

# Sensitising indigenous community toward conservation of *Amchi* tradition of Spiti valley

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*The traditional healthcare system of Spiti valley is renowned as 'Amchi system' which includes both ayurvedic and Tibetan medicine methods. It is performed and practiced by local healers known as 'Amchi/Amji' for centuries. This noble profession solely depends on local medicinal plants. In current scenario, amchi livelihood and indigenous medicinal flora are under threat due to the advancement in pharmaceutical sector. This has trapped the younger generation with instant allopathic effects and led to societal ignorance about their native herbs. Hence, awareness programmes and documentation are very important as it encourages the community to pass down the knowledge to young generation to reduce the cultural gap. The present article describes the interventions in sensitising local community toward conservation of native flora as well as noble amchi profession.*

**Keywords:** Capacity building, Conservation of Himalayan MAPs, Extension activities, Traditional practices

S PITI valley is located in the north-eastern part of the Himachal Pradesh with the Tibet boarder at its east. Valley possesses 13 gram panchayats with 231 villages functioning under Spiti Block administration at Kaza, Lahaul and Spiti with altitude ranges from 3,000–5,000 m amsl. The valley is inhabited by 'Bhot' community following 'Buddhism' religion where traditional agriculture is the main occupation. The region is a hotspot for its unique rich biogeography in term of flora and fauna having varied level of adaptations in extreme and challenging climatic conditions. The local healer '*Amchi*' is considered as the foremost human of Himalayan region.

Tribal communities have known to maintain and preserve these plants at their wild habitats by utilising them sustainably for their livelihood rather than personal benefits. The numerous written accounts testify to the usefulness of Himalayan herbs for medicinal purposes

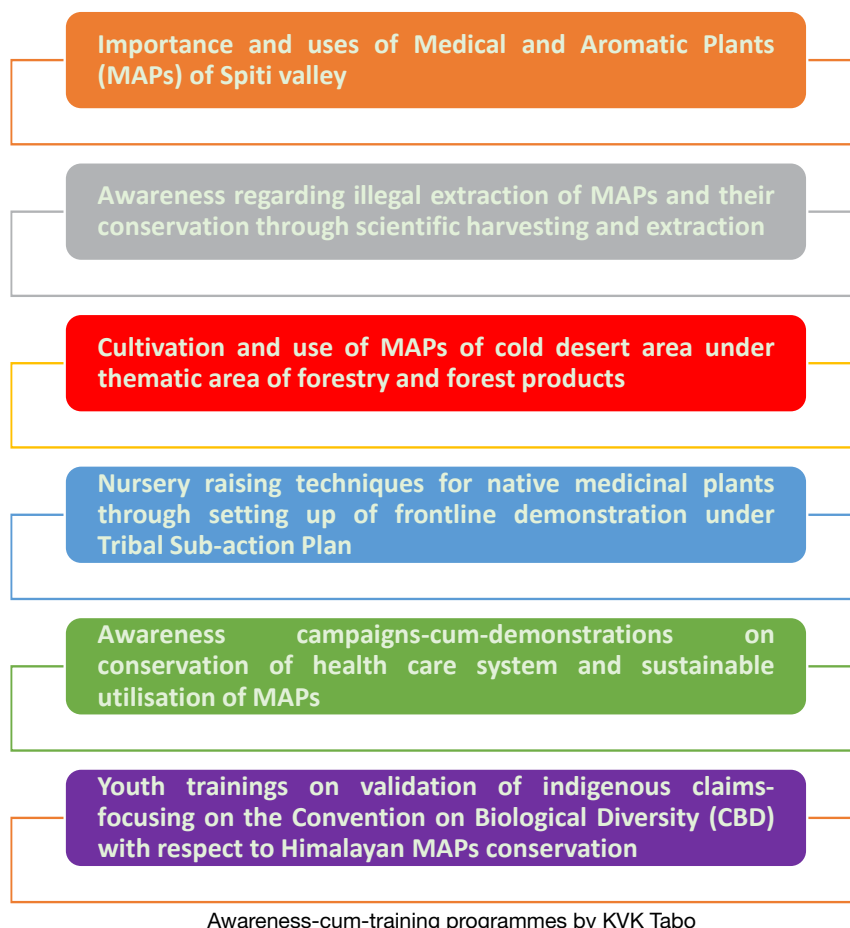
represent a long history of human interaction with the environment. During preliminary surveys, it was found that preference of adopting these traditional systems by young generation as profession is declining. The practice has been either

diminished or negligible to trace in upper area which was prevalent earlier. This causes traditional healthcare system dwindling with fast paced advancement of allopathic medicinal system. Hence, various ground level efforts



