this hamlet used to take to fish farming in addition to agriculture. But despite putting in a lot of hard work, they were reaping very low dividends. Blame it on their lack of awareness with regard to scientific fish-farming procedures and technological know-how. They mostly used friads and that too the ones produced by way of induced breeding as it came cheap. Besides, the ponds weren't cleaned properly, and the water medium wasn't conducive enough to promote fish growth.

## C. Intervention and process:

A team of ATMA personnel paid a visit to the village to get a feel of the plight of the farmers there. At an interactive session with the villagers, Chotelal Marandi and Premlal Marandi didn't hesitate to put forth their problems outright: "Why is it that the yield is abysmally low compared with our investment? Doesn't fish farming pay?" The other villagers too had similar queries. ATMA, that has been doing a pioneering job promoting pisciculture among the farmers in the district, was well aware of the problems. But, it had the solutions too. It told the villagers where they had gone wrong. The farmers were made aware of broadly three aspects: (a) selection of the variety of fish, (b) fish feed management, and (c) water treatment/pond preparation.

Villagers were advised to used Ganga fish seeds (generally naturally bred Rohu and Catla) which grow faster. Besides, they were told to undertake mixed fish culture for getting more output from the same input.

The farmers were also sensitised with regard to the choice of food diet. To maintain the adequate amount of food level in their tanks, they were told to go in for doses of mustard oil cakes, rice brawn, and cakes made from cow dung and pig litter. These come quite cheap and are readily accessible.

Besides, fishery experts dwelt at length on the procedures to be adopted for congenial water treatment. Villagers were told to maintain a slight alkali medium that promotes luxuriant fish growth. As the soil type of the area is predominantly acidic, the farmers were told to resort to lime treatment when the water medium tended to deviate from alkaline. In addition to this, preparation of ponds were advised in such a fashion that sufficient amount of food reached the various layers so as to cater to the requirements of the various types of fish that were bred in case of mixed fish culture. The Farm Information Advisory Committee (FIAC) also demonstrated various programmes related to composite fish culture in various blocks of the district.

The introductory tips given, Chotelal Marandi and Premlal Marandi accompanied a 20-member farmer team comprising members drawn from different villages for a 15-day training programme at the Birsa Agricultural University (BAU) at Kanke.

## D. Benefits and impacts:

The efforts by the FIAC and the subsequent training camp at the BAU endeared the farmers to take to fish farming in a more pragmatic way with the use of scientific procedures. The villagers lapped up the idea of composite fish culture. Presently, they are very much open to the idea of cultivating six varieties of fish in their ponds, viz, Catla (10%), Rohu (30%), Mrigal (15%), Silver Carp (20%), Grass Carp (10%) and Common Carp (15%). Being enriched in the knowledge of modern fish farming techniques, farmers were able to realize where the lacunae

that resulted in low output lay. The farmer duo, which used to get Rs 2,000-Rs 5,000 by taking to fish cultivation in a pond spread across 1 acre, are now reaping as much as Rs 10,000-Rs 12,000 by taking up the same venture in the same space. Seeing the wonders that modern fish farming techniques can spring forth, other farmers of adjacent villagers are showing interest in adopting similar procedures. The number of farmers, who are currently engaged in this venture the scientific way, is between 15 and 20. Their problems have, to a large extent, subsided. The gloom that had eclipsed their lives has given way to hope and a strong determination to surge ahead. They have stopped looking back. Problems are passé. It's time to move on.

## E. Lessons learnt:

(i) Not all farmers are unwilling to accept change. They just need to be told how they would benefit from the new venture, and how to go about it.

(ii) The farmers' eagerness to change traditional techniques of fish culture, and the supportive stance adopted by ATMA was instrumental in making a difference.

(iii) The FIAC-organised community demonstrations with regard to composite fish culture went a long way in instilling confidence among the fish farmers that they too could go in for the same and reap much more benefits.

# A. Title: Majdiha no more at the crossroads

## B. Background:

Located 21 km off the district headquarters town of Dumka, Majdiha village is inhabited by around 33 Santhal families. The village was marked by the absence of proper water management system besides rampant alcoholism. Although the villagers used to take to mono cropping, about 90 acres lay barren. Because of the use of traditional agriculture practices, yield was low and villagers were compelled to migrate to the neighbouring West Bengal in search of jobs to keep their hearths going. Lack of awareness among the villagers and inadequate communication facilities with relevant government departments and agencies had deprived the village of any external support.

## C. Intervention and process:

ATMA, Dumka, officials paid a visit to the village in the month of May, 2000. After speaking to the villagers and going round the village, they were aware of the problems bogging the hamlet. Planning and community participation were lacking. Uplands were barely brought under agriculture for lack of proper irrigation facilities.

ATMA felt the necessity to develop and strengthen people's organisations like Farmers Interest Group (FIG), Self Help Group (SHG), Gram Sabha and Mahila Mandal and encourage community participation for sustainable agriculture development and initiation other income-generating programmes. It also stressed enhancement of strategic planning with technical support for sustainable development besides formation of FIGs and SHGs. ATMA was of the belief that

significant changes could be brought about only if the villagers diversified to modern farming techniques.

