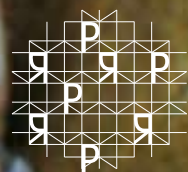
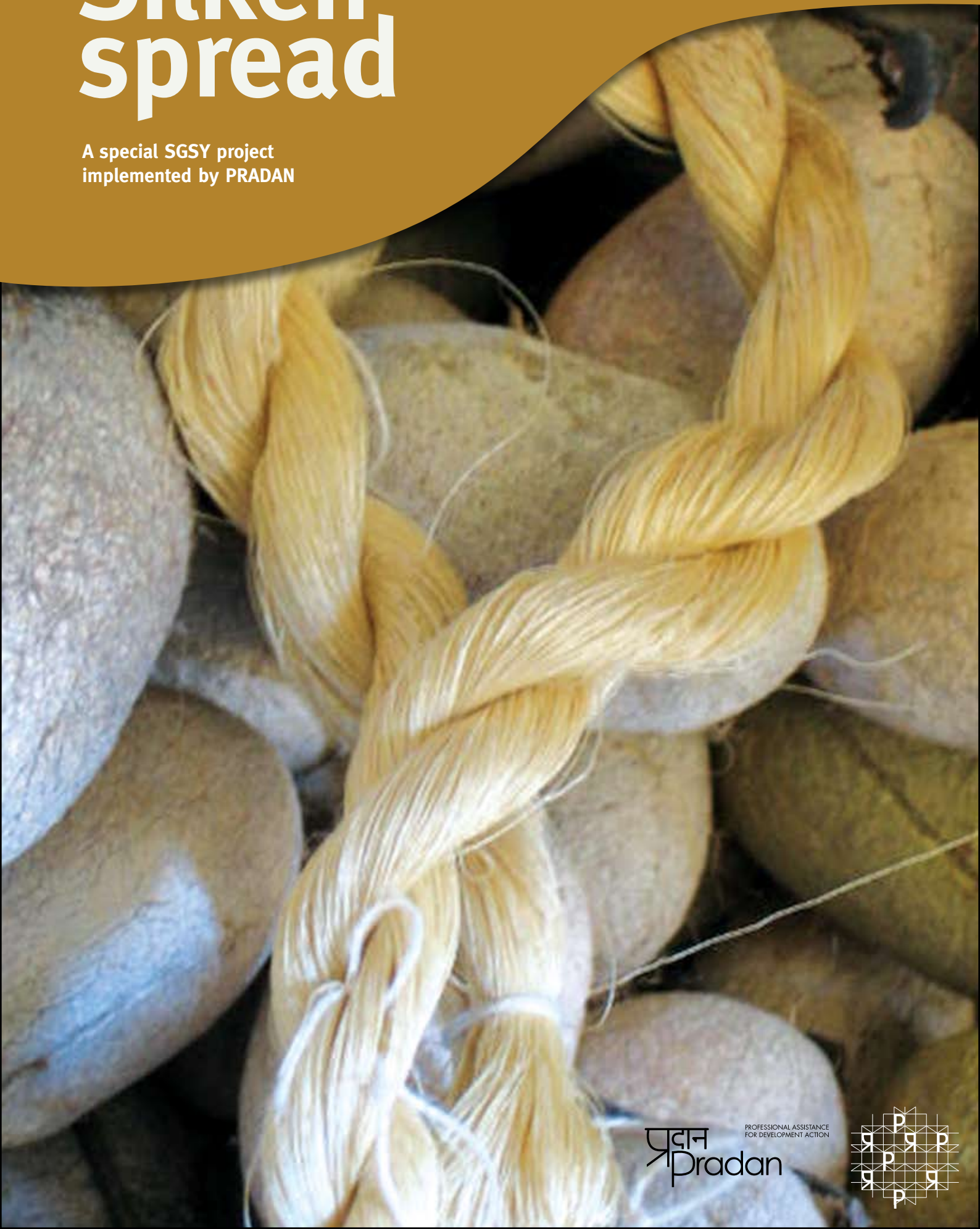


Silken spread

A special SGSY project
implemented by PRADAN





Tasar-based livelihoods for the rural poor have been successfully promoted through special SGSY projects for development of tasar sericulture in Jharkhand and Bihar in 2003-06

Key Achievements

INCOME AND EMPLOYMENT

| | |
|-----------------------------------|------------------|
| Number of Sustainable Livelihoods | 10,000 |
| Annual Income Potential | Rs 100 million |
| Annual Income Earned in 2005-06 | Rs 65 million |
| Wage Days Generated (2003-06) | 1.3 million days |

ASSETS CREATED

| | |
|--|-----------------|
| Natural Forests Rejuvenated and Maintained | 10,000 Hectares |
| Plantations Raised | 1,630 Hectares |
| Tasar Egg Production Units Promoted | 360 |
| Yarn Production Centres Created | 56 |

INSTITUTION DEVELOPMENT

| | |
|-------------------------------------|-----|
| Professional Human Resource Created | 32 |
| Skilled Extension Workers Deployed | 240 |
| People's Institutions Incorporated | 27 |

PROJECT INVESTMENTS (Rs million)

| | |
|--------------------------------------|--------------|
| Ministry of Rural Development Grant | 89.3 |
| Central Silk Board Grant | 16.1 |
| Credit from Banks & Self-Help Groups | 36.8 |
| People's Contribution | 44.8 |
| Total | 187.0 |



Dhovarni Learns to Smile

Visitors to Dhovarni, a sleepy village in Santhal Parganas in Jharkhand, would be struck by the stark poverty: poorly thatched shacks masquerading as homes, total absence of roads (a road is a 5 km walk away), no electricity, no sanitation. What then accounts for broad smiles on the faces of the villagers and an air of celebration in the village?

