

Livelihoods through Tasar Sericulture: Issues before Small Producers

MADHABANANDA RAY

Recognizing the potential of tasar as an income generating and sustainable occupation for the tribals who live in and around forested areas, Pradan's focus includes promoting scientific practices in ensuring disease free layings and providing backward and forward linkages for the activity

BACKGROUND

India is the second largest producer of tasar silk in the world after China. Tasar, a wild silk, however, accounts for less than 5% of the total silk production in India. Although China produces only temperate tasar, India produces both tropical (mainly) and temperate (in sub-Himalayan regions) tasar. Tropical tasar, grown only in India, is also known as Indian tasar; its silkworm is reared on host trees such as asan (*Terminalia tomentosa*), arjuna (*Terminalia arjuna*) and sal (*Sorea sp.*), available abundantly in the estimated 14.5 million hectares of tropical forests in the central Indian plateau.

In the past three decades, the demand for silk in the domestic market has increased at the rate of 5% per year on real terms. However, the production of tasar silk during the same period has gone down from 600 tonnes in 1970 to 302 tonnes in 2004–05. The overall demand for tasar yarn far exceeds its supply. Hence, India has to import nearly 900 to 1,200 tonnes (more than 75% of total demand) of tasar silk (all temperate tasar) from China and Korea to meet its demand. The total value of tasar fabric trade in India is estimated to be nearly Rs 450 crores (source: Central Silk Board—CSB). The domestic market accounts for nearly 60% of the total trade and the rest is export market.

States that produce tropical tasar in India are Jharkhand, Chhattisgarh, Andhra Pradesh, Orissa, parts of Bihar, West Bengal and Madhya Pradesh, and the Vidarbha region of Maharashtra. Over one lakh tribals and many more disadvantaged communities in these regions are engaged in rearing tasar cocoons. This region is characterized by high tribal concentrations and it has wide forest cover with abundant availability of tasar host plants such as asan and arjuna trees.

livelihoods for the poor communities that were once dependent on tasar rearing. The activity had almost disappeared from the area but for a few farmers, who continued rearing tasar because it is a traditional activity rather than for any real benefit. Pradan got support from the CSB and also got affiliated with a few state-led programme beneficiaries, who received tasar eggs. Pradan's interventions covered all the components in the tasar value chain. It has developed and adapted technologies suited to local conditions and worked out appropriate organization and management strategies for

different components such as the planting of tasar host trees, community-based disease-free egg production, including nuclear seeds, scientific tasar rearing, silk yarn production, fabric production and marketing.

Grainages have been established in the villages to prepare and distribute disease free layings (DFLs). A private grainage is a new concept in tasar sericulture. Pradan plays an important role in selecting and training grainage owners. In addition, Pradan provides them with an entrepreneurial orientation and organizes finance for infrastructure and equipment. To improve the quality of DFLs and the smooth running of grainage operations, Pradan provides intensive support and creates linkages for basic seeds with the CSB. Likewise, systematic seed crop rearing is a new concept and is practised by the rearers associated with grainages. The activity ensures multiplication of basic seeds to build seed stock for commercial grainages. Grainages offer a ready market for the seed rearers to sell their cocoons.

Pradan trains commercial rearers to adopt improved rearing practices such as *chawkie* rearing (in which the worms are reared on small size trees on small plots under nylon nets that protect the worms from the elements of nature and predators) and the maintenance of host flora. In addition, it links them with grainages for DFL supply, provides intensive follow-up support and helps organize finance. Pradan also creates diverse avenues for cocoon trade.

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Pradan has established three kinds of institutions at different levels of the tasar value chain.

Tasar Vikas Samiti: A Tasar Vikas Samiti (TVS) has 19 members with 1 graineur, 2 seed rearers and 16 commercial rearers. One TVS ensures sufficient DFLs for all the local commercial rearers. It also takes advantage of bulk buying of inputs and aggregate selling of the product (cocoons).

Masuta Producers' Company: Masuta buys cocoons from the TVSs and undertakes reeling and spinning of these cocoons through women's groups organized as Mutual Benefit Trust. The reeling takes place at common facility centres and women spin the yarn in their homes.