The grey areas identified, ATMA took upon itself the task of organising the villagers and provided them adequate training according to their needs. Some new varieties of upland paddy, oilseed and pulses were also introduced. Villagers were encouraged to undertake vegetable cultivation to supplement their income. Villagers were given demonstrations on the farming of upland paddy, maize, mustard and mulberry. The people were advised to grow vegetables instead of maize in their kitchen gardens. Besides, they were prodded to undertake mixed cropping of paddy (Vandana variety) and arhar (1 row of arhar after every third row of paddy).

## D. Benefits and impact:

ATMA played the role of a facilitator and guide in sharing knowledge, idea and the approach to sustainable development. The total cultivable land in the village has increased from 149 to 189.18 hectare. Barren land has been brought down considerably (from 90 to 49.9 hectare). To better irrigation facilities, villagers have developed a 2,800-feet channel through community participation to facilitated multi cropping. Now the number of families that grows vegetables in kitchen gardens has gone up to 36. Mono cropping has moved over to accommodate multi- and mixed-cropping. Villagers have been able to supplement their income by taking to production of vegetable and oilseed crops, and making handicraft items from palm leaves. They have taken to the cultivation of paddy, arhar, maize etc on the uplands, thereby ridding them of their barren status.

## E. Lessons learnt:

(i) Proper planning holds the key to development.

(ii) Community participation has brought the villagers closer, encouraging them to undertake seemingly risky ventures.

# A. Title: Flowers too can pay

## B. Background:

The problems faced by the farming community of Agoya village, about 18 km from the district headquarters town of Dumka, have much in common with those staring at their brethren in other parts of the district. Inadequate irrigation facilities coupled with no rainwater harvesting have been a running sore for long. Besides, sticking to traditional farming patterns, continual usage of perennial seeds, and improper use of fertilisers haven't served the purpose of increased agricultural yield. The farmers here have been cultivating paddy, wheat and vegetables.

## C. Intervention and process:

When the Block Technology Team (BTT) of Jama visited the village the farmers complained of extremely low inputs though they had been putting in a substantial amount of money and labour. Forty-year-old Deo Chandra Rout didn't hesitate to lay bare his heart. "We are struggling to make both ends meet. Why is it so when we don't hesitate to toil hard, which we have had been doing?" A one-day awareness camp was organised by ATMA to have a feel of the farmers' woes.

It was found out that the farmers relied heavily on mono-cropping, be it paddy, maize, or wheat in a small scale. Besides, the farmers who had no idea about hybrid seeds, used to rely on the same seeds for more than five years on the trot. They were totally alien to the concept of seed exchange. Besides, the farming community in this village used to bank on the local *haat* to sell their produce, thereby fetching them paltry amounts. Marketing of their products was a problem.

When asked if they wanted to try out something new, Rout readily agreed. ATMA, Dumka, arranged for his exposure visit to the Indian Institute of Horticulture Research, Bangalore, in the year 2002. The trip prodded him to take to marigold cultivation. A community demonstration on the beneficiary's plot was organised by the Farm Information Advisory Committee (FIAC), Jama, on a cost-sharing basis. BTT, Jama, provided all the technical know-how for the demonstration.

## D. Benefits and impact:

Since floriculture was not in practice among the farmers of the block, the venture paid rich dividends. Besides, this has good scope for expansion. The cultivation is comparatively less risky, and can be propagated by the adoption of various methods like root cutting and nursery growing. The first beneficiary of the venture in the village, Deo Chandra Rout, now grows marigold throughout the year besides cultivating wheat and vegetables. As the village is located close (approximately 8-10 km) to Basukinath Dham, a pilgrimage thronged by thousands daily, there is huge demand for flowers. So, marketing is no more a problem. Purchasers now even come to the farmers directly to buy their produce. There is also heavy demand for flowers during the wedding season. Flowers are being sold for anywhere between Rs 12 and Rs 30 per kg. Currently, Deo Chandra earns as much as Rs 9,000 by growing marigold on a 0.3-acre plot. Realising that the venture could contribute significantly in terms of profits, two more farmers of the village, Mohilal Rout and Indrakant Rout, evinced keen interest in the enterprise. They have also started growing calendula in their fields and are economically better off. Now, the total area under floriculture in Agoya village has gone up to 8 acre. The farmers have also started growing as many as five varieties of flowers (three varieties of marigold besides Gladula and Rajnigandha). Some additional employment avenues have also been generated through engaging a few persons to carry the flowers to the temple site and sell it there. This pays a little bit more than waiting for the purchasers to come to the village.

Presently, about 13 persons of the village have come together to form a Farmers Interest Group (FIG) that focuses on floriculture. They share problems and strive hard to improve upon, learning from each other's mistakes. Life is no more a burden, and the continuous carp about low outputs have vanished. Farming has suddenly become an area of interest rather than a compulsion.

