



Outstanding Practice in
AGROECOLOGY 2019



FACTSHEET

Nepal – Cultivating Green Prosperity in High Himalayan Communities through Medicinal and Aromatic Plants (MAPs, 2000)

IN BRIEF

The Mountain Institute (TMI) has been working with the mountain communities in Nepal for three decades. TMI trains highland farmers in sustainable agriculture methods. In 2000, it started a Medicinal and Aromatic Plants (MAP) Programme to offer a profitable alternative to traditional wild harvesting of plants. This highly community-based participatory approach aims to support the conservation of MAP species, enterprise development and fair trade, through technical and financial support and knowledge exchange. Currently the MAP Programme encompasses 100 villages in mountain districts of Eastern, Central and Western Nepal, where 18,000 farmers are now trained in cultivating MAPs (11,000 farmers directly trained and 7,000 farmers replicated) and 35-40 % are women. In 2008, TMI and its NGO partners in Ilam received the Mountain Development Award 2008 from the Ministry of Forest and Soil Conservation. As well as spreading throughout regions of Nepal, TMI is promoting the MAP approach in Peru.

ABOUT THE PRACTICE AT A GLANCE

Organisation: The Mountain Institute (NGO)

Implemented in: 100 villages in mountainous districts of Eastern, Central and Far-Western Nepal

Year: 2000 (TMI founded in 1971)

Beneficiaries: Small holder, poor and marginalized farmers. Single women and women headed households are prioritized.

Topic(s): Production, Processing, Distribution, Medicinal and aromatic plants

PROBLEMS TARGETED / CONTEXT

Nepal is divided into the Northern Himalayan range that is covered with snow throughout the year, the middle range that includes hills, valleys and lakes, and the southern range. The 11 districts in which the practice is implemented are located in first two ranges, where the altitude is between 1,000 and 2,000 meters. 66 % of the Nepalese population is directly engaged in farming. Most of them practice traditional subsistence mountain agriculture, using terraces fields with mixed crops and livestock, on usually less than 1 acre of land. Harvests are often insufficient. Poverty and lack of opportunities have lead the inhabitants of the mountains to migrate. But while migration used to be seasonal, it has become much more common in recent decades, 14 % of the population. The high migration makes living conditions for mountain inhabitants, especially women and elderly people, complicated. Medicinal and aromatic plants (MAPs) have being harvested since centuries in Nepal. Their products are an important part of families' incomes (10-15% of the annual cash-income of rural households), because they are sold very well to India and China. However, the wild gathering of these plants without regulations threatens mountain ecosystems and endangers some species that are on the verge of extinction.

During 1990s TMI carried out a study and documented that high market demand lead to the immature, unsustainable and over harvesting of MAPs species. To address this critical issue, TMI initiated the MAP Programme in 2000 in the Sacred Himalayan Landscape of eastern Nepal, Sikkim, West Bengal (India) and Bhutan. In later years this programme was expanded across the Himalaya in central and mid-western regions of Nepal. The programme was first piloted through delivering theoretical and practical training in cultivation of some MAP species like *Swertia chirayita*, *Paris polyphylla*, *Taxus wallichiana*, *Aconitum* spp., etc. in some part of Ilam and Panchthar districts of eastern Nepal in 2001 and other nine different MAP species were introduced after successive years till 2011. The cultivation was carried out within degraded and barren land so that it wouldn't hamper productivity.

KEY FEATURES OF THE SOLUTION

The goal of the MAP programme is to protect fragile mountain environment by improving local livelihoods and giving a specific alternative to unsustainable wild collecting. Instead of collecting the medicinal and aromatic plants from wild, farmers are encouraged to grow these plants on private land and sell them for cash (cultivation and commercialization of MAPs). This provides mountain communities with an alternative source of income as well as supports community-based conservation of high value MAPs in the wild. Whilst giving the wild areas and the ecosystem a chance to regenerate, the cultivation of medicinal and aromatic plants offers multiple advantages compared to wild gathering. Firstly, plants grow on unfertile soils and do not need irrigation. Consequently, lands are used that are otherwise useless for crops. Secondly, farmers have a greater control over medicinal and aromatic plants. And thirdly, farmers are not obliged to pay government tax on MAP production, which makes it attractive. Additionally, the programme addresses the gap in existing practices, level of technical skills for sustainable extraction/ collection, production and management of MAPs.