Eco-Tasar: Eco-Tasar is a private limited company, with Masuta being the major shareholder. The company has been formed to deal exclusively with the fabric market. The company provides the market for the yarn produced at Masuta.

In many areas, traditional practices are still in vogue. Tasar silkworm rearing in the forests is an age-old practice, in which tasar cocoons are collected from the forest. The rearers prepare their own eggs (called tasar seeds) for rearing. There is no way of identifying diseases in any stage of rearing; thus there are no prophylactic or therapeutic measures to protect silkworms from pests and predators. The success in rearing is not in the hands of the rearers. Many believe that successful rearing depends on God.

Currently, however, there is a gradual transition from uncertain traditional practices to more stable scientific practices. The development of plantations of tasar host plants in degraded forest areas or in the uplands, the scientific rearing practices of tasar silkworms, the elimination of diseased eggs in grainages (to make DFLs), etc., are the first steps to scientific intervention in tasar sericulture.

TASAR YARN PRODUCTION

Traditional tasar yarn production activity has no independent identity. It is a subsidiary activity carried out by women, mainly wives of weavers, in their free time within the house. Traditional, inefficient production processes and technology, and exploitation by the traders and moneylenders have crippled the activity.

The use of the palms, thighs and primitive tools in the production of tasar yarn has proven to be unhealthy and ineffective in enhancing productivity, in ensuring a reasonable income or in maintaining high quality standards of the produce. There has been very low investment in the innovation and the upgradation of yarn production technologies and the marketing of Indian tasar yarn to establish it as an independent product in the tasar sector.

The tasar value chain in traditional weaving clusters is mainly of two types. First, the well-off yarn traders invest their money to purchase and stock cocoons for the whole year. After getting an order of yarn from the weavers or fabric manufacturers, they issue certain number

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of cocoons against the assurance of a fixed quantity of yarn to traditional women reelers, who reside in the same or in neighbouring villages. They then supply the yarn to the weavers or the fabric manufacturers.

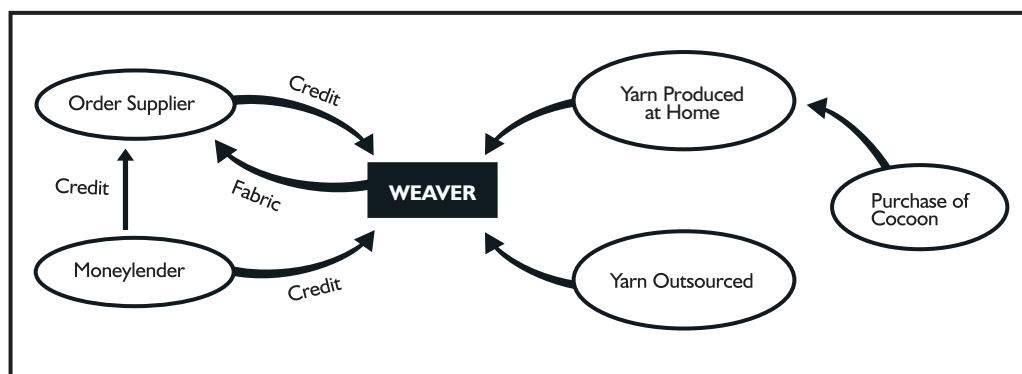
The reelers use their palms and thighs to convert the cocoons

into yarns (about 10–20 gm of yarn a day); they as such do not get any money from the traders for the conversion; the wastes (by-products) generated are their wages and they earn between Rs 10–12 a day from the tasar wastes. Many of the women have no income other than this.

Second, the weavers take credit from local moneylenders at a very high rate of interest and buy cocoons for the whole year. The fabric traders generate orders from the market for fabric and pass it on to such weavers for its manufacturing. The women of the weavers' families then convert the cocoons into yarn, using the same methods. The yarn is woven into fabric and sold to the fabric traders. In most of the cases, the fabric traders are the moneylenders; thus, after the repayment of the principle and the interest on the loans, the weavers are left with very meagre amounts.