The tasar cocoon harvest has been particularly good in the last two years (2005 and 2006) and families have earned as much as Rs 25,000 each in cash by rearing silkworms in 65-70 days! Such cash flow in the village is unprecedented. "I am going to buy a diesel pump to irrigate my fields," declares Rajkishore Singh, who harvested 16,640 cocoons, which fetched him a neat Rs 19,400. Although Rajkishore barely has land to feed his

family for three months in a year, he no longer has to leave home for long months in search of wage labour, thanks to earnings from rearing tasar silkworms.

Many others in Dhovarni have similar tales to tell. For Sitaram Singh, Mahavir Singh, Rukmani Devi, Dhaneshwari Masomat, and Subas Devi, dreams of better days have come true. Dhaneshwari Masomat is planning to marry off her younger daughter this year. Gopal Singh plans to cultivate wheat in the Rabi season and buy jewellery for his daughter, Rukmani Devi is happy because her children will no longer have to go to sleep on an empty stomach. Development has arrived in Dhovarni and the people have begun to smile and dream.

Tasar makes a comeback

Such happy tales come as a breath of fresh air in an area plagued by endemic poverty. In villages across Bihar and Jharkhand, in Banka and Godda, in Dumka and Koderma, in Chaibasa and Saraikela, and many other places, families are shaking off the shackles of poverty in large numbers, all because tasar sericulture has staged a revival, enabling thousands of poor families to earn their livelihoods with dignity and in peace.

PRADAN has been a partner in their journey out of poverty, with help from two special SGSY (Swarnjayanti Gram Swarozgar Yojana) projects, one each for Bihar and Jharkhand. The Union Ministry of Rural Development provided finances and the Central Silk Board (CSB) provided funds and technology to the poor through these projects. PRADAN implemented the project. This unique government-NGO collaboration has successfully created robust and sustainable livelihoods for the poor in Jharkhand and Bihar, overwhelmingly from the tribal and backward communities, and women, by promoting tasar silkworm rearing and tasar yarn production.

PRADAN is a voluntary organization working to promote sustainable livelihoods for the rural poor. It works in West Bengal, Bihar, Jharkhand, Orissa, Chhattisgarh, Madhya Pradesh and Rajasthan, in villages mired in poverty. It mainly works with women by promoting self-help groups (SHGs), and by promoting various farm, forest, livestock and village enterprise based livelihoods. PRADAN presently works with more than 110,000 poor

families (more than half a million people), mostly from tribal and backward communities, facilitating positive and sustainable changes in their lives.

Demand for Tasar

Energising and broadbasing tasar sericulture sector has been one such successful livelihood programme by PRADAN. About 150,000 families, mostly from tribal communities, eke out a living from tasar. Production of tasar silk involves rearing silkworms to produce cocoons, and processing of cocoons to make yarn and fabric. Tasar silkworms eat leaves of asan (*Terminalia tomentosa*) and arjuna (*Terminalia arjuna*) trees during the larval phase of their life cycle in forests or plantations. The larval phase ends with spinning of silk cocoons. Silk is extracted from the cocoons to make yarns that are woven into fabric.

The demand for tasar silk in India far exceeds supply. India imports tasar silk yarn from China and Korea to meet the demand. The value of tasar fabric trade in India is estimated to be Rs 450 Crore. The domestic market accounts for nearly 60% of the trade.

PROFILE OF PRODUCERS

A majority of tasar silkworm rearers are tribal people living in forest and forest fringe areas. Their primary livelihood is subsistence agriculture, which is mostly unable to provide them with food security. Rearing tasar silkworms is a traditional occupation for a majority of tasar rearers. Supplemental income from selling tasar cocoons helps them to meet basic consumption needs. Rearers spend an average of 60-90 days in rearing silkworms and in a good year, a household could earn about Rs 3,000 from a crop cycle using traditional methods.

A traditional rearing family



Overcoming constraints

It is PRADAN's strategy to identify and develop specific sectors of the economy that have potential to provide new or better livelihoods to poor people on a large scale. Tasar sericulture is one such sector that showed great promise because:

- There is a strong demand for Tasar silk in domestic and international markets.
- Tasar silkworm rearing involves family labour, requires low investment with short economic gestation and simple technology.

● Basic skills are available among a large pool of people traditionally involved in the sector.

There were, however, two major constraints. They were:

- Acute shortage of disease free eggs of tasar moths called disease free layings (DFLs). Silkworms hatch out of eggs and no eggs mean no crop! Eggs from diseased moths produce diseased silkworms that die before producing cocoons, leading to crop failure.
- Traditional practices of tasar silkworm rearing are not remunerative. Use of poor quality eggs, lack of sanitation

in the rearing fields and damages inflicted by pests and predators result in low productivity.

in the rearing fields and damages inflicted by pests and predators result in low productivity.

Impact

The special SGSY projects have been built on the strengths of appropriate technologies developed by Central Silk Board and the grassroots mobilisation and enterprise development skills of PRADAN. The projects have resulted in a significant and sustained increase in mean income of 10,000 chronically poor families. Moreover, for rearers the cash income comes at a particularly critical time, between paddy transplantation and harvesting, when the granaries are empty and there are no opportunities for wage employment.

Says Dhano Hembram, a silkworm rearer from Inarawaran village of Banka district in Bihar, "Although we have always reared tasar, I was earlier only able to feed my family for six months by cultivating paddy and rearing silkworms. Today, the income from tasar cocoons enables me to buy food for my family round the year. I have also been able to redeem a mortgage on 34 decimals of fertile land suitable for cultivating paddy."