The MAP programme cycle includes 7 phases. First, a feasibility study is realized – which includes environmental, socio-economic, market and value chain aspects – in order to select the areas where the project is going to be implemented. Community consultations are organized to discuss the programme’s relevancy, feedback, identity grasp and opportunities. Secondly, needs are identified and the process, the plan and the budget are planned in a participatory way. Thirdly, project inception and endorsement workshops at local and district level are conducted to introduce the project to stakeholders and local communities. Each participant also received good quality seeds of different varieties of MAPs, often starting with Chiraito (Swertiya chirayita). Fourthly, at implementation level, MAP farmers groups are formed to assure the monitoring of the project and farmers are selected on socio-economic and gender criteria to receive trainings. Two types of trainings are provided: basic training focuses on new farmers and advanced trainings is constructed for farmers who already received trainings and cultivate MAPs. Also a community-based biodiversity monitoring guideline was developed and local people representing community groups, traditional healers, local NGOs were trained in ethno-botanical inventory and monitoring techniques through a citizen-scientist approach. Fifthly, MAP cooperatives are established and legally registered. Management and business trainings are also organized to help the cooperatives to develop their activity. Additionally, visits in China and India are supported to encourage the exportation of MAPs. Technical and financial support is provided to the cooperatives to encourage their production. Sixthly, MAP farmers obtain “product origin certificates” from the District Forest Office or National Park to certify that the MAPs products were grown in their farmland and not collected from wild, which provide them tax concessions. Seventhly, a phase out plan is prepared so as to document and share the learning, explore opportunities for project’s sustainability, establish coordination and collaborative mechanism with private and government sectors for the sustainability of the project.

The programme is implemented by local communities, facilitated by the local NGO partners, with support of The Mountain Institute. The other stakeholders involved are government agencies (District Forest Office, District Agriculture Development Office, Department of Plant Resources, Rural Municipality, Division Cooperative Office), private sector (local, regional, national and international traders), development partners, civil society organizations, and research institutions.

INNOVATIVE ASPECTS

- Holistic, sustainable, technically feasible, participatory approach, with a special focus on women.
- Co-creation of knowledge through farmer-to-farmer training and learning, and empowerment through farmer-owned cooperatives.
- Preservation of traditional practices and ancestral knowledge.
- Positive impacts on both regeneration of MAP population and improvement of livelihoods in local marginalized mountain communities of Nepal.

FACTS & FIGURES

- Over 18,000 farmers are cultivating MAPs (11,000 farmers were directly trained by TMI and 7,000 farmers replicated), 35-40 % are women.
- Over 2,500 hectares of private and degraded land, in 11 mountain districts of Central, Eastern and Far-Western Nepal, are covered with 13 different MAP species.
- In 2016 and 2017, 1,024 MAP farmers, among them 40% women, participated in advanced level training.
- 4 MAP Farmers Co-operatives (Illam, Dhading, Rasuwa, Sankhuwasabha) with 9 sub-units were established and strengthened, and 14 mobile and temporary MAP storage depots established. Over 460 farmers received official MAP Farmer Identity Cards and Product Origin Certificates.

OUTCOME, IMPACT & EFFECTIVENESS

- The 2016 combined earnings from MAP farmers from all Nepali districts totalled USD 4,300,000, with income of individual farmers from US \$ 300 to USD 35,000 per year.
- From 2001-2010, TMI found an 80% cumulative improvement in wild MAP populations relative to the baseline situation.
- Anecdotal evidence underlines that increased incomes led to people becoming entrepreneurs, youth returning from abroad and people being able to send their children to better schools.

OUTLOOK, TRANSFERABILITY, SCALABILITY & COST-EFFICIENCY

The cost of implementation is USD 300 per farmer. This cost includes the trainings (basic and advanced) plus the seed, sapling, support to farmers during the training. Considering that 11,000 farmers were directly trained since the initiation of the practice, an amount of about USD 3,300,000 was already invested. It was financed through the contribution of different foundations and individual donors.

The project has been replicated in Rasuwa and Dhading districts of Nepal in 2009, in Gorkha district in 2014, and is additionally being initiated in Peru by TMI. TMI plans to implement the MAP approach in other mountain communities of Nepal. The replicability depends on the favourable environmental conditions and the species' geographical niche.

