

Grassroots biodiversity conservators of Arunachal Pradesh: national recognition and reward

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The issue of recognizing and acknowledging the value of traditional knowledge (TK) and creativity of the grassroot level people in biodiversity conservation has been debated for a long time. Despite their contributions, they have not reaped any tangible or intangible benefits. However, some of the conservators of Arunachal Pradesh (AP) have been recognized (two cases are reported) at the national level for their contributions to plant biodiversity conservation.

Orik Rallen, an *Adi* woman of Sibut village, East Siang district of AP is a traditional medical practitioner and community mobilizer who promotes conservation of indigenous plant biodiversity. She spreads awareness about domestication of forest plant species. Her efforts have led to conserving 23 local varieties of various crops and 36 local forest species. She explores plants from the community forest (*Morang*) and adds cultural-specific values to them. She has mobilized the *Adi* women of Sibut village to undergo training in value addition of indigenous biodiversity-based foods and their marketing to enhance community-based plant conservation. For this, she has formed a self-help group (SHG) of 10 women.

She is aware of the eroding knowledge among the young members of the community and teaches children about the local plant species, their names and biocultural and medicinal values. She visits schools and takes students to the community forests and homegardens for making them aware of plant species, their uses, methods of propagation and rational methods to harvest and sustain a particular species.

In search of indigenous plant resources and their domestication, she visits areas of other districts. She visited the older inhabitants to *Gensing* region of Upper Siang district to learn about (i) use of *engin* (local variety of sweet potato) and *singe-engin* (local variety of tapioca) as a breakfast item, its method of processing

and sale in the local market; and (ii) understanding TK variability on use of 'toko' (*Livistona jenkinsiana* Griff) fruits, *onger* (*Zanthoxylum rhetsa*) leaves, *bangko* (*Solanum spirale*) leaves and *dekang* tree (*Gymnocladus burmanicus*) fruit. She forms SHGs and promotes local plant species-based micro-enterprises with the help of R&D institutions in order to improve the scientific value of TK-based products. She trains women for reducing the cyanogenic glycoside taxiphyllin (which on hydrolysis, releases hydrogen cyanide) content in bamboo shoots which is consumed frequently by the *Adi* tribe. Consumption of unprocessed bamboo shoots by a pregnant woman (the bamboo shoot after chopping is pushed inside a green bamboo cylinder; the open mouth portion of cylinder is air-tightened using *ekkam* (*Phyrium puberula*) leaves. The bamboo cylinder is then placed in a water stream under the shade of a tree. After 3–4 months, the fermented and processed bamboo shoots are recollected and used for consumption. This practice is no longer followed in villages; through TK it can be scientifically validated) causes deformity in the unborn baby¹. Developing food products from seeds of *namdungs* (*Perilla ocymoides* and *Perilla frutescens*) and stem of *pagiperang* (a sour plant found in the community forest) to promote livelihoods of *Adi* women; and to influence conservation of related species in jhumland and homegardens are the sole efforts of Rallen.

For all these contributions, she was selected by SRISTI (Ahmedabad based institution) for the Biodiversity Conservation Champion Award.

Bamang Taniang, a traditional healer of *Nyshi* tribe of AP has been healing patients using plant-based medicines. He has identified more than 60 indigenous plant species having medicinal and food value. Taniang selects the plants from wild resources (natural habitats) believed to be more effective in curing a disease.

According to him, the Abotani Hills is a rich source of indigenous plants species from where he selects plant resources for use in ethnomedicines and conservation. To prevent natural habitats of ethnomedicinal plants from undeterioration, he has selected 3 ha of his land in the 'community forest' to conserve plants through domestication. He selects and domesticates plant species on the basis of population and nature of a particular species, ability of plant to adapt to a new habitat, age of plant and nutrient, and water requirements. Conservation through domestication helps to save time, energy and avoid overexploitation of plants in the community forest.

In last 3–4 years, he has expanded his network and made an association of herbalists of AP for developing and promoting herbal medicines. For his contribution to conserving indigenous plant biodiversity, SRISTI has conferred upon him the Biodiversity Conservation Champion Award.

These two case studies indicate that it is time to address the need for integrating grassroots biodiversity conservation champions with participatory and community based approaches of plants conservation. These conservators also need policy support and monetary incentives so that creative management of biodiversity could be sustained and erosion of related knowledge could be minimized.

1. Bhardwaj, R., Singh, R. K., Wangchu, L., and Sureja, A. K., In *Biodiversity Utilization and Conservation* (eds Arunachalam, A. and Arunachalam, K.), Avishkar Publishers, Jaipur, India, 2008, pp. 79–82.

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