Like Dhano, many others have used the cash earnings from tasar to improve the quality of their lives. Almost all of them have repaid loans and

redeemed mortgages, purchased food and clothes for their families, and have invested in productive assets like irrigation pumps, bullocks, and livestock. Practicing modern methods of rearing silkworms and spinning and reeling tasar yarn has also improved their efficiencies in other activities.

Transformed lives

Says Mohan Singh Soy, a Munda silkworm rearer from Kolhanregadih village in Saraikela district of Jharkhand, "I was able to feed my family for barely four months by cultivating my fields." Today, Mohan Singh is a more prosperous man who owns a pump that has enabled him to cultivate two crops a year. He now plans to cultivate vegetables during the Rabi season. "Tasar was a traditional occupation of my forefathers. But we were on the verge of abandoning it due to low and uncertain returns. Now thanks to PRADAN, income from tasar has again become a mainstay for my family," asserts Mohan Singh.

For Kunti Devi of Gandhrakpur village in Dumka district of Jharkhand, reeling yarn from tasar cocoons has brought about a much better quality of life for her and her family. She no longer has to worry about feeding her children. She is now able to send her 15-year old daughter and 12-year old son to school and also provide them with private tuition. But far more importantly to her, Kunti Devi believes that reeling has brought new meaning and dignity to her life since she became a regular earning member contributing to the welfare of her family, all without leaving her home and village. Says she, "I have learnt to earn and stand on my own feet. What more could I wish for?"

CREATING A VALUE CHAIN

PRADAN has worked on various elements of the tasar value chain to reduce uncertainty, increase productivity and help poor people retain more of the added value. Key elements of its strategy are:

- Creating village-based supply of disease-free layings (DFLs) of the tasar moth
- Promoting scientific rearing practices to reduce diseases and mortality among silkworms
- Raising plantations of tasar host trees on privately owned wastelands
- Promoting tasar yarn production among women in poor and marginalized communities

KEY ELEMENTS OF THE STRATEGY

Collaborating with Central Silk Board for critical technological inputs, developing training modules and accessing mainstream finances.

- Promoting hamlet level groups of rearers called Tasar Vikas Samitis to ensure participation of rearers at every stage.
- Promoting village-based tasar egg production centres called grainages, owned and operated by someone in the village to earn a living.
- Promoting common facility centres in villages and a producers' company for women yarn producers.
- Demystifying technology and training cocoon and yarn producers to adopt improved technologies.
- Conducting motivational trainings to enable cocoon and yarn producers set higher goals.
- Building linkages for material inputs, credit and marketing.



GRAINAGES

Seeds of Plenty

Successfully ensuring assured supply of quality tasar silkworm eggs in large numbers through local private production units called grainages

Portrait of a young man

Piyush Ranjan Tudu of Dodhajhal village in Shikaripara block of Dumka district in Jharkhand is a confident young man. The secret of the 22-year-old Santhal youth's confidence lies in the fact that he is a successful entrepreneur, earning more than Rs 20,000 a year by preparing and selling tasar DFLs to silkworm rearers in his neighbourhood. "Before I started a grainage (DFL production unit) in 2003, it was hard for my family to make ends meet. Today tasar has removed want from my home," says a smiling Piyush.

Piyush lives with his parents in a family of eight. As a child Piyush was fascinated by tasar rearing, which his father practiced. Like other younger people in the area, he hesitated to take it up himself, as harvests were unpredictable due to

frequent outbreak of diseases among silkworms and the hard labour went more often than not in vain. When PRADAN started revitalising tasar rearing by promoting improved scientific methods, Piyush took to it like fish to water. Today he has reason to celebrate his decision.

PRADAN arranged for Piyush to visit Chandubathan village in Dumka district, where he first saw DFLs being produced. He then attended a 10-day training programme in grainage operations conducted by CSB experts in their model grainage in the neighbouring Kathikund block. Once he was trained, PRADAN helped him set up a grainage. He has been supplying



Healthy silkworms herald a good harvest

quality DFLs to rearers in Dodhajhal and neighbouring villages. In 2004, Piyush earned Rs 15,000 from grainage operations. In 2005, his earning rose to Rs 18,000. This year he expects to earn about Rs 20,000. He spends 60-90 days in this activity. Today his family has bid goodbye to poverty.

In the past couple of years Piyush has repaired and expanded his home, replaced the thatch with tiles, developed a part of his land to make it suitable to cultivate paddy. Last year he bought a bullock cart and a thresher. He attributes his success as an earner entirely to tasar rearing. "My parents want to bring me a bride this year," says a beaming Piyush.

Piyush's is not an isolated tale. Others like Santosh Kumar Singh and Ramesh Kisku of Inarawaran village in Banka in Bihar, Barke Hembram of Bajrisole village in Dumka, and Surendra Soy of Kolhanregadih village in Saraikela district in Jharkhand have similar success stories to tell.

GAINS FROM GRAINAGES

| | 2003 | 2004 | 2005 | 2006 |
|------------------------------------|-------|-------|-------|-------|
| Grainages in operation | 243 | 317 | 360 | 360 |
| Number of rearers supported | 3,570 | 4,170 | 5,126 | 5,398 |
| Cocoon production (million pieces) | 29.6 | 20.4 | 30.5 | 32.5 |
| Value of cocoons (Rs million) | 23.8 | 30.0 | 26.0 | 45.5 |

Seed impasse

When PRADAN began exploring ways to promote tasar sericulture in the early 1990s, it found virtually no takers among traditional rearer families. The main reason for this reluctance was unpredictable and wildly fluctuating yield of cocoons, leading to uncertain, and often, no income. Apart from archaic rearing practices, lack of availability of quality disease free eggs was driving this traditional occupation into obsolescence, despite huge demand for tasar silk in the market.

