

Preventing perverse outcomes from interventions in forest-based livelihoods: Lessons from Tasar (*Antheraea mylitta* Drury) in India

Presenter: Nivedita Narain; PRADAN

Presenter Email: niveditanarain@pradan.net

Authors: Nivedita Narain, PRADAN; Satyabrata Acharyya, PRADAN and Tasar Development Foundation; Shamshad Alam, Tasar Development Foundation



Policies and programmes for wild silk or tasar-based livelihoods have galvanised income gains for indigenous forest-dwelling communities, but there is little evidence that these strategies are sustainable. Our study of successful tasar-based interventions indicates that the introduction of an eco-race risks unintended perverse consequences, unless tasar-development retains diversity of the system. This entails a paradigm shift from the insect- tree dyad, to the species and the fulfilment of its ecological requirements.

Our paper describes interventions of governmental and NGOs to increase tasar-production over the past 30 years. A thick description of how this approach has been counter-productive to its own purpose in the medium term, as it bypassed ecological concerns. Though there are shorter-term production gains by the introduction of eco-races, longer-term risks include extinction of indigenous eco-races, thinning of forests and loss of genetic vigor of the introduced eco-race.

We present a case-study of interventions spanning 30 years, by Central Silk Board with the NGO PRADAN in Santhal-Parganas, Jharkhand, India's highest tasar-producing state, with the largest variety of eco-races. We also journeyed to the habitats where the indigenous sarihan eco-race was pushed. Our literature survey locates these interventions in three waves, from the 1860s. Driven by concerns for increasing reliability of production, it involved repeated introduction of the only semi-domesticated eco-race, daba, through systematic seed-replacement programmes.

As the State introduced new species and propagated mono-culture, it manipulated the ecological niche favouring the introduced species. The character of the ecological niche underwent a huge shift, favouring homogeneity rather than diversity. The settings in which tasar eco-races occurred were not mapped nor were changes monitored. This relates to the ecological niche concept (Grinnell, 1917; Elton, 1927; Hutchinson, 1957) and further work on the functional resource-based habitat approach (Dennis et al., 2006).

Our empirical study highlights how perverse consequences can be prevented by increased diversity of the system, leading to enhanced resilience of tasar-insects to climate change, productivity and disease resistance. This is in sharp contrast to the historical and current commercial interests that underlie the three waves of tasar-interventions, in particular, and of non-timber forest products in general.