Local herbs found in Spiti valley

A) Caperbesh berries; B) Manu/Pushkarmool; C) Roots of ratanjot; D) Nila-tikka/karroo; E) Heypomo/Chhataya; F) Champa-sa



including awareness and training programmes have been carried out by Krishi Vigyan Kendra (KVK), Tabo scientists from 2023-2025. These extension campaigns along with demonstration extension activities by institutional engagement could enhance tribal livelihood.

#### Intervention by KVK

During 2023-2025, more than 20 extensions activities including trainings and awareness programmes under Tribal Sub-Action Plan (TSAP) along with project activities have been conducted where about 600 farmers have participated from 30 villages of Spiti valley. In each training, about 25 farmers (male and female) were targeted of age above 25-year-old. Different extension activities have been planned as per direction of ICAR-Agricultural Training Application Research Institute (ATARI) action plans and under state's TSAP schemes. Accordingly, village authorities were informed prior the event to convey information to villagers. Training resource

person included scientist/subject matter specialist, field/training assistant, village authority/member as mediator or linguist as farmers were more comfortable in their dialect 'Bhoti'. Under ethnobotanical survey, village *amchis*/herbalists had been questioned, engaged as well as participated successfully and found humble to explain the value and richness of traditional healthcare system. Traditional/ cultural data have been compilation from Mane, Tabo, Lari, Demul, Lalung, Rangrik, Kee, Chicham, Gue and Poh villages of Spiti valley. Various programmes were conducted to educate local communities on the importance of conservation and sustainable utilisation of Medicinal and Aromatic Plants (MAPs) These events were focussed on the convention on biological diversity (CBD) and its relevance to MAPs, conservation. Moreover, practical efforts through on Farm Trials (OFTs), Front Line Demonstrations (FLDs) and Method demonstrations (MD) were conducted at different villages.

#### Technology dissemination through extension activities

Progressive farmers, farm women, youth, *amchi*, etc. were sentised through the following extension activities:

**Extension field trials (OFTs/FLDs):** Targeted beneficiaries in trainings were trained by doing demonstration on field where equipment's like grape hoe, sickles, garden gloves, cocopeat, perlite, vermiculite, biodegradable pots, growing bags, etc. were shown and distributed to beneficiary farmers belongs to village Poh, Hurling, Mane, Kurith under TSAP.

**Field days:** Field days were conducted on improvement in poor scientific knowledge for cultivation and management of local medicinal herbs at Demul, Gue and Kurith village. Also, on importance of integrated farming and role of MAPs on upgrading tribal livelihood in Spiti valley.

**Field visits and Diagnostic visits through follow-up surveys:** Activities like field as well as diagnostic visits were conducted to keep an active connection with progressive farmers of Gue, Hurling, Poh, Mane, Demul, Rangrik, Kurith, Pomrang, Losar and Kholaksar. These includes:

- To check the growth performance and status of planted medicinal plants under OFTs/FLDs at Farmers field/ *amchi's* herbal garden.
- To monitor the health of cultivated temperate medicinal plants in farmer's fields.
- To collect the wild native herbs from farmers' field for identification, collection for cultivation and preservation for further exhibition and herbarium repository.
- To identify the obnoxious weeds in trial farms and suggest alternative practices.
- Soil sampling.

**Awareness through exhibitions and farmers fair (kisan mela):** Fairs and exhibitions acted as a suitable platform to raise awareness. More than dozens of exhibitions have been installed in different events to educate the communities, and



Farmers and monks gathered for extension event at Losar village, Spiti valley

Himalayan Forest Research Institute (HFRI) Shimla research station at Tabo. Seven days skill development programmes were also conducted under forestry thematic area on introduction and working of Computer Numerical Control (CNC) machine for creating wood art and carving on traditional

activities carried out at first year of action plan. Understanding the indigenous knowledge of rural people in relation to biodiversity resource management, cultural traditions is important for the development of the region. This relationship between the local communities and their natural surroundings can provide insights into the cultural significance of certain plants. About 45 farmers, scholars, educationists and tourists have visited to KVK during active season regarding procurement of information on medicinal plants.