Hari Singh of Dhovarni village in Jharkhand is a case in point. Although it was a family tradition, he was reluctant to take up tasar rearing. "The

old ways of rearing tasar often fetched no returns despite hard labour for 3 months. We had to travel to Giridih (150 km away) to buy seed cocoons, spending a lot of money and time. Back home, we spent 80-90 days in the jungles rearing silkworms. Yet the harvest was meagre and the crop frequently failed due to severe outbreaks of diseases. We were overwhelmed, as we did not have a clue how to control the disease. We believed it was the doing of evil spirits or ghosts. We were too poor to indulge in such a risky activity. Even migrating for work was a better option as we could then earn something to feed our families,” recalls Hari Singh.

His sentiments are echoed by traditional tasar silkworm rearers across Jharkhand and Bihar. Surendra Soy of Kolhanregadih in Saraikela silkworms rearing some ten years ago because production fell to abysmal levels. Dhano Hembram of Inarawaran village in Banka preferred to migrate to Deoghar and Kolkata to work as a wage labourer for as long as six months in a year rather than rear silkworms. Para Hembram of Kairasole village in Dumka had no option but to collect and sell firewood and migrate in search of wage labour because tasar silkworm rearing was so unpredictable. Each of

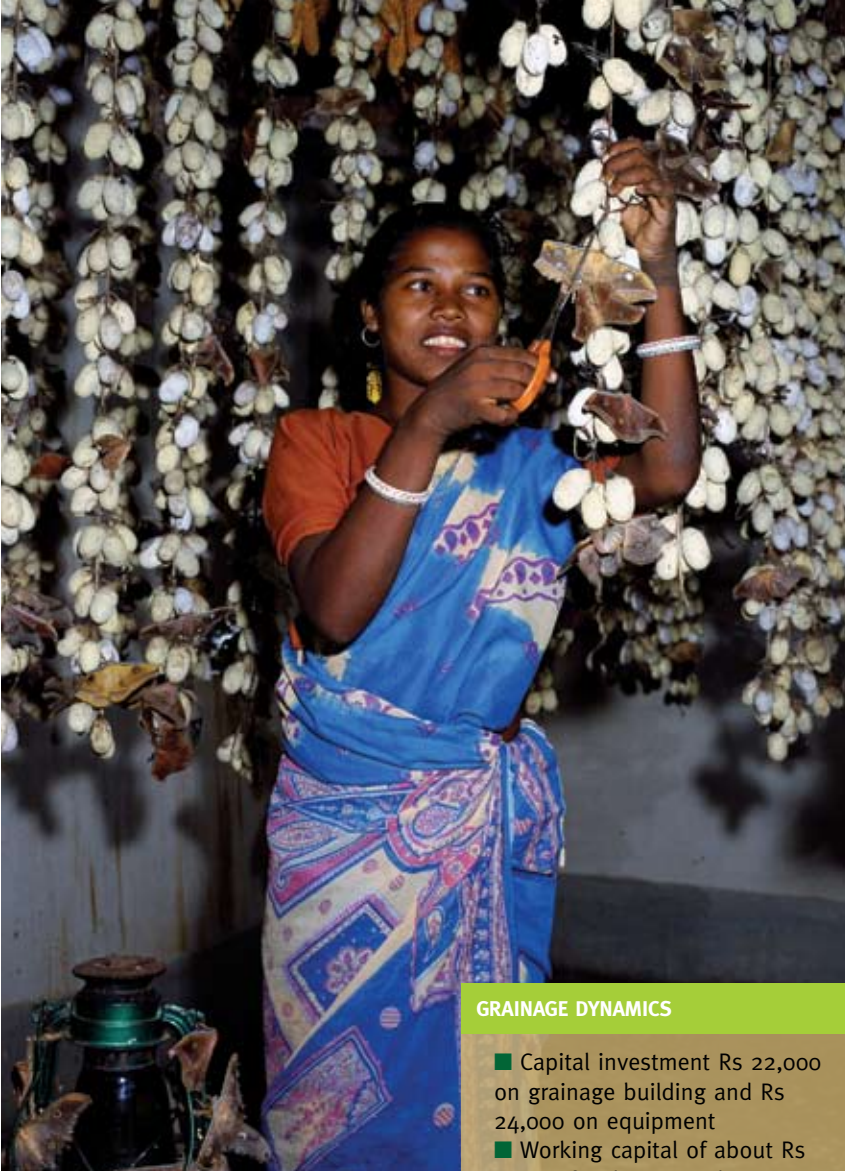
PRADAN found that if supply of quality tasar eggs (DFLs) was assured, it would stabilise crop productivity and make tasar silkworm rearing remunerative for a large number of poor people in Bihar and Jharkhand.

these traditional rearers agreed that poor quality and disease-laden moth eggs were responsible for the poor and often disastrous cocoon harvests.

Interacting closely with rearing communities, PRADAN found that if a supply of quality moth eggs or DFLs was assured, it would be possible to eliminate much of the risk in tasar silkworm rearing. This could go a long way towards stabilizing crop productivity and make tasar rearing a remunerative vocation for a large number of poor people in Bihar and Jharkhand.

Using microscopes to eliminate diseased layings





The grainages, owned and operated by individual entrepreneurs, mainly young people from rearer communities, have brought about a quiet revolution in tasar cocoon production.

area in Jharkhand and Bihar. It has significantly enhanced earnings of very poor families, mostly from tribal and backward communities.

Widespread impact

Private grainages have brought about a quiet revolution in tasar cocoon production. Each grainage caters to 15-20 rearers in the neighbourhood, whom the grainage owner also provides technical guidance in rearing. It has also unleashed the spirit of entrepreneurship, promoting the concept of better services and quality in the entire sector.

