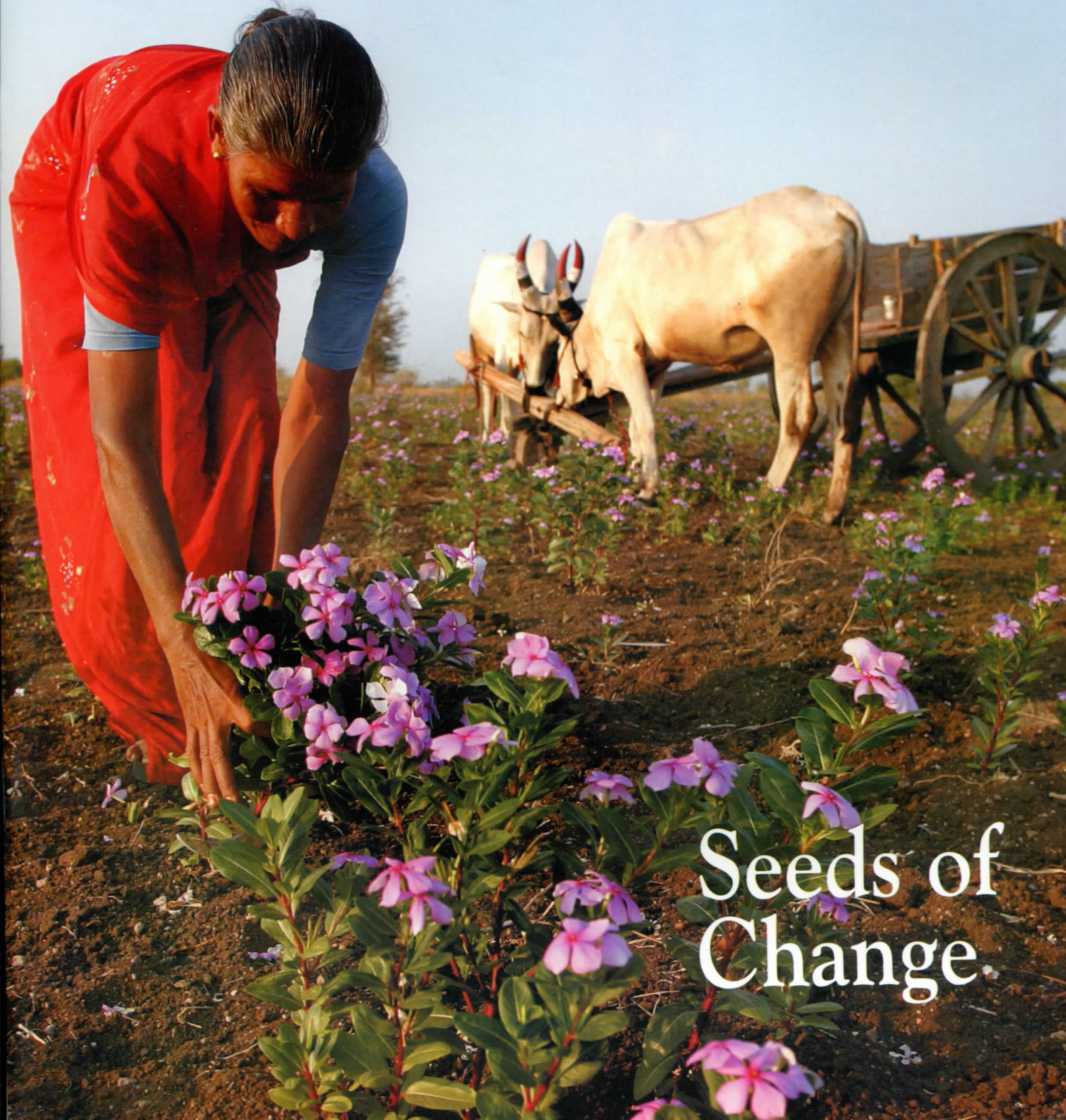


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Bulletin

THE FORD FOUNDATION NEW DELHI OFFICE

SUMMER 2004



Seeds of
Change.



RADHIKA CHALASANI

Gram Mooligai Company shareholder collecting medicinal plants.