Besides, upon the advice and the guidance of ATMA, villagers have taken to cultivation of off-season vegetables, which enables them to make a killing. They were also made aware of the nutritious food value of the same and prodded to consume a part of their produce themselves. Te pressure of the over-dependence on mono-cropping is now gone. This has also given the farmers access to other more profitable options. Besides, the village now breathes in an air of prosperity.

## E. Lessons learnt:

(i) Floriculture can be taken up as a profitable enterprise.

(ii) Community participation in a venture pays off quite well.

(iii) Farmers are not that averse to change. They just need to be told how to do it.

## B. Background:

Located 35 km off the district headquarters town of Dumka, Dumarsol village is inhabited by about 100 Santhals. The villagers here practise single-crop farming. But since the village is nestled amid dense forests, they have access to very little cultivable land. Lack of awareness about modern farming trends has compounded their woes. Though they are hard working, they struggle to maintain food security for the whole year. The farm produce is not even sufficient to keep their hearths going round the year. So during the off-season, most villagers migrate to the neighbouring states to eke out a living as daily labourers.

## C. Intervention and process:

The villagers were unaware of the importance of forest as a natural resource. But upon the intervention of CASA, an NGO, they formed a forest committee to prevent deforestation. In August 2002, a member of the Block Technology Team (BTT) of Dumka paid a visit to the village. He was pleased to learn that the villagers were keen to undertake some other venture that could supplement their income. He told them that they could earn more from the existing resources without causing any threat to the ecology of the village. A month later, ATMA and BTT urged the villagers to form a Farmers Interest Group (FIG). A 37-year-old woman, Fullin Murmu, was chosen the group leader. The group arranged weekly meetings to discuss the plight of the people, and stressed the need to stop exodus during the off-season. In consultations with ATMA and BTT, it was decided that Tasar rearing could be taken up in the village forest. ATMA arranged for a training programme about the venture in the village itself. The BTT provided 700

disease free laying (DFL) for community demonstration. ATMA and BTT officials provided all technical support for the venture, including the know-how about how to protect the DFLs from diseases.

## D. Benefits and impact:

The FIG got good results from Tasar rearing and produced 5175 DFLs from the first crop. It sold each DFL at the rate of Rs 2 to other villagers who showed interest in taking up a similar venture. Enthused by the result, the FIG evinced interest in procuring more DFLs from the State Sericulture Department. The villagers are now able to generate an average additional income of about Rs 3,000-Rs 4,000 each month by way of selling Tasar cocoons. Empowered with technical and moral support from ATMA, the villagers selected Fullin Murmu as ATMA Farmer Representative for Dumarsol village. She remains in constant touch with BTT, Dumka and ATMA officials for suggesting measures to upgrade the financial and social status of her co-villagers. The BTT suggested to the FIG members that they add more value to their produce by making threads from the chopa (wasted) cocoons for which the buyers previously gave less money. The group members decided to seek a trainer from ATMA; the villagers agreed to arrange for his lodging and boarding. It was also decided that all rearers' families contribute 1 Pan (80 Cocoons) for the training purpose. ATMA arranged a technician and a three-phase training programme in spinning threads. Trained, the villagers now don't sell the chopa cocoons for a lesser price; instead, they spin threads from it and earn more money. They also decided to make loom from that thread. For this purpose they selected Fullin's husband Suniram Hansda to be trained as a weaver. Nobody in the village had exposure to weaving, so they wanted the ATMA to impart them with this knowledge. ATMA obliged by a three-phase training programme. After the completion of the session, Fullin and Suniram decided to set up a handloom in their village and arranged logs/wood

from the nearby forest with the help of FIG members to make the equipment. Some parts of the handloom, which couldn't be arranged locally, were arranged by ATMA. On June 26, 2003, the handloom of Dumarsol was formally inaugurated by Project Director, ATMA, Dumka, in the presence of ATMA members from Palamu, Chaibasa, Jamtara and the State Consultant, NATP, of Jharkhand.

Now, Fullin provides part-time employment to around 15 group members who are inclined to weave fabrics through handloom. The group members earn Rs 800 per month additionally through spinning of Tasar cocoons.

The family income of Fullin Murmu has now increased to Rs 2,000 per month and the other group members also manage as much as Rs 1,000 a month. The initiatives taken by ATMA to generate an additional source of employment have paid off. Exodus from this village has now been contained to a considerable extent. The villagers of Dumarsol are currently involved in all aspects of sericulture, starting from Tasar rearing to weaving fabric from the cocoons. Now Fullin Murmu has been elected the FAC member for the sericulture wing of Dumka block.

## E. Lessons learnt:

(i) The change in approach of the villagers needs an initial external stimulus.

(ii) Through proper training and upon being shown the right track, villagers themselves can bring about a sea change in their lives. Fullin Murmu is a living example of what wonders determination can bring about.

(iii) Targeting a group when introducing an enterprise in villages reaps better results as it instils a good deal of confidence besides a sense of teamwork.