Each village level grainage provides a stable livelihood for a village youth. Grainage owner Piyush Tudu of Dodhajal in Dumka would never need to migrate to a city to feed his family. The life of Ramesh Kisku of Inarawaran in Banka, whose income has steadily risen from Rs 5,000 in 2004 to Rs 12,000 in 2005 and Rs 21,000 in 2006, has completely been transformed in just a few years.

Running a successful enterprise benefits the grainage operators in various other ways. They frequently become confident of initiating other enterprises as well. Says Santosh Singh of Inarawaran, "I will start a brick kiln this year. I am also planning to open a grocery shop in the village." And, Santosh Singh is not an exception in the tasar producing areas of Bihar and Jharkhand.

GRAINAGE DYNAMICS

- Capital investment Rs 22,000 on grainage building and Rs 24,000 on equipment
- Working capital of about Rs 15,000 for three months
- Producing 4,000-5,000 DFLs
- Catering to 15-20 rearers in the neighbourhood
- Providing technical assistance to the rearers during the rearing cycle

Moths emerging in a grainage

Innovative enterprise

PRADAN pioneered village-based private enterprises called grainages to produce DFLs (disease free layings or eggs) of tasar moth. Grainage owners use microscopes to examine smears taken from female moths after they lay eggs. Eggs from diseased moths are destroyed and those laid by healthy moths are washed in formalin and sold to tasar rearers as DFLs.

The grainages are owned and operated by individual entrepreneurs, mainly young people from rearer communities. These function as tiny home based service enterprises, producing high quality DFLs sold to rearers locally.

So far, PRADAN has promoted 360 grainages. These can produce 7.5 lakh DFLs every year to cater to over 7,000 rearers. Easy availability of DFLs locally has greatly contributed to the increase in cocoon productivity and rearing





A traditional rearing field

REARING

Sylvan Harvest

Improved techniques of rearing tasar silkworms in forests and plantations of Bihar and Jharkhand have enabled poor tribal and backward communities to climb out of the depths of poverty

A renewed value in forests

Once the jungles ruled Chotanagpur Plateau. Gentle expanses of mahua, sal, simul, asan, and arjuna stood sentinel over the many tribes that made their home under the dense canopies. Once the people who dwelt in these rich forests thought them to be the best places to live on Earth. They valued forests as gifts of Mother Nature, to be husbanded and harnessed. Not any longer.

The jungles have retreated – chopped, mauled and cleared – and the denuded landscape in southern Bihar and Jharkhand bears sad testimony to their departure. Driven by extreme poverty and deprivation, often the very people who once revered and treasured the trees took the axe to them.

Hope, however, is not lost. The tides are turning.

In Chaibasa and Kuchai, in Godda and Dumka, in Kairasole and Kathikund, in Kolhanregadih and Bindasarjom, where remnants of the once majestic forests still stand, the reverence for the forest has returned. Thanks to modern techniques of rearing tasar silkworms in forests, thousands of tribal and other poor households in Bihar and Jharkhand have found a sustainable and dignified livelihood. The forests have become important once more.

“Only a few years ago many of us had no option but to cut trees for firewood. But now we have learnt anew how to make a living from forests without destroying it. Today nobody would be foolish enough to cut down asan and arjuna trees. In fact, we now take care of them so that



Budhin Kole and his family are all smiles at the plantation in Mahulbona

REARING IN PRIVATE PLANTATIONS

One of the most significant innovations by PRADAN in the tasar sericulture value chain is promoting asan and arjuna plantations on privately owned wastelands. Communities have already raised 1,630 hectares of plantations under the special SGSY projects. The future growth of tasar production is likely to come from developing plantations because:

- Tribal and other poor communities own plenty of wastelands
- Low gestation time of three years
- Higher productivity of cocoons per DFL
- More scientific control over planting and raising asan and arjuna trees

they grow rich foliage in the tasar rearing season. These trees are our benefactors,” says a smiling Budhiram Hembram of Bindasarjom village in Chakradharpur in Jharkhand, a successful rearer of tasar silkworms. Thousands of other forest rearers across Bihar and Jharkhand echo his sentiments. Emphasizes Junglee Rai of Bamerjhanti village in Dumka, “The forests have enabled us to fight poverty by rearing tasar cocoons. The least we can do is to take care of them.”

Raising plantations for tasar

Nurturing and caring for extant forests to raise tasar silkworms is only part of this happy tale.

In places like Mahulbona, Kachuwa, Sadalpur in Dumka, Basira in West Singhbhum, Akashi, Karamtola in Godda, Murliken, Salaiya and Tetaria in Banka, many poor families are raising plantations of asan and arjuna trees to reap the benefits of modern tasar silkworm rearing. Planted at close spacing, the trees are pollarded to create a bushy canopy that a rearer can reach to move worms from one tree to the next while rearing. In hundreds of hectares in Jharkhand and Bihar, young forests have begun casting green shades over grounds that were denuded wastelands only a few years ago. These wastelands, owned by impoverished families, have already started yielding their riches, after barely three years of planting saplings. In many such plantations, the harvest of tasar cocoons was phenomenal in 2006.