Enterprise-led Biodiversity Conservation

The Keystone Foundation and the Foundation for the Revitalization of Local Health Traditions are working with local communities to develop enterprises from non-timber forest products (NTFPs) to support local livelihoods and promote conservation.

The Nilgiris: Forests and NTFPs

India has over 500 protected natural areas covering over four percent of the country's land area, as well as many unique eco-systems. All of these areas are under increasing threat due to human encroachment as well

as commercial demand for eco-products. The Nilgiris—India's famous Blue Mountains—is a mosaic of eco-systems located in the southern Indian states of Tamil Nadu, Karnataka and Kerala. The Nilgiris comprise tropical evergreen forests in lower elevations, and grasslands and montane evergreen forests in the upper elevations, up to 2,600 metres. In 2000, UNESCO declared the Nilgiris an international biosphere site because of the area's rich and unique biodiversity. Despite the prestigious designation, conservation problems in the Nilgiris are increasing as human settlements encroach upon indigenous forests and watersheds are depleted of forest cover. As a result, flash floods are now common during the monsoon season, causing serious hillside erosion. Tribal communities long dependent on the forests are facing a variety of economic hardships as forest cover decreases.

The Keystone Foundation has been working in the Nilgiris since 1994, conducting research on NTFPs and tribal communities' collection practices. Its aim is to help conserve forests and non-timber forest products (plants and animal/insect products found in the wild), thereby improving the livelihoods and living conditions of tribal people. Keystone focuses its efforts on NTFP harvesting in the wild as well as encouraging cultivation on farms, marketing, and recently, adding value through processing units which allows tribal communities to retain more of the end-product income.

Current NTFP collection practices in the Nilgiris are not adequately encouraging conservation nor providing a living wage for tribal people, who have few employment opportunities. All forest land is owned by the government Forest Department, which sells collection rights for vast tracts of land to outside contractors. Tribal people work for the contractors as day laborers, earning very little. They are paid by weight, and so there is pressure to collect as much as possible. Although tribal communities possess a rich, indigenous knowledge of NTFPs and their uses, and many of their cultural and religious taboos in the past effectively governed the sustainable harvesting of NTFPs, this knowledge is not integrated into Forest Department policies.

**“Until tribal collectors are allowed a real stake in NTFP collection, and some control and sense of ownership over the forest lands they collect from, conservation efforts by tribal NTFP collectors cannot make much progress.”
(Matthew John, Director, Keystone Foundation)**

The key problem is that local communities have no say in how the forest lands are used and managed. As Matthew John, one of Keystone's Directors, put it, “Until tribal collectors are allowed a real stake in NTFP collection, and some control and sense of ownership over the forest lands they collect from, conservation efforts by tribal NTFP collectors cannot make much progress.”

Despite these obstacles, in 10 years, Keystone has made headway in its conservation efforts: honey



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Value addition: A Kurumba tribal making candles from beeswax.

hunters now harvest only from mature hives (ensuring a stable bee population and better quality honey); villagers are establishing organic coffee and pepper plantations intercropped with indigenous tree species to maintain local biodiversity; and Keystone has distributed posters of two NTFP plants that are in danger of disappearing due to over-harvesting. Keystone is also working closely with the tribal communities to map the ancestral boundaries that effectively regulated NTFP collection among the tribal groups for hundreds of years.

In support of tribal people's livelihoods, in 1996, Keystone started buying and marketing honey collected in the wild by tribal hunters from hives clinging to cliff edges. Keystone markets flavored honey, beeswax candles and honeycomb medicine balms in Tamil Nadu. In addition, it exports beeswax candles. In 1998, Keystone also began purchasing four NTFP plant products from tribal collectors—*Acacia concinna*, *Sapindus emarginatus*, *Terminalia chebula*, and *Phyllanthus emblica*. The seeds or fruits of these plants are dried and, in some cases, processed by Keystone for sale as soaps, medicine for stomach illnesses, pickles, candy, dry shampoo powder and a cough and cold remedy (*Phyllanthus*, or *amla*, which is high in Vitamin C). Recently, Keystone set up two NTFP processing units in an effort to increase the income earned by tribal collectors. One of the units processing *Phyllanthus*

Forest Conservation and NTFPs

RADHIKA CHALASANI



Nearly one-third of India's total land area is now wasteland, which includes 34 million hectares (mha) of degraded forest land. Despite the large areas of wasteland, over one-fifth of the country (70 mha) is forested. A sizeable proportion of forest land consists of plantations while

relatively undisturbed forests comprise only three percent of the total forest cover. Since the 1970s, the government, NGOs and community-based organizations have made a concerted effort to reforest degraded forest land and protect forests, but the degradation of forest lands continues in many locations throughout India.