After the extension activities, it was found that the influence of modern medicine was more in lower altitude developed villages which are more connected. Pin-valley under biosphere-reserve is still store house of rare MAPs with need of extensive and delicate exploration for important species niche. Communities had less awareness on economic part and scientific usage in folk medicines such as *Yer*, *Champa-sa*, *Mau*, *Shirshe-methok* and *Gokshur* which were grown as extensive weed in farm field.

wood products to women and youths.

### Outcomes and interpretation

Spiti farmers/farm women and folk healers were being approached by scientists with initiative to training on cultivation and utilisation of local herbs/vegetables abundantly available in surrounding sites like jangli-payaz, lahusan, pudhina, dhania, jeera, ajwain, sauf, tirku, capra, chause-kochae, chulti, local sag-bathu, lafa-sag, etc. along with their kitchen gardening.

One of noteworthy response from training was that large participation of women in the consequent events has been noticed. This suggests that traditional health and environmental efforts are moving in the right direction towards gender-balanced community engagement. Overall, it was observed that women and youth participation in the second year increased with the awareness

### Challenges faced during training activities

- Due to short active season in Spiti valley, it made difficult to organise trainings, as farmers were occupied with farming schedules.
- In addition, much of the traditional knowledge was embedded in hidden signs and context-specific dialects, making

encouraging them in continuation of cultural practices. From time-to-time, exhibitions have been displayed in kisan mela and state level fair like La-darcha fairs, collaboration with ATMA, and Department of Agriculture and district administration Kaza, Spiti valley. The village lamas/Poojan foreigners, tourist and youngster have visited stalls to see the displayed medicinal herbs to know the cultural heritage in traditional health system in Spiti valley. Collectively, more than 2,000 indigenous people and tourists especially youth have interestingly participated in exhibition. They were aware about sustainable utilisation of the traditional system/practices for the sake of conservation of Himalayan flora. During exhibition, plant raw material including dried roots and fresh flowers/grasses of higher altitude were displayed. *Amchi* collected products have engaged the tribal people in public interaction and described their traditional used values. The compiled literature describing traditional as well as therapeutic values of local herbs has been published in the form of pamphlets and brochures (Hindi and English). Colourful pictures with demonstrations were illustrated for illiterate farmer community.

### Other extension activities:

Other activities like celebration of technology days at demonstration unit-herbal garden, collaborative trainings with ATMA (Agriculture Technology Management Agency), Department of Agriculture and district administration Kaza, HP State Forest Department, and