Plantation rearers in Mahulbona village in Dumka district of Jharkhand, for instance, harvested more than 85 cocoons per DFL in 2006, an unprecedented productivity (the benchmark is 60 cocoons per DFL). In this predominantly tribal village, rearers like Mangal Kole, Sanat Baski, Rup Hansda and Sukhdev Hansda have earned as much as Rs 20,000 in 70 days by rearing tasar silkworms in the asan and arjuna plantations they began

| TASAR SILKWORM REARING: THEN AND NOW | | |
|--------------------------------------|--------------------|---------------|
| | TRADITIONAL METHOD | MODERN METHOD |
| Cocoon Productivity | 14 per laying | 60 per DFL |
| Crop duration | 90 days | 70 days |
| Individual earning | Rs 3,000 | Rs 16,000 |

raising three years ago. These plantations will continue to provide cash earnings for them and their families for 40 to 50 years. Like many other impoverished families, these rearers are planning to invest some of their earnings to improve productivity in agriculture, which would further increase and stabilise household incomes.

Many others expect their first cocoon harvest from plantations in 2007. Rearing silkworms has become so lucrative a livelihood opportunity that poor families in Jharkhand and Bihar have now come forward in large numbers to raise plantations of arjuna and asan in their wastelands. More than 1,600 hectares of plantations have already been raised under the special SGSY projects in the two States. The short wait of three years required for the plants to grow big enough to host tasar silkworms seems worth the effort. Tasar silkworm rearing has now become a viable and sustainable livelihood activity for thousands of families.

Tasar turnaround

This turnaround would have seemed improbable

even a decade ago. Para Hembram of Kairasole village in Kathikund block of Dumka recollects, “We used to travel long distances to collect wild cocoons to make moth eggs and lived in the open forest shacks for as long as three months rearing silkworms outdoors, braving rains and winter chills. Despite all this trouble, we could not save the worms from diseases, pests and predators. The tasar crop failed frequently. Often our investments left us indebted.”

Mohan Singh Soy, a rearer from Kolhanregadih in Kuchai, an area once famous for its tasar silk, gave up rearing silkworms a decade ago as it did not seem to be a worthwhile activity. “Production of cocoons started to fall drastically about 10-12 years ago due to pest attacks and disease outbreaks. Who would toil for three months in the forests for no returns?” asks Mohan Singh. Like Para and Mohan Singh, many among the younger generation were no longer interested in the traditional occupation, preferring other means to livelihoods, even when it meant to be exploited as wage labourers.

The SGSY project has changed all this. Today, after PRADAN and CSB intervened with modern and more efficient methods of rearing, Para has enthusiastically taken to tasar rearing again, and in just a few years has bid goodbye to poverty. Now a successful rearer, Mohan Singh dares to dream of prosperity thanks to his steady earnings from tasar.

Rearing tiny silkworms inside nylon nets saves them from predators





The reduction of risks at various stages of rearing, crop insurance and higher price realization have made tasar silkworm rearing a robust and remunerative practice.

Pradan's intervention

Working with traditional rearing communities in Bihar and Jharkhand, PRADAN was able to identify the reasons for the uncertain harvests in tasar cocoons. Poor quality of moth eggs was the main reason for crop failure in traditional practices of tasar silkworm rearing. PRADAN solved this by developing and promoting local production units (grainages) to supply disease free layings (DFLs) – eggs laid by healthy tasar moths.

The other reasons for poor harvests were lack of sanitation in the rearing fields and damages inflicted by pest and predators. PRADAN therefore promoted new rearing practices developed by the Central Silk Board. Besides the use of DFLs, this involved raising the tiny, early stage silkworms (the first two instars) inside nylon

**Budhiram Hembram
of Bindasarjom**



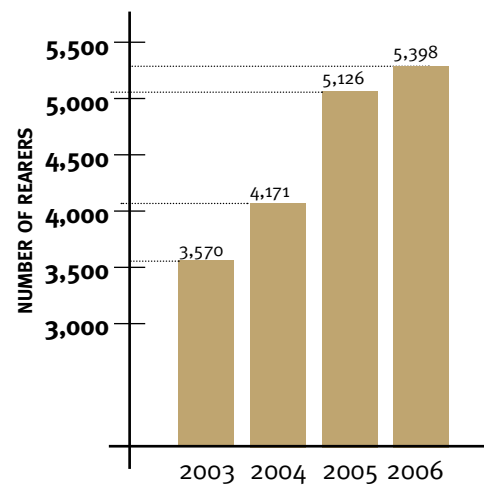
KEYS TO LEAPFROGGING PRODUCTION

DFLs: Use of disease-free layings (DFLs) ensures better race, higher hatching percentage of eggs and higher survival rate of worms.

Chawkie Garden: About 10% of host plants (arjuna and asan) are used to rear early stage worms (chawkie) under nylon nets, ensuring protection to tiny worms against all predators and the elements.

Prophylactic Measures: Lime and bleaching powder are spread around the trees and on the leaves to check proliferation of pebrine disease spores in rearing fields. Sodium hypochlorite is applied to silkworms to prevent attack of bacteria and fungus.

Crop Insurance: Insurance cover is provided for the crop, the rearer, spouse and one dependent, especially a girl child.



**Steady Rise in the
Number of Rearsers**

nets in the fields to save them from predators and vagaries of the elements, and using prophylactic measures in the rearing fields to minimize pest attacks and disease outbreaks. These modern and scientific measures have today enabled about 5,200 silkworm rearers to increase cocoon yields manifold. The reduction of risk at various stages of rearing, crop insurance and higher price realization have successfully made tasar silkworm rearing a robust and remunerative practice today.

The increase in productivity has been so dramatic and consistent that large numbers of dormant forest rearers in places neighbouring the project villages are now willing to adopt these practices. Many poor villagers are also willing to raise tasar host plantations on wastelands owned by them. The forests are indeed making a comeback, thanks to tasar silkworms.