Non-timber forest products (NTFPs) typically represent 95 percent of the biodiversity in a forest eco-system. NTFPs are defined as plants (edible and non-edible), medicinal plants, and animal products (edible and non-edible) found in the wild. NTFPs can also be cultivated on plantations but the bulk is still collected in the wild from forests. There are thousands of NTFP species in India, and approximately 800 medicinal plants used domestically, and for exports. India is one of the world's largest exporters of herbal medicines. The commercial market for NTFPs, particularly medicinal plants, has expanded rapidly in the last 50 years—estimated at \$11 billion in 2000 worldwide—and has opened up a productive alternative to logging in forests.

If over-harvested, NTFP collection can add to the degradation and destruction of India's forests. However, the active management and sustainable harvesting of NTFPs can potentially maintain complex forest eco-systems, while providing much needed income to local communities dependent on forests for their livelihood.

To sell quality NTFP products, Keystone has had to seek out niche markets in the state of Tamil Nadu.

products, including *amla* candy, mouth freshener, pickle and shampoo, has been making a net profit since its second year of operation.

In 2001, Keystone's total NTFP sales were just over \$22,000. Costs still far outweigh net profits because the NTFP market is highly informal and competitive. To sell quality NTFP products, Keystone has had to seek out niche markets in the state of Tamil Nadu. Tribal families at present earn only a subsistence income from NTFP collection, approximately \$250/year.

Although significant challenges remain, the future for NTFPs, conservation and tribal people's livelihoods in the Nilgiris looks more promising now. A recent order passed by the state government may give tribal communities the incentives and legal structures they need to set up community cooperatives, earn more income from NTFP collection, and ensure sustainable NTFP harvesting. In 2003, the State of Tamil Nadu gave tribal people rights to NTFP collection in 50 percent of the forest areas in the Nilgiris. As a result, the Forest Department can no longer sell collection rights to outside contractors in these areas. The order also required villages to set up forest protection councils. Although the councils and the reserve forest areas remain closely controlled by the Forest Department, the new arrangements allow local communities a role in protecting their forests, and the possibility of earning more money from NTFP harvesting and processing.

The Plains of Tamil Nadu: Wastelands, Open Grasslands, and NTFPs

The Foundation for the Revitalization of Local Health Traditions (FRLHT) is an Indian public trust established in 1991 with a governing council of eminent scientists, conservationists, medical professionals in traditional medicine, and representatives of India's leading ayurvedic pharmaceutical industries. The foundation supports research and pilot cultivation of medicinal plants in Tamil Nadu, Karnataka and

Kerala. It has established a research laboratory and botanical center in Bangalore, and 50 conservation sites. It also supports medicinal plant micro-enterprises.

The Gram Mooligai Company Ltd. (GMCL) in southern Tamil Nadu, set up with support from the Ford Foundation, is one of FRLHT's most innovative initiatives. Registered in 2000, and promoted by the Covenant Centre for Development, the herbal products company is owned by 28 self-help women's groups and two farmer men's groups, located in 30 villages. These groups, called *sanghas*—representing approximately 400 women and 35 men—own shares in the company and have invested a total of \$11,000 in equity capital. The women's *sanghas* collect 15-20 species of medicinal plants from wastelands and open grasslands for sale directly to GMCL. The two farmer *sanghas* are cultivating six medicinal plants for sale to GMCL. Some of the medicines being marketed by GMCL include *trigal* capsules and ointment for joint pain made from several medicinal plants; syrup for coughs made from three medicinal plants (*Adhatoda vasica*, *Ocimum sanctum* or *tulasi*, *Eclipta alba*), honey and sugarcandy; and aloe ointment for wounds and cuts made from two medicinal plants (turmeric and *Aloe vera*), coconut oil, petroleum jelly and beeswax.