Women participation in MAPs training at Kee village, Spiti valley

**Table 1.** List of local herbs with their traditional uses

| Common name    | Vernacular name | Botanical name                              | Family         | Traditional uses                                                                                                                                                            |
|----------------|-----------------|---------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Beurr          | Burse           | <i>Artemisia brevifolia</i> Wall. ex DC     | Asteraceae     | Whole plant is dried and kept in woollen apparels as an alternative of phenyl balls.                                                                                        |
| Caperbush      | Capra/Rutokpa   | <i>Capparis spinosa</i> L.                  | Capparaceae    | Fruit buds/emerged leaves as nutritious vegetable. Caper berries for preparing pickle are good source of nutrients and vitamins.                                            |
| Lafa-sag       | Champa-sa       | <i>Malva neglecta</i> Wallr.                | Malvaceae      | Used to treat constipations.                                                                                                                                                |
| Sapal          | Chaura          | <i>Angelica glauca</i> Edgew                | Apiaceae       | Roots/leaves as aromatic spices in cooking dal/vegetables.                                                                                                                  |
| Leek           | Chause-kochae   | <i>Allium tuberosum</i> Rottler ex Spreng   | Amaryllidaceae | Green leaves are cooked for steamed momos and thupka.                                                                                                                       |
| Dittander      | Chulti          | <i>Lepidium latifolium</i> L.               | Brassicaceae   | Leaves are used for saag.                                                                                                                                                   |
| Jangli-payaz   | Gyaman          | <i>Allium carolinianum</i> Redoute          | Amaryllidaceae | Dried flowers called as gyman recommended in winter cuisines to keep the body warm.                                                                                         |
| Chhataya       | Heypomo         | <i>Heracleum candicans</i> Wall. ex DC.     | Apiaceae       | Tender inner stem is edible, leaves/flowers used for food masking.                                                                                                          |
| Ratanjot       | Khamet          | <i>Arnebia euchroma</i> Royle ex Benth.     | Boraginaceae   | Ratanjhot roots are mixed in oil and by applying regular helps in delay of hair greying. Another dye is mixed in butter to make art on doors and to colour the puja diyaas. |
| Pushkarmool    | Manu            | <i>Inula racemosa</i> Hook.f.               | Asteraceae     | Root decoction has various traditional uses such as its warm effect helps in digestion.                                                                                     |
| Jangli jeera   | Mawo            | <i>Bunium persicum</i> (Boiss) B. Fedtsh.   | Apiaceae       | Seeds are used as spice and to treat digestion problems.                                                                                                                    |
| Karoo          | Nila tikta      | <i>Gentiana kurroo</i> Royle.               | Gentianaceae   | Bitter decoction to treat fever and jaundice.                                                                                                                               |
| Sag            | Niprchiaya      | <i>Convolvulus arvensis</i> L.              | Convolvulaceae | Plant is dried and decoction is served in winter to keep body warm.                                                                                                         |
| Atish          | Ponkhar         | <i>Aconitum tanguticum</i> (Maxim.) Stapf   | Ranunculaceae  | Amchi used its root to prepare formulation to treat severe fever and related issues.                                                                                        |
| Hathpanja      | Salampanja      | <i>Dactylo rhizahatagirea</i> (D. Don) Soo. | Orchidaceae    | Roots are recommended with milk for overall nutrition to body.                                                                                                              |
| Dhudhal        | Shirshe-menthok | <i>Taraxacum officinale</i> F.H.Wigg.       | Asteraceae     | Flower is used in herbal tea and leaves decoction to lower blood sugar level.                                                                                               |
| Himalayan iris | Themma          | <i>Iris hookeriana</i> R.C. Foster          | Iridaceae      | Leaves are dried and used as roof thatching.                                                                                                                                |
| Henbane        | Thuklang        | <i>Hyoscyamus niger</i> L.                  | Solanceae      | Medico-religious use.                                                                                                                                                       |
| Charma         | Tirku           | <i>Hippophae rhamnoides</i> L.              | Elaeagnaceae   | Tea prepared from fruits is good source of vitamin C.                                                                                                                       |
| Farash         | Umbo            | <i>Myricaria germanica</i> (L.) Desv.       | Tamaricaceae   | Medico-religious use.                                                                                                                                                       |
| Bathu sag      | Yer             | <i>Chenopodium foliosum</i> L.              | Amaranthaceae  | Leaves as nutritional vegetable.                                                                                                                                            |

spontaneous interpretation challenging.

- The limited presence and unavailability of *amchi*-multi-performer as monks, *guru/poojan/pandit* in ceremonies further constrained by cultural integration.
- Other encountered aspects during training/surveys such as technology illiteracy, insecurity of sharing local knowledge and language barrier in interior villages have created gap in accessibility of information.
- Reluctancy in participation of youth and progressive/commercial farmer due to ignorance of old system and traditional practice as found

more interested in commercial crop trainings.

### SUMMARY

With time and experience, Spiti *amchi* have developed a reliable knowledge as well as effective methods to identify, harvest and utilise locally available herbs for both preventive and curative of ailments/diseases for their community. Unfortunately, it was noticed in the preliminary visits that traditional system has been offended by youths belonging to heritage *amchi* family itself, which was very concerning. The conducted extension activities have sensitised the tribal community especially youth, *amchi* and women farmers and showed their successful

participation. The efforts have been made by conducting various on farm trials, front line demonstrations, trainings/awareness camps, demonstrations; capacity building programmes based on convention on biological diversity awareness at different villages of Spiti valley. Furthermore, collaboration with another government departments as well as NGOs is needed to preserve this indigenous knowledge through various field-based research, documentation, community participation, extension activities, etc.

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