Salkhi Devi of Junglepara Letwa

PRODUCING YARN

New Spin to an Old Tale

Reeling and spinning tasar yarn has enabled nearly two thousand women from tribal and other poor communities to overcome poverty

Out of poverty

A hard life of labour has made Salkhi Devi look much older than her 40 years. She lives in the remote village of Junglepara Letwa in Banka district in Bihar, where the basics of modern life like paved roads and electricity, or for that matter adequate food, clothing and shelter, are still distant dreams.

All this, however, has not stopped Salkhi Devi to successfully overcome poverty. She is a star producer of tasar yarn, earning more than Rs 18,000 a year from the occupation. For a woman who had never seen the world outside her village till she was 37, Salkhi Devi is today a frequent traveller, visiting many villages to train women and spread the message of reeling yarn to transform lives.

All this would have seemed a distant dream to her

even a few years ago, when this mother of three sons and three daughters struggled to feed her children. The land her husband Kailu Tanti cultivated was barely sufficient to feed the family for just a few months in a year. He migrated long for wage labour every year. They were ridden with debt and saw no way out of this life of poverty and misery. Salkhi Devi became a member of a SHG promoted by PRADAN. Peer support and credit from the SHG ensured that she managed little domestic crises like illnesses without getting further indebted to local moneylenders. Then came a big leap forward.

PRADAN set up a tasar yarn reeling centre in the neighbouring village of Bhusiatar in Katoria block where Salkhi and other SHG members



SUCCESSFUL SEPARATION

PRADAN intervened to separate yarn production from weaving and promote it as a viable enterprise for poor rural women. The intervention intended to:

- Upgrade and adapt existing tasar yarn production technologies
- Promote entrepreneurial capability among yarn producers
- Establish linkages with economic services
- Ensure supply of cocoons round the year
- Promote sale of quality yarn in the open market
- Promote producers' business organizations for sustainability

could find a way to earn regularly. A reeling centre was built with funds from the special SGSY project and reeling machines were bought for the women. Putting aside her initial hesitation, Salkhi Devi started to reel her way out of poverty. Today she is a proud workingwoman whose earnings contribute significantly and regularly to family coffers. "If it were not for reeling yarn, I would still be struggling to make ends meet and would have never dreamt of a better future for my children," says Salkhi Devi.

Traditionally, reeling and spinning yarn from tasar cocoons were not considered to be independent economic activities. Yarn production was considered an integral part of weaving and seldom carried out independently. Women, including small girls, in weavers' families produced tasar yarn by rolling the tasar filaments with their palms on their bare thighs. This painful and dehumanising process was also quite inefficient.

Intervention by PRADAN

The tasar yarn scenario looked bleak when PRADAN stepped in its interventions in the tasar silk value chain. Its innovation of introducing yarn production as a new, standalone occupation for rural women has today resulted in nearly two thousand poor women from tribal and backward communities in Bihar, Jharkhand and Chhattisgarh

to earn a living round the year by reeling and spinning tasar yarn.

A study by PRADAN in the 1990s revealed that yarn production could generate a large number of livelihoods among poor rural women, especially for those who earn a living mostly through wage earnings and own little or no land. A few factors that favoured this view were:

- A huge gap in demand (2,000 MT) and supply (300 MT) of tasar silk yarn in India

- Available technology (developed by CSB) that required low capital investment
- High quality standards that could be managed by rural women themselves
- Potential to offer income round the year

A new vocation

Tasar yarn producers promoted by PRADAN are located outside weaving areas around Bhagalpur. For today's yarn producers in Jharkhand, Bihar and Chhattisgarh, this is an entirely new vocation. As with Salkhi Devi, the process starts with organizing poor women into SHGs. Stable SHGs are linked with banks to enable them access larger volumes of credit. At the same time, the process of livelihood planning is initiated in all stable groups in which each member is helped to make a livelihood plan for her family. Many such members, after assessing their resources and aspirations, opt for a livelihood based on tasar yarn production.

Each selected woman is trained on two aspects - technology and entrepreneurship. Salkhi Devi went to Raksha village in Bihar for her training. Says she, "We learnt about the raw material (cocoons) and the reeling machine, learnt to improve our hand-eye coordination and understand quality parameters." The CSB provides technical training. Additionally, entrepreneurship motivation training is conducted to help the women understand the business, its economics and their position in the overall business.

The activity also requires construction of a common facility centre in selected villages. The special SGSY projects in Bihar and Jharkhand have provided funds to build these and given subsidies to buy reeling machines. About 30 women from villages within a kilometer from

PROFILE OF REELERS

| PARTICULARS | PAST | PRESENT |
|---------------------------------|--|---|
| Sources of income | Collecting & selling firewood, wage labourer in fields, brick kilns & stone quarries | Tasar reeling |
| Income opportunity | Seasonal | Round the year |
| Income assurance | Low | High |
| Status | Wage earner | Self-employed |
| Hours spent in a day on the job | 8 | 6-8 |
| Working condition | Mostly outdoors, often hazardous | Indoors, good working conditions in work shed |

Reeling tasar yarn provides women with a regular monthly income, which radically transforms family finances of poor households in remote villages.

the centre work together under one roof, reeling tasar yarn for a living. For many poor women, it is a way to earn a regular income in a dignified manner. "I would any day prefer reeling yarn in the centre than work as a farm labour or scavenge for firewood in the jungles," says Yalwa Devi of Phitkoria village in Dumka district in Jharkhand. For Salkhi Devi, working in the Centre is like "going to office." She has the active support of her husband Kailu Tanti.

Profitable venture

The women borrow working capital from banks. Their earnings depend on efficiency and time spent in the activity. A woman could easily earn about Rs 1,200 a month by reeling 5-6 hours every workday. Although yarn making is an individual activity and earnings are individual, the women do a lot of things collectively, like buying cocoons and selling yarn. They also employ a local youth as centre manager to process cocoons for reeling and take care of accounts, etc.