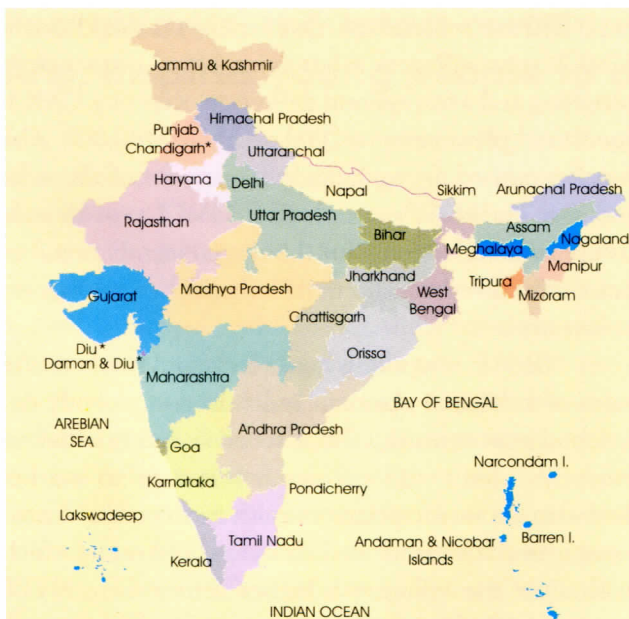
The cultivation of NTFP plants is a promising alternative to total dependence on wild collection.

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Irula tribal women making rope from forest vines.

FRLHT is piloting six medicinal plant “cultivation packages,” providing seeds to the farmers and attempting to work out standard operating procedures to ensure good harvests and to mitigate losses due to insects and diseases. However, the cultivation of NTFPs on farms is still in the pilot phase. Yield per acre is low, and standardized packages for the harvesting and sale of cultivated NTFPs are still being developed. Market linkages, while improving, are still tenuous.



1. Appropriate Technology India 2. Asia Network for Sustainable Agriculture and Bio-Resources 3. Keystone Foundation and Gram Mooligai Company Limited

Conservation-linked Enterprises

Developing natural resource-based enterprises that meet the triple bottom line of economic, environmental and equity objectives is an important challenge in South Asia. The Ford Foundation is supporting several organizations in India and Nepal pioneering community-run enterprises in extracting and processing wild herbs and plants into essential oils, handmade paper and oak tassar silk. Besides Keystone and FRLHT, other grantees include Appropriate Technology India (ATI) working in Garhwal district of Uttaranchal and the Asia Network for Sustainable Agriculture and Bio-Resources (ANSAB) based in Nepal.



Student learning to prepare herbal medicines.

The habitat and landscape where the *sanghas* collect medicinal plants for the GMCL enterprise are totally different from that of the Nilgiris. The land is harsh and semi-arid, with few trees. NTFP collection is hard work, which only lower caste and poor villagers are willing to take on. Collectors have to walk long distances to gather medicinal plants. The government Forest Department does not sell collection rights for the land because it is degraded but the land belongs solely to the Forest Department. Local communities have no say in how forest lands are managed. The collection of NTFPs is still within the bounds of sustainable harvesting but the grasslands and NTFPs could be better supported, and more plentiful, if the villagers had some sense of ownership and caretaking over the land.

GMCL medicinal plant sales in 2003 reached \$140,000.

GMCL pays collectors the same wholesale rates for NTFPs as middlemen. But, unlike the middlemen, GMCL pays villagers a fair price based on accurate weighing and a transparent definition of quality. GMCL medicinal plant sales in 2003 reached \$140,000. The *sanghas* earned approximately 60 percent of the sales income. The NTFP earnings from GMCL provide only a supplemental income for the *sangha* members and as yet there have been no dividends paid or savings for reinvestment.

GMCL is working hard to expand markets and sales of medicinal plants in India. In one recently developed joint venture, GMCL is collaborating with four women's credit and savings federations to market herbal medicines to primary health care centers. A processing unit for herbal medicines has been set up which will allow the villagers a higher return from NTFP products. GMCL has also set up a modern honey processing facility to market honey, both domestic (from apiaries) and wild. ☐