

eden project

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backstage at the living theatre of plants and people

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The Pragya way

Linda McDonald, Director of Fundraising at Eden has been involved in an exciting project. Here she introduces the work of the Whitley Laing Foundation, which offers a wide range of awards for nature conservation projects worldwide, seeking pragmatic, sustainable and long-lasting nature conservation work which generally emphasises the benefits of wildlife and habitat conservation to the local communities where its applicants work.

Above: A Lahaul valley farmer tending to his field of *Aconitum heterophyllum*, a high-value medicinal plant.



The Foundation also wants to raise public awareness of the serious problems facing ecosystems through promoting the work of its winners. Eden are interested in the work of this Foundation and have met with the Director,

Louisa Mitchell, and the Foundation Manager, Georgina Ponder, who visited Eden during Canopy Season in October 2004. Georgina suggested we met Gargi Banerji when she next visited the UK.

Sue Minter, the Director of Horticulture at Eden, is particularly interested in the Whitley Gold Award Winner 2000, Gargi Banerji, the Director of Pragya (www.pragya.org), based in the Himalayas, and her work with the indigenous people in the conservation and harvesting of medicinal and aromatic herbs in this high mountain region. Sue is the author of the Eden Project book *The Healing Garden*, and her meeting with Gargi at Eden is the beginning of a fruitful collaboration between Pragya, whose stated objective is 'to shape and enable holistic, sustainable development with focus on vulnerable and neglected communities and ecosystems', and Eden.

Garji Banerji, Director of Pragya writes: The Himalayas are home to many species of the most rare and valuable medicinal and aromatic plants, including an estimated 1,700 species of high-value plants. These plants are an integral part of the culture of the local communities of the Himalayas, woven into their lives in innumerable ways. Deforestation and climatic changes in the Himalayan region, compounded by overuse of medicinal and aromatic plants (MAPs) and destructive harvesting practices, and the absence of effective soil and water conservation measures, have led to the valuable medicinal and

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Top to bottom: Darge Shashni, the first successful medicinal plant farmer from Lahaul and Spiti, holds up a sample of his first harvest of *Aconitum heterophyllum*.

The Lahaul Valley Medplants Growers' Cooperative holding a meeting.

A greenhouse for medicinal plants constructed using passive solar construction techniques in Lahaul and Spiti.

Pragya began by popularizing the concept of 'conservation through cultivation'

aromatic plants of the Himalayan region getting depleted at an alarming rate.

With the burgeoning interest in herbal medicines and aromatic products in India and abroad, the plants that were in the past used only for the healthcare of the rural communities of the Himalayas are today used for manufacturing various products – medicines, cosmetics, food supplements, tonics, etc. – for the benefit of ever-growing numbers of the world population. Entire slopes of medicinal and aromatic plants have as a result been mined from the Himalayas, and many of the rare species have been pushed to the verge of extinction. Many of the Himalayan medicinal plants have declined by up to 80 per cent in the last ten years.

Medicinal and aromatic plants are a valuable resource, nature's gift to its native communities to help sustain themselves in the harsh conditions of the region. But they are not inexhaustible. Without urgent conservation measures this rich herbal wealth will be lost for ever, with severe consequences for the health and well-being of the local communities. Pragma is promoting the cultivation of these species through multiple community-centred activities, while helping conserve the plants in the wild. Recognising the bio-cultural nature of MAPs, the project also works on preserving the traditional medicine system.

Conservation through cultivation, plantations & home gardens

Pragya began by popularizing the concept of 'Conservation through cultivation'. As a result, medicinal plants are today being cultivated in several villages across the Indian Himalayas. The high altitude region from 9,000 to 16,000 ft, rich in the rarest and most high value species of MAPs, has been targeted and the species appropriate for each altitudinal belt have been identified. Several farmers and traditional healers in the region have been assisted in setting up micro-plantations of medicinal plants; women's groups have also been assisted to set up home gardens for aromatics. Apart from conserving the endangered species of the region by replacing the destructive practice of collection of medicinal plants from the wild with the alternative supply mode of cultivation, this intervention is helping establish alternate cash crops for these high mountain regions.

Case history: Darge Shashni's Atish crop
Forty-year-old Darge is the first to make atish cultivation a commercial success in the

Himalayan valley of Lahaul. The valley is home to many medicinal plants such as *atish* (*Aconitum heterophyllum*) and *panja* (*Dactylorhiza hatagirea*). The local amchis (traditional healers of the region) have collected these for years, but when the roads were built, the traders and collectors appeared and it was not long before the plants were endangered. Knowing the value of these plants in the outside markets, Shashni, a farmer from the 10,700 ft.-high Tinno village, had felt that these plants, if cultivated, could be an immensely lucrative crop for Lahaulis. He had tried to cultivate these very valuable but till then undomesticated, medicinal plants, but failed. When Pragma began work in Lahaul, not many Lahaulis were aware of the critical situation, and most were unconvinced that these plants were meant by Nature to be cultivated.

Darge was persuaded to use seeds instead of the cuttings that he had tried, using the cold scarification technique to soften the seed coat and enhance germination. The seeds showed a very good germination rate, responding to Pragma's technical inputs and Darge's care, and his plot of the delicate *Aconitum* plants was soon acting as a demonstration plot for cultivation of medicinal plants in the valley. *Aconitum* is a slow growing plant and can be harvested only in the third/fourth year after the germination of the seeds. Pragma team members visit the plantations they help frequently, not only to address technical problems that may arise but also to prop up morale.

Darge proved to be a committed farmer, even seeing his crop through an attack of powdery mildew that had spread to it from his neighbouring field of green peas. An elated Darge reaped a rich harvest of *Aconitum* seeds in 2003 and sold them to the Lahaul Medicinal & Aromatic Plants Growers' Society for further sale to several Lahaul farmers who have now taken to *Aconitum* cultivation, having discovered the advantages. The crops are dried roots, hence storage is not a problem; the plants grow naturally and are disease free; they do not require fertilizers other than the manure available at home; as the total harvest is not more than 3–4 bags from a bigha (a twelfth of a hectare), transportation is not difficult

Pragya is a not-for-profit development organization based in India, working for the sustainable development of the high-altitude Himalayan region. The project being described in this article won the organization the Whitley Award in 2000. Please visit www.pragya.org for more details of the organization and its work.