In the traditional tasar yarn production business, therefore, neither are the yarn-producers and the weavers organized nor is there an open market for such yarn. Therefore, all such unorganized producers (yarn producers and weavers) are financially exploited in a closed system operated by moneylenders, traders and order suppliers.

Box 2: The Traditional Tasar Yarn Production System



ISSUES INVOLVED

As mentioned earlier, the present technology is the first step towards scientific intervention in tasar sericulture but there are many issues that need to be addressed.

- a. Fluctuating production: Even with the application of available technology, the production of tasar silk fluctuates greatly in qualitative as well as quantitative terms.
- b. Technological backwardness: The available technologies have become outdated as compared to the innovations in the other fields of technological developments.
- c. Unorganized production system: In the tropical tasar value chain, all the actors are unorganized and are, thus, dominated by the middlemen and traders.
- d. Lack of entrepreneurship: In the traditional value chain, the traders and the moneylenders are the entrepreneurs whereas the producers are all wage earners. Barring the efforts of Pradan and MASUTA, none of the institutions in the present value chain promote entrepreneurship among the tasar producers.
- e. Finally, sericulture is a state subject; public sericulture establishments, in spite of recent development of value chain on tasar from producers to end users, have failed to capitalize on the advantages of recent breakthroughs and have been inadequate in providing a stewardship role. The patronage approach of the public institutions rather than partnership has not contributed to building a wide stakeholder base in the tasar sector. Consequently, the producers are promoted as beneficiaries and continue to remain at the receiving end (where their entrepreneurial ability is muted).

Moreover, there are limited stakeholders in the sector, yet another limitation. Apart from CSB (partly), the state department, NGOs such as Pradan and people's institutions such as MASUTA, no other formal public or private institutions are involved in the development of the sub-sector. Pradan's contribution lies in having evolved a suitable institutional framework for the promotion of tasar.

SCOPE FOR TASAR SERICULTURE-BASED LIVELIHOODS

Pradan's experience reveals that there are a host of other factors that helps India position itself for large-scale promotion of tropical tasar sericulture-based livelihoods such as:

- ✓ Favourable agro-climate for tasar silkworm rearing
- ✓ Availability of traditional skills of tasar rearing with tribal people
- ✓ Availability of large tracts of wastelands owned by poor people that could be put to use for raising host tree plantations and, subsequently, for silkworm rearing
- ✓ Availability of asan and arjuna trees in natural forests
- ✓ Low opportunity costs of labour, subsistence, mono-cropped, kharif paddy based agriculture
- ✓ Proximity to the largest tasar silk weaving and trade centres in Bhagalpur, Raigarh-Champa, Sambalpur, Bhandara, Nawada, Kolkata, etc
- ✓ Development of each of the segments—plantation, rearing, yarn making and weaving—as separate enterprises, and demonstration of entrepreneurship among the producers

WAY FORWARD

Tasar-based enterprises could be one of the best livelihood options for the poor residing in forest fringe areas. Tasar rearing pockets in all the states are mainly in inaccessible areas; many of these areas

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are affected by the activities of extremists and are out of the reach of the government machinery. There is also a dearth of credible NGOs to work at the grass roots to promote tasar-based livelihoods.

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strategies based on complementarities to unlock the potential of the tasar sub-sector and create robust livelihoods for a large number of poor families in all parts of the potential tropical tasar belt. An approach that edifies the agencies of the producers in the overall context of sector development goals could form the basis of partnership among stakeholders.

The strategies that comprise successful intervention are:

- i. Promote tropical tasar sericulture-based livelihoods in central India, aggressively involving all who matter—public and private players, research institutions, NGOs, etc.
- ii. Work in close coordination with the partners to promote 'entrepreneurship' among producers rather than create 'employment' for producers.
- iii. Organize small producers around their institutions for long-term sustainability, building ownership and linking them with market with higher burgeoning ability.

- iv. Innovate and develop new and need-based technologies for tasar seed production, plantation, rearing and post-harvest cocoon processing.

Besides these factors, there needs to be constant fine-tuning and improvement

of tasar-based livelihood enterprises for higher productivity that match global quality standards. There is also the need to create leadership spaces for producers in their institutions and involve such producer leaders in government policy formulations.