The reeling centres are registered as mutual benefit trusts (MBTs). These MBTs have now come together to form the MASUTA Producers

Company, which is already making its presence felt in the entire tasar sector. The quality and volume of yarn produced are unprecedented.

Says Jaba Das of Gandhrakpur village of Dumka in Jharkhand, "When I started working, I could extract yarn from only 50 cocoons in a day. Now I utilize more than 150 cocoons and earn about Rs 1,000 in a month." This income has transformed her family from being chronically poor to a situation when Jaba pays for private tuition for her daughter and son. Loans and mortgages are things of the past.

Women who have been reeling for the past two years under the special SGSY projects in Jharkhand and Bihar have today found a way to a regular occupation that provides them with monthly

earnings. In remote villages where poverty stalks every home, this radically transforms family finances. The women universally want to continue.

"I was always dependent on my husband. Today I earn regularly on my own. Making ends meet no longer means living in debt," says Kunti Devi of Gandhrakpur, working in the same centre as Jaba Das. For Salkhi Devi of Junglepura Letwa, reeling yarn is now a way of life. "SHGs gave us hope against poverty and debt. Reeling has given us the opportunity to turn our hopes into reality,"



Recreating the magic of tasar silk

says Salkhi Devi. She has become an enthusiastic proponent and travels frequently to other villages to train other women.

Social spin-off

This sustained ability to earn has resulted in a major spin-off. Women across locations, Sonia Devi in Sarua, Salkhi Devi in Junglepara Letwa, Yalwa Devi in Phitkoria, Kunti Devi and Jaba Das in Gandhrakpur unanimously feel that their family and social standing has significantly improved. “My husband now consults me on all matters,” says Sonia. Yalwa Devi’s husband is proud of the fact that his wife travels to Deoghar on business. Jaba’s husband now helps her in household work. Salkhi Devi’s husband Kailu Tanti helps by de-husking paddy, a task traditionally forced upon the women.

The increased respect at home is also reflected in the village and the community. The women reelers of Gandhrakpur in Dumka banded together to protest harassment by a local strongman. They took up the matter with the community and police. The “strongman” is now especially polite to them. Salkhi Devi probably sums it the best, “The men in Junglepara Letwa no longer look down upon the women. How can they? We earn more than most of them and we are united.”

MASUTA MUSCLE

All village reeling centres or MBTs are brought together in a national collective registered as a Producers’ Company under section 581C(5) of the Indian Companies Act and named MASUTA Producers Company Limited. It functions like a cooperative but is governed and regulated like a private limited company of the producers.

MASUTA PCL is made of over 60 primary groups with a membership base of 1,750 tasar yarn producers from Bihar (350 producers) Jharkhand (1,150 producers) and Chhattisgarh (250 producers). The collective production of yarn presently is to the tune of 10.5 MT annually.

The main objectives of the company are to ensure round-the-year supply of raw material (tasar cocoons) and buy yarn from the MBTs at a fair price. The company sells a major part of the yarn directly in the open market and partly converts it into fabric. It acts as an interface between the market and its members and by doing so, manages enterprise risks.

The entire operation is now financially self-sufficient. PRADAN and MASUTA PCL plan to promote 10,000 tasar yarn producers in the next three years.



Sonia Devi of Sarua



Yalwa Devi of Phitkoria



TASAR SILK PROJECTIONS

- Probable demand: 3,800 MT in 2015
- Domestic production in 2015 at present rates of growth: 350 MT
- Gap in production & supply: 3,450 MT

POTENTIAL BY 2015

- Cocoon production: 250 crore pieces
- Yarn production: 2,500 MT
- Value of tasar sector: Rs 20 billion
- Achievable livelihoods from tasar: 350,000
- Possible number of additional livelihoods: 200,000

People out of poverty 1.75 million

New Horizons in Tasar Sericulture

The collaboration between Union Ministry of Rural Development, Central Silk Board and PRADAN has clearly been a success. It efficiently directed large-scale public finances to remote villages, enabling over 10,000 families below the poverty line gain robust livelihoods in tasar sericulture. This successful partnership now needs to be scaled up into a joint venture to promote many more thousands of livelihoods among chronically poor families in Chhattisgarh, Madhya Pradesh, Eastern Maharashtra, Orissa, West Bengal and Jharkhand.

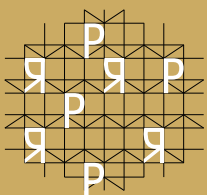
Tasar sericulture could be one of the most preferred livelihood options for a large number of very poor families living in the tribal heartlands of the central and eastern Indian plateaus. Abundance of human power, privately owned wastelands and favourable ecology create grounds for a significant expansion of tasar sericulture in the region. Short gestation and high returns to labour make tasar silkworm rearing and yarn production attractive livelihood propositions for poor families.

Prototypes for Rapid Replication

Small-scale private grainages, plantations on private wastelands, improved package of silkworm rearing and yarn production in common facility centres are the key components that could be replicated to attain rapid growth of the sector, creating livelihoods on a significant scale.

Institutional mechanisms like Mutual Benefit Trusts and Producers' Company are new and successful initiatives in tasar sericulture. These are critical for integrating decentralized operations and facilitating aggregation at various levels, which offer advantages of collective action to poor producers. They have also created space for the producers to take charge of the business on their own. These institutions would be the major drivers to facilitate a people-led growth in the sector.

A projected GDP growth of 8%-10% for the country would sustain a growth in annual demand for tasar silk at 12%-15% in real terms. This translates into over 250,000 additional livelihoods for impoverished families. Tasar sericulture holds a promise for nearly two million people to bid goodbye to poverty.



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