In order to scale-up the practice, a wider access to sustainable markets, sustainable sourcing, farmer's friendly policy, value addition and research gaps are necessary. TMI is already working on the capacity building of companies, on the provision of loans with low interest rates, on strengthening the relation between the private, the public and the development sector to assure long-term collaboration and quality control. In addition, refining technologies and the improvement of the certification system would allow farmers to enter the European and US market.

INTERVIEWEE FEEDBACK

Number of points: 20,5 out of 23

Summary: The interviewee provided information on the rationale behind The Mountain Institute, which has been active for a long time in Nepal and which considers its results to have been strong in terms of livelihood improvement and biodiversity conservation. Robust answers were given to all questions on the Future Justice Principles and almost full marks were achieved.

1 (Sustainable use of resources) – 5/6 – Almost full marks achieved for cultivation of traditional, wild growing species and no chemical inputs. Composting and seed re-use champions recycling. Soil conditions improved through good cover of land through MAP plants and by adding of organic matter. Biodiversity improved through support for species which were close to extinction. Depends on external funding. Cooperative supports those most in needs and ensures profits for farmers.

2 (Equity and eradication of poverty) - 3.5/4 – Provides extra incomes and livelihoods for populations who otherwise focus on subsistence farming. All involved are marginalised communities who find jobs and empowerment. 40% are women, 60% youth. In some instances helped reverse migration. Promotes a local solution but not really local markets as MAP are exported.

3 (Precautionary approach to human health, natural resources and ecosystems) - 2 / 2 – Ancient techniques throughout and so no risk involved, preservation, technical and practical training. No harmful species or chemical inputs involved.

4 (Public participation and access to information) - 3/3 – Communities directly engaged, all small-scale producers. They source external information on market price and products, bring it to cooperatives and to farmers. Revives ancient knowledge, combines it with and generates new knowledge.

5 (Governance and human security) 3/3 – Annual audit and records kept. Selling is done by cooperatives and fair price is always retained. Farmers are in control, being the sustainable managers of MAPs.

6 (Integration, interrelationship- human rights, social, economic and environmental objectives) - 2/3 – Directly linked with conservation and incomes for the economically weak, who are also the most vulnerable to climate change. No impact on nutrition (0 points).

7 (Common but differentiated obligations) - 2/2 – Practice is not new, rather has been reinforced and made sustainable thanks to cooperation. No burden at all, rather more opportunities.

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LINKS AND FURTHER READING

The Mountain Institute (2018), Medical and Aromatic Plants Program. Improving livelihoods in Nepal's rural mountain communities since 2001: http://mountain.org/wp-content/uploads/TMI-MAPs-Brochure_Web_Email_single-pg-layout.pdf

The Mountain Institute (2016), TMI Medicinal & Aromatic Plants Program, Nepal, Video: <https://www.youtube.com/watch?v=-EoQ9YJFxr0>

IPROMO/FAO/TMI (Online Presentation of TMI) (2017), Environmental and economic issues to enhance mountain sustainability: http://www.fao.org/fileadmin/templates/mountain_partnership/doc/IPROMO/IPROMO_2017/Presentation_Thapa.pdf

The Mountain Institute, ConservationGIS.org, Conservation Technology Support Program: GIS Experiences from Prior Recipients: <http://www.conservationgis.org/ctsp/tmi/tmi.html>

RECOFTC The Center for People and Forests (2018), Agreement between RECOFTC and The Mountain Institute <https://www.recoftc.org/en/nepal/news/agreement-between-recoftc-and-mountain-institute>

[pnews/153-women-vital-for-food-security](https://www.recoftc.org/en/nepal/news/agreement-between-recoftc-and-mountain-institute)

Ngotho (2015), Tharaka women strive to bring back indigenous seeds in The Star.co.ke: https://www.the-star.co.ke/news/2015/09/01/tharaka-women-strive-to-bring-back-indigenous-seeds_c1194189

Lush Award (2018), Lush Spring Prize 2018 Influence Award Winner: African Biodiversity Network: <https://uk.lush.com/article/lush-spring-prize-2018-influence-award-winner-african-biodiversity-network> and Video: <https://vimeo.com/269225541>

African Biodiversity Network, films - Kamburu film: <https://vimeo.com/7096771>; Seeds of Freedom film: <https://www.youtube.com/watch?v=C-bK8X2s1kI>; and Seeds of Sovereignty film: https://www.youtube.com/watch?v=9GLYIw_QdjQ